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THE CANADIAN FISHERMAN

(Official Organ of the Canadian Fisheries Association)

VOL. VIII

GARDENVALE, P.Q., JANUARY, 1921 - DEC. 1921

NO. 1-12

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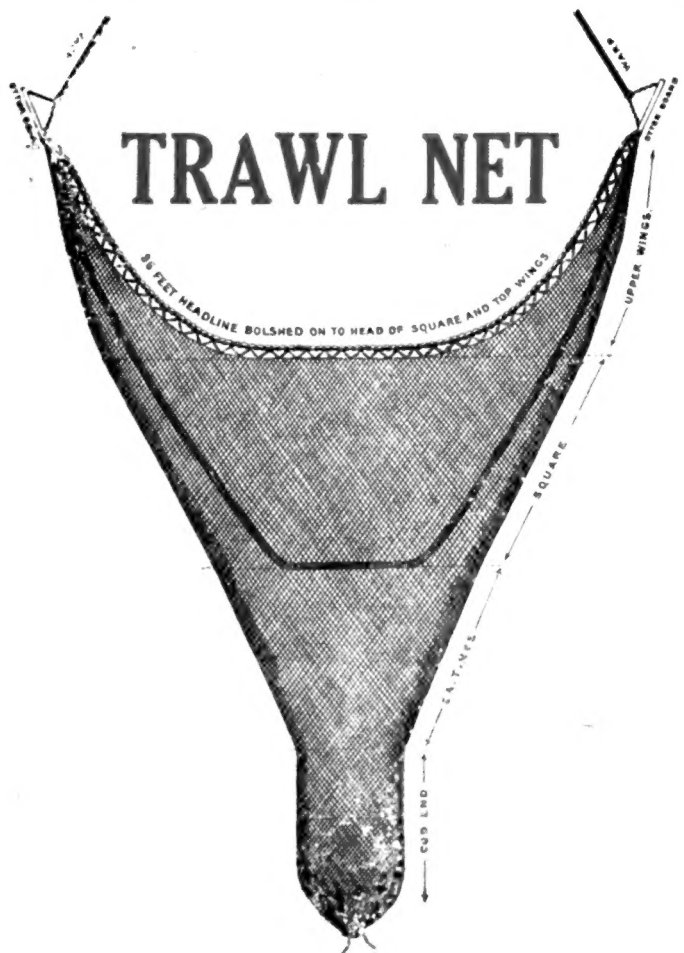


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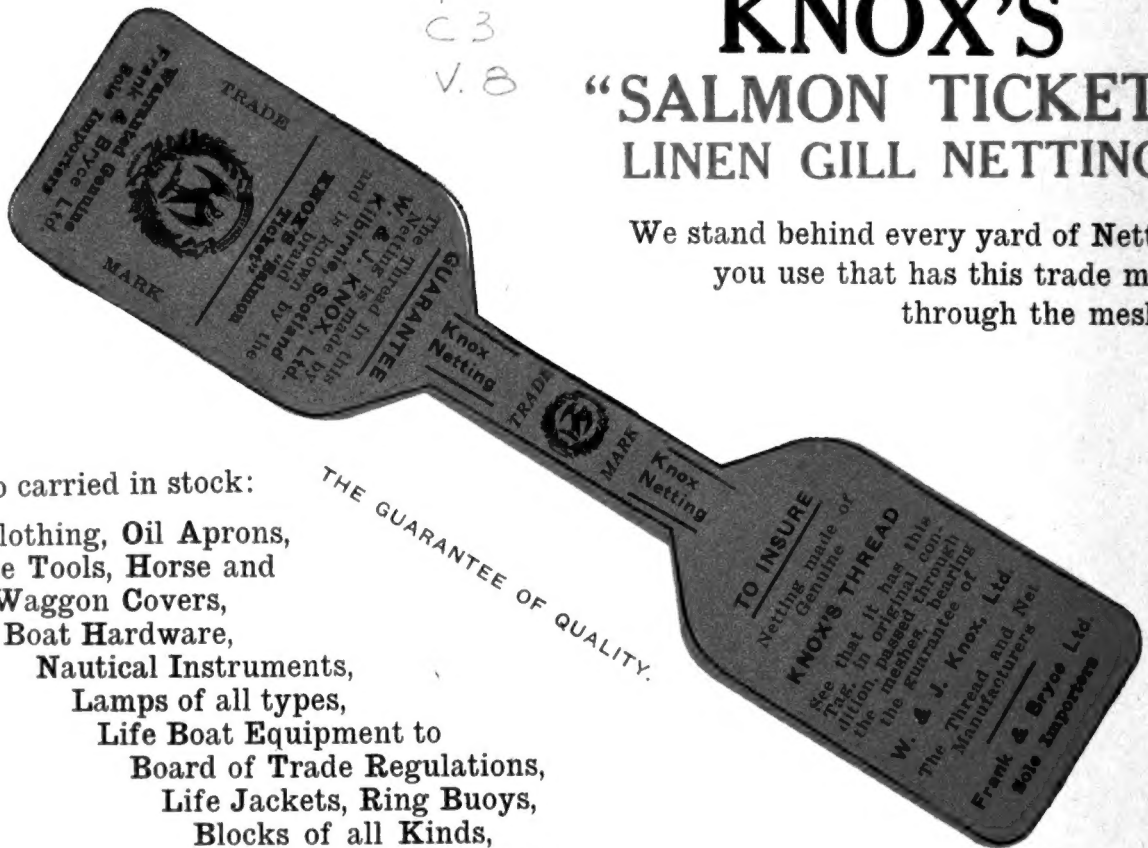
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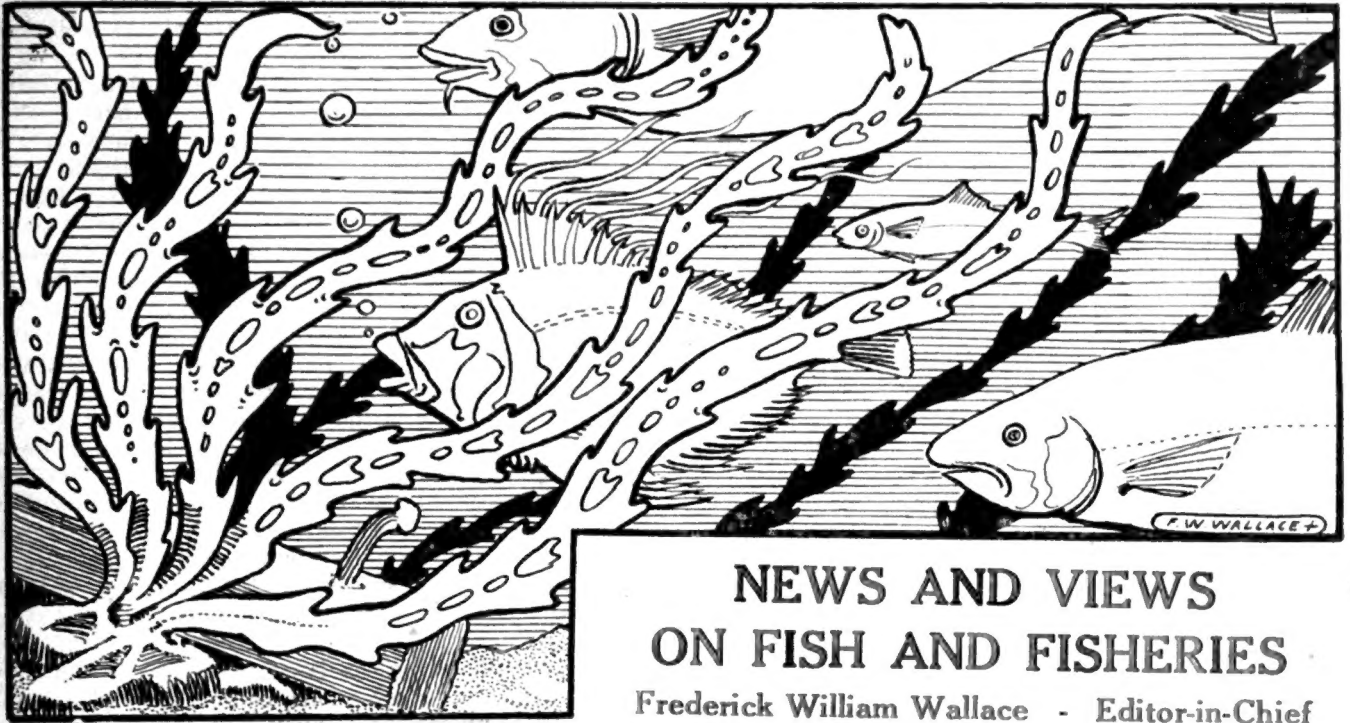
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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

NATIONAL FISH DAY, FEBRUARY NINTH.

The fourth Canadian National Fish Day will be celebrated on the opening day of the Lenten Season, Wednesday, February Ninth, and from what we hear, it is destined to be the best ever.

Members of the Canadian Fisheries Association from coast to coast are lining up their districts and customers in an effort to put the day across with a swing, and the C. F. A. Publicity Committee have been busy for weeks past on plans of campaign.

The Department of Marine and Fisheries are co-operating with the Association to splendid effect. Minister, Hon. C. C. Ballantyne, has already issued a statement urging the more general use of fish as a food and the universal recognition of National Fish Day, and the Post Office Department are permitting the use of a post-mark bearing the legend—"National Fish Day, February 9th"—to be used in cancelling stamps in fifteen of the largest cities in the Dominion. Special articles with illustrations and reading matter regarding the Fish Day are being supplied the press throughout the country.

National Fish Day will be featured specially in the menus of railroad dining cars, restaurants and hotels everywhere and private hotels and cafes have been circularized to co-operate. Fishery officers have been bulletined to stimulate interest in the event in their respective districts.

The trade themselves are advertising in the press and circularizing their customers. We have already seen letters and envelopes from fish companies imprinted with a rubber stamp — "National Fish Day, February Ninth. Eat Fish and Boost!" Vancouver promises a big effort and Montreal will feature a window dressing competition and a Fish Dinner on the evening of February Ninth.

The Association had hoped that the United States fish trade would have been able to co-operate, but the time was too short for them to line up their cam-

paign. They propose to hold a National Fish Day on March 9th, and will join Canada in the celebration of a North American National Fish Day in the Spring of 1922.

The Canadian Fisheries Association and the Industry have good reason to congratulate themselves upon this aggressive piece of publicity. Three successful National Fish Days have been celebrated thus far and with good results in drawing the attention of Canadians to our fishery resources. To promote a publicity feature which will awaken the interest of a whole country is something to be proud of and Mr. J. A. Paulhus, originator of the idea, may well rest his claim to fame upon the promotion of this now universally accepted piece of fisheries propaganda.

AMERICANS URGING IMPOSITION OF DUTY ON IMPORTED FISH.

American fishing interests throughout the United States are advocating a duty upon imported fish. Upon the Pacific Coast, there is a demand that duties be imposed against Japanese codfish, Japanese canned fish and Canadian herring and halibut. Atlantic interests have held meetings on the subject and President Gardner Poole of the United States Fisheries Association has been delegated to appear before a Congressional Committee on behalf of Boston fishing interests to urge an adequate duty on imported fish. Gloucester fish men appear to favor a duty on both fresh and salt fish but desire a graduated tariff rather than a general rate.

Higher tariffs against canned fish of all kinds from Canada and Europe is advocated as it is claimed the rate of exchange existing favors importation. Some U. S. dealers favor duty-free fresh fish and winter caught frozen varieties, but the demand for a protective tariff is pretty well unanimous from all branches of the U. S. fishing industry.

This demand for protection against Canadian fish is

a matter which will vitally affect Canadian producers and it is time that we started to map out a new policy of fisheries development in other directions. More attention must be given to our home markets and a scheme of marketing our fish products under preferential treatment within the Empire should be promoted immediately.

FISHERIES DEPARTMENT WANTED.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliations. Also a Deputy Minister in charge who will have direct access to the Minister.

The Canadian Fishing Industry from east to west have been able in the past five or six years to sit down and overhaul their machinery. They have been looking for the sand in the gear; for the monkey-wrench in the works.

We all know what wonderful fishery resources we have and what a smart and capable bunch of men we have engaged therein. Our fishermen are the best of their kind—intelligent, aggressive and capable; our business men in the trade have more than ordinary obstacles to overcome, and carry on their business undeterred by them. But in spite of the tremendous possibilities of our fisheries, our machinery for development is still running at slow speed.

Some years ago, the brightest minds in the Industry got together and formed the Canadian Fisheries Association. Then they started overhauling the engine. They have succeeded in remedying many defects, but the main defect—the one which is responsible for the loss of power, the lack of progression—is the non-existence of distinctive Government Fisheries Administration vested with sufficient funds and authority.

This is no reflection upon those officials at present administering the so-called Fisheries Department at Ottawa. They are doing all they can, and their individual capabilities and training place them on a par with the best anywhere. We have no hesitation in admitting that. But they are muzzled, hand-cuffed and absolutely swathed in the red-tape of Departmental traditions and political expediency.

Canada's trump cards in playing the game with the rest of the world consists of Agriculture, Forests, Mining and Fisheries, and we hold a hand which can't be beaten. But the hand is played by a Government whose experience in card games seems to have consisted of playing "Snap" with Sunday School texts. The only card which they gamble on is that of Agriculture. The others — especially Fisheries — are liable to be thrown into the discard for some of lesser value.

For many, many years the Governments at Ottawa have invariably regarded the basic industries of the Dominion with eyes improperly focussed. In their restricted outlook, the Fisheries have been out of sight. They have been hull-down below the horizon so long that we are tired of it.

The administration of our tremendous fish resources has always been a side-line of some Government department. First it was bracketed with Marine; then it was kicked across to Naval Service. The Fisheries Association in turn kicked at this crude lack of appreciation, and as a sop to the Industry, it was thrown back to the Marine again. At the present time the administration is now "**DEPARTMENT OF MARINE AND fisheries.**" (The small type is intentional and describes our status

in the eyes of the Government). And we are departmentally regulated by the Minister of Marine, Fisheries and Naval Service through a Deputy Minister of Marine.

Two years ago, the Canadian Fisheries Association asked that the Fisheries be given a decent departmental administration. They didn't ask for too much—merely that the Fisheries Department be established as a distinct organization under the supervision of a Deputy Minister of Fisheries. As a palliative, the Superintendent of Fisheries was elevated to the doubtful status of Assistant Deputy Minister of Fisheries under the Deputy Minister of Marine. The change consisted of an empty title and nothing more.

The situation at present is this. The Fisheries Department is a side-line to Marine and the Deputy Minister of Marine is the controlling officer. He is a Marine man, pure and simple, and knows little or nothing about the Fisheries. The Chief of the Fisheries Department cannot see the Minister in charge without laying his story before the Deputy Minister of Marine. That gentleman may not approve of the Minister being approached on the subject laid before him, and the Fisheries official has to retire to his office and think up something more favorable. Thus it is with everything. All plans for the betterment of the Industry; all our ideas and suggestions, cannot be placed before the Minister unless the Deputy Minister of Marine approves.

The Marine Deputy cannot be blamed for this state of affairs. It is not his fault. He has two important departments to keep going and he has to be careful. He is not "au fait" with Fisheries matters and naturally exercises considerable caution when Fisheries affairs are placed before him. Civil Service training inclines to cautiousness in everything. A Deputy Minister must watch his step or he'll get in wrong. The Departmental motto is invariably "It is safer to refuse than approve" and any scheme that is likely to be controversial or to corral some of the Department funds must be knocked on the head instantly. Keep out of trouble and spend no money is good logic for Deputy Ministers.

Then again we are cursed with Ministerial inactivity on our behalf. A good man is appointed to the cabinet portfolio of Minister of Marine, Naval Service and Fisheries. Full of zeal, he dives into the scope of his administration for something to build his name and future reputation upon. He studies the Marine; he stays up nights thinking about the Naval Service and delves into the Fisheries. The Marine appeals to him; there is a fascination about the Navy, but the Fisheries — this is a complicated and tough proposition, difficult to acquire, and far from the lime-light. He gives the Fisheries up as something beyond him and devotes his time and energies to Marine and Naval Service. All the Ministers are the same. They all balk at Fisheries. And our Industry suffers accordingly.

Neither Minister or Marine Deputy can be blamed for their attitude. It is the fault of the arrangement, and the real blame for the existence of such an arrangement lies at the door of the Premier, the Cabinet and Parliament.

The three mentioned have never in the History of Canada properly appreciated the value of the Canadian Fisheries. They have never shown much interest in fishery affairs. Political expediency demands that attention and care be given to those industries which employ the largest crowd of voters. That is why Agriculture is jollied along so nicely. Please the farmers

and you have a satisfied proportion of the population whose votes are numerous enough to break up a Government should they get "sore" on its actions. The fishermen's votes do not amount to a great many—so why waste time and money on them?

The Fishing Industry of Canada knows what it wants and the "WANT ADVERTISEMENT" at the head of this article expresses it briefly and succinctly. It will remain in print until the want is filled. The demand is reasonable and when acceded to will be productive of much good to the Industry. All our lack of progression; all our slowness in getting ahead and into our rightful place can be ascribed to the lack of a Department of Fisheries and a responsible officer administering it.

To bring this about it is up to every individual engaged in the Canadian fisheries to do his part. The Government does nothing voluntarily. The Canadian Fisheries Association has already placed a resolution before the Government asking for the establishment of a distinct Fisheries Department with a Deputy Minister in charge. It has already placed the matter before Premier Meighen and the Hon. C. C. Ballantyne, Minister of Marine and Fisheries. This must now be backed up by the Industry individually.

Every person who is interested in the development of the Fisheries should write the Premier and the Minister of Marine and Fisheries urging them to aid in the establishment of a Fisheries Department with a Deputy Minister of Fisheries in charge. And at the same time, the local Member of Parliament should be made acquainted with the situation and requested to use his influence in the House to the same effect. Local Fishery Associations and Boards of Trade should have the matter brought before them and resolution framed and sent to the Ministers mentioned. Such a whole-hearted demand cannot be ignored and the Industry will have recorded their ideas in no uncertain manner.

Until we get a distinct Fisheries Department, a Deputy Minister with direct control of fisheries administration and direct access to the presiding Minister, we'll never get anywhere.

"SHOULD HAVE DEPARTMENT WITH DEPUTY MINISTER."

An Opinion from an Authority.

In his valedictory address at a Vancouver banquet, Col. F. H. Cunningham, recently retired Chief Inspector for B. C. Fisheries, and an official with 37 years service in the Federal Fisheries Department, stated:—"The Fisheries..... should be given her own general manager in the person of a Deputy Minister of Fisheries who should take the full responsibility and be absolutely responsible under the Minister for the future progress and development of this vast estate (the Fisheries)."

CANADIAN FISH IMPORTS IN ENGLAND.

During 1919, Great Britain imported fresh fish to the amount of 32,605 cwts valued at £147,705 from Canada. Canadian canned sardines 5,658 cwts, valued at £45,750; canned lobsters 31,564 cwts valued at \$601,177; fish cured or salted 11,856 cwts valued at £56,164. Canadian canned salmon amounting to 487,402 cwts and valued at \$3,457,516 were also imported while from the United States they imported 475,865 cwts valued at £3,047,524. In the latter item Imperial preference is conspicuous by its absence!

NOVA SCOTIA SALT FISH FOR 1920.

The Lunenburg catch amounted to 285,800 quintals—7,200 quintals short of the record catch of 1919. The early Spring trip sold at \$12.50. A break in prices occurred during the summer and export prices at present are quoted around \$7.50.

Canadians did some good business in the West Indies and Brazil last Spring through the Government control of fish in Newfoundland, but the Cuban market fell away owing to supplies of Norwegian fish. The outlook for consignment business is not good at present, and large stocks on hand will have some difficulty to find a market.

Cost of production is too high to meet the low prices quoted and re-adjustment is absolutely necessary for the season of 1921. The period of high prices is past.

Pickled codfish also dropped in price, but producers got clear at better profits than if the product were manufactured for export. Herring, Mackerel and Alewives produced a small catch, but stocks were cleaned up and demand was good.

In general, it is hoped that salt fish stocks will be cleaned up at a small profit, but the outlook for next year is uncertain.

LOBSTER PACK FOR 1920.

The total lobster pack of the Maritime Provinces amounted to 160,000 cases for 1920—an increase of 30,000 cases over 1919. The value of the 1920 pack was \$5,500,000—an increase of \$1,000,000 over the previous year.

The export of live lobsters to the United States was 20 per cent over 1919, but conditions in marketing the canned product were not favorable. Exports were made to England, and the Scandinavian countries principally. Belgium took a very much reduced portion of her usual import, while France, usually a good customer, took practically none. High prices and the rate of exchange are blamed for the poor market. The United States and Canadian markets for canned lobsters showed distinct improvement over other years, but there is still much stock unsold according to last reports. The packers claim that in spite of the big pack they have made no money, and Prince Edward Island, New Brunswick and Quebec packers expect to face a loss. Prices will probably reach pre-war levels.

AN INTERNATIONAL FISH DAY IN 1922.

The U. S. Fisheries Association have tentatively agreed to co-operate with the Canadian Fisheries Association in the celebration of National Fish Day on both sides of the line in 1922. The date will probably be the first day in Lent. Both Associations will get together at an early date to review plans and exchange ideas.

THAT AMERICAN-CANADIAN FISH MERGER.

The rumored American-Canadian merger of fishing concerns doing business on the Atlantic coasts of the two countries appears to be off. Since the huge stock promotion of the East Coast Fisheries went under, we imagine that all talk of fish mergers will be quiet for a while.

MAINE SARDINE PACK SHORT.

The Maine sardine pack will fall short of the average of 2,000,000 cases this year. Overstocked markets, stocks undisposed of, and adverse conditions have resulted in a reduced output for 1920.

SOUTH AFRICAN MARKET FOR CANADIAN CANNED FISH.

According to advice recently received from South Africa there is an opportunity to put other brands of canned Canadian fish on the market there. At the present time salmon and sardines are the only varieties in demand.

Our Trade Commissioner in South Africa believes that if samples of other canned fish, along with labels, were forwarded, a market could be built up. He feels the opportunity is particularly favorable for developing a big a big market for canned codfish and canned haddock, and he suggests that the flat tins be used in preference to the tall.

Among the natives (seven millions) there is a considerable demand for sardines put up in cotton seed oil. In pre-war days the natives bought these for six cents a tin, but they could be sold today from 12 to 25 cents, which, it is estimated would mean from 6 to 12 cents, F.O.B. Canadian port. As to the better brand of sardines there is a chance for a market among the three millions of Europeans, but this is clearly a matter of North Sea competition.

Canadians should make an effort to get into the South African market.

PISCATORIAL PARAGRAPHS.

Develop Markets for Canadian Fish Within the Empire.

British Columbia frozen salmon destined for shipment to Great Britain must be decorated with three seals, wired or corded through different parts of the fish. This is to denote that the fish is not the product of British waters during the close seasons. If British fishery inspectors can't tell the difference between "oneorhynchus" and "salmo salar"—then their "eddication" has been neglected and Canadian fishermen are paying the penalty.

All who know Frank Cunningham, former Chief Inspector of Fisheries for British Columbia, will regret that he has retired. The Colonel was a great favorite with all who knew him and his knowledge of the Canadian Fishing Industry is profound. Though we regret his leaving official life, yet we tender him our heartiest wishes for a happy and peaceful period of retirement and trust that he will keep in touch with the Industry as long as he can.

The Lake Erie Fishermen's Association will hold their Annual Convention at St. Thomas, Ont., on February 1st, 2nd and 3rd. A splendid program has been drawn up and the proceedings will be fully reported in the next issue of the "Canadian Fisherman."

An Englishman was in a French restaurant looking over the fish section of the menu. "What have you in fish?" he asked the waiter.

"Ve have sole vit lemon sauce; sole vit parsley sauce; sole vit anchovy sauce; sole vit mayonnaise; sole vit Dutch sauce; sole vit oyster sauce; sole vit..."

"Hold on!" cried the other. "It seems to me that you French have only one kind of fish but a thousand sauces."

"Oui!" replied the waiter. "And you Eenglish—you haf a t'ousand kinds of fish but only vun sauce—Lea and Perrins!"

CANADA BARRELS & KEGS, LIMITED.

The well known firm of The Charles Mueller Company, Ltd., manufacturers of fish barrels and kegs of every description, and located at Waterloo, Ont., have reorganized and taken the name of the Canada Barrels & Kegs, Limited.

Mr. Leo Henhoeffer remains with the new company as Managing Director and Secretary-Treasurer and the entire staff are being retained. Canada Barrels & Kegs, Ltd., will maintain the quality of product and first-class service established by the Chas. Mueller Company and which has won the favor of the fishing industry for so many years.

FUNDY FISHERIES, LTD.

The above firm with headquarters at St. George, Charlotte Co., N.B., has recently been incorporated at \$100,000 capitalization to carry on a general fishing business. Senator I. R. Todd of Milltown, John C. Belyea, John C. Earle, St. John, Geo. E. Frayley and James H. F. Fray, of St. George, are the incorporators.

CALENDARS RECEIVED.

Connors Bros., Black's Harbor, N.B., produced a very fine calendar this year—being a colored reproduction of a famous painting portraying the Peace Conference in the Hall of Mirrors, Versailles.

Louis Cote, Reg'd, Dealer in Fish Oils and Salt Fish, Quebec, have produced a large calendar displaying a photo of their wharf at Quebec.

R. S. Hamilton Co., Fish Dealers, Fish Pier, Boston, Mass., have an unusual calendar showing a photo of Boston harbor partly frozen over and the fishing schooner "Rex" in the ice. Three members of her crew are seen walking ashore to the pier.

CHINOOK SALMON IN ONTARIO WATERS.

The U. S. Bureau of Fisheries recently received two specimens of chinook salmon caught in the Niagara River. They are the product of fry placed in the lake.

SLIME AND ICE ALLOWANCE REFUSED.

Ottawa, Jan., 13.—The complaint of the Canadian Fisheries Association re the charges by Canadian Express Company on net weight of fish (carloads) excluding allowance of 2½ per cent for slime and ice adhering to the fish when weighed, which it was claimed, was by custom allowed to the fisherman, is refused in a judgment written by Hon. F. B. Carvell, chairman of the Railway Board, and issued yesterday.

NEW ONTARIO GAME AND FISHERY OVERSEER.

With headquarters at Bridgeburg, W. H. Read, of Fort Erie, has been appointed to the office of District Game and Fishery Overseer for the counties of Lincoln, Welland and Haldimand. The appointment is made under the new arrangement by which positions will be centralized and many smaller appointments done away with. Instead of having a number of men on part time, under the new arrangement, there will be one district official on full time. George H. Briggs, who has been Game and Fishery Officer at Bridgeburg for a number of years, will be relieved of his duties. Inspector Read was recommended by Capt. James Huner, of the Game and Fishery Department and his duties have already commenced.

OBITUARY.**Captain William C. Smith.**

It is with great regret that we have to record the passing away of Captain William Charles Smith at his home in Lunenburg, N.S., on December 23rd. Captain Smith was the managing owner of the schooner "Delawana" and it was while he was attending the International Fisherman's Race at Halifax, that he was stricken with the illness which eventually resulted in his death.

William C. Smith was born in Lunenburg in 1858 and educated in the schools of his native town. In his early years he followed the sea as a fisherman, and master of fishing and coasting craft. In 1899, he established the business of W. C. Smith & Co. Ltd., Fish Dealers, Outfitters and Vessel Owners, and built up a large and successful organization through good judgment, expert knowledge and careful management. He built and owned many of Lunenburg's finest salt bank fishing craft as well as larger freighting schooners, and was the owner of the schooner "Delawana."

In public life, Captain Smith was a member of the Lunenburg Town Council for 14 years and served as Atlantic member of the Dominion Fisheries Advisory Board. He was a strong Conservative in politics and belonged to the Episcopal Church as well as to the A. F. & A. M.

In the fishing industry, Captain Smith was an outstanding figure and one of the leading men in the trade. He was very kindly and approachable and his passing will be universally regretted.

YARMOUTH FISHING FLEET GROWING.

The fresh fishing fleet of Yarmouth, N.S. is growing and this port seems to have captured the former glories of the up-the-Bay port of Digby. With the launch of the schooner "Patrick and Michael" of 140 ft. overall and 192 tons gross, Yarmouth will boast of the largest fresh fisherman in the Canadian fleet. A slightly smaller vessel will be launched in the Spring of 1921 for the same business.

The local fleet had a successful season during 1920 landing and shipping fish to the U. S. market. A growing business is being done with inland Canada. The need of an up-to-date cold storage is badly needed for the development of the industry.

NO MYSTERY FOR HER: SAYS CREDIT WAS DUE THE FISH.

It is hard to tell sometimes whether the humor of a child is intentional or accidental. The following is an extract from an essay on "Why Canadians Should Eat More Fish" from a little materialist-in-embryo in Nova Scotia:

"Another reason why we should eat more fish is that we should all follow the example of Jesus which is found in Matthew, 14th chapter, which tells how he fed the multitude of five thousand men, besides women and children, with five loaves and two fishes. It don't say what kind of fishes they were, but fish must certainly be very filling."

The Gloucester fishing schooner "Esperanto" — winner of the International Fishermen's Cup—is for sale along with other sailing schooners of the Gorton-Pew fleet.

SHACK AND SCROD.

The enthusiastic angler was telling some friends about a proposed fishing trip to a lake in Colorado which he had in contemplation.

"Are there any trout there?" asked one friend.

"Thousands of 'em," replied the angler.

"Will they bite easily?" asked another friend.

"Will they? Why, they're absolutely vicious. A man has to hide behind a tree to bait a hook."

A Terrible Threat.

If the U. S. insist on barring their markets for our products, we shall retaliate by prohibiting the holding of American Conventions in Quebec and British Columbia.

How to Predict the Winter Weather.

Split open a safe. If caught, prepare for a long, hard, lonely winter.

Split open a lip. The kind of winter you will get will depend entirely on whose lip you split open.

Split open a pair of kings to draw for a straight. If you fail to fill it, prepare for a tough spell. If you fill it, who gives a whoop about the winter outlook?

Split open a goose. If the wishbone is thin and transparent, it means a light winter for you. A tough winter for the goose is assured in any event.

Split open a Ford. If the driveshaft looks fairly well preserved you are in for a hard winter. If it appears to be a total wreck you are in for a hard winter. No matter how it looks you are in for a hard ride.

Split a bottle of near-beer. Tough winter, tough spring, tough summer and tough fall.

Other Reliable Tests.

Are your neighbors putting away an extra supply of coal? If, so, somebody's been lying. It'll be a hard winter before you believe further stories that coal dealers are on the level.

Is the hair on the cat unusually long? If so, this may indicate a severe winter. If the hair is unusually thin may indicate a light winter or the mange.

Is the hair on the old fur coat very thin? This is a certain sign of coming hardships from cold and frost.

How is the hair on the chin of the average citizen? If thick, prepare for a hard winter for barbers.

Never Failing Test.

Is your last year's overcoat out at the elbows? Is your wardrobe made up of two light summer suits? Are you living in a furnished room? Are you hoping you may get through the reason without suffering? "Prepare for the worst winter since the blizzard of eighty-eight."

If you want to get ahead—keep your head.

"How are you, Mrs. Flynn? How's your husband to-day?"

"Worse, Mrs. O'Brien. He's got the gangrene."

"Well, thank God for the color, anyway."

None but the Arabs of the desert affect to despise fish.—They can't get it.

Sunday school teacher.—"Johnny, I'm surprised at you. Why do you disbelieve the story of Jonah and the Whale?"

Johnny.—" 'Cause ma told pa she bet it was jest an excuse Jonah gave his wife fur not comin' home."



**COL. F. H. CUNNINGHAM RETIRES AFTER
THIRTY-SEVEN YEARS SERVICE IN THE
DEPARTMENT OF MARINE AND
FISHERIES.**



On August 15th, 1883, F. H. Cunningham became accountant in the Dominion Fisheries Department. During the following years up to the year 1911 he became successively assistant accountant in the marine and fisheries department, inspector of fisheries for Ontario, inspector of fish hatcheries for Canada, and superintendent of fish culture for Canada. In 1911 he was appointed Chief Inspector of Dominion Fisheries for British Columbia and up to December 31, 1920 held that position. Colonel Cunningham asked to be permitted to retire at the end of 1920 and with great regret Hon. C. C. Ballantyne, Minister of Marine and Fisheries finally acceded to the request and the Chief Inspector was granted superannuation.

During his holding of the office of inspector of hatcheries and of fish culture Col. Cunningham carried out many valuable and interesting investigations with the most practical results. The writer has had the pleasure of listening to the story of some of these investigations and great credit is given by Col. Cunningham to members of the hatchery and fish culture staff of the Dominion Fisheries department all over Canada, for their faithful work in connection with the department. Much exploration work is carried out by both sections referred to and the Colonel has taken personal part in much of this work. Perhaps the most hazardous of all his exploration experiences occurred some years ago when a canoe and boat journey was made down the Nelson River to Hudson Bay to investigate the sturgeon and white fisheries. Although of the most arduous nature the journey was successfully made and the objects of the expedition sustained. During his term as superintendent of fish culture the number of hatcheries in Canada increased from 22 to 41.

The appointment of Col. Cunningham to the office of resident chief inspector of Dominion fisheries for British Columbia was somewhat in the nature of an experiment as previously inspectors made their trips from Ottawa. The results have been so satisfactory that now each province in the Dominion has its Chief Inspector of Fisheries.

Colonel Cunningham's association with both those engaged in the industry and with the department at Ottawa has been of the most friendly nature at all times. His decisions have been rendered with the interest of the industry as a whole at heart, and, in the long run, have met with general approval from fishermen and employers alike.

The Colonel attributes a great deal of his success in the office of Chief Inspector of fisheries to the efficiency and loyalty of the staff of officers associated with him.

Colonel Cunningham's military career extends back to 1880 when he enlisted in the 2nd Norfolk Rifle Volunteers—a regiment recruited from his native county in England. He holds a medal with two clasps for the part he took in the North-west rebellion of which he is a veteran. In 1885 he set out from Ottawa as a member of a band of sixty composing the Ottawa

sharpshooters. These were made up of the best marksmen from the several regiments then stationed at Ottawa. Twenty of these, among them young Cunningham, took part in the Cut Knife Hill engagement of May 2nd. Two were killed and two wounded in this engagement. After his arrival in British Columbia, the Colonel held a commission in the 104th regiment Westminster Fusiliers, and during 1917, 1918 and 1919 was in command. Col. Leekie, then G.O.C. of the military district commented most favorably on the performance of this regiment.



Three of Colonel Cunningham's sons saw service over-seas. One with the 47th Battalion, one with the Machine Gun Corps and the third with the engineers. Francis served with the latter and was killed in the fighting in France during 1916. A younger son, not being able to serve overseas, carried on militia duty in Canada.

After establishing a record of service extending over thirty-seven years in one government department, Colonel Cunningham retires with the best wishes of all who have been his friends and associates during his long term of service. That the future years may bring a great measure of prosperity, good luck and happiness to the former Chief Inspector of Dominion Fisheries for British Columbia is the sincere wish of all who know him.



Report on a Visit to Fish Curing Establishment in Aberdeen.

By Professor J. J. R. MACLEOD, M.B., Ch.B., of the University of Toronto.

At the request of the Biological Committee of the Honorary Advisory Council of Scientific & Industrial Research, I collected some information regarding the methods for the curing of "Finnan Haddies" and other similarly cured fish, while on a visit to Aberdeen, Scotland. I visited (1) the fish market of Aberdeen, (2) the fish curing establishment of George Angus & Co., and (3) the Biological Station of the Fishery Board of Scotland at Nigg, near Aberdeen. The information which I succeeded in collecting from these three sources probably contains nothing that is new to those familiar with the fish curing industry, but it may nevertheless be of value to report it briefly, since one or two details in the method of preparation of the fish appear to be different in Aberdeen from those in Canada. It will save space if I piece together the information received from the three sources, so as to form a continuous statement of the processes through which the fish are put, from the time they are caught until boxed up in the curing works for the various markets.

Species of Fish Used and Method of Catching.

The fish are caught by trawl in the various fishing grounds of the North Sea extending into the Atlantic as far as the Faroe Islands. The boats are therefore sometimes a week or more at sea during the fishing trip. The fish are sorted when the trawl is brought on board and they are immediately gutted and placed in boxes with broken ice between the fish. These boxes are then stored in the hold, where they may lie for several days, with the fish at a temperature a little above freezing point. On arrival at the market wharf in Aberdeen the boxes of fish are put up to auction. The fish-curers buy mainly haddock (*Gadus Aeglefinus*). It is this fish alone that is used for making the famous "Finnan Haddie". Sometimes the sea bream (*Pegelus Centerodontus*) is used, but not as rule. The Norway haddock (*Sebastes Marinus*) is sometimes bought for curing purposes, but it is filleted before curing. Codlings (*Gadus Morrhu*) are also bought in various sizes, the smallest fish to be smoked closed, the larger ones to be filleted.

Certain of the fish arriving at the fish market from the boats have not been gutted at sea. These are usually the fish in the last trawl, and those caught by line. Before being placed in the market all fish are inspected by the Government officials, and any fish that are at all doubtful are not allowed to be sold for curing purposes. The condemned fish are sent to the fish manure factory. The chief criteria of freshness are the absence of decided discoloration and the odour of the fish. It may be mentioned here that Mr. Angus stated that so far as he knows, fish are never purchased for curing purposes after they have been for sale by the retail fish mongers.

The curing works are all near to the harbour, and immediately the fish are delivered they are distributed among the cleaners, who work in well-built long sheds. The first batch of fish arrive at the sheds about 10 a.m. Until recent years they arrived earlier, because the fish auctions used to be held in the early morning instead of in the forenoon as is now the case. I saw many boxes of fish after delivery in the sheds. They still contained pieces of broken ice and the fish looked fresh, and those I handled were stiff. The foreman distributes the fish on shelves next the cleaning troughs, on which they are prepared for soaking in brine.

Preparation of Fish.

The haddocks of average size are slit open and thoroughly cleaned by girls who are very expert at this work. The remains of the lining membrane and the so-called blood-bone (kidneys and blood vessel) are cut out and the opened fish scraped in a running stream of water by a rotating circular brush made of stout bristles. A slit is also made through the back muscles at the side of the back bone.

The fish are then put in the brine solution which is of such a strength that they just almost float in it. A crude hydrometer in the shape of a weighted bottle with a mark on it, is used to test the strength of the brine. Fresh salt is added from time to time, to maintain the brine of proper strength. Averaged sized haddocks are brined for thirty minutes, the time for removal of each batch being indicated by a wooden clock dial.

After removal from the brine, the fish are hooked by the "lugs" or "shoulders" on wooden pegs arranged on narrow boards. These are placed on racks so that the brine may drain from the fish, after which they are transferred to the kiln.

The above description is for average sized haddocks. The process is different for small haddocks or codlings and for large cod or other fish. The small haddocks and the codlings are not slit open completely, but they are scraped inside. They are soaked in brine for about twice as long as the ordinary finnan, and then hung on special metal hooks.

The large cod are filleted, a long strip of the back muscles being very deftly cut away from the underlying bones and immediately placed in brine for thirty minutes. The pickled fillets are then dipped in annatto stain to give them a yellowish brown color.

Smoking.

The smoking is done in small sheds with specially built hearths for the fires, and gradually tapering lums. The boards with the fish are hung over the dense smoke, being held at one end by brackets in the brick wall, and at the other by brackets coming down

from the front of the lum. The boards with the fish can be easily moved from place to place. There is one girl to attend to each shed, and these I saw contained about ten fires each. Each fire is made of a circle of peats smouldering on the inside of the circle. One duty of the girl is to see that the fires do not burst into flame, by sprinkling sawdust on them whenever this threatens. The sawdust is of soft wood or of oak, according to the cure desired. Another duty of the girl is to change the position of the racks, so that the edges of the fish do not become dry. This requires some experience to do properly. The time of smoking varies according to the market to which the fish is to be sent. For the Glasgow market (and local consumption) the pale smoke is desired, and for the Edinburgh market the dark smoke. In the former case the fish are left in the kiln only two or three hours, oak chips and sawdust being used; in the latter case they are left six to eight hours, and soft wood sawdust is used. After smoking the fish are allowed to become cool and are then immediately packed carefully in neat boxes. Sometimes two fish are tied together by the lugs before packing.

The 'Smokies' are cured in an entirely different

way. They are exposed in a confined space in specially built kilns to a much higher temperature, so that the flesh is actually cooked. The kilns consist of square "pots" built of wood or brick and sunk somewhat below the ground level. The sides of each pot measure about four feet. In the wooden pots a fire of billet wood is first lighted, and when it is 'clear' i.e. thoroughly ignited, and the dense smoking over with, the racks of fish are hung on ledges on the walls of the pot, and the top covered by a lid or by sack-cloth. In the brick pots white wood chips are ignited (below the ground level) and are kept smouldering by moderate ventilation through two or three holes at the bottom. The fish are then put in, and the pot covered. The fish are fired from for three quarters of an hour to one hour.

The fillets prepared from large cod are really not smoked at all. They are merely dried by hanging in the haddock kilns for half an hour.

Packing.

After the fish removed from the kilns or smoke pots have cooled, they are immediately packed in neatly made boxes, and practically always shipped on the same day.



Government Endorses National Fish Day.

MINISTER APPEALS TO THE CANADIAN PUBLIC TO RECOGNIZE FISH DAY.

Ottawa, Jan. 13—Canada's Fisherman's Day or National Fish Day, February 9, which has the endorsement of the Fisheries Branch, Department of Marine and Fisheries, and which is the subject of a special appeal issued today over the signature of Hon. C. C. Ballantyne, Minister of Marine and Fisheries, may yet be an international event. Officials at Washington, and Gardiner Poole, Boston, president of the United States Fisheries Association, have become enthused over the suggested internationalizing of the occasion. On behalf of the commercial fishing interests, Mr. Poole has advised the Canadian Fisheries Association that the suggestion will be carried into effect next year and there seems little doubt that Washington will come forward with official recognition.

The Post Office Department, Ottawa, has arranged for special cancellation postmarks to be used in the post offices of the chief centres throughout Canada, bearing the legend — "National Fish Day, February 9." These will be in use very soon.

The following statement was today issued by Hon. Mr. Ballantyne:—

"Every Canadian should be interested in the development of our natural resources. Of these our fisheries are among the greatest. Each and every Canadian has a share in this great national property and indirectly draws his dividends. His interest in seeing the markets for our fish develop should be just as intense as it would be were he

an actual subscriber of capital and drawing profits in actual cash.

"Of all the markets offered for Canadian fish the home market is the best. That puts each one of us in a position to assist in the expansion of this outlet.

"February 9 is Fisherman's Day — National Fish Day, designed to commemorate the thousands of brave fishermen who daily risk their lives to furnish us with food, and also to develop greater respect for the nutritive and economic value of fish as an item in one's diet.

"Let everyone, whether in the habit of eating fish or not, give it the premier place in the National Fish Day meals. If we are to develop a broader local market, each citizen — each shareholder in the industry,—must assist in the project.

"C. C. BALLANTYNE."

The attitude of the fisheries administration says Mr. W. A. Found, assistant deputy minister of fisheries, is to bring the industry to an advanced stage of development. To achieve this much is to be desired. The potentiality of our fishing areas presents the possibility of securing for Canada the foremost position among fish-producing countries. Whether this advantage will be developed depends upon the energy with which the commercial interests prosecute their claims in foreign markets, and equally as much upon the support of the Canadian people at home.

A recent bulletin issued by the Fisheries department states that the per capita consumption of fish in Canada is about nineteen pounds per annum, while in England it is approximately fifty-eight pounds. Countries bordering on the North sea average around forty pounds.

Reports from all quarters quite obviously point to depressed conditions in foreign fish trade, due to the poverty of foreign markets and the unsatisfactory exchange situation. Mr. Found, discussing this phase of the situation, stated that now was the opportunity for our Canadian people to take full advantage of fish as a food. Fish is in a different class from other food resources, he pointed out. While other sources are trying to recuperate from the exhausting strain of the war period, the sources of our fish supplies produce far in excess of the demand. Instead of intensified production, which is necessary in other lines, a stimulated demand is needed in the fish business. Our fish supplies would solve the problem of shortage in other commodities if people would turn to sea foods and let the depleted stock recover.

It is interesting to note that the marketed value of our Canadian fish in 1920 was in excess of \$56,000,000. Two-thirds of the total quantity landed, which was approximately 825,000,000 pounds, went into foreign markets. Our home market has not yet developed to a state where satisfactory distribution can be secured.

National Fish Day this year comes on the first day of Lent, and each year in future it will also fall on Ash Wednesday.

JAPANESE DEMAND FOR FISH SCALES FOR EXTRACTION OF FISH ESSENCE.

Trade Commissioner A. E. BRYAN.

Yokohama, November 11, 1920.—Inquiries have been received at this office as to whether fish scales suitable for the extraction of the shiny silver material known as fish essence can be obtained in Canada.

It is said that the fish giving the best scales for this purpose is the "Ablet," also known as the "Ablen," "Bleak" or "Blay." This is a small river fish about 3 inches long, and is usually found in most cool and temperate countries. The lower part of the body of this fish is covered with many small silvery shining scales. The sides of the fish are also productive of shiny scales. These are what is demanded. The scales of any other part of the fish are of no use.

It is said that owing to its small size the Ablet must be caught with nets of very small mesh. In some countries these fish are caught when they are milting in thick banks along the river sides. The scales are the richest in this shiny material some two or three weeks before milting, but during the milting the scales are of no use. After milting the scales regain some of their former richness, but are not as good as if caught before milting takes place.

Method of Preparation.

When the fish are caught they must be taken ashore while living and the silver scales scraped off. It is very important that these fish should be quite clean before scraping. They should be allowed to swim in a container of water before they are scraped. The scraping should be done with a dull knife in order to get the scales off without staining them with the blood of the fish. After the scales have been scraped into a clean receptacle they are mixed

with common marine salt and packed in air-tight tins. It is also important to let all the water drip from the scales in order that they may be packed as dry as possible. Too much dampness within the tin retards the long preservation of the scales in proper condition for use. The tops of the tins are then soldered and the tins are packed in wooden boxes.

If any one in Canada is able to supply these fish scales he is asked to communicate with the Canadian Trade Commissioner at Yokohama, Japan.

Note.—Mr. W. A. Found, of the Fisheries Branch, Department of Marine and Fisheries, was asked for an explanation of the use made of the extract referred to. He replied as follows: "Up to the moment such use of fish scales is not being made in Canada, though it is understood that a concern recently began operations at Eastport or Lubec, in the State of Maine, by using the scales of sardines or young herring that were being canned at the sardine canneries there. Very little information is available regarding these operations, but it is understood that the scales were treated with a solvent which extracted from them the bright colour matter, and that a pearly liquid was produced, which, it was stated, is used in the manufacture of artificial pearls."

SCALLOP FISHING REGULATED.

A license is now required for scallop fishing in N.B., N.S. and P.E.I. Close season extends from June 1st., to Oct. 15th. In Mahone Bay, N.S., season is open only from Dec. 15th to Jan. 20th. Scallops less than four inches across widest part of shell must be returned to water. Floating and soaking scallop meat is prohibited.—Order in Council, Dec. 9th, 1920.

Team Work.

"I say, Gadsby," said Mr. Smith, as he entered a fishmonger's with a lot of tackle in his hand, "I want you to give me some fish to take home with me. Put them up to look as if they'd been caught to-day, will you?"

"Certainly, sir. How many?"

"Oh, you'd better give me three or four—mackerel. Make it look decent in quantity without appearing to exaggerate, you know."

"Yes, sir. You'd better take salmon, tho."

"Why? What makes you think so?"

"Oh, nothing, except that your wife was here early this morning and said if you dropt in with your fishing-tackle I was to persuade you to take salmon, if possible, as she liked that kind better than any other."

—Los Angeles Times.

Lady.—"Do you want employment?"

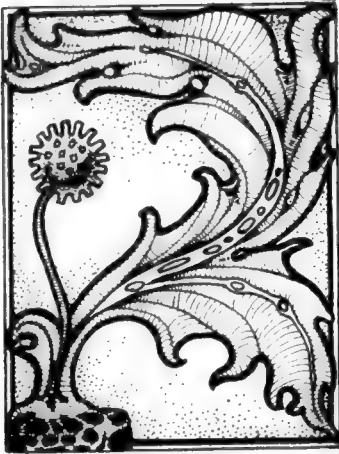
Tramp.—"Lady, yer means well, but yer can't make work sound any more invitin' by using a word of three syllables."

"Yes," said the specialist as he stood at the bedside of the sick buyer. "I can cure you."

"What will it cost?" asked the sick man faintly.

"Ninety-five dollars."

"You'll have to shade your price a little," replied the purchasing agent. "I have got a better bid than that from the undertaker."



Good Management in the Salmon Canning Industry.

By HENRY DOYLE.

An Instructive Article by a Pioneer Salmon Canner
and Student of Fishery Science.

Generally any man is considered a good business man when his efforts are crowned with financial success, and the longer his success continues, and the farther his sphere of influence extends, the more his accomplishments are lauded; the louder his praises are sung. But should adversity dog his footsteps, should competitors secure his trade, or should a shortage of raw materials curtail his output, then the commercial world takes an unfavourable view of his business ability. His past successes are weighed in the balance against his present misfortunes, and are found wanting. His misfortunes are put down to poor judgment. The inroads of competitors seem evidence of his slackened energy. Shortage of raw material is ascribed to lack of foresight. If in business on his own account he may carry on until the tide turns and success once more become his hand maid. If he is managing a business for others it is more than likely a change will be demanded and his services dispensed with before he can profit sufficiently from adversity to re-establish himself in the confidence of his associates.

But whether acting for himself or others it often happens that a true realization of existing conditions is not fully grasped by a business man until it is too late to rectify the situation. It is not enough to be able to see the road to success: to travel it we must possess a means of conveyance. And until we employ the means of conveyance on the very road we have to travel it is a useless implement for our purposes.

In the salmon canning industry today the operators are facing this very situation. For many years past the business has been a profitable one, and due to the combination of good packs and a ready market, most of those who followed this branch of commercial life have been successful. Their success has convinced themselves, their shareholders, and the general public that they were astute business men, fit to be intrusted with the management of large affairs. From the standpoint of past performance this confidence may appear fully justifiable, but if past successes were obtained at the cost of future operations, can we truthfully consider their management has been businesslike?

The pack of Red Alaska in 1919 was but 1,204,343 cases, and that of 1920 is probably no larger. Not since 1899 has the output been as small. The packs for the five years 1914 to 1918 inclusive averaged 2,269,350 cases, or nearly 100 per cent. more than either 1919 or 1920 produced. Pink salmon are two years old when they are caught on their return as mature fish to their spawning streams, and the depletion in Alaska in this species is even more marked. In 1917 the pack was

2,298,466 cases; the corresponding year of 1919 but 1,657,434 cases were produced. In 1918, 2,418,212 cases were packed, while from the progeny of that run only about 1,300,000 cases were put up this year.

But more serious still is the fact that from the spawning steams of Alaska comes warning that in 1921 and 1922 more pronounced decreases may be expected. With fewer fish to catch, fishing operations have become more extensive and more intense. The results have been that hardly any humpbacks arrived at the spawning beds, and in many areas there were practically no eggs deposited. To such localities it is out of the question to expect good runs in the two next seasons, or in any future seasons, unless these sections have their runs restored by artificial propagation.

A like condition prevails in the Fraser river fishery. The sockeye runs of to-day are but shadows of their former size. The "upper" Fraser watershed has been without any runs to speak of in three out of every four years since 1899, while the rock slides in the Fraser canyon in 1913 placed the fourth year; the "big" year; in the same category. The decrease in this sockeye fishery is notorious. It is so noted indeed that in contemplating it we overlook the fact that the humpback fishery is following the same downward path, and soon this species too will be as scarce as sockeyes are to-day. The pack of 1919 was far smaller than that of 1917, and that of 1921 bids fair to show a still greater falling off.

Good management would make some provision to prevent the extermination of the sockeye and humpback fisheries of both Alaska and Fraser river, but what steps are the cannery interests taking in either district to ward off disaster? I think we can truthfully say: Absolutely none. Each operator still devotes all his time and energy to secure as large a portion as possible from the remnants of the runs that are left, knowing full well that if he does not do so his competitor will; that staying his own hand will not result in his neighbour doing likewise. All squabble and fight to eliminate the other fellow's form of fishing appliance; each pretends to believe—although in his heart he knows otherwise—that if only his method of fishing was permitted no depletion would occur. They all waste money in political wire pulling to achieve their individual objects, while no attempt is made to bury their separate grievances and by working harmoniously and in concert, to build up the fisheries so that all forms of gear could be employed with impunity, and fish in plenty would be available for all.

In the early days of the Columbia river fishery every

canner worked for and by himself. Fish were plentiful, yet rivalry was keen, and the last thing a canner dreamt of was co-operating with a competitor. But by and by the industry fell upon evil days; fish became scarce; and packers became alarmed. Still they made no concerted attempt to prevent extermination; they left this to the government to do for them. The government tried, and by their efforts produced sufficient salmon by artificial propagation to maintain the run at some semblance of its former greatness. But they did not bring it back to anything like its prime. It was only when new management; new ideas; and new methods were applied that such success was secured as promises to make the Columbia fishery exceed the best records of its past. And to the credit of the Columbia river operators, they laid aside their squabbles over traps, seines, gill nets, and fish wheels, and financially and otherwise, co-operated to supplement the government's action in producing through artificial propagation sufficient salmon for all their appliances, and still provide an ample run of fish to the natural spawning beds and for hatchery requirements.

What Columbia river canners have done and are doing, should spur operators in other localities to take like concerted action. Never mind the government; let the government do what it can, in its own way, to maintain the supply; but let the canners supplement government action by co-operating themselves in propagation work in districts where the government is not operating, and with methods which promise greater success than is expected from the methods which the government employs. Take the money which to-day is being squandered in fighting each other, and apply it to fish cultural purposes, and there would be ample funds available for operating a dozen hatcheries on the rearing pond system.

If a farmer owned a farm of 66 acres and made \$100 per acre profit each year, he would be doing well. He would receive a net return of \$6,600 per annum. If he possessed such a farm and made no effort to plant crops and cultivate them so he could reap the profitable harvest, we would rightly say he was a poor manager and deserved to have his farm taken away from him. If he was not the owner, but managed the property for someone else, there would not doubt be a speedy change in management.

The case of the salmon canner is very similar. Rearing ponds of 66 acre area are of sufficient size to accommodate 132,000,000 young sockeyes or humpbacks until they attain the fingerling size. From 50,000 adult salmon, equal to about 4,000 cases of canned fish, the necessary eggs could be obtained. At Bonnierville hatchery young sockeyes have been successfully retained until they were 5 or 6 inches long; were marked before released; and matured fish, possessing such markings, returned in due course to the river waters. The Oregon authorities estimate that fully 10 per cent. of the marked fish were accounted for, and that with their present day knowledge of how to feed and take care of the fish while in the rearing ponds, a return of 26 per cent. to 50 per cent. Can confidently be looked for.

But even on a 10 per cent basis the 132 million fish a 66 acre propagation farm took care of, would produce sufficient mature sockeyes to fill "One Million Cases." Bonnierville hatchery officials estimate the cost per 1,000 at about 50c, and at this rate it would take \$60,000 to \$70,000 to pay production costs. If a million cases were secured the market value at to-day's prices

would be \$12,500,000, for Alaska Red, or \$20,000,000 for Fraser sockeye. Surely a satisfactory return for foregoing the packing of 4,000 cases, and on an initial expenditure of \$70,000 for seed, planting and cultivation.

And if the farmer-manager would be deemed censurable for neglecting his obvious opportunities, why should we look any differently on the cannery operator who, with still greater prospects of profit, yet makes no effort to obtain it. It is all very well to decry past artificial propagation accomplishments, but if initial failures in medical, engineering, or other scientific research work, had deterred men from continuing their efforts, where would mankind be to-day? All signs of our present civilization would be lacking, and in mode of living, and in understanding, we would be as are the beasts of the field.

It is not to be expected that at the start off anything like rearing ponds for 132 million fish would be installed. But if operators in various sections would examine streams adjacent to their canning establishments they doubtless would find localities where rearing ponds of an acre, or half an acre, could be installed; where cannery employees could do the work of caring for the young fish; and where food for their use could be processed right at hand. In this way the work could be accomplished with the minimum of expense, and the resultant matured fish returning to their native stream would give the cannery operator the best chance of reaping his reward. Should no returns be secured he could at least claim judgment and foresight for attempting to provide for the future, while if he built up the fishery the resultant profit would shrink the cost to insignificant proportions, and would establish him forever as a successful business man.

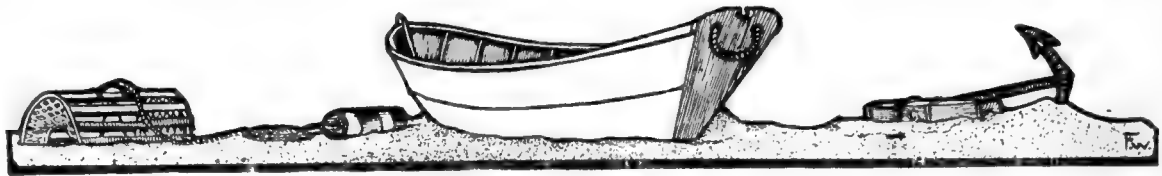
Through many years of effort, and vast expenditure of money, we have built up brands, selling connections, and an established trade for canned salmon. Is it good business management to jeopardize, perhaps lose all this, by exterminating the natural supply while waiting for the government to provide us with artificially propagated raw material? The farmer does not expect the government to furnish the seed, plow and cultivate the soil, and permit him to reap the harvest free of all production expenditure. Why should those engaged in the fishing industry be less self reliant? The returns they can look for from their 66 acre fish farming are a thousand times greater than a land farmer could possibly secure from his efforts, and yet we are facing the extermination of the industry without even an attempt on our part to prevent it. "God helps those who help themselves" apparently is not part of the creed of Pacific Coast salmon operators.

Years ago Columbia river salmon under Columbia river brands, supplied the trade of Great Britain. As time passed and this fish was not available for that market, Sockeyes and Red Alaska supplanted it. But the John West brand, the various Hume brands, and other well established Columbia river labels are still leaders in the English markets, although to-day they are used on Sockeye and Red Alaska salmon. If Puget Sound, British Columbia and Alaska fail to furnish salmon in sufficient quantities to keep well known brands before the public, what will be the consequences? The canners of Siberia and Japan, with their practically unimpaired fisheries will step into the breach; the well-known brands will be used on their products; and should our fisheries eventually become restored we will have to break a fresh lance against a

competitor armed with cheap cost of production, and possessed of all the advantages we enjoy to-day.

The rearing pond system of Oregon may not be perfect; it may perhaps fall far short of what the authorities claim for it. But at least it has proven better than the methods employed elsewhere, and if these other methods continue to be used by the government in their propagation work, why should the canners sit supinely by, and let Oregon alone demonstrate the workings of its system. Surely the canners of Alaska, Puget Sound and British Columbia have enough at stake to warrant their spending money to demonstrate the effectiveness of any and all systems that give promise of maintaining their supply of raw materials. They spend thousands yearly for fire insurance pro-

tection and consider it money well spent. What is artificial propagation but an insurance of raw material supplies? If one is beneficial, why not the other? To-day the packers are getting together through amalgamations, through voluntary agreements for pack curtailments, and through other means to preserve their selling markets and eliminate destructive competition in securing fish supplies. Why not use the same means and same organizations in an effort to restore the fisheries to their old time strength? Success may not come at once, but come, it eventually will. Woe betide us if we await that attainment until our brands have disappeared, and our trade has passed into the hands of Asiatic competitors.



A Voice From Nova Scotia

By MARGARET McLAREN.

With all of the necessities of life at their present high cost, and fish at its present low price, who but a capitalist can assume to become a fisherman?

Somewhere about a year ago, the storms, raging with incessant fury along this coast, stripped the fishermen of their gear; nets, ropes and grapplings being carried away by the raging seas. Since that time, it has taken their most industrious efforts to recuperate their losses.

This season brought little or no mackerel, and the numerous dogfish played havoc with the nets during herring time. All this, of course, is most discouraging.

On the west Halifax coast, boats are being hauled up and the fishermen are going from home to engage in more lucrative employment.

Any person who feels an interest in the fishermen, will readily see that the situation is indeed precarious. Winter is here and hard times seem just ahead. Altho' the fisherman catches fish, he can't catch groceries and clothing and a little toward emergencies in his family, (figuratively speaking) unless a fair price is given him for that which, he has daily, even hourly, drawn from the sea, at the risk of his life.

Beginning at the beginning, the prices of twine and rope are almost prohibitive. That is why the fishermen are engaging in other occupations. As a people we should assert our right to have things arranged so as our fishermen might be enabled to get their gear at a reasonable figure. We ought also to consume more fish per capita and if we did, we would be affording a larger home market for the fisherman's catch and economizing in our living costs.

And, to-day, on account of the apathy of both people and Government, fishermen cannot make both ends meet.

The writer goes to Church on Sunday. The congregation of that Church are mostly fishermen and their families. A few seasons ago, my neighbors were prosperous, and well dressed, comfortable and satisfied. To-day there is that strained air of expectancy, that sign of a brave front among them, that cau-

ses the writer who takes perhaps a little more notice of the barely perceptible, to wonder why things have come to such a pass. Mountinous prices for everything, and next to nothing for fish.

What is the remedy?

Many are suggested, but a good start may be made in the establishment of a stronger and better fisheries administration at Ottawa. At present, Fisheries are overshadowed by Agriculture, Mining and Forestry and these resources have been carefully nursed along by a paternal Government. The Fisheries are governed, as a sort of side-line, by the Department of Marine. The Marine administration is paramount. It should be secondary to Fisheries.

There is no manner of doubt but what the cabinet at Ottawa have failed to realize the potentialities and value of Canada's fishery resources. But little money is voted for their development and parliamentarians are unsympathetic and uninterested when fishery affairs come up in the House. Fishery estimates are ruthlessly cut to sums which are totally inadequate.

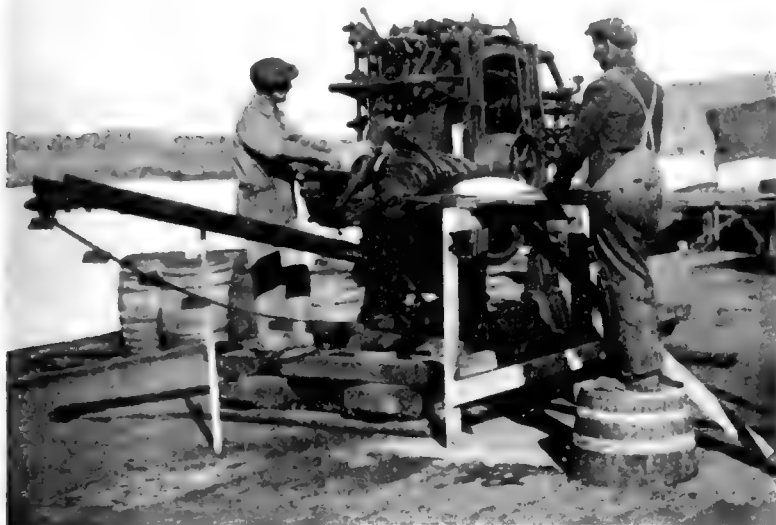
An energetic and capable Fisheries Department with money and power to accomplish things could do much to bring the industry to a prosperous plane. It could devise ways and means for making the fisherman's labor worth while; it could develop both the home and export markets by aggressive publicity and secure for the fishermen a larger outlet for their fish.

A futile administration reflects itself in an industry. When hard times come along, the trade, lacking the backing of a strong Government Department, have to fight adverse conditions themselves without assistance and it is always the primary producers who feel the pinch. Hard times in the Fishing Industry always goes back along the line to the fisherman and he suffers most because he is least able to stand the squeeze financially.

Let us hope that this fact will be realized and that the Fisheries will be called to their rightful place among the natural resources of the Dominion and given the sympathetic consideration and development which they deserve.

Dressing Fish by Machinery.

The "Iron Chink" Adapted for Cod and Haddock.



Messrs. Job Bros., & Co., Ltd., of St. Johns, N. F., have furnished us with photographs and a description of a machine, similar to the famous "Iron Chink" of the Pacific salmon fisheries, which is designed for use in dressing and cleaning cod and haddock. The photographs reproduced herewith are those of an experimental machine only. The finished commercial machine will be a trifle smaller and of much neater appearance. These cuts are shown to give a general idea of the machine and how the men stand to work it.

Messrs Job Bros., who are the Atlantic agents, furnish the following information regarding the apparatus.

"Those engaged in the Codfish and Haddock industry will be interested to hear of a machine which has recently been designed and will shortly be on the market.

This machine heads, spits and guts the fish, removes the backbone from any point desired, cleans and washes the interior of the fish and removes the black film or membrane from the napes, in fact it takes the round fish and performs all operations necessary to make it ready for salting or smoking.

The makers of this machine are the Smith Cannery Machines Co. Inc. of Seattle, Washington, U.S.A. This company, a number of years ago, evolved a machine for use in connection with the Salmon canning industry of the Pacific Coast of America.

We mention it merely because its success goes some way towards guaranteeing the success of the Cod and Haddock machine designed by the same Company.

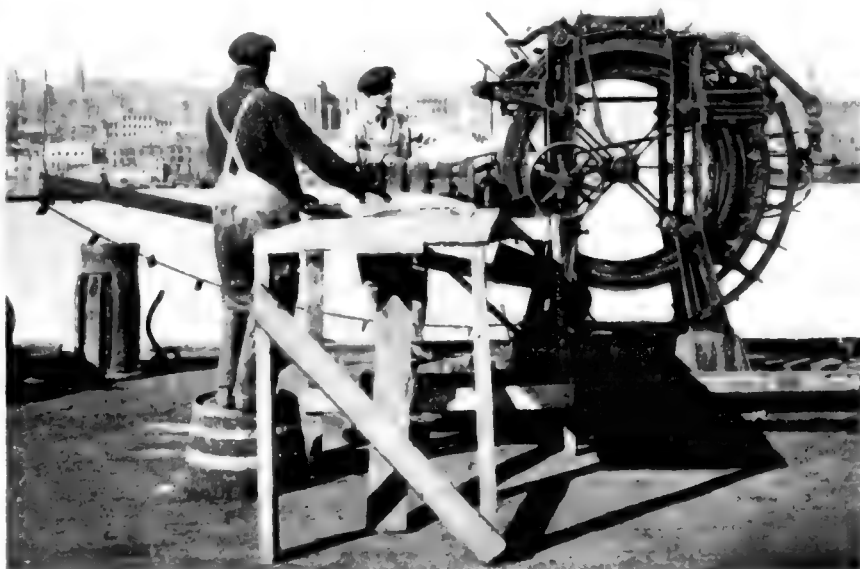
The operation in connection with splitting codfish and haddock is, as you know, somewhat different; the removal of the tails and fins is not re-

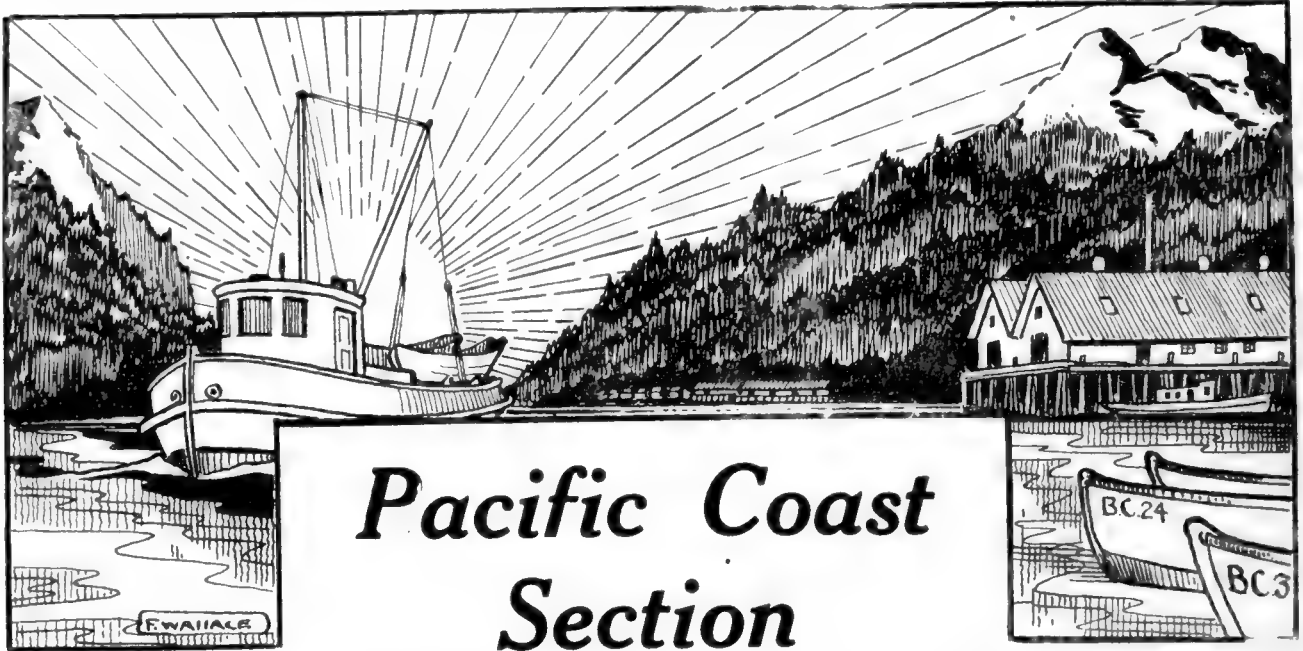
quired, and it is necessary for the fish to be laid open and the back bone removed from the head to a certain point near the tail.

At our suggestion, the Smith Cannery Machines Company undertook to modify the Salmon machine to enable it to perform this slightly different series of operations. The only machine as yet in existence is an experimental machine which is now in our possession here. From the demonstration we have seen with this, we are satisfied that the commercial machines which the Smith Cannery Machines Company is engaged in constructing will perform the operations required in an entirely satisfactory manner. In view of present-day labour conditions and the experience of the Salmon industry, we think it possible that the present machine will in time become indispensable to the codfish and haddock industry; indeed we have given evidence of our own confidence in its prospects by ourselves

contracting for the first two Commercial machines turned out, to be used at our establishments here and in Labrador respectively. These are now under construction and it is expected that they will be ready in time for the opening of our fishery next Spring.

In a general way we may say that the machine stands 7 ft. high and weights something over a ton. It is driven by any convenient motive power of about 6 to 8 H.P., and also, of course, requires a water supply. It is fed by two men, one of whom passes the fish into the heading apparatus, while the other places them in the main part of the machine which splits them, removes the bone from a point which can be adjusted at will, cleans and washes the fish and drops them into a wheelbarrow or any other convenient receptacle, or into a conveyor as may be convenient.





Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd. 528 Winch Building, Vancouver, B.C., Canada.

ARE WE GOING TO GET A DEPARTMENT AND A DEPUTY MINISTER OF FISHERIES?

Two years ago the Canadian Fisheries Association asked the Minister of Marine and Fisheries to appoint a Deputy Minister of Fisheries and to establish a separate Fisheries Department. The matter has been the subject of much discussion and debate by the Industry on the Pacific Coast and the opinion has been unanimous in endorsing the C.F.A.'s idea.

Organizations such as the B. C. Salmon Cannery Association and the Vancouver Board of Trade are now asking the Premier to separate the Fisheries Department from the Marine and to appoint a Deputy Minister of Fisheries. They have requested that the man appointed be one who is fully qualified to carry on the duties of the office with a thorough understanding of the requirements and scope of the Industry.

The request is coming from those who have their money invested in the fisheries and who have felt the lack of a sympathetic and aggressive administration. They have suffered under the present system and desire the appointment of a Deputy Minister of Fisheries who will be in a position to advise and place before the Minister all matters requiring his sanction without the futility and injustice of leaving such things to the "say-so" of a Deputy Minister of Marine.

NATIONAL FISH DAY IN VANCOUVER.

President "Al" Hager of the Canadian Fisheries Association, whose home town is Vancouver, has passed the word along to get busy on NATIONAL FISH DAY, FEBRUARY NINTH. He says: "This is going to be the biggest National Fish Day ever put over in Vancouver!" Now, when "Al" makes a statement like that, it means something doing, and the rest of Canada's Fishing fraternity will have

to do some hustling for the "high dory" record. The public of Vancouver, and every other British Columbia city and town, will have their pick of every variety of fish on that day whether they want it fresh, cured or canned. British Columbia always made a good celebration of National Fish Day, but plans for the coming event are designed to beat all previous records.

LECTURE TOUR BY COL. CUNNINGHAM TO ASSIST IN THE MARKETING OF CANNED PINK SALMON IN UNITED KINGDOM AND ON THE CONTINENT.

If the plans under way ultimately mature for the proposed lecture tour of Col. Cunningham in the United Kingdom and on the Continent it is to be hoped that the greatest good may result from it.

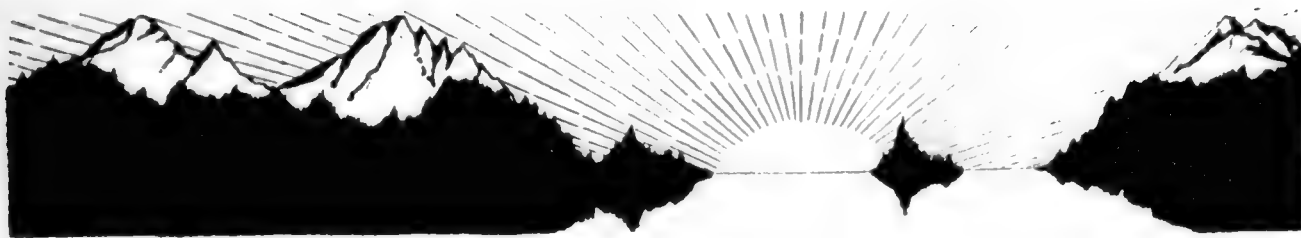
To obtain the best and most lasting results; definite plans for the right kind of publicity before, during and after the tour should be carefully arranged far enough ahead to assure the broadest kind of distribution of news in connection with the campaign.

Assured co-operation of distributors of canned salmon in the United Kingdom and on the Continent must be definitely arranged before anything else is done. The public should be given plenty of notice of the lectures. The firms handling canned salmon should carry on an advertising campaign of sufficient scope to insure good returns.

Unless the plan of campaign is broad, comprehensive and of sufficient duration the expense of such a lecture tour will be time and money thrown away.

Properly planned and executed this lecture tour will surely be worth while. Colonel Cunningham is without doubt the best man available to make such a tour.

If he has the proper backing in the United Kingdom and on the Continent the best of results are bound to be obtained.



Banquet To Col. Frank Cunningham

Appreciation by Pacific Industry to Popular Fisheries
Officer on Retirement.

IMPORTANT ADDRESS BY RETIRING OFFICER.

On January 12th at the Citizen's Club, Vancouver, the members of the British Columbia Salmon Cannery Association tendered a banquet to Col. F. H. Cunningham, who retired as Chief Inspector of Dominion Fisheries for British Columbia on December 31st, 1920. Col. Cunningham has served in the Dominion Fisheries Department for 37 years and has held his last office for over ten years.

Frank Burke, a prominent official in the Canadian Fisheries and Salmon Cannery Associations, acted as Chairman of the gathering and among the speakers who paid deserving tribute to the retiring official were Messrs H. B. Bell-Irving, W. H. Barker, A. H. Whitmore and W. B. Powell, all well-known cannerymen.

Col. Cunningham's valedictory speech was as follows:—

"It is difficult for me to realize my position here tonight, especially so as on previous occasions when we have met together it has been for the purpose of discussing official business, but now I am your guest, and I appreciate the honor you have conferred upon me in tendering this banquet, at the termination of my service as a Dominion Government employee.

I have experienced thirty-seven years and four months of continuous service in connection with the Fisheries of Canada, and if I stated I severed my connection with the Service without any regrets I would be false to myself, false to the Department, false to you and false to the industry. I have many regrets, and in looking back I realize mistakes must have been made but they have been errors in judgment rather than of intent.

As you are aware, and it has been stated many times, the position of Chief Inspector of Fisheries has not been a bed of roses, and during the past three or four years the horizon has been black with clouds, but the gathering here tonight conveys to me that the clouds were not as black as I pictured them and that I had more friends and sympathizers than I anticipated. A word of encouragement and sympathy would have, on many occasions, been gratefully received, and I am reminded of this by a letter I received from one of the Fishery officers in which he stated: "It is too bad that a man is allowed to leave a Service before he is told how much his efforts have been appreciated, and that we heap wreaths on a man's grave after he is dead when a word of encouragement might have kept him alive."

I wish to make it very clear that my superannuation and retirement from the Service has been grant-

ed at my own request, and that the existing relationship between the Hon. C. C. Ballantyne and the officials of the Department is of the most cordial and pleasant nature, and I shall be glad at any time to render them any assistance which my long experience might warrant.

I would like to say a few words on the question of administration. About 1883 a child was born and she was christened under the name of the Department of Fisheries and was given a father by the then Honourable A. W. McLellan, in the person of a Deputy Minister. The child grew and developed until 1890, when its estate was worth \$17,714,902. The expenditure in managing this estate amounted to \$226,000.

In 1890 this poor little child became an orphan, as its father died, officially, and she was transferred to the Department of Marine and came under the tender mercies of a step-father. Notwithstanding this, the child still developed and later on in life was given a new step-father in the person of the Deputy Minister of the Naval Service, but unfortunately for the child, the tail wagged the dog and she even lost her identity.

After being under the guidance of a second step-father for a few years she again had to look for new relationship, and went back to her first love, the Deputy Minister of Marine, now known as the Deputy Minister of Marine and Fisheries.

Notwithstanding all these vicissitudes, the child continued to develop, and today her estate is worth, to the Dominion of Canada, Fifty-six Million Dollars and she spends over One Million Dollars annually in the administration of the same.

Surely, with such a long probation, showing such successful results, she is now competent to manage her own affairs, and the time has been reached when she should be given her own General Manager, in the person of a Deputy Minister of Fisheries, who should take the full responsibility and be absolutely responsible under the Minister for the future progress and development of this vast estate.

I will now say a few words on the value of the salmon fisheries to the commercial life of this Province. This is a question which does not appear to be fully appreciated by the general public, and the large investments in the industry generally are not given credit for the important part they play in keeping the Province of British Columbia one of the foremost in progressiveness and commercial value.

The figures I will give are most conservative and

are based on the salmon pack of the past year, which was 200,000 cases less than the previous year. To start with, there is a capital investment of nearly Sixteen Millions of Dollars and the sum of \$3,892,000 was paid to those who produced the raw material—that is, those who earned their livelihood by fishing.

Over Two Millions of Dollars were paid in wages to Cannery employees and the number of persons employed in the fishing industry was over 17,000. To be added to the above, over \$300,000 was paid for supplies—such as groceries and produce, and the cans used in putting up this pack cost over Two Millions of Dollars.

The majority of the expenditure for supplies and cans was in the City of Vancouver, where labor is employed in preparing and manufacturing all these requirements.

The lumber business also benefits by the manufacture of boxes, and the shipping companies receive their share of the expenditure for freight purposes.

It will thus be seen that the canning industry of British Columbia is one of the greatest supporters of the commercial life of the Province, and when this work is all done and these immense sums of money paid out within a period of about four months, it is a stupendous undertaking, and those who are willing to gamble in the fishing business deserve the support and sympathetic consideration of the Government and the public.

Fishing is a pure gamble, and the man who puts his money into a Cannery accepts 75 per cent of that gamble, as his Cannery must be placed in repair, supplies must be on hand, and, in fact, his money is all expended before he gets One Dollar in return, and his loss is very great if the run of fish should not materialize, or if the run is less than what he had prepared for.

I am of the opinion that the general public should be better informed of the value of the Fishing industry to the life of the Province, and I shall be pleased to know that action is taken in this direction.

It might not be out of place to say a few words on market conditions as they stand at the moment. I respectfully submit, Mr. Chairman, that a commercial investment of Sixteen Millions of Dollars is worthy of the sympathy and consideration of the general public and of the Government. Considering the crisis through which all commercial industries are passing, and the canned salmon business in particular, it is absolutely necessary that every consideration should be given to assist the industry as a whole, keeping in mind that the canners are seized with the necessity for conservation and for producing a high quality of goods, and that they are doing their best to build up Canada's trade by the efforts in their special line just as much as those engaged in other industries.

I understand today there are approximately 350,000 cases of fall fish in stock, and for which there is little demand. If the public of Canada could be brought to an appreciation of the food value of the various species of salmon indigenous to the Pacific Coast, there is no reason why this whole output should not find a home market. The public, however, appear to have very little knowledge of the

attributes of the various species of salmon, and are of the opinion that unless a salmon has red flesh it is of poor quality.

Each of the different species of salmon is distinct and separate, seeking different conditions for spawning purposes. The dog salmon has a higher value as a food commodity than any of the other species, and pink canned salmon carries a percentage of 19.75 of body-building material as against 16.45 for a sirloin steak—the steak costing 42 cents per pound and a pound of canned pink salmon can be purchased for 25 cents.

Hence, if the public could be brought to appreciate that color carries with it no food value and is only of value for appearance, the consumption of the fall varieties of salmon would increase very rapidly.

There is one word I would be very pleased to see obliterated absolutely from the salmon business, and that is referring to pink salmon and chum as "cheap" fish. In what way are these fish cheap? They cost just as much to pack as red fish and should be packed just as carefully. The only difference that can be referred to is that the raw product does not bring such a high price as it is caught by a cheaper method and in greater quantities, and thus reaches the consumer at less cost—consequently, cut out altogether the word "cheap" when referring to canned salmon of any variety.

You have heard it stated that I may have the honor of representing the canning industry of British Columbia in the capacity of Publicity Agent, and it is my intention if arrangements are completed, to leave for England at the end of next month in the interests of the trade. I fully appreciate I will have great difficulties to overcome, but I am going forth feeling that the progressive experiment which the canners have undertaken will be a success, and it is my intention to use every endeavour to get in touch with the consuming public and make them as familiar with the different species of salmon as the canners are themselves.

It is absolutely necessary that only fish of the highest quality should be canned, and as much care should be taken in processing as is done with the sockeye. If you put up a class of goods of the highest quality I am perfectly satisfied that the experiment of appointing a special agent to advertise your goods will be a huge success.

I do not suppose for one moment that immediate success will be met with; it will take time, but I hope that before the season of 1921 expires you will benefit from the progressive action you have taken. My aim is that the name of Canada, printed on the lid of a salmon can, shall be a passport to any table in the world, and this can be accomplished if your part is done on the fishing grounds and in the Canneries.

I cannot close, Gentlemen, without saying a word to you about my successor in office, Major Motherwell. You will find in him a man of high principle, a man of business, a man who is willing to receive you and discuss official business in an intelligent manner at any and all times, and I bespeak for him the same sympathy, the same kindness, and the same consideration that you have always shown me.

WHY THE FISHERIES DEPARTMENT DECIDED AGAINST GAS BOATS IN No. 2 DISTRICT BRITISH COLUMBIA.

The following results of a questionnaire sent out by the Department of Fisheries to secure an expression of opinion as to whether gas boats were desired for operation.

No. 2 district shows a decided result against their use.

Replies received from Fisherman in District No. 2 with regard to the use of Gas Boats in that District:—

	Whites		Indians	
	Yes	No	Yes	No
Gill-Netters				
Rivers Inlet District	52	55	..	24
Smiths Inlet District.	14	2	..	..
Skeena River District.	20	35	2	22
Bella Coola District	23	26	5	21
Naas River District	1	..	23	7
Namu District.	2	..	6	2
Unclassified	15	34	..	24
	127	152	36	100

Trollers.

District No. 2, whole district	46	1	..	1
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Licenses Issued, Season 1920.

Gill-Netters Licensed.	Whites	Indians
Rivers Inlet	424	321
Smiths Inlet	98	44
Skeena River	190	321
Bella Coola	81	48
Naas River	9	126
Namu	70	19
Butedale	26
Q. C. I.	4	10

Replies received from Gill-Netters	279	136
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Trollers Licensed.

District No. 2	373	159
Replies received from Trollers.	47	1

The Department felt as a result of the above showing that it was justified in deciding against the use of gas boats in this district.

VANCOUVER WHOLESALE FISH MARKET.

Halibut—Plentiful and prices are ranging from 12 to 16c per lb.

Cod—This variety of fresh fish is highest ever known in the local market bringing 15c to 16c. The dealers attribute the raise in price to the fact that a closed season goes into effect on January 15th and after that date for two months no fresh cod may be sold in Vancouver that are brought in locally. The reason being that the area right around Vancouver is to be closed until March 15th.

Herring—In good supply and selling at 5c to 6c per lb.

Smelt—Small and scarce.

Carp—From the Columbia River are being sold by the London Fish Co. at 12c per lb.

Rock cod—In plentiful supply, selling at 6c per lb.

Grey cod—Quite plentiful and bringing 5c per lb.

Soles—Arriving in good quantities and large in size. Selling at 8c to 10c per lb.

Sable Fish (black cod)—Arriving in good quantities and selling at 10c per lb.

Kippers—Selling at 9c per lb.

Kipperd pilchards—Selling at 12c per lb.

Smoked halibut fillets—Selling at 16c per lb.

No cod fillets at present being sold locally in Vancouver, on account of the high price of cod.

CANNED SALMON MARKET.

Prices on all grades that are being held are firm although there is no movement of stock to speak of. Sales are being made now and then but in small lots. Stocks are dwindling in the retail stores and these must be replenished. The packers that are holding any large quantities at all are just as firm in their prices as those who have smaller lots. Just as soon as there is any favorable change in the exchange situation with the different countries there will be a decided movement in foreign shipments. Every vessel sailing for the U. K. and Europe take a good sized shipment of canned salmon. Ships sailing for South America are getting some tonnage in this commodity also.

RATES FOR DRY SALT HERRING HAVE BEEN ADJUSTED ON THE PACIFIC COAST.

As reported in the "Canadian Fisherman" for December there was a considerable difference in shipping dry salt herring from Barclay Sound on the West Coast of Vancouver Island to the Orient and from Vancouver to the Orient as the herring had to be brought to Vancouver and rehandled. Shippers from the East Coast of Vancouver Island had a much lower rate than those on Barclay Sound which worked against the Barclay Sound shippers. This has all been changed since a meeting of the Pacific Westbound Freight Conference in Seattle during the latter part of December. The rate from Barclay Sound is now \$15.50 to the Orient although the herring are shipped via Vancouver. The rate on herring delivered to Vancouver for shipment is \$10.00 to the Orient. This arrangement appears to be agreeable to all concerned.

DRY SALT HERRING MARKET.

Why is it that the white man packing dry salt herring cannot get together on some general footing and control the dry salt herring market?

The Japanese packer has never attempted to put up this commodity in anything like a standardized pack and have never carried on the business in a business-like manner. This year it looked as though there would be a change and that the white packers would have a chance to make a good thing, but before the season got fairly started there was a break and the result has been that several firms have lost heavily from their experience. Had the white packers stuck together and had one selling agent to handle the entire pack instead of bringing in some outsiders who knew nothing about the dry salt herring market there would have been a different story to tell. Let us all hope that next season will see the Japanese eliminated as a factor in the dry salt herring market and that the white packers will get together and have a real selling agency to handle the entire pack instead of having the fish hawked all over the coast by men who are only out for the easy money for the time being. This is a great big branch of the fishing industry and may be made big or spoiled for all time. It is up to the white man to get together.

Halibut Low and High During December.

Halibut prices went to extremes during December. The price has ranged from around 13c (low) to about 19c (high) per pound during the month of December. The catches variable on account of the weather.

Many men think they are hard-headed when really they are just pig-headed.

CANADIAN CANNED SALMON IN THE UNITED KINGDOM.

It is interesting to note the attention given to Canadian Products in the United Kingdom. A good illustration is an article published in "Production and Export"; a monthly published in London which is "The Journal of the British Empire Producers Organization". The author of the article is Mr. A. B. Revelton. The article in question was brought to the attention of the British Columbia Salmon Cannery Association and the Vancouver Board of Trade by the Agent General for British Columbia in London, Mr. F. C. Wade.

Canned Salmon.

Mr. Jesson, on the 2nd November, asked the Minister of Food whether he had received representations from or on behalf of the Canadian salmon cannery protesting against the continuation of control of salmon in this country; and whether he is aware that certain grades of salmon of a high food value are placed at a disadvantage in competition with other canned products which are uncontrolled, and that considerable resentment is being felt, particularly in British Columbia, against what is considered an injurious restriction upon the Canadian salmon trade in this country?

Mr. McCurdy: Representations have been received in connection with the continuance of control of canned salmon. I do not agree that the revised Canned Salmon Prices Order places canned salmon at a disadvantage in competition with other canned products. With regard to the last part of the question I can only say that I regret any exaggeration of Canadian feeling on a measure taken for the protection of the consumer.

Misleading Government Grading of Salmon.

The above question was asked recently in the House of Commons in regard to the Canadian Salmon question, and the reply would have led one to suppose that an increase in the control price had reconciled the canning industry to control itself. This is not the case, and quite properly so, for the present control is most unfair to the industry in British Columbia, and though it may be arguable whether the control of canned salmon during the war period was necessary or not, in any case, there can be no doubt that it did harm to the trade in this country. The greatest damage was done by the Government's policy of grading salmon. Instead of allowing canned salmon to be sold by its usual name of Sockeye, Cohoes, Pinks, etc., it was necessitated that all tins should be labelled as Grade 1, Grade 2, Grade 3, etc. The result of this was that the public, while they often bought pink salmon, as such in the past, would not buy it when it was offered to them as a Grade 3 article, as they thought it was merely an inferior class of goods, and not as it really was—a good article of its kind.

Owing to the depletion in the supply of Sockeye which has been decreasing for some time past, successful efforts had been made before the war after great difficulty to introduce pink salmon on the market. The Government's action practically killed this trade. The Government who held large stocks of pink salmon have only just realised these stocks now at ruinous prices, and stocks in private hands have been proportionately depreciated. Now, when all the damage has been done and the demand for pink salmon practically killed, the Government has abolished the grading of salmon, and merely proposes to fix a maximum retail selling price which, of course, will apply to the higher grades

of salmon, such as Sockeye and Red Alaska only, while control is in force and distributors' profits are limited to lose interest in pushing the goods. While their profits are limited on Red Salmon they are not likely to take any trouble to re-introduce pink salmon into favour with the consuming public. In our opinion, owing to the depletion in the supply of red salmon in British Columbia, the hope of the continued prosperity of the industry largely depends on the popularising of pink salmon which is still in good supply and it is in every respect an excellent article of food. Any action which militates against this is certainly contrary to the best interests of British Columbia, and the policy of the Government in proposing to maintain control under present conditions certainly answers that description.

Unfair Discrimination in Control.

It may be mentioned that tinned milk and canned meat have been de-controlled. Both these articles are imported into the United Kingdom in far larger quantities than canned salmon and are in no sense less essential foodstuffs. The discrimination against canned salmon is, therefore, unfair to that industry. There is no argument which can be adduced for controlling canned salmon which could not be brought forward with equal force for importing many other articles of food. The industry willingly accepted control during the war although its exercise, particularly in grading of salmon, did untold harm to the marketing of cheaper varieties of salmon in this market. It may, therefore, now fairly claim to be left to conduct its own business, free of restriction in the second year of peace.

A Comparison of Prices.

A note of some uncontrolled canned goods, and those fixed by the Food Controller for salmon is informative:

Retail Prices of Uncontrolled Canned Goods.

South African Crayfish, 1s. 6d. per ½-lb. tin—3s. per lb.

United States Lunch Tongue, 1s. 9d. per 6 oz. tin—5s. 3d. per lb.

United States Brisket Beef, 2s. 3d. per 12 oz. tin—3s. 4½d. per lb.

The Food Controller's Schedule of Salmon Prices:—

1 lb. Talls, 96s. per case (48 tins), 2s. 2½d.

1 lb. Flats, 96s. per case (48 tins), 2s. 2½d.

1 lb. Ovals, 102s. per case (48 tins), 2s. 4d.

½-lb. Flats, 130s. per case (96 tins), 1s. 6d.; 116s. or equivalent, 1s. 4d.

The Chairman of the B.E.P.O. and the Food Controller.

These figures speak for themselves, and came aptly as a particular example of the general principles laid down by the Chairman of the British Empire Producers' Organisation at its annual meeting. He said that, "Acting under D.O.R.A., the Ministry of Food is restricting the free importation of foodstuffs of every description, at a time when Danish bacon, Argentine beef, and mutton, and multitudinous questionable American products, are being given preference in storage accommodation, and in facilities of distribution in our markets. This position cannot be further endured. The Dominions simply won't stand it. The very best authorities positively assert that a free market not only in such foodstuffs as I have referred to, but in sugar and other products, would make for more regular supplies and would certainly lower prices to the consumer. It is indeed grotesque that we should

replace in times of peace the brains and experiences of the business communities of the Empire by those of gifted amateurs who constitute our Ministry of Food. Could anything be more suicidal to this country than the present policy of buying huge consignments of foodstuffs in the American markets at a time when we are refusing free entry of the same class of Australian, New Zealand, and Canadian products? Not content with shutting the doors in the face of the Dominions, the Ministry of Food are guilty of a great disservice, to New Zealand in particular, by keeping too long in cold storage mutton and other products, while allowing a free market to Argentine and other foreign competitive products. The Ministry is not only obstructing business and deliberately enhancing prices to the consumer with a view to making a fictitious departmental profit, but by its stupidity it is destroying the priceless goodwill of Dominion products. The Ministry had a war-time purpose; it has no sound reason for existence to-day."

It may be added that the present attitude of the Food Control administration seems to bang the door in the face of Canadian producers, and is a curious return for Canada's self-sacrifice and general imperial patriotism in offering preferential trade arrangements to the different members of the Britannic Commonwealth.

If the sole object of the Government were to disrupt the Empire the task could not be undertaken more effectually.

[Taking all circumstances into consideration everything points to this as the psychological time for the placing of the lower priced canned salmon before the British Public.]

CANADA'S SOUTH AFRICAN TRADE COMMISSIONER MAKES INTERESTING REPORT.

When Trade Commissioner W. J. Egan was in Vancouver a little over a year ago the writer was struck by many remarks he made in connection with his experiences in assisting to build up Canada's trade with South Africa. Mr. Egan showed keen insight into the tradesman's ways and also that he had studied the consumer's viewpoint. There is no doubt that Mr. Egan has been a most successful salesman himself and when all is said and done is not this one of the greatest assets of a successful trade commissioner? In the "Weekly Bulletin", on page 1630, of the Department of Trade and Commerce dated December 6, 1920, Mr. Egan gives good and sufficient reasons why British Columbia canners have not been able to reach the South African market direct during the past season. He also gives out strong hopes that future efforts to reach this market direct from British Columbia will surely bear fruit.

Eastern Canada will also be interested in the report in question.

There is only one thing to do in connection with the foreign business and that is for Canadian business houses to keep everlastingly at and push their goods as "Made in Canada."

BRITISH COLUMBIA CANNERS ASSOCIATION MOVES INTO NEW QUARTERS.

The British Columbia Packers Association have moved from their old quarters at 517 Granville St., which they had occupied for many years, to new and more commodious quarters in the New Union Bank Building, at 410 Seymour St.

PACIFIC MOTORSHIP COMPANY TO HAVE MONTHLY SAILINGS.

Mr. E. Cunningham, agent in Vancouver for the Pacific Motorship Company states that beginning with a January sailing his company will operate a monthly service out of Vancouver for points on the West coast of Central and South America. This will be of great assistance to those who wish to build up their connections with points that this service will reach.

CANNED SALMON OF QUESTIONABLE QUALITY SHIPPED TO VANCOUVER FROM SEATTLE.

On December 16th local cannerymen in Vancouver were tipped off that one or two scow loads of canned salmon which had been held up in Seattle on account of their questionable quality were on their way to Canada. Customs authorities were immediately notified, and as a result there are now stored in Vancouver, (in Bond), several thousand cases of canned salmon which, rumor has it, the authorities in Seattle were all ready to condemn and send to the incinerator. The salmon are supposed to be the property of the Kenei Packing Co., but as no application has been made for entry into Canada no names are given, although the above named firm were responsible for the fish while they were in Seattle.

Before this lot of canned salmon can be imported into Canada now they will be passed upon by the Dominion Food Inspector, and if they are at all in the condition they are reputed to be in there is no likelihood of their passing the customs. On the other hand these same fish may be shipped right across Canada to Montreal "In Bond" and no one can stop them, but before they could be imported they would have to be inspected by the Dominion Food Inspector, as he has the power to reject them. It is safe to say that the customs officials are watching these canned fish very closely, and there is little chance of their getting by for Canadian consumption.

TROLLING SEASON STARTS A MONTH EARLIER ON THE WEST COAST OF VANCOUVER ISLAND.

The first week in January saw about 12,000 lbs. of red spring salmon on the Vancouver market caught by the trollers near Barclay Sound on the West Coast of Vancouver Island. The second week about the same amount arrived. The weather has been against the fishermen getting the best results but it looks as though this would be a good season for this variety of fish on the West Coast if the weather permits.

NANAIMO HAS A FINE RUN OF HERRING.

For the first time in many years Nanaimo has experienced a run of fine large herring. There are more gill net fishermen working their nets in and around Nanaimo than ever before. It has always been the seiners that got most of the fish in this locality but this year the gill netter has had his innings. The fish are large and fat and are a joy to the smoke house operators for kippering.

Barclay Sound is quiet just now although one operator is freezing some herring for bait.

The Privy Council have decided against the Quebec Government in the dispute over tidal waters jurisdiction—the Federal rights having been upheld.

INSPECTION OF CANNED FISH.

There is a strong feeling among the salmon canners of British Columbia that the inspection under the meat and Canned Food Act as applied to canned salmon does not go far enough. To get the full benefit of a government inspection it is felt that the canned salmon should be inspected "after the fish have been canned" as well as before, and the department at Ottawa is now being approached with the request that the inspection act be enforced as regards the finished product. By having such an inspection the government certificate will go a long way in guaranteeing a first class pack of salmon of any variety.

FRASER RIVER INDIANS PROTEST.

Protesting against certain regulations passed in 1919 a large number of Fraser River Indians and White Settlers have signed a petition addressed to the Dominion Government at Ottawa. The regulations were put into force to assist in the preservation of the salmon which head for the spawning grounds and the regulations applied to parts of the river above Westminster.

It is cited in the petition that the Indians will "not use the old method of stampeding or going on the war-path, nor use unlawful means but will pursue the more civilized and right way."

The Indians feel that they should have their original rights restored and have signed this petition for this purpose. The petition will be presented to the Minister of Marine and Fisheries personally by representatives of League of Indians of Canada.

LOW PRICE CANNED SALMON ARE NOT REACHING THE PUBLIC AT RIGHT PRICES.

There is no doubt that if an investigation were made of retail prices in the different cities throughout Canada it would be found that Pink and Chum salmon are now retailing at from 5 to 10c per tin higher than necessary and in some cases 15c higher.

There is no doubt in the writer's mind that if these fine low priced economical canned fish were placed before the public at right prices the demand would increase immediately.

There is too much spread between the producer and the consumer on these particular grades of salmon. Why is it that the retailer will not increase his turnover by selling in larger quantities at lower prices and thereby increase his profit?

To the writer's mind the problem is a question of publicity not only to get the consumer to buy, but to get the sellers to push these varieties. Every argument is in favor of these low priced canned goods but they have not been marketed properly to see if the public will buy. It has been proven time and again that by right marketing methods any good food may be sold in large quantities.

The Canadian Market for low priced canned salmon is large and it is only a question of getting it before the public at right prices and in the proper manner. With every one practicing economy at the present time and with Lent coming on now is the time to give the public what they will buy and at prices that will move the goods.

MUCH INTEREST SHOWN IN POSSIBILITIES OF THE RE-HABILITATION OF THE FRASER RIVER.

So much interest has been shown by the public in the possibilities of the re-habilitation of the salmon fisheries in the Fraser River that the daily papers of the Pacific Coast are giving much space to reports of what have been accomplished at the Bonneville hatchery in Oregon.

This has especially been the case since plans have matured for the bringing of Mr. R. E. Clanton, fish commissioner of Oregon, to British Columbia to make a survey of the upper reaches of the Fraser River to report on the feasibility of carrying out a plan for the building of a hatchery and rearing ponds similar to those at Bonneville.

The "Daily Province" of Vancouver on January 10th printed a long and very complete article in this connection from the report of one of its correspondents who visited the Bonneville hatchery. Such publicity will go a long way toward accomplishing results that will be of benefit to thousands in the province and will again revive a great industry.

CLOSED SEASON IN UNITED KINGDOM ON SALMON.

According to instructions received from the Dominion Fisheries Department at Ottawa all frozen salmon shipped from Canada must be sealed in at least three different places. One seal must be placed on the head, one attached to the dorsal fin and one attached to the adipose fin. The seals shall bear a crown on one side and the word Canada on the other side. From inquiries this is the first intimation that shippers of frozen salmon to the United Kingdom have had of any closed season in that locality and shipments have been going forward regularly. The department suggests that by having the seals attached at the point of original shipment it will save the fish being taken from the package at the receiving port and sealed, then replaced in the original package. All salmon from Canada or any other country into the United Kingdom must be sealed before they reach the retailer's hands.

LARGE SOCKEYE EGG COLLECTION.

Ottawa, December 29.—A most successful sockeye egg collecting season has come to a close at Kennedy Lake, Clayoquot Sound, Vancouver Island. A total of 9,577,500 sockeye eggs were collected for hatchery purposes between October 23rd and November 13th, and in addition thereto the natural spawning grounds were well-seeded.

This condition is particularly encouraging when taken into account with the increased pack of the cannery which in 1916 was 1,600 cases of sockeye and in 1920 a little over 4,500 cases.

SS. "NEW ENGLAND" DOWN FOR ANNUAL SURVEY.

The New England Fish Company's steamer "New England" arrived in Vancouver on January 6th with 75,000 lbs. of fresh halibut. She came down for her annual survey and overhaul. The "New England" has been sailing out of Ketchikan, Alaska, where she has been delivering her catches to the plant of the company at that port. Capt. Scott who brought the steamer down has been in charge since last March and has made regular trips from Ketchikan since that time.



The Fish Trade in Belgium

(Canadian Trade Commissioner, A. STUART BLEAKNEY.)



SOME USEFUL INFORMATION FOR CANADIAN EXPORTERS.

Brussels, November 27th, 1920.—Strange to say, Belgium, although a maritime country all parts of which are relatively close to the sea, is not self-sufficient in the matter of her fish supply and depends on France, England, Holland and even the United States and Canada to meet her requirements.

Oysters have been imported from France, England and Holland to the amount of 664,153 kilogrammes, for nine months of this year, and other shell fish reach the very considerable figure of 18,000,000 kg., most of which comes from France and Holland.

Conserved fish is also a big item in the food consumption of Belgium. During the first nine months of this year there were imported 4.4 million kg. of preserved fish to a value of 20.5 million francs. Portugal is the most aggressive supplier of this article, shipping to the value of 8.5 million francs, England 5.1, the United States, France and Holland following in order with 1.8, 1.5, and 1.2 million francs respectively. Several other countries ship considerable quantities, among which Canada supplied to the value of 462,018 francs. Most of the fish is canned salmon, crayfish, lobster, herring and sardines. The French pack are noticeable as having a distinctive mark in the form of a fish stamped on the cans.

Chum Salmon Prices High.

To give an idea of the retail prices here—which of course vary considerably over different periods—the following prices taken at random in Brussels shops are given:—

Pink salmon, Canadian, 2.45 francs per pound tin.

Pink salmon, United States, 2.25 per pound tin.

White salmon, American Chums, 2.45 per pound tin.

It may seem strange that chums were selling at higher prices than pinks, but the fact remains that this was the case in stores not one hundred yards apart. This was not due to a preference for chums but probably to ignorance on the part of the buyers. Many individuals when buying salmon ask for "saumon" without paying any attention to the colour or grade.

Nova Scotia lobster was being shown in the windows of Brussels at 6.50 the tin of two-thirds pound and 4.25 for one-third pound. Other lobster not Canadian, and claimed to be inferior, was selling at 4.25 for a tin of roughly two-thirds pound. The Canadian article was very highly spoken of. It was labelled in very attractive fashion. Crayfish (*langouste*) was shown at 4.50 francs for a tin weigh-

ing slightly under a pound.

Portuguese sardines in olive oil in tins weighing two-thirds pound are to be seen at 1.75 francs. This is for the ordinary grade. A better grade from the same country was much dearer at 2.25 for a tin slightly over one-third pound. American sardines in flat tins 4 inches by 2 inches by $\frac{3}{4}$ inch high in olive oil were marked 1.60. French sardines were also in evidence at about the same price.

Conditions in the Canned Fish Trade.

A large and representative importer dealing in this line and having chain stores throughout Belgium, when approached in regard to conditions in the import trade, stated that formerly their purchases were made in the actual fishing season. Owing, however, to considerable fluctuations being experienced in the countries concerned, much prudence is now evidenced by buyers. In consequence of the violent fluctuations in exchange and in the price of the merchandise itself, all future purchases are risky and uncertain.

As regards packing, there is no fault to be found with present methods. As to salmon, the flat tin is always preferred, the fish in this case being packed by hand, according to this firm. Fish packed in glass is also unknown. Canned salmon is usually sold under its own label, although some importers are selling under a fancy label. In regard to quality, red salmon is the most sought after, but its prevalent high price forces the pink salmon to the fore. As to lobster, this firm states that it is the opinion of buyers that the Nova Scotia product keeps longer and is better preserved than that of another province mentioned. Lobster enjoys a better sale since crab has risen so in price but its preservation is not up to the mark. In regard to Canadian "sardines" (young herring), the firm claims that there is no hope of being able to place these on European markets as Europe has sardines of superior quality. In this connection it should be noted that considerable American sardines (young herring) were being shown in the stores in competition with European brands at competitive prices.

Fresh and Smoked Fish.

In regard to fresh or smoked fish, herring is apparently the big item, the import for the first nine months of this year amounting to 161 million kilogrammes valued at 19.5 million francs. As is to be expected, Holland is the most important supplier of these with 8.3 million kg. valued at 9.9 million francs for the period mentioned. The United King-

(Prices Quoted are in Francs.)

dom comes a good second with 5.8 million kg. valued at 7.4 million francs. Norway shipped 1.4 million kg. valued at 1.3 million francs. United States only supplied to the value of 40,000 francs. Canada does not appear as a source of supply.

Belgium also imported other fish and shell fish to the extent of 9.7 million kg. valued at 16.7 million francs, principally from Holland. It should also be noted that in Holland the Belgian importer finds an exchange situation almost as acute as that on the other side of the Atlantic.

Fresh Fish Markets.

Fresh fish is a popular article of diet in Belgium. The high price of meat has stimulated the sale of fish considerably. While fish has risen in price from 100 in 1914 to 460 at the present time, meat has risen in proportion with the result that people with small means are forced to substitute fish for meat to a greater extent than formerly. This situation has been ameliorated through the sale of frozen meat by the Ministry of Ravitaillement. It should also be noted that the religion of the country has a bearing on the sale of fish on Fridays. The number of large open fish markets is very noticeable in Belgium. As is also the remarkable difference in prices between the stores themselves, the store and contiguous markets, and between different markets in the same city, which seems to point to a lack of keen buying. A reason that suggests itself is the probability that the domestics in many establishments do the buying rather than the householders themselves, the domestic of course lacking the same incentive to economy.

Prices on the Brussels Fish Market.

Prices on the Brussels fish market were taken on October 29th, and were as follows:—

Crayfish..	18 francs per kilo.
	(Langouste).
Lobster..	12 to 16.
Sole..	8 to 10 francs per kilo.
Turbot..	8 francs per kilo.
Fresh codfish..	6 to 9 francs per kilo.
Whiting..	1.25 to 2.00 per kilo.
Stockfish..	2 francs per kilo.
Fresh herring..	1.25 per kilo.
New herrings..	30 to 40 per piece.
Smoked herrings..	30 to 40 per piece.
Skate or rayfish..	2.50 per kilo.
Dorado..	2.00 per kilo.
Plaice..	2.75 per kilo.
White salmon..	3.00 per kilo.

The prices on this date were rather low, and I would judge from experience that the average prices are somewhat higher.

Consumption of Fish in Belgium.

It is difficult to establish the annual consumption of fish in Belgium. Possibly a figure equal to twice the imports would not be very far out. The Brussels fish market last year registered sales to the value of 7,000,000 francs. The Belgian fisheries could be much more fully exploited by the use of steam trawlers. In Bruges, during the month of August, there was reported from Ostend sales of fish to the value of francs 1,488,207, of which only 528,068 were derived from steam fishing boats, 108,210 from English,

French and Dutch steam boats, and the balance from Belgian sailing boats.

Belgian Tariff on Fish.

Fish of all kinds, including such conserved fish as is not imported in boxes, jars, light wooden packing (*crouts*) or other covering of this kind and which is prepared by means of substances exempt from customs and excise duty, is free.

Preserved fish in boxes, jars, light wooden packing or other packing of this kind is charged duty at the rate of 30 francs the 100 kg. with the exception of caviar, which is charged 45 francs per 100 kg.

Preserved fish not in jars, boxes, light wooden packing or other packing of this sort and prepared with substances subject to duty, is dutiable at 24 francs per 100 kg.

CAN THIS FACT BE APPLIED TO MACKEREL MIGRATIONS?

Why mackerel should swim in a tank from left to right, and never otherwise, is a problem which the united intelligence of all members of the Sussex Sea Fisheries Committee has failed to solve.

It is known as the great mackerel mystery. For more than thirty years the Brighton Aquarium has kept mackerel. When first introduced to their glass tank, they persisted in trying to swim through the glass, to their grievous bodily harm. Presently an island was set up in the middle of their lake. Accidents at once ceased, and for more than twenty years the mackerel have been swimming steadily round that island, by day and by night, in season and out of season, and never once have they been observed to swim from right to left.—Tit Bits.

CANADIAN FISH CATCH FOR NOVEMBER.

Million Dollar Decrease in Value Against Former Year.

The total catch of sea fish on both coasts for the month of November was 382,208 cwts, with a value at the boat's side of \$1,155,153 against 441,650 cwts valued at \$2,138,513 for the same month last year.

There was a decrease of over 30,000 cwts in the aggregate catch of cod, haddock, hake and pollock on the Atlantic coast. The catch of salmon on the Pacific coast was 167,000 cwts less, while that of herring was 146,000 cwts greater. Halibut were taken in greater quantities by both Canadian and American vessels. The increase was 12,000 cwts, but of the total landed in British Columbia more than two thirds were brought in by American vessels. All the small halibut boats of Prince Rupert are now laid up for the winter.

Lobster fishing commenced in Charlotte and St. John counties, New Brunswick on the 15th of the month and the catch amounted to 3,610 cwts against 2,133 cwts for the same period last year.

Three men were lost by drowning in northern New Brunswick during this month.

BANFIELD CANNERY DESTROYED.

The salmon cannery owned by the Banfield Fisheries, Limited, situated at Grappler Creek, Barclay Sound, British Columbia, was totally destroyed by fire on November 13th, together with 106 tons of salted herring in vats and boxes.

Acadia's New Four-Cycle Engine For The Fisherman

A Detailed Description of the New Engine.

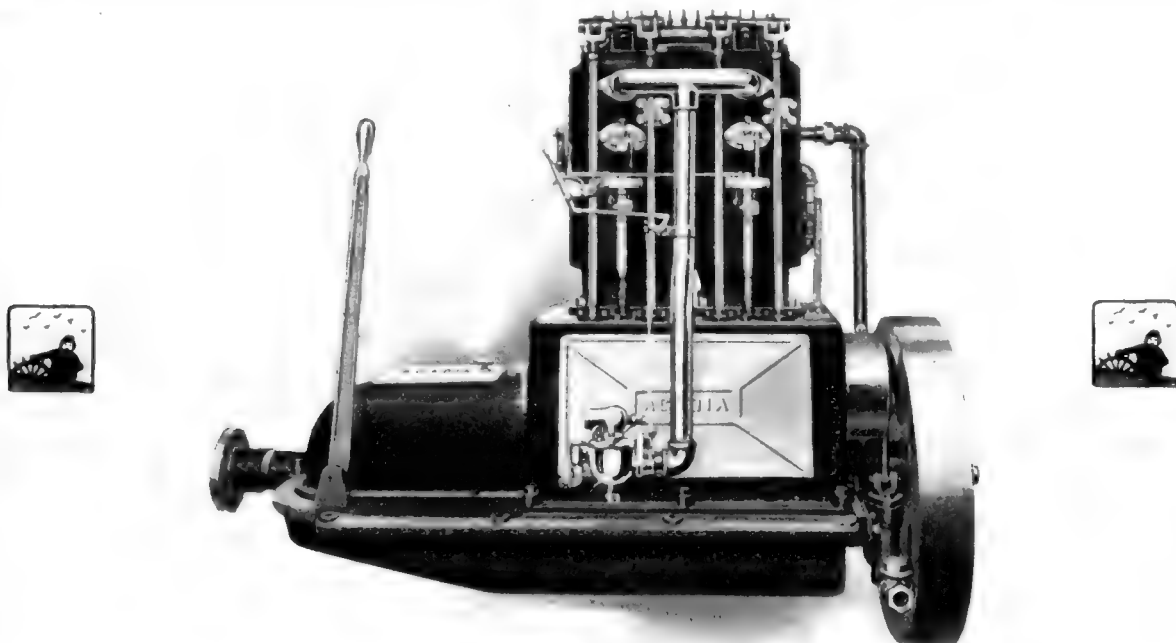
The reader will remember that some few months ago mention was made in these columns of the new "Acadia" 4-Cycle Engines, manufactured by Canada's largest manufacturers of Marine Engines, Acadia Gas Engines, Limited, Bridgewater, N.S.

During the last 13 years this Company has worked up an enormous business among the fishermen on the Atlantic Coast, as there are "Acadia" Engines in every fishing cove and harbor from the Maine border line to the Northern Labrador, and they assure the public that as in their two-cycle engines, these 4-cycle engines are all that they represent them to be.

On page 100 will be found their announcement stat-

turning Propeller are distinctive of the "Acadia" Heavy Duty Power Plant. Durability, Accessibility and Efficiency are the features which satisfy the most exacting customer, as a glance must prove.

Accessibility is a special feature of all "Acadia" 4-cycle Engines. They have removable Valves in Cages, removable Cylinder Heads, giving quick access to the Cylinders and Pistons for the removal of Carbon deposits. Through the combination of the removable Head and easy access to the Crank Case, the Connecting Rods and Pistons are readily removed through the top of the Cylinder without disturbing the Cylinder Block. A removable Cam



ing they are now in a position to fill orders for 4-cycle Engines in High Speed, Medium Duty and Heavy Duty types in 1, 2 and 4 cylinders ranging from 10 to 60 H.P. As may be seen by the cut in their advertisement the High Speed 40-60 H.P. 4-cycle engine is very compact and simple in construction. It is a very high class Engine of the most up to date Valve-in-Head design. It is equipped with two ignition systems, Bosch High Tension Magneto and Atwater Kent, has an electric starting and lighting equipment and all modern motor conveniences.

Their Heavy Duty Engines have been designed, constructed and tested to meet the requirements of the fishing trade, where the utmost reliability, consistency of performance, ease of handling, freedom from break-down, economy and general efficiency are positively demanded. The very best tried and proven engineering principles have been closely followed and the large bore and stroke, with a relatively low rotative speed, and the large, slow

Shaft through the side of the Base is a special feature, in fact, every provision has been made for convenient inspection and adjustment. Large doors on the Crank Case and Reverse Gear Housing afford easy access to the Bearings and immediate adjustment to the Reverse Gear. Passovers are provided for leading the water from the Cylinder to the Head, thereby preventing water from entering the Cylinders.

They supply a complete Electrical, Water, Exhaust, Fuel and Propeller Equipment; everything necessary for installing and any of our readers who are considering the purchasing of either a High Speed, Medium or Heavy Duty Engine, will do well to consult the Acadia Gas Engines, Limited, Bridgewater, N.S., before purchasing elsewhere.

B. C. WHALING.

During the recent whaling season the catch on the British Columbia coast reached nearly 1,000, including all varieties.

W. Irving Atwood,
President.

W. Elmer Atwood,
Vice-President.

Irving M. Atwood,
Treasurer.

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MONTREAL

TELLS FISHERMEN AND SCIENTISTS TO COME MUCH CLOSER.

Closer harmony between the scientist and the practical man in fisheries work was strongly advocated by Professor Raymond C. Osburn, of Ohio State University, of the recent annual meeting of the American Fisheries Society in Ottawa. To employ a poetic phrase they are "useless each without the other."

Professor Osburn accused our scientists of remaining aloof from the practical problems to be solved and from the practical fish man who knows what the industry wants. On the other hand he also criticized the practical man for his lack of sympathy for the scientist.

"Science," he says, "is a radical by nature, and practice inclines to stand pat. Such a team is a most difficult one to make pull together. It would be well if practice would advance a little faster on the heels of science, that we might make practical use of advances in knowledge as soon as they become available."

Professor Osburn pointed to the progress in agriculture as an illustration of the co-operation he would like. As to publicity, occasional reports and bulletins on fishery matters are issued from Government and state sources, while in agricultural work there are floods of such bulletins touching every phase of practical work and setting forth every new idea and every result of modern research. Through

the agricultural extension service they touch every part of the country.

In closing his remarks Professor Osburn made a very earnest appeal: "Let us scientific investigators and practical fish men get better acquainted for the good of both of us, that we may make common issue against the difficulties which stand in the way of greater production and utilization."

GREAT PROGRESS IN CANADIAN FISH CANNING INDUSTRY.

Canning as a means of preserving food was first invented as the result of a prize offered by Napoleon for some method of preserving food for his troops.

In 1864 canning of fish was started on the Pacific Coast, a salmon cannery being opened up at New Westminster. Year by year new canneries were established, and were successful in finding a market for their output. At the present time there are approximately 950 canneries in operation in Canada. Besides salmon, many other sea foods are canned such as sardines, herring, pilchards, mackerel, clams, haddock and lobsters. The value of the output of these canneries in 1918 amounted to more than \$28,000,000, the capital invested in such establishments being approximately \$30,000,000.

NO DECISION REGARDING EXPRESS RATE INCREASES YET.

No decision has yet been handed down by the Board of Railway Commissioners regarding the proposed increase in Express rates. January 20, 1921.

THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

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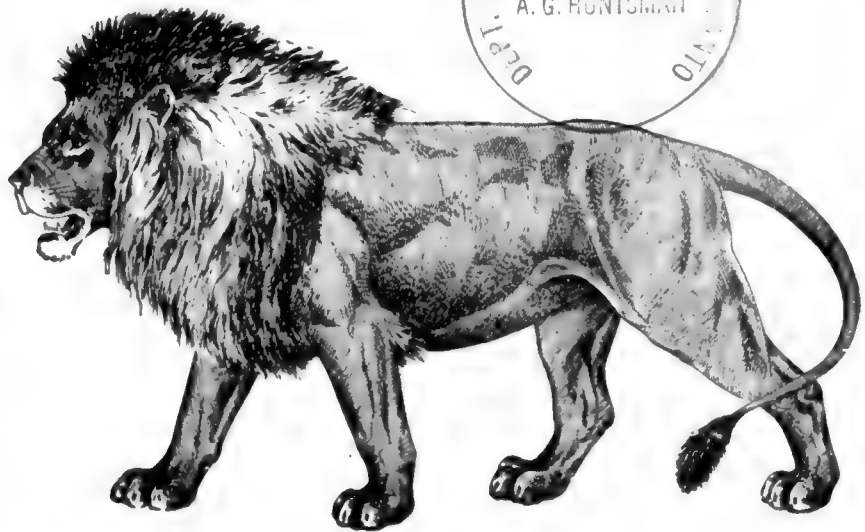
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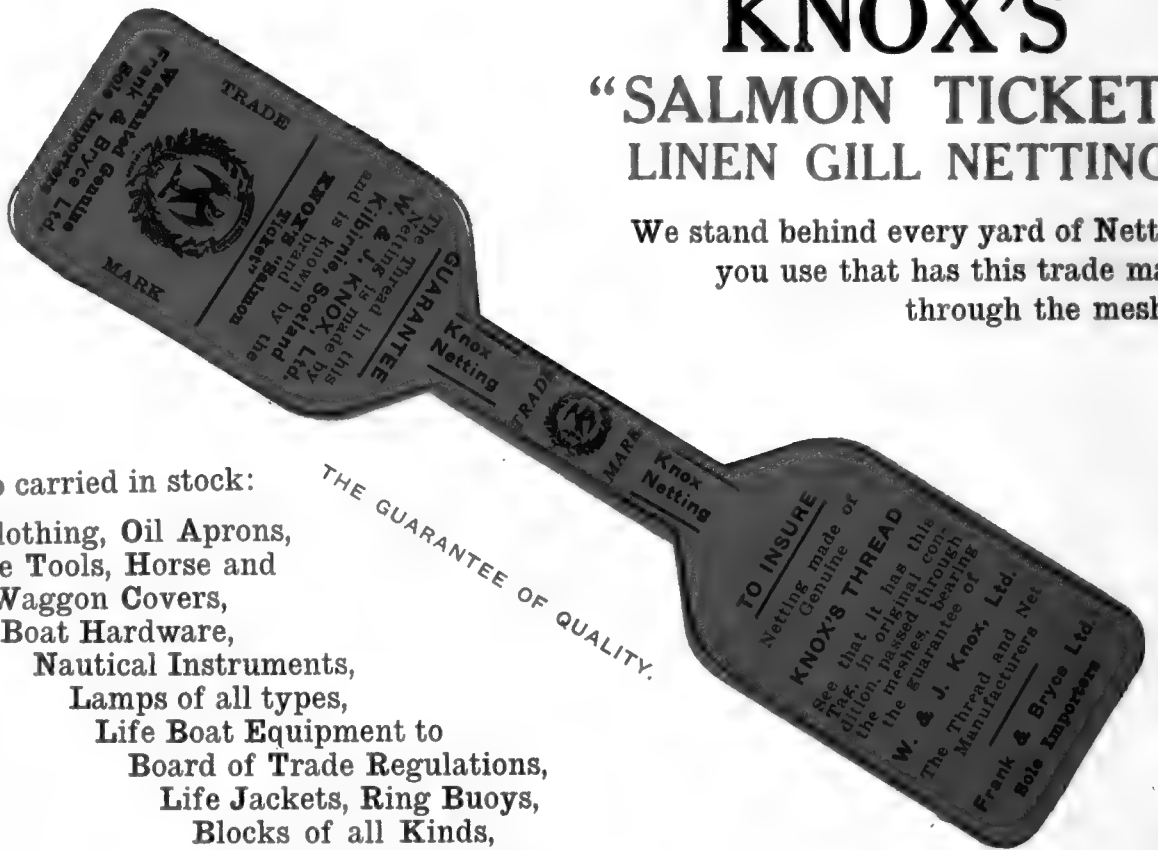
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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

THE FISHERMAN'S PRAYER.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliations. Also a Deputy Minister in charge who will have direct access to the Minister.

One would think in a growing country like Canada which looks for its future greatness to the development of its natural resources that those Departments which administer natural resources would receive the encouragement of the Government and the personal attention of a Cabinet Minister.

But such is not the case as far as the Fishery resources are concerned for we find that this tremendous asset with its enormous possibilities is administered as an appendage to a really minor Department, i.e. that of Marine. Intelligent comprehension of our Fishery resources is still further lacking when we find that their administration is under the aegis of a Cabinet Minister who has been saddled with two other Departments, viz: Marine and Naval Service.

The Cabinet must have been in a jocular mood when the disposition of the various Governmental administrations was made. They took all the Departments which had a nautical flavor, clubbed them together and shoved the lot across, to a Minister who was fond of yachting. The result is that we have Fisheries, Marine and Naval Service being looked after by one Cabinet representative.

In the old days of patronage, the most popular Departments were the "spending" Departments. They were the ones which gave the Minister prestige, for there is a certain nobility in holding the treasure chest. The Ministers who have held the nautical trident soon found out that Marine and Naval Service opened up more "spending" possibilities than any others in the triumvirate. These two Departments live on spending money. They bring nothing in—a fact which apparently appeals to the ruling gods at Ottawa. The only Department of the three which brings a revenue to the

country is the Fisheries, but because it is a revenue producer, it is the Cinderella of the trio and therefore of no account.

Three Departments are a tough proposition for one Minister to handle. He can't do it properly alone, so they give him a Deputy familiar with the Department who can advise and confer with him. They gave the Minister bossing the nautical trinity a Deputy for Marine and a Deputy for Naval Service, but they didn't think the Canadian Fisheries were worth the appointment of such an officer. Instead, they took the Fisheries Cinderella and placed it in the care of the Marine—thus saving the salary of another Deputy Minister.

Poor little Miss Fish (it ought to be "Miss Fit") must therefore recite her prayers and longings and aspirations at the knees of the Marine Deputy. If the latter is in a kindly mood and not too busy throwing "largesse" to the clamoring multitude of ship-builders and plate-millers who surround him, he may take her prayer up to the Great God who rules the Sweet Trinity. "Miss Fish tells me there is money to be made in dried codfish if your Majesty will—" begins the Marine Deputy.

The Great One looks up from considering a suggestion to spend a few millions in building a fleet of dirigibles to carry "two per cent" to the benighted Eskimo up in Baffin's icy mountains, and he frowns at being interrupted. When one's thoughts are of "a great and joyous spend" it is not pleasant to be disturbed with such vulgarities as "codfish."

"Ah, yes, Miss Fit's codfish. Tell her that Papa will look into it when he's not so busy." The Great One waves his hand in dismissal and the Marine Deputy salaams himself out through the green baize door.

"Nothin' doin', kid", he says to the anxious Cinderella.

"But there's money in it," she pleads. "Look what it will bring to the country! Think of the people it will employ! Think—"

The Marine Deputy pats her on the head. "My child. I'm not paid to think of making money. I'm paid to concoct schemes for spending it—"

"But my people are getting anxious. They are clamoring for it. It won't cost much."

"How much will it cost?" The Marine Deputy asks the question in a bored manner.

"About fifty thousand dollars—"

The M. D. chokes and sits up in his chair. "Fifty thousand dollars?" he ejaculates. "Fifty thou—Here, child, here's a nickel. Go and spend it on advertising fish. I'm busy—run away!" And he turns to O. K. his approval on a suggested expenditure of five million for building a dry-dock on Lake Winnipegosis.

The records of both the Marine and Naval Departments are records of one "prodigious spend". Within the last few years and when the country should be hauling in its horns, the Marine and Naval Departments have saddled the Dominion with a huge Merchant Marine and established a new Navy as a starter on a new spending orgy. On the Fisheries—the "one best bet" of the three—practically nothing has been spent on development work and the appropriation for Fisheries has been cut to the root.

Marine and Naval Service are non-productive Departments. The country's money pours out from them as from a cornucopia and practically nothing goes back. One would think that the Minister in charge of Marine, Naval Service and Fisheries would sit down in communion with himself and realize that there ought to be a balance—something coming in to offset the money going out. His "one best bet" to raise a revenue to balance expenditure is in developing the Fisheries. Whether it is his fault or that of the Cabinet of which he is a member does not matter. The fact remains that nothing is being done to develop our Fishery resources and no move is being made in the way of a start.

And it is not for want of advice. The Fishing Industry have pointed the way many times, and their demands are not unreasonable or excessive. *A distinct Department of Fisheries with a Deputy Minister in charge and a more generous appropriation for greater administrative and development work* sums up the desire of the Industry. Until this request is acceded to, the development of our fisheries will never begin under the grotesque arrangement of administration which obtains at present.

NATIONAL FISH DAY A SUCCESS.

From all quarters there comes word that the fish sales on National Fish Day exceeded by far those of the last national event in 1919. Furthermore, there are strong indications that the Lenten demand will be well beyond that of previous years. Retail fish prices have fallen considerably in recent weeks and this, along with the fact that there is an abundant supply in stock, should stimulate local demand.

The National Fish Day next year promises to be of greater importance than ever before because of the fact that it will not be a national event alone, but an international one. This year the United States interests were unable to make arrangements on such short notice and were obliged to push the date ahead a month—to March 9. But next year, and in succeeding years, there is assurance of international co-operation.

During the last year there seems to have taken

place a general awakening in the fishing industry not only in Canada, but on the other side of the border. This appears to have been brought about by the dislocation of foreign and domestic trade due to the exchange situation. Fish producers and distributors, like those engaged in other lines of business, found themselves surrounded by new conditions, and their uncertainty as individuals inclined them toward co-operative action.

In Canada, and in the United States, as well, an effort is being made to stimulate local demand for fish, and in order to supply interior markets improved transportation is being sought. Across the border refrigeration experts are at work to ascertain the best method of handling fish for shipment far inland.

At Montreal recently, leaders in the industry in eastern Canada, together with an official of the Fisheries Branch, Department of Marine and Fisheries, met with officials of the Canadian National Railways and the Grand Trunk for the purpose of securing improved fast freight service from points in the maritime provinces to Montreal and Toronto. The point emphasised was that while it is not essential that delivery of fish to Montreal and Toronto be speedy, it is absolutely necessary that fish should arrive regularly. The conference resulted very satisfactorily.

INCREASE IN EXPRESS RATES.

The determined opposition of the Canadian Fisheries Association to a general increase of 35 per cent on the commodity rates, in which fish are included, asked for by the Allied Express Companies at the recent hearings before the Board of Railway Commissioners, has resulted in the decision being given that the commodity rates are to be increased 20 per cent only.

The Association knew that some increase would be given the Express Companies but they felt that 35 per cent was too much, and in the interest of the consumer, the C. F. A. executive decided to enter a strong opposition to the demands of the Express Companies. Mr. D'Arcy Scott, a former Railway Commissioner, and a well-known Ottawa barrister familiar with railway traffic problems, was retained by the Association to fight the rate increases and he was assisted by the Executive and members of the Association all over Canada. The Board of Railway Commissioners held hearings at various centers in the Dominion and the C. F. A. Executive saw to it that its members were furnished with valuable evidence to present before the Commissioners in the various cities at which sessions were held.

The Decision of the Commissioners was handed down on February 2nd, 1921 and became effective on February 9th. Their judgment was that the Express Companies be permitted to increase their rates as follows: On first class goods, except food-stuffs, 35 per cent; on food-stuffs classified as second class, 25 per cent; on commodities, fresh fish, fruit, cream, etc., 20 per cent.

Commenting on the judgment, Mr. D'Arcy Scott reports to the Association:

"It is to be regretted that the commodity rates were increased because it means quite a lot to the shippers but very little to the Express Companies, as the percentage of the articles taking commodity rates to the volume of all the express

business is only 7 per cent. This is ascertained from an analysis of the Dominion Express Company's business handled on one day, November 12th, 1919. The total number of shipments were 31,901. Of this number, those taking commodity rates were only 988 which is 7 per cent of the whole. The percentage of the weight of the commodity shipments to the total weight of all shipments carried on that day would be rather larger. The total weight was 2,134,355 lbs. and the weight of the commodities shipped that day was 127,009 lbs.

I, of course, look upon the increases as merely temporary, and I hope that when the cost of operation of the Express Companies is reduced that a reduction in commodity rates will be brought about. The main reason why express rates were increased was because the wages of the Express employees had to be so much increased during the War and after it."

Had no attempt been made by the Canadian Fisheries Association, on behalf of the fishing industry, to combat the proposed increases, the rates on fish would have been increased still higher. The expenses in connection with the opposition were borne by the Vancouver and Prince Rupert Branches, and the Toronto and Montreal Directors of the Canadian Fisheries Association.

ENGLISH AND AMERICANS DEMANDING FISHERY DEPARTMENTS WITH MORE LIFE.

An outstanding personality in the Fishing Industry of the United States wrote us the other day regarding our campaign to secure a distinct and aggressive Fisheries Administration. He says: "We are endeavouring to revolutionize the U. S. Bureau of Fisheries in order to make same of maximum benefit to the commercial fisheries. It seems to me that this is a matter of the most vital importance to the fishing industries of both countries."

An illuminating letter appears in the British Fish Trades Gazette under the signature of Baron Heneage. On the subject of a distinct Fisheries Department, the writer says:—

"No Department ever gets proper attention from the Cabinet without it is directly represented therein, and this is more especially the case with the great fishing trade, because there is rarely any Minister who takes any interest or has any knowledge of its requirements, whilst, unfortunately, the members of the fishing constituencies in England do not show to much advantage in the House of Commons when any fishing questions are under discussion—unlike the Scotch members." (The latter have the Scottish Fishery Board administering the Scotch fisheries.)

One can almost quote the British peer's words with respect to Canadian conditions.

THE SALMON FISHERIES OF KAMCHATKA.

By arrangement with the "Fish Trades Gazette" of London, Eng., the CANADIAN FISHERMAN has secured the Canadian copyright of an informative article on the "Salmon Fisheries of Kamchatka" by Harry Somerset-Lister, F.R.G.S.—the article having been written up from the author's personal observation. We believe this will prove specially interesting to our Pacific Coast readers as well as being of general interest to all

QUEBEC FISHERY REGULATIONS CHANGED THROUGH PRIVY COUNCIL DECISION.

An Order-in-Council dated January 26th, 1921, rescinds Section 9 of the Quebec Fishery Regulations and substitutes the following in order to bring the Quebec regulations in line with the law as laid down in the Privy Council decision of November 30th, 1920.

Section 9—Leases and Licenses.

Fishing by means of nets, weirs, engines or other apparatus, or contrivances of any kind, whether fixed to the soil or not, is prohibited except under license or permit from the Minister of Marine and Fisheries:—

- (a) in the tidal waters of the Province of Quebec and
- (b) in the non-tidal rivers and streams of the Province of Quebec which are navigable and accessible by way of navigation from the sea.

PINK SALMON AND INSPECTION.

As an instance of how badly a system of inspection is required for various kinds of fish products, the following extract from a letter received from a large retail distributor in Canada is worth considering:—

"The writer is quite in accord with you, that there is room for considerable education throughout this country in regard to the food quality of pink salmon in comparison with Sockeye. We have very recently opened Pink Salmon which in flavor and richness were practically as good as Sockeye salmon, but there is a very strong tendency by the consumer towards Red Salmon, and it is hard to convince the public that light colored salmon are at all comparable with Red. In our opinion salmon is sometimes, in fact quite often, labelled Pink when it should not be, and undoubtedly, this is a tendency to hurt the sale of good quality Pinks. We do not say that these Pinks so labelled are not species of fish which are entitled to be called Pinks, but they are either caught in different waters from the better quality, or at a season of the year when the fish are not at their best, or some other season; and as before stated it would be a great deal better if this quality of fish were not sold under the name of Pink Salmon. We think that there should be a very high standard of quality for Pinks, and nothing under that standard to be labelled as such."

CANADIAN FISHERIES FOR DECEMBER 1920.

The total catch of sea fish landed on both coasts during the month of December was 478,666 cwts. with a value in first hands of \$964,181, against 433,939 cwts. valued at \$1,282,203 for the same month last year.

Of the total catch for December this year, 349,639 cwts. consisted of herring landed in British Columbia. This is 101,302 cwts. greater than the herring catch of that province in the preceding December. The value, however, is \$104,504 less, owing to the state of the Oriental herring market to which the bulk of the catch is sent.

The catch of haddock on the Atlantic coast was 10,000 cwts. greater than that for December, 1919.

Smelt fishing results in 15,649 cwts. being taken against 28,741 cwts. last year. The decrease is due to mild weather and the lack of ice on the rivers and bays.

Lobster fishing in Charlotte and St. John counties, N.B. since the season opened on November 15th gave

a total catch of 6,336 cwts. against 4,528 cwts. for the same period in the year before.

There were 9,060 cwts. of halibut landed in British Columbia against 14,044 during the preceding December. It is worthy of note that of the total landing of halibut at Prince Rupert in December last, 7,987 cwts. were brought in by American vessels and 808 cwts. by our own vessels.

INTERNATIONAL SCIENTIFIC COUNCIL FOR FISHERY RESEARCH.

The International Council for combined fishery research work by Canada, the U. S. and Newfoundland, which has been so strongly advocated by the Canadian Fisheries Association, is now ready to begin co-operative work as far as Canada is concerned.

Following a meeting held in Ottawa last September at which representative scientists and fishery officials from Canada, the U. S. and Newfoundland were present to discuss the formation of such a council, the Canadian Government has now taken action and a recent Order passed has appointed the following gentlemen as Canadian representatives on the International Committee: Mr. W. A. Found, Ass't. Deputy Minister of Fisheries, Loring C. Christie, LL.B., legal adviser, Dept. of External Affairs, and Dr. A. G. Huntsman of the Biological Board of Canada and Scientific Division, Canadian Fisheries Association.

This committee, together with similar committees from Newfoundland and the United States will determine what measure of co-operation is desirable for the scientific investigations of the deep sea fisheries adjacent to both coasts of this continent; and what general investigations should be undertaken. The body will consider problems that may be awaiting study and submit recommendations to the respective Governments.

STEEL VERSUS WOOD IN FISHING SCHOONER CONSTRUCTION.

The Shipbuilding Department of the Nova Scotia Steel and Coal Company, New Glasgow, N.S., have been investigating the possibilities of constructing fishing schooners, of the standard Lunenburg type, of steel instead of wood.

It is pointed out that the life of a steel vessel would be considerably longer than that of a wooden craft; lower insurance rates could be secured and the low rate would last as long as the vessel maintained her class which would be 25 to 30 years at least; owing to thinner plates and beams they would carry more cargo than a wooden vessel of the same size and they would stand the strain of sail-carrying much better than a wooden schooner which often has to be hauled out and re-caulked from this cause. Also by fitting with water-ballast tanks, the expensive (and unpleasant) job of loading and dumping stone ballast would be done away with.

The cost would naturally be higher, but in the long run with the low insurance premiums, the longer life of the vessel, and freedom from caulking, it would possibly be the cheaper vessel in the end.

As far as a steel vessel's adaptability to bank fishing is concerned, we can see nothing against it. Steel schooners in freighting and steel schooner-yachts are common enough so that there is no argument against them on the score of either cargo carrying or sailing

abilities. As to any action of fish slime or salt on a steel hull, the steel steam trawlers so numerous today would dispose of any argument of deterioration to catch or vessel itself.

Lunenburg vessel owners have already expressed themselves as being favorably impressed with the suggestion and the cost seems to be the only thing that prevents the immediate construction of such a craft for Lunenburg owners. But experiments are now being made as to the possibilities of building by means of electric welding and this may reduce the cost somewhat.

The question seems to narrow down to the problem. "Is it better business to build a wooden schooner which, though much cheaper in initial cost, carries more repair bills and a higher insurance rate and will not last as long; or to build a steel schooner at a much higher cost which will last longer and cost less in insurance and up-keep?"

There is a little point about repairs which occurs to us. The wooden schooner can be repaired by a carpenter in almost any Nova Scotia fishing port, but should a steel schooner receive damages she should have to be taken to a steel ship repair yard and the cost of repairs would be much higher and the loss of time must also be reckoned. It is easier to replace a plank than a plate, but, however, this is only a minor point.

THE U. S. TARIFF BILL.

It would appear that the demand on the part of American fish producers for a protective tariff against Canadian and other foreign fish is not the unanimous desire of the whole American fish trade or of the American public.

The Fordney Bill has passed the Senate loaded down with amendments, and it is said that the Congress will hesitate to accept it as it now stands. Many American papers condemn the Bill as being a measure designed to aid the American Western farmer and state that Eastern American business is being penalized to help the Western farmer make up his losses.

As far as fish is concerned, a vast number of the American fish dealers are for free fish and newspapers catering to the consuming classes are against duties of any kind on food-stuffs. The Gloucester "Times" in an editorial on the subject of the Fordney Bill concludes with the following paragraph:—

"The Fordney Bill will never become law, we believe, and the consumers in this country will not have to pay more for sugar, flour, wheat and beef. But its legislative history is redolent with subterfuge and deception."

Any action as regards fish tariffs will probably remain in the air until the Harding administration takes hold.

PRINCE RUPERT FISH SHIPMENTS TO UNITED STATES.

Official figures prepared by the U. S. Consulate at Prince Rupert show that the following quantities of salmon and halibut were shipped to the U. S. from the port during 1919-20.

	1919	1920
Salmon Lbs.	552,800	618,000
Halibut Lbs.	12,374,700	14,720,000

PISCATORIAL PARAGRAPHS.

The Lunenburg vessel masters are forming an Association to be known as the "Master Mariners' Association". The objects of the organization are to improve methods, and to economize, in the catching, handling and selling of fish. We think this is a step in the right direction and wish the new organization every success.

The schooner "Mayflower" — Boston candidate for the defence of the Fisherman's Cup — has made formal application for entry to the races. Gloucester fishermen, it is reported, contend that the "Mayflower" is not a bona-fide fisherman in the strictest sense of the word, but an imitation fishing schooner built for racing and financed by men not actually engaged in the industry. Evidently, however, the "Mayflower" is going to live up to the conditions set as she will make the trip to the Banks in the Spring and engage in fishing throughout the summer. The Marconi trysail rig with which she was equipped is to be discarded for the regulation Banksman's canvas and gear.

A speaker at the Prince Rupert Fish Day luncheon stated that fish had become such an obsession with Rupertonians that even the little children embodied it in their nightly prayers when they said, "Our Father which art in heaven, *halibut* be thy name."

National Fish Day will be celebrated in the United States on March 9th. The U. S. Fisheries Association are behind the movement and things are going with a great swing. Next year, the two countries hope to co-operate in celebrating one International Fish Day.

THE FISHY MUSE.

Arthur L. Millett, State Inspector of Fish for Massachusetts, and well known to the Industry in Canada and the U. S. has broken forth into a paean of praise after contemplating the possibilities of fish as a food. Friend Arthur sends us a copy of the workings of his muse in aid of the U. S. National Fish Day, and we consider it good enough to print herewith.

Boost Fish!

The time is coming—it's at hand—
 When folks all over this broad land,
 Who love a wholesome, "price—less" dish,
 Will turn their thoughts and tastes to fish,
 Some eat it now and know it's good
 And cheap and healthful; it's the food
 That makes more brains and also muscle
 And so will aid you in life's tussle.
 Its easy on the pocketbook
 And easy too for wife to cook.
 All kinds of meat are getting less.
 Well, I should worry, I confess,
 As long as fishes swim the sea
 There's plenty food for you and me,
 The kind of food we all should eat,—
 'Tis bad this eating too much meat.
 It slows one down, you lose your pep,
 But fish? Why fish will make you step.
 You'll feel like hustling every day
 And all your tasks will seem but play.
 Eat fish! Don't be a fish abstainer—
 Your health and purse will be the gainer.

THE FISHING INDUSTRY OF PRINCE EDWARD ISLAND.

By PAUL.

Although, last season, the Fishing Industry has been practically demoralized by the low prices, lobster packers are now busily engaged in preparing for the season's pack. The price to fishermen, will be much lower this spring than last, but after all, the net returns will be better than last year, as all material and food stuff are lower in prices, so that the industry will be carried on, this year, on a gain basis; even the fishermen, with lower prices per hundred for their lobsters, will be ahead of last year.

Inspector Gallant of this Province, has just published a tabulated statement of the fishing industry of Prince Edward Island, the first report of the kind ever made public.

Following is the report for the calendar year of 1920:

40,562 cases lobsters, packers' values..	\$1,398,450.00
Cod, Haddock, Hake, prices at boatside	66,773.00
Herring and Mackerel	70,111.00
Smelts and Trout	87,768.00
Eels, Tom Cod and Quahaugs	2,414.00
Oysters	22,423.00
	\$1,645,939.00

The capital invested in the fishing industry during the year 1920 was, for Vessels, Boats, Nets, Trawls, Hand Lines, Lobster Traps, Piers and Wharfs, Freezers and Ice Houses, \$912,350. People employed: Men, 3,801, Females 890.

It will be seen by the above report that the Fishing Industry of Prince Edward Island is of considerable importance, and there is no doubt, that if careful manipulation of the business was carried on, the yearly result would be most gratifying.

Along the North coast of the province, where Lobsters seem to abound in the early spring, many fishermen realized, last season, as high as \$1,800 per boat of two men. This was an abnormal sum of money to be made in less than six weeks, but lobster men were being paid as high as \$10.00 per hundred pounds. This coming season, the price will be much lower, but as I state above, the result will even be better, for both fisherman and packer.

Many lobster factories are exchanging hands this spring, some packers going out of the business and new ones coming in. It is pleasing to note with what stoicism some of the old packers are preparing for the new year's work.

Smelts are not as plentiful in our rivers as former years. The exporters, however, are getting big prices for the delicious little fish, but considerable losses have been sustained by certain ones, due to the carelessness of the transportation companies. In one case, a shipment of boxed smelts from Tignish to New York, was eight days in transit, reaching the market in poor condition, thereby making a total loss to the shipper. But the worst feature is that the Express Company does not wish to assume the blame.

A petrified fish about fifty feet long has been discovered in Utah. This is said to be the largest sardine and the smallest whale America has ever produced. — Punch (London).



National Fish Day, 1921



Montreal Held the Most Successful Day of All.

Montreal fish trade celebrated National Fish Day in most enthusiastic fashion and it was estimated that one million pounds of fish was consumed on the Day in Montreal and district. The wholesale distributors advertised freely in the local press, also the retailers. Posters were distributed by some firms and wagons were decorated with painted signs. One concern had a special moving picture film made of their premises and cold storage showing the packing and distribution of fish. This film was run at all the principal Picture Theatres in Montreal for ten days prior to the Fish Day. On the evening of National Fish Day, the Montreal members of the Canadian Fisheries Association and the local fish trade to the number of forty sat down to an informal dinner where fish was the principal item on the menu.

Fisheries Department and Deputy Minister Wanted.

Mr. A. H. Brittain and Mr. D. J. Byrne, both past Presidents of the Canadian Fisheries Association, in their addresses to the guests at the Montreal Fish Day dinner, both emphasized the necessity for a distinct Fisheries Department with Deputy Minister in charge if the Industry was to be developed as it should be developed.

• "In the sense that there is a Minister of Agriculture to direct the administration of the food resources which lie in the land why should there not be a Minister of Fisheries to direct the administration of the food resources which lie in the sea?"

This was suggested in the discussion of the fish dinner at St. Lawrence Hall, on February 9th, held in celebration of the Fourth National Fish Day of Canada, under the auspices of the Canadian Fisheries Association and Fish Traders in Montreal.

That the Montreal association was not alone in the spirit of the fish day celebration and in the feeling that the sea harvests and harvesters are worthy of more emphatic attention than has hitherto been paid to them in this country, was evidenced by a sprightly telegram addressed to the Montreal gathering by the president of the Association resident in Vancouver, saying:

"Vancouver meat packers put out of business this week by fishing fraternity. Every man, woman and child in Vancouver eating fish today. Window displays magnificent. Drink health to the Fisheries Association."

This message was received with applause by the company when read by Mr. J. A. Paulhus, the vice-president.

Should Have Deputy Minister.

The suggestion as to ministerial recognition of the fishing industry was voiced by Mr. A. H. Brittain, past president of the association, who referred to the fishery resources as one of Canada's greatest assets capable of indeterminable development. He saw no reason why the 60 million dollars it represented should not be increased to 160 millions, providing the industry received the attention which was its due, and expressed the opinion that a better administration of it would be had were the department placed under exclusive ministerial

supervision instead of being coupled with that of the Marine as at the present time. He thought they should at least have a deputy minister to whom the industry could look as the responsible head of the department and whose attention would be given to fishery matters alone. He recalled that the sailor who had won the international schooner race was a Canadian-born, one of thousands who would have remained in Canada had the development of the industry corresponded at all with the country's ability to man it.

Mr. D. J. Byrne, also a past president of the association, expressed concurrence in Mr. Brittain's suggestion believing that the industry would derive incalculable benefit and prestige from ministerial recognition commensurate with its importance, and this idea was also expressed by Mr. Paulhus, the vice-president of the association.

Dr. F. C. Harrison, of the Macdonald College, in proposing the toast to "The Canadian Fisheries," made happy reference to the delightful repast which the ocean and the cooks had provided for their delectation, and adverted to the work in which he has been engaged in connection with the Dominion Biological Board to determine the cause of certain defects, such as discoloration of canned lobster and salted codfish, which had militated disadvantageously against Canadian export trade, intimating that there was reason to believe that their researches had been successful and that these defects would be remedied in consequence. The fault in the cured cod, he said, had been traced to certain kinds of tropical salts used in curing, the remedy being found in the use of salts drawn from Canadian sources.

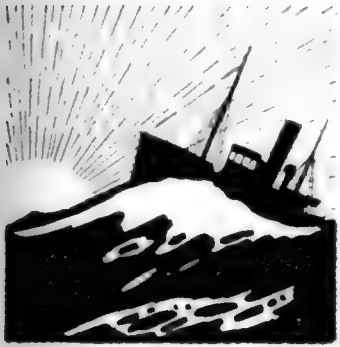
Short addresses were also heard from J. H. Conlon, director of the publicity department of the Marine and Fisheries department, and Mr. S. A. Mason, president of the Retail Fish Dealers Association, as also from Mr. J. T. O'Connor, director of the Canadian Fisheries Association.

The dinner proved to be a most enjoyable affair throughout. The menu, consisting of oysters cooked and on the shell, salmon, smelts and other fish, was tastefully served and left nothing to be desired in satisfying the inner man.

The following were among those in attendance: J. A. Paulhus (chairman), Dr. F. C. Harrison, J. H. Conlon, J. J. Harpell, S. A. Mason, F. W. Wallace, secretary Canadian Fisheries Association; A. H. Brittain, J. T. O'Connor, F. T. James, Toronto; D. J. Byrne, S. Mason R. D. Hodge, John Green, H. G. Connor, F. A. Bellavance, H. Rayment, Henry Wolman, Geo. Woolmer, W. A. Coker, H. Mitchell, H. Gilbert, Geo. Birse, W. F. Rayment, H. Marshall, F. Reynolds, J. Leach, Albert Cawthorne, M. Stanford, H. Welham.

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STRANGLING AN INDUSTRY!

HOW THE FISHING INDUSTRY OF THE NORTH PACIFIC IS BEING BLUFFED AND HUMBUGGED BY THE CANADIAN GOVERNMENT RAILWAYS.

For the establishment of a distinct and enlarged Fisheries Administration at Ottawa, with power and ability to prevent the industry being imposed upon, no better argument can be advanced than to give here-with some idea of how the fishing industry of Prince Rupert, B.C., has been stifled and held back from its legitimate development by the Canadian National Railways.

In all our experience of the many drawbacks which militate against the proper development of our Canadian fisheries, we have never seen anything to equal the nonchalant manner in which the officials of the Canadian Government Railway Systems have treated the urgent needs of a great industry, and the whole story is one of "passing the buck", unfulfilled promises, humbug and absolute indifference.

For some years now, Prince Rupert has suffered from a shortage of refrigerator cars for transporting the immense quantities of fresh and frozen halibut and other fish which are landed, or which could be landed, at that port by Canadian and American fishing vessels exploiting the fishing banks west and north of Prince Rupert.

The shortage of Express refrigerator cars has long been a serious matter with the fish shippers of Prince Rupert and the management of the only railroad which enters the port was made acquainted with the fact when the situation developed. But the War was on then and the citizens of Prince Rupert, including the fish trade there, did not press their demands unduly as they were cognizant of the fact that the needs of War demanded the country's labor and money. The situation, however, was presented to the Railroad Administration for action as soon as hostilities ceased.

The Fishing Industry is one of Prince Rupert's greatest assets. Every citizen of the place derives some benefit, directly or indirectly, from the fisheries. Were it not for fish, the Grand Trunk Pacific Railway would have but little excuse for making Prince Rupert a terminal. It is one of the biggest eastward hauls the railroad has. Take away the fish and there is little else.

One would imagine that the officials in charge of the Grand Trunk Pacific or Canadian Government Railways, and the Canadian Express Company which is allied with it, would do everything in their power to foster the fishing industry at their terminal port: that the Minister in charge of the Government Railway system would be only too glad to develop a remunerative business in an effort to show a profit rather than the depressing annual deficit which is a feature

of the system. But such is evidently not the case. It would appear that neither Minister or the officials under him care two pins whether the railroad prospers or not. Here's the story. You can judge for yourself.

When hostilities ceased, the fish trade of Prince Rupert and the Board of Trade made representations to the Minister of Railways and Express Company officials asking that additional Express refrigerator cars be built and placed in commission as soon as possible to take care of the increasing fish shipments of the port. One hundred cars were suggested as being necessary to take care of the business offering and same was confirmed by an affidavit from the General Manager of the Grand Trunk Pacific Railway.

Early in 1920, a considerable time after the initial request was made, the railway announced that **THIRTY EXPRESS REFRIGERATOR CARS WOULD BE BUILT AND PLACED IN COMMISSION AS SOON AS POSSIBLE.**

At the Convention of the Canadian Fisheries Association held in Vancouver in June 1920, Prince Rupert delegates brought the matter of their car requirements before the Convention and the following resolution was passed:

WHEREAS the matter of providing adequate refrigerator car facilities is of the greatest importance to the Fishing Industry, particularly at all points of production furthest removed from the markets,

AND WHEREAS a shortage of such facilities has for some time seriously interfered with the proper marketing of Canadian fish, especially at the port of Prince Rupert,

BE IT THEREFORE RESOLVED that the Canadian Fisheries Association in Convention assembled requests its Executive to communicate with the Hon. Minister of Railways setting forth these facts and respectfully urging that he take immediate steps to provide additional refrigerator car space sufficient to take care of the needs of the port of Prince Rupert and other shipping points on the Government Railways.

On July 8th, 1920, the Prince Rupert Branch of the Canadian Fisheries Association passed the following resolution:—

WHEREAS at the Annual Convention of the Canadian Fisheries Association at Vancouver a unanimous resolution was passed urging upon the Executive to press the matter of providing an adequate supply of Express refrigerator cars for the Fish business,

AND WHEREAS the General Manager of the Grand Trunk Pacific in an affidavit has stated that one hundred additional cars are required to take care of this service, -

AND WHEREAS announcement has been made that an order has been placed for an additional thirty cars for this service,

BE IT THEREFORE RESOLVED that we urge upon the Executive to press this matter before the proper authorities with a view to relieving the present very inadequate facilities at an early date.

Both these resolutions were placed before the Hon. J. D. Reid, Minister of Railways, and the National Secretary of the Canadian Fisheries Association in a long communication to the Minister dated July 28th, 1920, elaborated upon the handicap the Prince Rupert fish trade was laboring under through lack of proper transportation equipment, and he furnished statistics showing the amount of tonnage which was diverted from the Port of Prince Rupert through lack of cars.

The Minister was travelling through the West when the letter was sent, but the Asst. Deputy Minister acknowledged same and stated that he was forwarding the communication to the President of the Canadian National Railways System for his information.

The Prince Rupert Branch of the Canadian Fisheries Association, through their Secretary, Mr. J. L. Lee, kept the matter prominently before President D. B. Hanna of the Railway System, and also enlisted the aid of the Transportation Division of the Department of Marine and Fisheries. This latter Department, through Mr. J. H. Conlon, made representations to relieve the car shortage as soon as possible, but this matter is one that calls for the personal attention of the Minister of Marine and Fisheries himself and not that of an official who is saddled with too many varied tasks and whose standing is not likely to impress the Railway Moguls. However, Mr. Conlon did what he could from the Departmental side.

Secretary Lee of the Prince Rupert C. F. A. kept a record of the car shortages at Prince Rupert and same were mailed monthly to Chairman Carvell of the Board of Railway Commissioners, President D. B. Hanna of the National Railways, Department of Marine and Fisheries, and the National Secretary of the C. F. A. These records told of a serious state of affairs — serious enough to have commanded the earnest consideration of any business man but evidently not serious enough for a Government official. Men who can sleep easy administering an organization with a deficit of many millions do not lose any slumber over the demands of a bunch of fish men for more cars, or chances for securing big business.

Owing to the uncertainty of the supply of cars, fishing vessels are avoiding the port of Prince Rupert and are carrying their catches to Alaskan ports and to Vancouver and Seattle. Vessels are daily coming in to Prince Rupert with large trips of fish and finding no cars available, they clear again for another port. One small vessel with a catch of 80,000 lbs of halibut means \$2,400 in tolls to the Express Company. Such business is being turned away from Prince Rupert daily and millions of dollars in revenue is thereby lost to the Government Railways.

Let us see now what has been done about the extra refrigerator cars promised so long ago. The thirty new cars were promised for delivery in August, 1920. August came and no cars. The delivery would be

made sure in November, 1920. November came around and no cars in sight. December came and the year closed with nothing doing. The Rupertonians were beginning to feel that they were being humbugged. Fishing boats were coming in, and finding no cars available, they went off to other ports with their skippers and crews indignant at the waste of time and money incurred by calling in at Prince Rupert.

The whole city of Prince Rupert took an interest in the matter in January, 1921, and mass meetings of the citizens were held, and the wires kept hot demanding to know from the railroad officials when the cars were really forthcoming. A letter received from President D. B. Hanna of the Government Railways, and dated December 27th, 1920, stated that the delay was unavoidable, but the thirty cars would be delivered by the end of March. This date is too late for the early spring traffic in fish which is very heavy, and further enquiries were made of the railway officials to find out if some of the cars could not be delivered earlier.

Wires received from Hon. J. D. Reid, President D. B. Hanna, and President Pullen of the Canadian Express Company all read the same old chant—"Understand new cars will be delivered by end of March". A. E. Warren, General Manager of the Western Lines of the Grand Trunk Pacific wired at end of January—"Understand first car will be delivered March 15th and balance by March 31st." All of which, after the unredeemed promises of the past, were most unsatisfactory.

President A. L. Hager of the Canadian Fisheries Association was then appealed to and asked to secure definite information. He wired to Secretary Wallace at Gardenvale, Que., to interview President Pullen of the Express Company in Montreal and get a definite answer as to the car deliveries. The Secretary secured only the usual reply, viz: "That latest advice from manufacturers is that delivery may be expected in March." One item of information was adduced when the name of the manufacturers was secured, namely, the National Car Company at Hamilton, Ont.

A representative of the CANADIAN FISHERMAN was then sent to interview the National Car Company at Hamilton to find out what progress had been made with the construction of the long promised cars. He went there on February 9th, and interviewed one of the highest officials of the car company, and his report is that—

The car company has been, and it at present, closed down. It is expected to resume operations in a week or so. No start has been made on the construction of the promised cars, and the only information adduced is that the Car Company expect to start work on an order of 1,000 freight cars for the Government and that it was hoped that the thirty refrigerator cars would be put through at the same time.

To sum it all up; THERE IS CERTAINLY NO CHANCE OF THESE THIRTY EXPRESS REFRIGERATOR CARS BEING DELIVERED IN MARCH AND THE PROMISES OF THE RAILWAY OFFICIALS AMOUNT TO NOTHING BUT BLUFF AND HUMBUG.

The whole matter reflects the spinelessness of the present Governmental administration. There seems to be no back-bone to it and no definite policy appears

to have been worked out to pull the country up from the mire it has sunk in through the ravages of war. A huge debt hangs overhead but no effort is made to nullify it and instead of confining expenditure to the development of remunerative natural resources, the Government in power has incurred still greater obligations by the purchase of duplicating railroad systems and the building of steamships which could have been constructed elsewhere at lower cost. One would have thought that an opportunity to control the haulage of a huge fishery would have been seized upon by the Government in an effort to make their railroad system pay. But that common axiom of plain business has been ignored by the present Government who are really to blame for the state of affairs existing in their own railroad system.

It is no use blaming the minor officials for negli-

gence in the Prince Rupert affair. The blame lies on the men higher up and we do not hesitate to name the Minister of Railways, Hon. Dr. Reid, for his indifference to the request for more equipment, and the Minister of Marine and Fisheries, Hon. C. C. Ballantyne, for his lack of interest in the development of a great fishing port. If the latter had given more time and thought to fishery matters, his influence in the Cabinet could easily have secured action in the matter of supplying Prince Rupert with more refrigerator cars.

The whole fishing industry of Canada will suffer from this species of humbug until we get a Department of Fisheries with a responsible official at the head of it and a Minister who will give ear and action to the plain suggestions of the Industry along the lines of sane development.

Privy Council Decision in Quebec Fisheries Reference



The decision in the Quebec Fisheries Reference was submitted on the 30th of November last and copies of it have now been received. It more than vindicates the position taken by the Federal Government. The decision finds in substance that there is a public right of fishery, over which the Federal authorities have exclusive jurisdiction, not only in the navigable tidal waters but in the non-tidal portions of the streams that are navigable from the sea as well; thus including valuable salmon or other river fisheries.

The history of this question is concisely as follows:

At the time of confederation, it was understood that by the provisions of the British North America Act, the complete jurisdiction of the fisheries in the different Provinces was transferred to the Federal Government. A few years afterwards question arose as to whether this was the case. In 1882 a decision of the Supreme Court of Canada was obtained in the case known as "Queen vs. Robertson", which determined that the ownership of the fisheries in the non-tidal waters still remained vested in the Provinces or in the riparian owners. This did not apply to what are now the Prairie Provinces and the Territories north thereof, as the Crown Lands therein were owned by the Federal Government. Following this decision the Provinces continued to press the claim to greater jurisdiction, and a reference in the premises was finally submitted to the Privy Council, the decision of which was given in 1898. This decision was in substance, except in those waters which at the Union passed to the Dominion under the third schedule of the B. N. A. Act, 1867, that whatever proprietary rights in the fisheries, were vested in the Provinces at the time of Confederation, remained their property subsequent thereto, but the exclusive power to regulate the fisheries, wherever they might be situated, is vested in the Federal Government. Immediately following this decision the different sea-washed Provinces claimed jurisdiction over the tidal fisheries, not

only in the rivers and estuaries, but in the bays and territorial waters along the sea coast as well. The Federal Government, on the other hand, maintained that there is a public right of fishery in tidal waters, and that, as such, it came within the exclusive purview of the Federal Government.

For years negotiations went on with the different Provinces to settle the matter amicably, but this was not found to be possible, and finally in 1913 a reference to the courts was decided upon with British Columbia, in which the other Provinces interested became intervenants. The decision in that case maintained the contention of the Federal authorities.

This settled the question in all sea washed Provinces, with the exception of Quebec, which contended that as the decision was largely based on Magna Charta, and that, as Magna Charta did not apply to the Province of Quebec, the decision did not affect the situation in that Province.

In order speedily to settle the matter, it was finally agreed that a reference should be submitted to the Court of King's Bench in Quebec, under authority of a Provincial Statute which was obtained for that purpose. The decision in that Court was adverse to the Federal contention, and the conditions brought about by the war delayed consideration of the appeal before the Privy Council until last year.

It is understood that the Federal fishery regulations are being immediately amended to place them in line with the law, as laid down by the Privy Council decision, and that during the approaching fishing season, the fisheries in the navigable tidal waters, as well as in the non-tidal portion of the streams that are in fact navigable from the sea in Quebec will be administered by the Department of Marine and Fisheries of Canada; and no fishing in such waters will be allowed, excepting under license from the Minister of that Department.



Lake Erie Fishermen's Convention

Most Successful Gathering and Important Resolutions Passed

The Sixth Annual Convention of the Lake Erie Fishermen's Association has come and gone, leaving in its wake memories of the largest and most enthusiastic gatherings yet held by this enterprising organization. It was a get-together and a big reunion of practically all the men along the north shore of the lake engaged in the fishing industry. Every port from which the tugs steam sent its quota of delegates and for three days, Feb. 1, 2 and 3, the city of St. Thomas was given over to the hardy men of the gill and pound nets who are banded together as business men in the interest of their calling. Already, after six years of existence, the organization has more than justified itself, for it has secured legislation and regulations from both provincial and federal governments that has been of great benefit to the industry. Further regulations will be sought as the result of the business sessions held this year, designed to conserve the fisheries of the lake and to promote the interests of those in the industry. For instance efforts will be made to facilitate the collection of bad debts from American dealers: the fisheries department will be asked to close the lake to other than home port fishing; it will be recommended that the present ten mile limit from the edge of the pound nets be retained, while other regulations will be sought in the interests of the tug owners and companies.

Governments Not Represented.

It was a matter of deep regret that when the executive got together to plan the open sessions of the convention they were unable to secure speakers from either the provincial or federal governments, although these had been arranged for. Efforts had been made to have Hon. Harry Mills address the gathering but the minister wired his inability to be present and apparently no one from the Ontario department could be spared. The Dominion Government was also unrepresented. Some good ideas, however, were forthcoming from A. W. McLeod, superintendent of Hatcheries in a couple of addresses and another special speaker was Rev. Dean Tucker, of London.

A Great Reunion.

As usual the Grand Central Hotel was the headquarters for the gathering. The executive committee held their sessions there and the open sessions took place in the council chamber at the city hall. While there was a distinct business tone throughout the convention the social side was featured and the delegates found time to fraternise in the bonds of a true brotherhood. The men from the ports at the head of the lake

met those from the lower fishing grounds and there was much yarning and reminiscing. Bluff, hearty Arthur Brown, who, by the way was again elected president, came over from Kingsville, and Capt. Robinson, of Port Dover, was on hand early just to show that his interest is still with the fishermen although he is now boss of three patrol boats in the Government protective service. Other veterans from the fishing ports, such as H. Dromgole, of Rodney; W. Goodchild, Amherstburg; J. E. Pastorius, of Kingsville; Bert Westcott, of Kingsville; H. Hales, of Dutton; George Van Order, of Port Burwell; N. S. Cornell, of Port Stanley, and many others prominent in the fishing industry were conspicuous in the hand-shakes, discussions and business which marked the gathering.

Opening Session.

Although a lot of work had been done by the executive committee, the first open session of the convention did not take place until Wednesday afternoon in the city hall where President Brown in a few well chosen remarks welcomed his fellow members of the Association to the annual meeting and expressing the hope that the proceedings would be characterized, as in the past, by harmony and good feeling between the various interests in the industry. Mayor Brinkman, of St. Thomas, who has always evinced a hearty interest in the activities of the Association, gave a brief speech of welcome in which he dwelt upon the atmosphere of the Railroad City as conducive to the enjoyment of such a body of men as composed the Lake Erie Fishermen's Association. He extended the freedom of the city to the members and expressed the hope that they would enjoy themselves socially as well as in a business way while guests of the corporation.

Fishers of Men.

In the absence of Rev. Canon Carlyle, Rev. Dean Tucker, of London, consented at the last minute to address the first session which he did with great vigor and directness of speech. He pointed out that the highest occupation man could be engaged in today was that of fishers of men and declared that in order to quell the disturbances that are prevailing in the industrial world today it is necessary above all things that a principle of brotherhood be inaugurated between employer and employee. Until the employer who represents capital, abandons the idea that he is in the world only to make money and to become rich rather than to serve his fellow being, this principle of good fellowship could not succeed. He appealed to the fishermen, as representing capital and labor to assist in this great work by

adopting the principle of brotherhood, the foundation of which was laid by the four fishermen who were called by Christ to become fishers of men. Dean Tucker enlarged on this theme, dealing also with the country's natural resources and picturing a bright future for Canada if the ideals of Christianity were lived up to.

The Annual Banquet.

The annual banquet was held in the dining room of the Grand Central Hotel on Wednesday evening and proved a very enjoyable affair. Upwards of a hundred delegates and several guests dined sumptuously and afterwards listened to a number of brief speeches under the chairmanship of President Brown. Mayor Brinkman again extended a welcome to the delegates and he was ably seconded in his civic welcome by City Solicitor Doherty, who proved to be an entertaining story teller. No gathering of Lake Erie fishermen would be complete without the presence of Mr. L. Ponsford, familiarly known as "Ab" Ponsford, for it is to him, perhaps, rather than anyone else, is due the credit for the pioneer work in connection with the

There are not the fish in the lake there were 10 years ago, and this should be remedied. Ask the government to appoint an impartial commission to go up and down this lake and take evidence and go back to Toronto with intelligent recommendations to the government."

Work of Hatcheries.

Superintendent McLeod of the Ontario Hatcheries, voiced the provincial departments' appreciation of the work of the Lake Erie Fishermen's Association as protecting the interests of the fishermen. The department is fully aware that this association expresses the will and thought of the fishing people all along the north shore of Lake Erie, he said. He then spoke about the work of the hatcheries and the necessity for co-operation between the government and fishermen if the hatcheries were to be a success. He had always been under the impression that the staple fish in Lake Erie was white fish but last year's figures showed that the white fish business amounted to \$124,000 whereas the herring business amounted to \$645,000. The hatcheries on the Canadian side have been devoting the majority of their



Sixth Convention of Lake Erie Fishermen's Association, St. Thomas, Ont.

present organization. Mr. Ponsford in a brief talk indulged in some reminiscences, remarking that six years ago such an organization as the present one was thought impossible.

"I took it upon myself to try and get the Lake Erie fishermen together. I had been working at Port Stanley at the time the thought entered my mind. I used to hear the grievances of the fishermen as they would come in off the lake at night and it was then that I thought of organizing this association.

"From my point of view, one of the big things that is up to you today is to stick together," he continued. "The department at Toronto sent out a circular letter asking questions of the different fishermen along the lake. Perhaps no two of those answers will be alike. But here is the place for you to answer that letter. Get together, thrash out the different questions and lay your solid opinion before the government. It is up to you more today than before to get together and make recommendations that certain conditions be improved.

time to the propagation of white fish, but since I have seen that it is not the staple fish in Lake Erie I have advocated a more extensive propagation of herring," he said.

Mr. McLeod explained that with careful handling and fertilizing of the eggs it is possible to get from 65 to 70 per cent results. Any changes that may be made are not to put restrictions upon the fishermen but to conserve the industry for the men who have invested their time and money in it. A present between 63 and 65 million white fish and 8 million herring eggs are in the Normandale hatchery and just so soon as the fisherman prove that they can take care of the Normandale hatchery, the government will establish a new station.

Sailed the Seven Seas.

One of the best speeches of the evening was that by Capt. P. C. Robinson, of Port Dover, who for many years was associated with Mr. Barlow in the fish business at Port Dover and who now has charge of the lake

patrol service. The captain was introduced as a man who had sailed the seven seas. He started his early career as a locomotive engineer but, as he himself says, he thought there was less danger on the sea than on the railroad so he went before the mast. In his speech the captain urged for greater unity, for in unity there was strength. They had a great asset at their front door and it behooved every man to see that no action be taken which would injure that asset. "You all know just what is wanted to change the conditions that exist today and put them back to where they were in 1889. It has been told that you could stand on the hill of Port Stanley all day long and see the smoke of tugs and every night see them come into port with 10 or 15 tons of fish. Today the tugs have to go 40 or 50 miles and then they do not get the fish they used to. There is only one plausible reason—the fish are getting less. There is ability and energy enough among you gentlemen to change that condition and put it under judicious treatment, and Lake Erie will, under judicious treatment, come back."

Other brief speakers were Ex-Reeve N. S. Cornell, of Port Stanley; Ex-Mayor E. A. Horton, and A. A. Ingram, of St. Thomas; Harry Dromgole, Rodney and C. F. Hamlyn, of the Canadian Fisherman.

A Lively Business Session.

There was considerable discussion of a lively character at the closing session of the convention on Thursday afternoon when the executive committee presented its resolutions. Early in the proceedings Mr. Sullivan, of the American Express Company, addressed the gathering reviewing the difficulties under which the express companies had been operating for some month and assuring the fishermen that now that the American Express Company had been empowered to operate as a single company, increased facilities for handling the Lake Erie fish would be at the disposal of the shippers. The business was now getting back to normal in the United States and the establishment of a chain of iced refrigerator cars along the M. C. R. and north shore of the lake was guaranteed. It was stated that during the coming season the company would be able to offer an express service that would meet the needs of the fishermen. Mr. Sullivan urged greater care by the shippers in packing their shipments in the way of tagging both ends of the boxes, showing the quantity and kind of fish, the supplying of consular invoices and the use of good boxes, preferably wired.

A. W. McLeod, superintendent of hatcheries again spoke briefly urging co-operation of the fishermen in the efforts being made to prevent the depletion of the lakes. He declared that no body of water produced as much white fish and herring as Lake Erie and more money was invested in the fishing business in these fish in Lake Erie than in any other lake. It was necessary to have some place in the lake for fish to propagate naturally and he asked the assistance of the men in the industry on behalf of both provincial and federal Governments in getting the lake back into the condition it was in 1910.

Gill Net vs. Pound Net Men.

The old differences that have existed for some time between the gill and the pound net fishers again developed over a resolution which was brought forward calling on the Government to adopt more stringent regulations in the issuing of licenses to gill nets.

W. D. Bates, of Ridgeway, led one faction and N. S. Cornell of Port Stanley, who has for years been the champion of the gill net cause, the other. The discus-

sion started when the resolution was read calling on the Association to ask the Government to make different regulations for gill net fishermen and that he be compelled to take his tugs out of the ten miles limit before placing the nets and that all fish be brought back to the home port instead of at other ports and returning home the following day as is being done at present.

Mr. Cornell submitted an amendment in which he requested the Government to allow the lake to remain open as under present conditions. He held that if twenty tugs went out under the new regulations there would be absolutely no difference as far as the conservation of fish was concerned. It merely meant for money for the coal man as the fishermen would use a considerably greater quantity of coal in going sixty miles to get the same quantity of fish available at thirty miles or less. He accused the pound netters of being out to benefit themselves.

A. E. Pastorius, of Kingsville, who fathered the resolution, and who is himself a gill netter, but nevertheless, he said, he wanted to see the supply of fish in Lake Erie protected so that the fishermen should not lose their means of earning a livelihood. Drastic steps had to be taken and the resolution, he thought, would accomplish all that could be desired. During the spring, he said, 30 or 40 tugs could be seen outside of any fishing port and with the crowding of tugs the work was crippled and a large amount of twine was always destroyed.

Captain Robinson, who has charge of the Government patrol beats on the lake, stated that he had seen many changes in his 12 years' experiences on Lake Erie. The fishermen were losing their only asset by not adopting stringent regulations. He had seen tugs go out in 1918 from Port Stanley and come back in a short time with from 12 to 15 tons of fish. This could not be done today, and he attributed the change to the fact that the fish of Lake Erie had been depleted. It had become necessary for a sanctuary to be established somewhere, and the gill netters would have to go farther afield to make their catch.

Captain Smale, of Port Bruce, disagreed with the remarks of Captain Robinson. He declared that despite all statements to the contrary the fisherman is the most prosperous man in the country to-day. He had heard the same story of prospective depletion and the great need for conservation back in the early days when he was a youth. He had, however, noticed that if any conservation were necessary, it was up to the gill netters to do the conserving, the pound netters apparently could do no wrong.

N. S. Cornell declared that while the gill net men had refrained from coming to a disagreement on the question in open convention they purposed going to Toronto with their grievances, and would as far as Port Stanley is concerned fight the matter out there.

After the resolution had finally carried the gill net men offered a resolution asking that a fair distribution of gill net tugs be made in the various ports in view of the action regarding gill netters. This was lost but Mr. Cornell and Mr. Pastorius were delegated to represent the gill netters before Parliament when the matter is discussed, the other side will be represented by Harry Drumgole and W. Bates.

The convention indorsed the action of the executive and re-elected all of last year's officers. N. S. Cornell's name was submitted for president, but on a vote being taken it was defeated.

To Hold Another Regatta.

It was decided at the convention to hold another regatta at Port Stanley probably on July 1st. Last year the event was pulled off under the auspices of the Association and was a huge success. The regatta committee will meet later and arrange the program.

The Officers Elected.

The election of officers developed only one contest, that for the presidency. The names of A. S. Brown, of Kingsville, president for the past two years, and ex Reeve Cornell, were submitted. Mr. Brown securing the greatest number of votes.

Hon. Harry Mills, the minister of mines and fisheries, was elected honorary president and A. E. Ponsford, of St. Thomas, one of the men instrumental in getting the association organized, was re-elected honorary vice-president. Reeve Harry Dromgole was re-elected vice-president and H. A. Short, of Port Stanley, secretary-treasurer at a salary of \$100 a year.

The executive committee was re-elected as follows: W. Goodchild, Amherstburg; W. G. Bates, Ridgetown; W. E. Crewe, Merlin; J. E. Pastorius, Kingsville; H. Goodison, Clear Creek; Ed. Koehler, Ridgetown; R. Kolbe, Port Dover; B. Westcott, Kingsville; E. Hales, Dutton, A. B. Hoover, Nantecoke; Capt. Robinson, Port Dover; J. Harris, Pelee Island; A. Graham, Leamington; J. Grubb, Point Pelee; H. Van Order, Port Burwell; W. H. McPherson, Port Stanley; H. Taylor, Port Stanley, Bert Clay, Tyreonnell; J. Bailey, Wheatley; N. McAuley, Erieau; E. W. Moss, Port Maitland; W. H. Wheeler, Selkirk; A. Dougher and George Garvel, Port Maitland; C. W. Barwell, Port Burwell; A. Misener, Port Burwell; C. Ross, Dunnville.

Grievance Committee: Essex, J. Harris and B. Westcott; Kent, W. E. Crewe and N. McAuley; Elgin, W. H. McPherson and Ed. Koehler; Norfolk, H. Van Order and C. W. Barwell; Haldimand, A. B. Hoover and E. W. Moss.

Resolutions Adopted.

The following are the resolutions in full as adopted at the meeting:

Moved by Ed. Koehler, seconded by H. Hales—

That Messrs. Pastorius and Dromgole be a Committee to draw up resolution "re" dealings with foreign corporations and that this Committee obtain legal advice in the matter.

Moved by C. Barwell, seconded by C. Ross—

That Government be requested to allow the taking of Sturgeon, 42 inches in length and over, in Lake Erie.

Moved by J. E. Pastorius, seconded by C. Barwell—

That the Government make different regulations for gill net fishermen for the License Holder to fish out of his home port and return catch to his home port in his own tug.

Moved by N. S. Cornell, seconded by W. H. McPherson—

That if the Government, considering the vote taken, decides to close the Lake, in accordance with the preceding resolution, that there be an equal distribution of the tugs, as far as possible, to the several ports on the Lake.—(Carried in Executive but "Lost" in open meeting).

Moved by W. D. Bates, seconded by C. W. Moss—

That the present 10 mile limit be maintained and there be no fishing of any kind allowed in the zone between the pound nets and the 10 mile limit, except by Government Patrol boats for the purpose of taking Spawn only; also that the Ontario Fisheries Dept. ask

the Federal Dept. to have the three present Patrol boats and any other Patrol boats instructed to confiscate all nets found set in the above zone at any season of the year and for a second offence cancellation of License.

Moved by H. Dromgole, seconded by Geo. Van Order—

That the present 5 mile limit, excepting the south side of Long Point, be maintained and that no fishing of any kind be allowed in the zone between the pound nets and the 5 mile limit, excepting by Government Patrol Boats for the purpose of taking Spawn only; also that the Ontario Fisheries Dept. ask the Federal Dept. to have the three present Patrol Boats and any other Patrol Boats instructed to confiscate all nets found set in the above zone at any season of the year and for a second offence, cancellation of License.

Moved by W. H. McPherson, seconded by H. Hales—

That the Government be requested to take the necessary steps to rigidly enforce the regulations regarding the taking, disposing of undersized herring or that the penalty for first offence be confiscation of nets, and for second offence, cancellation of License.

Moved by Geo. Van Order, seconded by N. S. Cornell—

That the 2nd Annual Regatta be held at Port Stanley this year.

Moved by J. E. Pastorius, seconded by N. S. Cornell—

That the Government be requested to limit the depth of nets to 36 meshes to take effect the beginning of year 1922.

Moved by N. S. Cornell, seconded by B. G. Westcott—

That an Advisory Committee to consist of H. Dromgole, A. E. Crewe, A. B. Hoover, W. H. McPherson, J. E. Pastorius and Geo. Van Order, be appointed to assist the Governments in any matters, which they may wish to refer to this Association, and that this Committee have full power to act.

Moved by H. Dromgole, seconded by B. G. Westcott—

That the Provincial Government be asked for the usual annual grant of \$500.

Moved by B. G. Westcott, seconded by E. Koehler—

That the Provincial Government be requested to assist Dr. Clemens in his research work on Lake Erie.

Moved by N. S. Cornell, seconded by F. Small—

That the Federal Government be asked to make a grant of \$500 to this Association.

Moved by W. H. McPherson, seconded by E. Moss—

That N. S. Cornell, J. E. Pastorius, W. D. Bates and H. Dromgole be Committee to Present Resolutions to Government.

Moved by N. S. Cornell, seconded by J. Grubb—

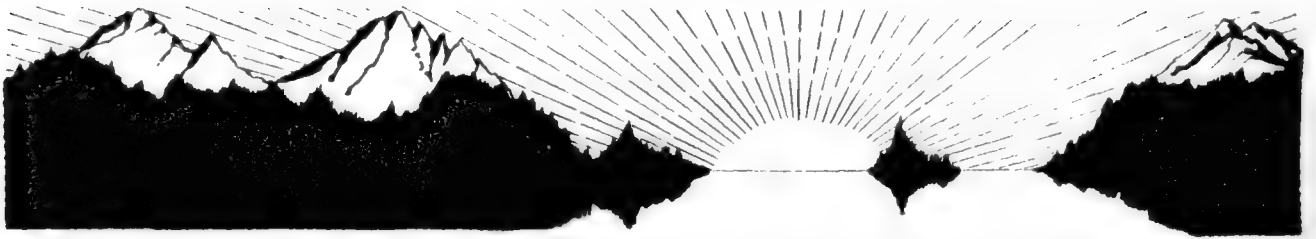
That Dr. Jackson, Reeve of Port Stanley, A. C. Brown, W. H. McPherson, Fred Morgan, H. Wollatt be Committee in Charge of Regatta.

Moved by N. S. Cornell, seconded by J. E. Pastorius—

That this Association convey a hearty vote of thanks of Dr. Clemens and Mr. McLeod and the other speakers.

VETERAN LAKE MARINER DIES.

By the passing of Captain Alexander Lawson at the age of seventy-seven years, Goderich loses a fine citizen. Captain Lawson was one of the old-timers of the Great Lakes. He was a master of sailing vessels and has owned several. He retired about ten years ago. He was one of the original stockholders in the Hutchinson Flour Mills, now the Western Canada Flour Mills Company. He leaves his widow and three daughters, two at home and one in Detroit.



The Salmon Fisheries of Kamchátka

By HARRY SOMERSET-LISTER, F.R.G.S.

*An Interesting and Instructive Survey of a Corner
of Siberia and its Fisheries.*



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An Unknown Peninsula.

Fascinating through its inaccessibility, amazing in its natural features, the Peninsula of Kamchatka, situated at the extreme south-eastern termination of the Siberian Continent, and hitherto practically unknown to the outside world, has sprung into prominence through the fact of a concession having been granted by the Soviet Government to an American syndicate. Ten years ago the migration of salmon from the Pacific to the great rivers of Kamchatka continued uninterruptedly as it had done since the beginning of recorded time. The sparse native population, which for the most part clings to the territories bordering the banks of the rivers, annually took its quota of the fish, so infinitesimal, however, as to make the consideration of it ridiculous. In the year 1910 a convict named Beeritch, after his release from the criminal settlement on the neighbouring island of Sarkhalinn, made his way to the village of Oost-Kamchatsk, on the east coast of the peninsula. Being of an enterprising nature, he soon succeeded in forming a fishing combine out of the village community, as a result of which the following spring saw a small building erected on a sandspit running out into the ocean, and separating it from the Kamchatka river. There was raw material, in the shape of salmon, in abundance, but skilled labour was lacking. In the third year of the enterprise, however, things had improved to such an extent that machinery and plant of an up-to-date pattern began to supersede hand labour, and the first American cannery mechanic made his appearance. Since then canneries have sprung into existence around the entire coastline, and to-day there are some thirty of them, all, without exception, owned or controlled by Japanese companies.

The Little Yellow Men.

Two big Japanese corporations, those of Mitsubishi and Tsutsumi, practically monopolise the entire industry. The canneries visited on both the east and west coasts were, if anything, superior in equipment to those of British Columbia, Alaska, and Puget Sound, to quote the words of an American engineer I met at the largest of them on the east coast, who had worked in all of the localities mentioned. To draw a comparison myself was out of the question, as it is twenty years since I was in British Columbia, and the improvements both in cannery erections and plant during that period have been extraordinary. Invention suc-

ceeds invention, and the life of a new machine in a Japanese cannery is not more than two years on an average, not that they wear out, but through being scrapped to make way for others of a much more economical and labour-saving type. The Japanese are reputed to be prodigal in their extravagance. Dumps of machinery of all kinds may be seen in and around any of the canneries fringing the coast of the peninsula, which upon close examination appear to have nothing whatever wrong with them. It is the same with cans. The territory of a cannery is simply carpeted, from a batch just thrown out and shining like silver, to others in every stage of rust.

Japanese extravagance is evident also in the manner in which this industry is administered. One of the things that impresses one upon arrival at a cannery is the excessive number of employéés engaged. There were about three times as many clerks on the office staffs as were actually required, and the same sort of thing was in evidence in the cannery itself and amongst the crowd of fishermen. A good 10 per cent. could be tacked on to the 50 or 60 per cent. profit that an average cannery returns by the rigid curtailment of staffs.

The actual process of canning is carried out under excellent sanitary conditions. At one of the fishing stations I made surprise visits at all hours, as there are both day and night shifts, the blaze of electricity illuminating the latter being but another phase of Japanese squandering, but invariably found the same condition of things prevailing as they had been at the first "official" visit.

Superiority of Kamchatka Brand.

Holding no brief whatever for any of the concerns in question, I may say that the Kamchatka brands of canned salmon beat any of the other kinds sampled. Inquiries for them in this country, however, since my return have not resulted in finding a single can so far. They are, of course, well known to the trade, but not to the buying public. The "pack", as it is termed, is exported from the peninsula in unlabelled tins, some of which have a special mark stamped into the metal, which may be known to the wholesalers, but which is a Chinese hieroglyph not only to the buyer but to the man behind the counter as well. Evidently the wholesale buyers in Europe, who make their purchases through agents at Yokohama, do not fully sample the contents, as otherwise they would not be so eager to

cover up the cans with labels having no reference whatever to the place of origin.

Crossing the Bar.

Every year the various kinds of salmon arrive at the mouths of the rivers with surprising regularity. The period of their advent extends from May to mid-August, but each has its special time of arrival which, to judge from its constancy, is more or less independent from seasonal influences. A few fish apparently remain at or in the vicinity of the mouths of the rivers during the summer and eventually return to the sea, but these are so few as to scarcely be worthy of mention. During the passage of the fish from the ocean across the bar to the mouths of the large rivers, they are beset by enemies that take ample toll of them ere they are allowed to proceed into fresh water. Schools of seals, running into thousands, form a living barrier from shore to shore of the estuaries, and, blood-mad, hurl themselves among their prey, and butcher the salmon to such an extent that in some places the water is colored red. One morning I stood alone for nearly three hours at the extreme edge of a sandspit watching this slaughter of the innocents. Seals with heads well out of the water and pointing straight up so as to allow full play to the jaws, were gorging themselves with the fish, what time seagulls were swimming in and out amongst them and actually picking dainty morsels from their teeth. Two tours of the world have revealed to me most of its weird sights and sensations, but few, if any, could have surpassed this, which it was my good fortune to be spectator of, one of Nature's greatest mysteries. Above this unique scene of carnage countless myriads of gulls floated in the air, darting now and again to pick out the eyes of the fish, which portion they mostly prefer. The indescribable volume of sound set up by this multitude of birds resembled, in one's imagination the shrieks of tortured children. The vast majority of the fish that escape, practically all in fact, ascend the rivers and streams to spawn, and once having done so there begins a restless rush for suicide. This uncontrollable panic incites the fish to perform all manner of peculiar antics. During the headlong race up-stream, always on an empty stomach, as once the sea is left behind the fish cease to feed, they bite each other fiercely, rub themselves against rocks and boulders to alleviate the irritation set up by parasites, and occasionally whole shoals will make a mad scamper for a sandbank or the shore, becoming stranded thereon, and forming a further feast for the gulls, clouds of which follow them for hundreds of miles up river.

A Race to Death.

Always is the air alive with leaping fish. In the narrow reaches of the rivers approaching their source, the fish form a compact mass, the middle section forcing those near the banks out of the water and on to dry land. These vast accumulations of dead and dying salmon set up a stench that is perceptible for miles inland and out to sea when they are washed down by the floods in the spring. Not the least of the tolls taken of the fish is that by the bears. These animals, emerging about the beginning of May from their long winter's sleep, gaunt and cadaverous looking, soon put on flesh after a few weeks' course of salmon, which remains their staple food until the period of hibernation comes round again when they retire to sleep, armour-clad with fat to support them through the seven months of winter. It is quite an ordinary thing to see them either

sprawling over the edge of the bank or up to their necks in the river, catching the fish with their paws and heaving them out on the bank, where the she bear and cubs are waiting for the feast. Many of the tracks they make leading to the rivers and streams reminded me of similar approaches made by buffalo to the rivers threading the prairies of Canada, which I saw many years ago, during my first journey through the Dominion. Almost without exception, all the wild denizens of the great forests and mountainous tracts of the peninsula are very partial to salmon. Even the sable, that very precious little animal, slightly larger than a weasel and every inch as cute, whose fur is the recognized gold currency of the peninsula, even he, dainty feeder as he naturally is, is not averse to a morsel of cast-up fish. Practically every living thing in Kamchatka supports life on salmon.

Apart from human beings, whose staple food it forms, the sledge-, bear-, and sable-dogs feed on nothing else. Cows, drinking at the rivers' brink, seize a passing fish and consume it from the head downwards. Horses, like the dogs, eat the fish in any state, sharing, however, with them a preference for it in the semi-liquid condition which very advanced degree of decomposition is brought about by the natives burying the surplus catch of the season in large pits and allowing it to mature during the tropical heat of the brief Kamchatkan summer.

The Staple Food.

In the early part of last year during the ascent of the Kamchatka river in a canoe we suddenly detected a most pungent odour which revived memories of the bog fields of Harrowgate. It soon became, however, unpleasantly convincing that the comparison was but of a fleeting nature. The stench increased in so overpowering a degree that the order was given for the canoe to be turned round; the guide however, intervened with a smile on his good-humoured face, explaining that the smell proceeded from an open fish-pit in the village we were approaching and which just then showed up round a bend in the river. There was nothing to be done, as there were neither an alternative route nor any other means of transport, and, as luck would have it, the whole of the villagers were in the thick of their preparations for the anticipated "run" of the early salmon and could not spare a fresh lot of canoe-men or guides that knew the region I was making for. The distance to the next village was, roughly, equivalent to ninety-six miles, which turned out to be just the longest stretch between any two villages along the entire length of the river. In the end I remained in this inferno, an expression the reader will not consider too vivid when he has read what follows, for five days and nights. The atmosphere of the place all the time was such that you could have hung an axe up anywhere. Explorers are accustomed to danger; one could almost say they eagerly anticipate it, for, after all, to have done with caution is exhilarating. But here were live dangers of a kind one rarely has to reckon with. I had not been in the place an hour before learning that it had been swept with black pox barely three weeks past, and that a good half of the original seventy-four villagers—men, women and children—had been carried off, the majority after only a few hours' illness. The survivors, though buckling to work again, were in a desperate state. Haggard, weary, and worn out, most of them seemed. Medical help was quite unknown, and had been for years; ever since, in

fact, the last unqualified "doctor" of the Czarist régime had made his yearly visit, before the war. Of medicine there was not a trace, nor had there been for a similar period. I found later that epidemics of various kinds are general throughout the salmon river zones, the cause being directly traced to the uncovering of these fish pits and to the open drying-sheds or "balagans", where the fish are hung in tiers to dry, in the same way in which tobacco leaves are dried in the Southern States of America. The long Kamchatkan winter, during which it is difficult to procure food of any kind with the consequent necessity of fish as a staple article of diet for almost every living creature in the settlements, creates a need for a very large number of these sheds, and the consequence is that, to a fresh arrival, the villages have the appearance of being very considerably larger than they are in reality. At this village, as an example, I heard that 30,000 fish was no uncommon catch for a single day. Split in half as far as the tail, cleaned and washed, the salmon is hung across a pole in the company of fifty or sixty others. These poles are then placed a few inches apart, with their ends resting upon other poles which extend the width of the shed. The fish are thus freely exposed to the air, but protected from the sun. They are not hung lower than about eight feet from the ground, on account of the dogs, who are occasionally to be observed gazing at them with longing eyes and watering mouths, experiencing the tortures of Tantalus. Excepting for a sledge dog, however, I cannot say that the sight is a tempting one. Swarming with countless millions of maggots, which distil in a gentle but unceasing rain upon the ground beneath, whitening it as with a shower of powdery snow, the fish seem to be so rapidly disappearing that one wonders how any remain till winter, another sense besides that of sight causes the same reflection, but neither the dogs nor their masters appear too particular in these little matters. The former, by the way, represented at the outset still another of the live dangers above referred to. They are a semi-wild breed with a large strain of the wolf in their blood.

The Howling of the Dogs.

In the village in question, I calculated there could not be less than eight hundred of these animals, all chained or fastened up in open-air kennels during the summer months to keep them from worrying the cows and horses. Sometimes it happens that half a dozen break loose, one after another, not a difficult matter to judge from the fastenings, and these will, in force, pull down and partly devour a horse or cow. Poultry, sheep, and pigs are unknown in the country, on that account. The incessant barking is varied at stated intervals by a howling concert of eight hundred performers, each doing his level best to out-howl his neighbour! The stated intervals mentioned could be almost checked by a watch, so accurate are they. They include feeding time, once a day only (one fish to each dog), in the early morning. Drinking time twice a day, morning and late at night. These calls, however, were very often ignored by the villagers, and more than once I noticed a dead or dying animal amongst the living. A good part of my five-days' stay was spent in feeding live salmon to the dogs and quenching their terrific thirst. The savage animals at first resented my approach, but soon got on friendly terms, and just before leaving I could walk right in their midst and caress them at leisure, much to the surprise

of the natives, who had warned me frequently against them. Hydrophobia, however, is quite unknown in Kamchatka. Apart from the periodic howls mentioned, the dogs, by this same method, invariably give the village warning of the approach of strangers some time before the latter actually make their appearance, and by a peculiar variation in the volume of sound, indicate the direction whence they come. The howl at midnight, however, and again just about four in the morning, beggars any attempt at description. Sleeping in the headman's hut, which commanded an excellent view of the burying ground planted in the centre of the village, early one morning, at the first streak of light, I was awakened by the weirdest and longest howl the dogs had given during my stay. I felt the blood cooling in my veins. Outside, the mist rising from the river enveloped the village in a shroud, leaving exposed, strange as it seemed, the part of the cemetery where, barely covered with earth, lay the newly dead. This vision of delirium, backed up by the natives' stories of the black-pox epidemic crowding back into my brain, produced the impression of being in an anti-chamber of Purgatory. Only a strong-minded man could have stood it.

When, however, the day of departure arrived, the dogs seemed to understand that they were losing their new-found friend—perhaps the only one they had ever known—because as the canoes pushed out into the stream they howled, as they always do at an arrival or departure, but this time there seemed to be an even deeper note of sadness.

It is quite impossible to convey any idea of the enormous multitudes of salmon that annually ascend the great waterways of the country. Some years since, in a library at Moscow, I came across a time-worn Russian manuscript dealing with Kamchatka, written on vellum, some hundred and sixty years ago, which stated that "the fish come from the sea in such numbers that they stop the course of the rivers and cause them to overflow their banks, and at this time the bears and dogs catch more fish with their paws than people do in other places with their nets." This and similar accounts of the really marvellous abundance of salmon, which at the time seemed almost unthinkable, proved to be, if anything, understated. In the case of some species every fish appears to perish; in others, to which I shall refer, a few get back to the ocean. These salmon exhibit, though in a far more intensified degree, the changes that are noticeable in our own salmon after spawning. The jaws are prolonged and hooked, and the teeth much developed. The back becomes somewhat humped; in some enormously so, and the skin of that region so hypertrophied and spongy as to conceal the scales. Simultaneously the colour of the body surface changes, becoming livid or dusky and blotched, with red patches or even entirely red. The flesh gets paler in colour and tasteless, and the whole aspect of the fish denotes its unfitnes for food. As they ascend the rivers the salmon keep close together in large shoals, each fish keeping to its own shoal and not mingling with others. Later in the year, after spawning time, they, of course, become indiscriminately mixed. During my wanderings through the country at least six different kinds of salmon were met with. The following description is limited to those about which reliable information was obtained.

Varieties of Salmon.

The Tcharveetchar occupies first place, both as to

size and flavour, and is the King Silver of commerce. It is only found in Kamchatkan waters, and forms a delicacy fit for the table of a Bolshevik Commissar. On first arrival this fish is silvery, the back and upper surface dark and marked with dark spots, which also extend on to the dorsal fin and tail. A good specimen may have a length of four feet or more and weigh about eighty pounds. The average fish run to fifty or sixty pounds. It frequents only the larger rivers, and does not exist north of the fifty-sixth parallel. It arrives about the end of April on the east coast, the middle of May on the west, and early June in southern waters. This is one of those that appear to wait for some days at the mouths of the rivers before ascending them, which it does in shoals so large that a wave of water is driven up in front. The fish becomes marked with red on the sides, producing a streaked appearance, and the thick snout becomes hooked, especially in the male. From the time of entering the river the Tcharveetchar ceases feeding, equally with the rest. According to the natives, a certain, though very small, proportion eventually manages to regain the sea. The flesh is of a rather pale red in colour, and is esteemed by the aborigines above that of any other kind.

The Krarsnaiyer or "red" fish, in shape and general appearance resembles our own salmon; on its first appearance in the rivers it is silvery, the belly white, the back dark with a bluish shade and almost without spots. In length, it reaches three feet or more, and large examples scale over thirty pounds. It is found in both the Kamchatkan and Okhotsk seas, that is to say, on both the east and west coasts of the peninsula, and seems to frequent large and small rivers alike, ascending them about the end of May or beginning of June, later than the Tcharveetchar, but before the Haiko and Gorbooshar. In volume it forms the bulk of the season's catch. Towards the end of August the Krarsnaiyer is completely of of condition. It takes on a light red all over, like a goldfish, and both jaws get prolonged and hooked, while at the same time the teeth are wonderfully enlarged. None ever return to salt water after spawning, so the natives maintain; and, being the most plentiful of all the salmon, the river banks become covered with them.

The Hunchback.

The Haiko is not unlike the "red", but it differs in the greater bluntness of the snout and the pale colour of the flesh. It appears as a rule to run smaller, but its area of distribution is similar. It ascends the rivers some little time later than most of the others, its advent coinciding more or less with that of the Gorbooshar, or hunchback, salmon. About mid-July it is caught in great numbers. Later the appearance of the fish undergoes much the same change as the Krarsnaiyer, the jaws becoming much hooked, but they never acquire the deep and generally diffused red of the latter, that colour being usually confined to small patches on the belly and under surface. A kind of bread is made by the natives from the flesh of the Haiko.

The Gorbooshar, or hunchback, arriving from the ocean, is absolutely without any trace of the extraordinary development of the back from which it takes its name. It is without spots, except on the tail, which is deeply forked and is very silvery. It frequents the rivers of some of the Aleutian Islands, as well as those of Okhotsk and Kamchatka. Roughly, its length is from eighteen to twenty-four inches, and its weight

seldom above fifteen pounds. As a rule it is considerably less. The Gorbooshar swims up the rivers in company with the Haiko. The hump begins to appear even before the fish has spawned, and is generally supposed by the natives to be the result of the efforts made in ascending the stream. Both jaws become hooked at the same time, and in consequence the mouth does not nearly close. The vast majority perish in the month of August, and though some last out till the middle of September, the natives say that none ever return to the sea.

Canine and Human Delicacies.

The flavour of the flesh is delicate on the first arrival of the fish, but the Gorbooshar is looked upon as the perquisite of the dogs, and is very little eaten by the natives. In the drying sheds it invariably occupies the lowest tiers of all. The female is very much smaller than the male and very much less numerous, the hump not being so largely developed and the hooks being absent or very slight.

The last of the series is the Keyzhootch, which is quite devoid of red coloration. The dark and greenish-brown back is marked with rather large black spots and the snout is blunt, becoming afterwards developed in a most peculiar manner. The largest weigh from fifteen to twenty-five pounds and measure three feet. This fish is the last of all the salmon to leave the sea for fresh water, arriving not earlier than the middle of August, and is, in consequence, in good condition when almost all of the others are uneatable. In the middle of September the majority of them are still clean, and it is not until the month following that they begin to acquire the blood-stained tinge of the under surface and the extraordinary snout alluded to. The latter presents a smoothly-rounded protrusion about as large as a sixpence, overhanging the lower jaw and giving the fish a most comical expression.

What may be styled a by-product of the industry, the delicious red "eekrar", or caviare, which used to be exported to Russia in hundreds of tons, has, since the markets of the empire were closed, been thrown away, as a ready sale for the red variety exists in no other country. Dumps of these roes were met with not only at the canneries, but at every village near the rivers. Salmon heads and refuse from the canneries are dried on matting in the open air, after being boiled soft, and the mass obtained thereby is packed in bales under pressure and shipped to Japan as a fertiliser for the rice-fields.

In concluding this article I may add that I was sufficiently long in Kamchatka to discover that there are still bigger fish than salmon to fry, but of that some other time.

You pick up nuggets of pure humor in a school-room. A teacher of a first grade room was explaining the nuisance of the common house fly and incidentally remarked that a single fly was capable of producing four thousand offspring. A little girl filled with wonder jumped up and said: "Teacher, for the Lord's sake, tell us now what the married ones can produce."

William Beardmore & Co., Limited, whose steel works are at Glasgow, and naval construction works at Dalmuir, have opened a Canadian office at 285 Beaver Hall Hill, Montreal in charge of Mr. Breen Kennedy. Their lines of special interest to the fishing industry is sheets, ship and boiler plates and sections. Boilers, oil engines and pumps.



Fish Facts and Fancies from Nova Scotia

By AGNES G. McGUIRE.

The period of depression which is being experienced in nearly all of the big industries to-day, affects the fishing industry as much as any. None but the greatest optimist would state that the immediate outlook is very promising, but perhaps the pessimist has less chance to gloom over the fishing industry than many others, because although temporarily there seems to be not much else to do than mark time, owing to certain peculiar conditions, there is at least the knowledge that this state of depression will not obtain for long, and that the fishing industry, of all others, is the one that offers the widest field for expansion and development with the least outlay of capital and effort.

For those who would advance the argument that in the Bank fishing fleet at least, there is vast outlay, and that the fishing vessels of Nova Scotia cost huge sums, I would offer in rebuttal, that the fishermen themselves admit that the big cost of the schooners is due to a very large extent, to the spirit of extravagance which seemed to obsess all industries during the years from 1914 to 1919, when the percentages earned were so much greater than in former years, and there seemed practically no limit to the prices charged or secured for anything.

It is not so many years since a good-looking substantial bank fishing vessel's contract price was \$4,000; to-day the beautiful schooner yachts engaged in prosecuting the industry, outfitted and ready for sea, run up to about \$50,000, a price out of all proportion to the returns for the past year.

But, be it remembered, that homes were built, families were raised comfortably and communities prospered in the old days when fish brought approximately \$4.00 per quintal, and thrift and practical economy built up the towns and villages dependent upon the fisheries, and after all, every one knew that the day of price inflation and extravagance had to pass: the fishing industry had to get back to a normal basis as well as all others. Once the fish makers or curers received 25 cents per quintal, to-day they get \$1.00, and so it goes, through the whole gamut.

In Lunenburg the sensible, practical men are now getting together with the idea of retrenchment and cutting out of extravagant ideas, and if that is done, there is every reason to believe that the pendulum will swing back to the same careful living of pre-war days and then returns for the labor of the men will net them a good profit.

For the summer catch of 1920 the prices are not likely to be high, but the majority of the Lunenburg fleet will show a good profit and many of them handsome margins on last season's work.

For the prosecution of the fishing industry there is not the need of expensive machinery which the development of manufacturing mining involves, nor the lines of railway sometimes necessary to be built in the exploiting of such manufacturing, neither is it affected by fire which often blasts lumbering operations, nor frost, nor drouth nor flood, which frequently at one sweep destroys the efforts of the agriculturist. The waters teemed with fish since earliest history, they teem with fish to-day, and as one of the absolute essentials of living at present is an abundance of food that is nutritious and reasonable in price, and as this un-failing source of food exists in the sea without aid from man in its propagation, except in a very few cases, no effort must be spared to advance this industry to the place it should hold in our national production.

There seems to be a singular lack of inclination among Canadians to consume fish, and when its value as a muscle, fat and tissue builder is compared with meat, there is much to be said in its favor, in fact, most doctors claim that entirely too much meat enters into the diet of the average citizen, and, as a substitute, what better can be desired than one of the many excellent varieties of fish found in abundance in our waters, served in tempting form? Right here let me state that one half of the nonsense we hear about people not liking fish is because they have little or no idea concerning its preparation for the table.

A point not to be lost sight of too, when considering the excellence of fish as food, is the medicinal qualities of many kinds of fish. In a large number iodine is found in varying quantities, and iodine is the indispensable factor in the functioning of the thyroid gland, that wonderful ductless gland which ministers to the stability of the human race. Hence we should eat fish to be healthy, normal beings, as well as because it is the best substitute, if not really superior to meat as a steady diet.

The Canadian fisherman did much to support the efforts of the Food Board during the war, and there is little doubt that the home consumption of fish was advanced very materially, but generally speaking, Canadians do not eat one quarter enough fish, and that

leaves us to too great an extent dependent upon our export trade. A Halifax fish merchant has advanced the idea that if the threads of the work of the food board were picked up and carried on in a practical way, there would be an incalculable benefit rendered the fishing industry. There would be some cost to such a campaign, it is true, but that would be trifling when its advantage was considered. Whether the family is going to develop a taste for fish or not, will largely depend upon the way it is cooked. It is hard to spoil a good piece of beef in preparing it for the table; if it is broiled, baked, stewed or even fried, it is a poor cook indeed, who can utterly spoil it, but fish is a different matter. Personally, if fish were eliminated from my diet, I would be very unhappy, but I have had some of the most unholly concoctions placed before me during some of my travels, which left me no room for wonder why the average person "does not like fish". One of my saddest experiences was when a most plausible menu card announced "Salt cod a la Welsh rabbit". Deciding to myself that I'd try anything once, I ordered it, and at once vowed that a starving alley eat would disdain it. It was good salt cod, mind you, covered with stringy cheese, milk and crackers, and I am sure that if I had been a candidate for the India famine fund, I couldn't have done any more than look at it, and that is not the only time, by a very large majority, that I have seen fish ruined by high-faluting chefs, who seemed to know how to do anything but cook. There are hundreds of delicious ways to prepare fish, so that it will be one of the most desired foods, but, if you are going to make a conscientious effort to advance your country's interests by being a fish eater, 'ware the "Welsh rabbit" preparation. I have noticed that in many cases the recipes printed for the cookery of fish are too high class, they don't come under the like-mother-used-to-make variety. If such a campaign were put on, it would be well to secure recipes from good, wholesome practical home cooks, and I have no doubt but that many who affect to despise fish, would be among its most enthusiastic converts.

For the encouragement of the home market there is much to be done in the matter of rapid transportation of fish from the coast to the inland towns of Canada, at all times, at a moderate rate, so that fish could reach the consumer in a perfectly fresh condition. In Nova Scotia more attention should be given to the development of the fresh and pickled fish markets. These branches should be as carefully nurtured and brought along as the export dried-fish trade, and while it may mean the outlay of considerable capital, the benefits which would accrue from it would justify such expenditure.

If the fresh fishing industry is to be encouraged, there should first be an inquiry into the rumored fishing agreement with the United States based on the recommendation of an international commission, which sat some time ago, one of the terms of which would mean the opening of the largest consuming centre in Canada to the United States, free of the duty of one cent per pound, which is now paid. The removal of this cent per pound would not affect the Canadian consumer, but would mean a great deal to the Nova Scotia fisherman, for whom there is too great a disparity between the price received by the shippers and the price charged the consumers. He receives three or four cents a pound and would have to lose this cent in competing with American shippers. The commission referred to

held no inquiry in Nova Scotia, but before the proposed arrangement is carried into effect a full and complete investigation should be held.

In the pickled fish trade, there seems to be also need of careful attention, and no effort should be spared to stimulate what is in every other country a highly remunerative branch of the industry. With herring selling from \$8 to \$14 a barrel, and mackerel running as high as \$40 a barrel, and with the comparatively small increase in the cost of salt, barrels and other containers, why is it that our pickled fish do not net the fishermen the handsome profits that those same products of other countries secure for properly cured and packed fish? The quality of the catches of Atlantic fish is equally as good as those caught in the waters of any country, why then should our pickled herring and mackerel bring a much lower price than a similar product from other countries? For my reply, I am directly quoting from an article written by the Inspector of the Eastern Fisheries Division, which appeared in the Halifax Herald of December 31, 1920. "The answer is that our fish are too often badly cured and badly packed, ungraded and in inferior packages, with the result that the product could not demand the best prices even when marketed under the most favorable conditions. Indeed the conditions have been so bad that many dealers will not buy pickled fish for export in the original package, as the packing has often been so inferior as to jeopardize the business reputation of the dealers, as well as any possibility of profitable business. It is fortunate that during the past several years the demand for the better class trade has resulted in the more reputable dealers insisting upon better methods, and consequently those dealers have no difficulty in disposing of large supplies at good prices".

In conversation with a gentleman who has built up an excellent trade with Trinidad, in fish of every variety, I gleaned some very interesting information. This gentleman insists on the best in his export product and declares that there is no limit to the business which may be built up in the West Indies trade, if we adopt the methods which the Americans are using to extend their operations in that direction.

As it may interest the Canadian Fisherman readers, I will pass his ideas along, quoting verbatim: "Another point which presents itself to me is that for many years we have been selling to the West Indies trade our dry, smoked, pickled and canned fish. These markets are the same now as they were twenty-five years ago. There is little or no expansion. The Americans have gone into this market with canned fish and practically taken the cream of the trade. Very little is known in the West Indies of Canadian canned fish, and we do not get anywhere near our share of the trade. To help build up our W. I. Trade, the idea of making an exhibit of our fish goods has been in my mind for some time." (This gentleman has resided in Trinidad for a number of years and knows his subject from A to Z.) "The Americans, in order to increase trade, make frequent commercial raids on outside territory. They will charter a palatial steamer, fit her out as a floating exhibition and make a trip to the West Indies, sparing no pains to interest buyers at every point. In this way and other ways they have secured to themselves an increased trade with the British possessions in the West Indies. Anyone acquainted with this trade knows this, it is no secret, and one has only to visit any of the islands to see the proportion of Canadian and American goods in

stock. Canada, and particularly Nova Scotia, could have the bulk of the fish trade of the Leeward and Windward Islands, if properly gone after. Little is known there of dry fish cured in an ordinary way, whether it contains 10, 15 or 20 p.c. less moisture, or its value in proportion." (That may be a surprise to many fish merchants but I am assured that it is true and there is great need of education along those lines.)

With reference to canned goods, he particularized sardines, saying that cheap American sardines are used in preference to the same quality packed in New Brunswick, in fact a proportion of the Canadian pack is sold to American packers, to be sold as American pack, in the West Indies markets.

No particular effort is made on the part of Canadian packers to protect their trade and it is the opinion of this gentleman that an educational trip should be made to the West Indies with a full exhibit of Canadian fish products. The Canadian Government ought to assist in the matter to the extent of transportation, as it can be shown where it would greatly benefit them from a carrier's standpoint. It would be a big advertisement for Nova Scotia and would mean prosperity for every section of Canada interested in the fishing industry, clear to the canning plants on the Pacific coast..

In the case of dry salt fish, there can be very serious trouble arise if these products are not handled properly from the very moment the fish is hauled over the schooner's side from the dory. They are in perfect condition when taken from the trawls, but, when they pass into the hands of "header" and "throater" every part of the work must be performed in a cleanly, careful and sanitary manner, or the dried product can never hope to compare with those of foreign markets, where the greatest attention is given to the smallest detail, at this stage of the process. The clot of blood at the end of the back bone must be carefully cleaned away, because, although the salt will keep that blemished spot from decomposing, it will not keep it from a most unsightly discoloration. Again, the fish should be carefully "white naped", which may be best done with a small vegetable brush,—some use a small wire brush, but it is claimed, this brush tears the fish. Others, with a dexterous turn of the knife rip the offending membrane off like a piece of paper. All other clots should be carefully cut away and the fish washed, and then all that can be done on deck has been done. Now for the salting. Here is where there is going to be a very special departure from the usual mode of procedure, if a desirable, unblemished product is to be secured, and the first step is to be sure of your salt. It is a singular thing that almost every captain of a schooner will tell you that he knows there is something wrong with the salt he is using. There are few fishermen who do not know it, and nearly all merchants agree about it, yet the old method is pursued.

Here is an explanation offered which seems reasonable, which any chemist can prove, and how many thousands of dollars have been saved in every industry by the knowledge of the chemist! The theory advanced is this: Nearly all schooners going to Porto Rico with dry fish go to Turk's Island and carry a return cargo of salt. Now, a salt pile which has endured the wet season in Turk's Island is not going to be as valuable as one which has only stood through a dry season. The constant rain, in other words, washes away the strength of the salt and the remaining bulk is largely composed of lime, which is of no use as a preservative

of fish. This theory is borne out by the white deposit seen on dry fish, which many fondly believe to be caused by brine, but which in reality is a thin coat of white wash, but it does not do what white wash often does,—cover up bad work. The fish deprived of the keeping quality of a good strong salt, simply spoils and is totally unfit for any market. One fish merchant assured me he never used anything but Cadiz salt, and although its cost was much higher, it was cheaper in the end, because there were no spoiled fish when the shipments of cured products arrived at their destination.

Having the proper quality of salt, the fish must be keneched carefully, and the salt distributed evenly, otherwise there will be hollows in which the pickle will collect, and too much salt in other portions, which makes a bad looking finished product. If the fish have been handled in the most careful manner on board schooner, and captain and crew feel assured they have done everything in their power to ensure a high class dried fish, they can still be ruined by a careless fish maker.

Suppose this well dressed cargo is taken ashore and piled in a store which is dirty and then is washed in about one quarter enough water. Instead of drawing off the water and adding a proper amount of good pure water, a couple of buckets of clean is put in with the already filthy lot in the container, the half-washed fish is then put out in the sun to dry, and with the help of the salt it does get cured in some sort of manner. As long as the weather is cool, there is not much difficulty experienced, but ship them to the tropics, let the imperfectly dried product start to sweat and what is the result? A mass of decomposed food totally unfit for human consumption and fit only to be pitched into the dock. Ask anybody familiar with the fish trade if this very thing has not happened. As one shipper expressed it, "My experience has been sad and serious. Sad because we have not a standard pack under Government Inspection, and serious because shipments can go bad thousand of miles from home with no way of redress".

Think of a cargo such as has been described, going into a market in competition with really perfectly cured fish. The foreign markets think so highly of the Porto Rican and other West Indian markets, that they would not dream of offering any but the best stock for sale. It is reasonable to suppose that the West Indies is so enamoured of Canadian markets that they will buy shipments of bad fish when they can secure a good product? Would it not be better to safeguard the industry so that not one poorly cured consignment could ever be attributed to a Canadian port?

Now, while the trade reports state that there have been badly cured fish shipped to Porto Rico and other West Indian ports, would it not seem very much more to the point to get down to brass tacks and prevent such an occurrence, than to carp and cavil and argue about the matter without raising one effort to apply a preventive to the evil, no matter how small the proportion may be? We should be as jealous of our reputation in this vast industry as the foreign fish curers. Suppose for one instant that such a contingency should arise that these markets should be lost to Canada. What consternation would reign! What money would be spent in an effort to recover the lost ground!

Instead of this being a matter of argument, there should be education of a technical nature which will put this particular product above reproach. These

schools have been established in Great Britain and other European countries. Their benefits have been such that it would be unwise and ignorant to minimise their value. All any one has to do is to look at the marketed products of those countries, whether pickled or dry, to recognize that the meticulous care which is given to every stage of the process has been the result of careful training in such schools. But it must be remembered that the fishing industry of those countries were schools for fishermen have been established, is conducted along different lines than in this province, consequently, many subjects taught in the schools there, would be of no great practical value to our fishermen, and of course there is no room in our industry for any, save practical values.

A great part of the industry of the maritime provinces is the "Bank" fisheries, and the bulk of the exported fish are cured dry fish. Steam trawlers are not operated to the same extent they are in other countries, line trawling and hand lining being the methods used. The vessels are sailing schooners, about 100 tons net, and for the fishermen who man this particular fleet, there are certain definite educational needs which a short course of a suitable nature would fill.

There are five branches in which instruction is badly needed, Navigation, Motor Engines, Mechanics, Commercial courses, and last but by no means least, Improved methods of Curing, Packing and Handling fish foods. There are possible one or two other subjects which might be taken up later, such as Ship Survey, Medicine and Hygiene, which would be of great value in minor accidents and sickness, but these could be added as the schools enlarged. For a start, the first five are the essentials.

With regard to Navigation, qualified instructors with proper equipment can be established at the various fishing centres at such times as would be of most advantage to the fishermen who, at the close of the course, could go to the regular Navigation Schools, to secure certificates.

Many of the fishermen are expert coastal navigators; many even are qualified as far as practical navigation goes to steer a vessel to foreign ports. They have picked up knowledge in the "school of hard knocks" and in a most arduous way. Much of this could be obviated by the suggested course; they could obtain information during an idle time and with their certificates their opportunities would be limitless.

There is little doubt many would gladly avail themselves of this chance, as the natural ability of the men would soon enable them to qualify for this big chance, were the education carried to their doorstep.

Motor Engine Mechanics would be of great advantage to those prosecuting the shore fisheries, although the bank fishing schooners are also equipped with auxiliary motor power. The smaller boats are practically all motor boats and the operators of the motor engines are largely self-taught. It naturally follows that they have little or no knowledge of the principles involved in the construction, care and working of such engines. Boats of this sort will be used to the exclusion of any hand power. Should anything happen to an engine a man may have to lose several days getting repairs at some point, miles distant.

This course of instruction could be held in connection with the Navigation Course and would be of inestimable benefit, enabling the men to obtain positions which they could not fill without the necessary certificates.

In regard to the Commercial Course, many of the fishermen have been unable to attend school in their earlier days, and so find the "business" end of the fishing trip a stumbling block.

A simple course dealing with marketing, stock, settling up trips and the necessary points in Arithmetic, etc., could be given in connection with the two named in the foregoing, all of which would benefit the fishermen very largely.

The last named course, Improved Methods of Curing, packing and handling fish, offers a wider field and one in which the need is greater than the others.

Technical Education in Belgium, Germany and Norway has taught the fishermen that their product must be of the highest quality. Government Inspection in those countries demands that they keep to a high standard.

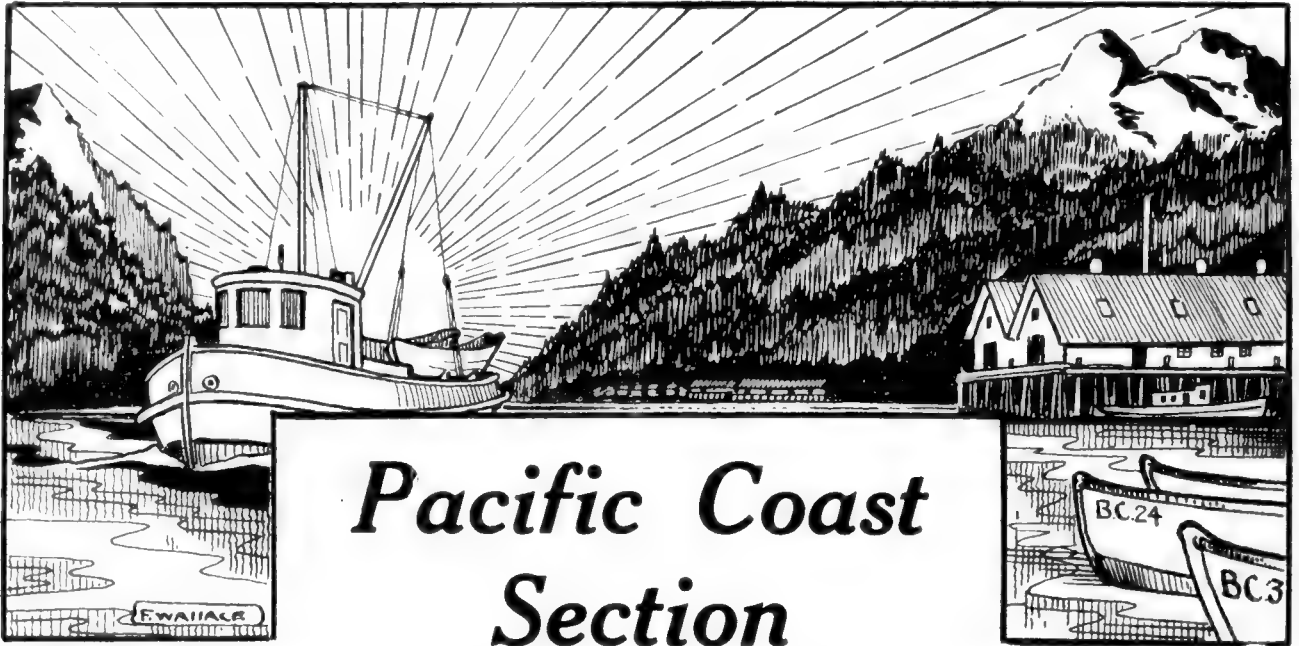
We know much, not all there is to know, about catching fish, we know in a hap-hazard manner, a certain amount about curing them.

The foreign markets call for the best in cured fish, some markets requiring a larger percentage of moisture to be removed than others, some, heavier salting. If our product does not compare, in quality, or appearance,—and appearance is a big factor,—with those fish put out by men who have been educated to cure them properly, then education must be brought to our fishermen. The farmers of Nova Scotia have made tremendous strides during the last twenty years, by means of exhibitions, lectures by experts, short courses, regulations of marking or grading through regular inspectors, practical literature, application of scientific methods and in endless other ways, and also can the fisherman advance by imitating many of their practices.

Take a trip through Lunenburg County and see the farmers there who have attended the short courses put out by the Agricultural Colleges; listen to them talking, but better still watch them putting into execution their practical knowledge gained from these sessions. See them reclaiming farms from the swamps and forests, and treating "sick" soil, and decide whether education has benefited them or not. It is an actual fact that in the matter of potato raising alone, Lunenburg County has set a world record. No such yield has ever been known in countries where potato growing is the chief industry, and it was accomplished by scientific methods combined with hard work and common sense.

Harvesters of the sea must take a lesson from the tillers of the soil, and must get together and bend their united efforts to devise all the workable schemes that may be applied to improve their products and their industry. The assistance of scientists, educators, business men, advertisers, government officials and the leaders among the fishermen themselves must be impressed into service, so that nothing but the highest class of fish will be offered, and every product of the Canadian industry will be heralded far and wide as the best that can be secured in any market. Nothing less than that is worthy of Canada.

Avoiding the Rush. — "Any trouble getting a drink in your town?" asked the farmer. — "Not a bit," replied the city man. "Why, the bootleggers are so thick that they have to wear badges to keep from selling booze to one another." — Cincinnati Enquirer.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd. 528 Winch Building, Vancouver, B.C., Canada.

PRIZE WINNERS IN FISH DAY CONTEST FOR WINDOWS IN VANCOUVER.

CANNED FISH WINDOW DISPLAY.

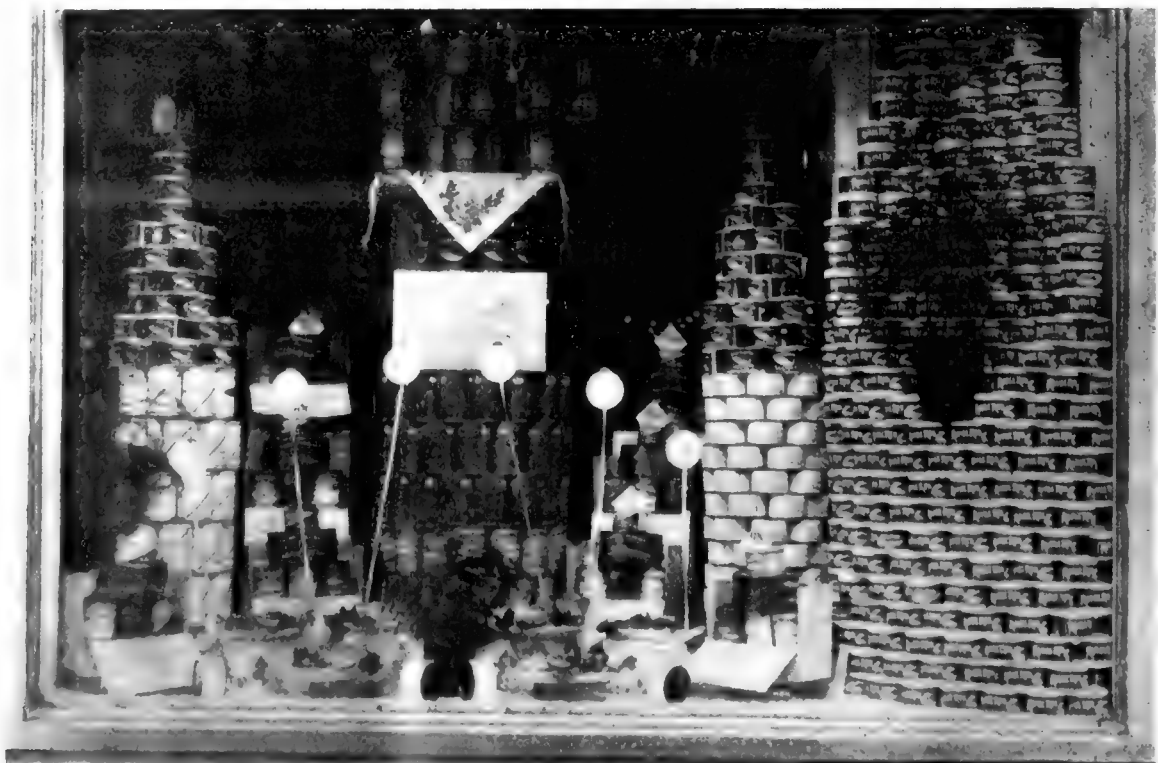
Prizes donated by B. C. Salmon Cannery Assn.

- 1st prize \$25.00—A. & C. Grocery, 520 Granville St.
2nd prize \$15.00—Merritt & Beeton, 2250 4th Ave., West.
3rd prize \$10.00—J. W. Payne, 24th Ave. and Knight Road.

FRESH FISH WINDOW DISPLAYS.

Prizes donated by the Vancouver Branch Canadian Fisheries Association.

- 1st prize \$25.00—P. Burns & Co., Ltd., Granville Market, 817 Granville St.
2nd prize \$15.00—Chris Johnson, Economy Market, 71 Hasting St., West.
3rd prize \$10.00—P. Burns & Co., Ltd., Mainland Market, 16 Hastings St. West.



CANNED FISH DISPLAY

First Prize Window, A. & C. Grocery Vancouver.

PLAN SUGGESTED TO BARTER CANNED SALMON FOR LIQUOR.

With the moderation act coming into effect in British Columbia, it has been suggested to the British Columbia salmon canners that they trade their stock of canned salmon for wet goods. The salmon canners with this idea in mind have approached Premier Oliver with the suggestion that the provincial government use its buying power under the Moderation Act to bring about sales of Provincial commodities especially canned salmon. A plan has been suggested whereby no liquor shall be bought by the government unless payment therefor is arranged and financed by a purchase of a corresponding value of British Columbia natural products.

The delegation of canners that waited upon Premier Oliver on Jan. 24th were, Messrs. Peter Wallace and F. E. Burke, of the Wallace Fisheries Ltd., J. Lamb and J. M. McMillan, Cassiar Packing Co., Ltd., R. V. Winch, of R. V. Winch & Co. Ltd., R. C. Gosse, of Gosse-Miller Packing Co. Ltd., E. A. Hamilton, of the Western Packers, Ltd., J. S. Eckman, of the Canadian Fishing Co., Ltd., and W. D. Burdis, Secy of the B. C. Salmon Canners Association. It was submitted that 750,000 cases of canned salmon are still in the hands of the canners, these consisting mostly of pinks and chums. The canners state a market can be found in France and other countries from which purchases of wines and liquors will have to be made under the Moderation Act. The suggestion is that as France has large quantities of wines and liquors, arrangements should be made for direct barter of products between the British Columbia canning industry and the wine-growers of France. It was also suggested that the proposal also might be extended to Scotland where whiskey is believed to exist in large quantities and to Jamaica which exports rum. The Premier agreed to lay the proposals before the cabinet without delay.

CONCERTED ACTION WOULD MOVE A GOOD SHARE OF CANNED PINKS BEFORE THE NEXT CANNING SEASON.

If the salmon canners of British Columbia would take some concerted action in regard to marketing their pack of canned pink salmon, which they now have on their hands there is every chance of their be able to move the larger part of this before the canning season starts.

There is too much pessimism among the packers themselves. For so many years have they considered the pink salmon the lower grade that they cannot go out and talk optimistically about their own packs. As a matter of fact they have at the present moment the very best possible argument in favor of this particular variety of canned salmon. It is of high protein value and one of the most economical foods obtainable. They only thing they have to do is to agree on a definite marketing plan and put it into effect. It will cost something to put over such a plan but the returns will more than justify the expenditure. They already agree on one thing and that is they want to sell their goods. All right, it should be a very simple matter to map out a plan to market them. There are many examples that demonstrate the feasibility of a plan. The fruit growers, the nut growers, the lumber men of the Southern states and innumerable other associations all over the continent who have got together (and the members of

these associations are competitors in the same line of business) and put over marketing campaigns that were successful beyond dreams of the most optimistic of the members. Canada's National Fish Day, right in Vancouver; demonstrated what could be done by a proper marketing plan, when over 1,000 cases of canned salmon were sold in three days in a town that has the reputation of being a fresh fish town, and when fresh fish was sold to the tune of 200,000 lbs. in the same three days. Why sit around and worry about goods that are ready to go on the shelves of the retailers and thence to a waiting public who are anxious for a low economical, tasty food?

SALMON CANNERS NOT ALL AGREED UPON SCHEME TO BARTER CANNED SALMON FOR WET GOODS.

That all the salmon canners are not one in the idea of bartering canned salmon for wines and liquors is shown by the following letter from Mr. H. O. Bell-Irving which was published in the Vancouver daily papers on January 26th:

"The Hon. John Oliver,

Premier of British Columbia,
Victoria, B.C.

"Sir.—In the evening editions of Vancouver papers I notice report of an interview of certain gentlemen interested in the salmon canning industry; with you, in which it is suggested that an exchange of unsold stock of salmon in British Columbia, should be made for wines and spirits with France and elsewhere. The suggestion does not emanate from the the B. C. Canners Association as a body, but from some of its members only, and I wish to disassociate myself entirely from the proposal, not only as one interested in the fishing industry, but as chairman of the Moderation League. Much as reciprocity in trade is desired I do not think the scheme a practical one which can be seriously considered.

"I have the honor to remain, Sir,

"Your obedient servant,

(Signed) "H. BELL-IRVING."

It is understood that the B. C. Fishing & Packing Co., Ltd., are not favorable to suggestion. These are two of the largest salmon packers in the province.

VANCOUVER WHOLESALE FRESH FISH MARKET.

Halibut.—Plentiful during fish day week and at right prices.

Salmon.—From the West Coast of Vancouver Island in fair quantities although the weather has not been very good.

Herring.—Point Grey herring have been coming in in fair quantities. During fish day week a large quantity was brought in from Nanaimo, and a large quantity of the smaller sizes were sold.

Soles.—Scarce.

Smelt.—Scarce.

Shellfish.—Crabs and shrimp have been quite scarce for some time now.

Oolichans.—A few have been on the market but no large quantities.

Cod.—Closed season for local caught ling cod. There have been some fresh grey cod on the market.

PRINCE RUPERT CELEBRATES NATIONAL FISH DAY IN A ROYAL MANNER.

Local Association Right on the Job.

A good many Canadian towns can take a lesson from Prince Rupert when it comes to boosting fish. Prince Rupert is a mighty fish producing centre but its population is small and therefore its status as a fish consumer is not great. But when National Fish Day came around, the event was celebrated by practically every inhabitant of the Northern Pacific city.

The local branch of the Canadian Fisheries Association got to work and imbued everybody in the place with their own enthusiasm. Advertisements were carried in the local papers; appropriate slides were shown in the Moving Picture Theatres; dealers made good fish displays in their windows, and delivery rigs carried cloth banners to remind the housewives of the importance of having lots of fish for February 9th.

A Fish Luncheon was held at noon of the Fish Day with over two hundred persons sitting down to the table! As a lunch, a social event, and a tangible recognition of an Industry, it was voted by all to be the largest turn-out at a mid-day affair ever held in Prince Rupert. An appropriate Menu Card was designed and prominent speakers gave interesting and informative addresses.

Ex-Mayor Speaks.

Mayor Rochester presided and spoke on the origin of Fish Day on the suggestion of Mr. Paulhus, of the Fisheries Association. He said the fisheries of the port meant everything to the businessman. It was the staple product. It meant the same to Prince Rupert as the wheat crop did to the prairies. They ate, talked and thought fish.

The luncheon opened with the singing of "O Canada" by a prominent fisherman, John Davie, everyone joining in the chorus, and closed with the National Anthem.

Ex-Mayor McClymont, speaking at the National Fish Day banquet, described the fishing industry as the life blood of this community, around which everything else rotated. If that industry were wiped out, a good many would look to other fields.

"We might ask ourselves," said Mr. McClymont, "if we are developing this industry to its fullest pitch, knowing the actualities and possibilities. Personally, I don't think we are. Leaving out the salmon, and dealing with the other species, I believe the halibut is being well attended to and pushed to the limit. But we have other species, not receiving our attention, that have built up score of places almost as large as Prince Rupert and some larger.

Herring Industry.

The herring species outnumber any other in the oceans of the world, and in my country it is known as the king of fish. There, whole communities depend on it. Their fleets follow it around the British Isles, and when the great Yarmouth run is on, as many as 2,000 men and women leave the north on special trains to look after the curing and packing of the catch, annually, the big markets being the Slavonic races and Italian. I simply mention this to show what other countries do, and to enquire if we can do the same."

He had been told that the local herring were too small and soft to stand curing and he had also been told that large herring could be caught practically all the year round, off the Queen Charlotte Islands, by using proper nets and going deeper. He suggested that the latter question be gone into. He believed all

that could be produced could be marketed among the foreign population of the prairies, and in the Orient. The herring industry also meant the development of a large shore payroll, as well as actual fishing. The coopeage industry alone was an important item.

Help Them Win.

The luncheon was held under the auspices of the Prince Rupert branch of the Canadian Fisheries Association, and the fishery committee of the city council and board of trade.

The menu card was a real work of art, bearing among other things, the following truthful lines:

"We've had miners and loggers and shipbuilders here. And at times we have figured they acted quite queer. But the fishermen stay with us through thick and thin. And it's up to Prince Rupert to help them to win."

The committee of arrangements comprised Messrs. J. N. Sinclair, Jas. L. Lee, Ald. Frizzell, Ald. Dybhawn, and Messrs. W. E. Williams and Geo. W. Nickerson.

COL. CUNNINGHAM LEAVES FOR EUROPE.

Armed with letters of introduction and commendation, photos and films of fishing and canning operations, and the moral support of the Federal and British Columbia Governments, Col. Frank Cunningham left Vancouver on Feb. 15th, for Europe where he will act as a missionary to increase and extend the markets for B. C. Pink Salmon.

He has the assurance of the Hon. C. C. Ballantyne that the Government in Ottawa is in full accord with the objects of his mission, and will render him its prestige and assistance. He will wait upon the Ministers during his stay in Ottawa, and complete these arrangements.

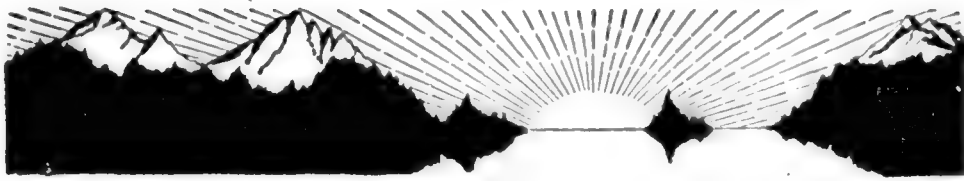
Col. Cunningham cannot, at the moment, outline his future programme which will be largely governed by the advice of the Boards of Trade, Chamber of Commerce, and the Brokers, which he will obtain after his arrival in England.

His intention is to represent the whole industry, and to that end will avail himself of every opportunity afforded by illustrated lectures in schools, public halls, department stores, press notices, hand bills, etc., to educate the people, in all which he will keep in close touch with the Boards and Brokers referred to, in order to have supplies of Pinks on hand in towns where he is going to campaign, and so get the goods in the homes of consumers whilst the interest aroused is alive.

It was arranged that Col. Cunningham will report weekly to the Secretary of the B. C. Salmon Cannery Association, his movements, programme, results, and any other interesting particulars and which will be distributed to the Cannery and Brokers here.

Time Was up. — "Moike was drowned last night." — "Is that true? Couldn't he swim?" — "Yes; but he's a man of the union; he swam eight hours and quit." — Good News.

The retired business man was discoursing to the town folk on how to be successful. "Yes," he said, "if there is one thing to which I owe my success in life, it is to pluck, pluck, PLUCK!" — "All right," called a voice in the rear of the room. "where did you get the people to pluck?"



National Fish Day in Vancouver

President A. L. Hager, of the Canadian Fisheries Association, called a meeting of the executive of the Vancouver branch way back in January and a rough plan was mapped out as to what was to be done in connection with National Fish Day. This was simply a forerunner of several meetings of this same committee until complete plans were formulated. At one of the meetings Mr. R. R. Payne, production manager of the Canadian Fishing Co., Ltd., was nominated Chairman of the local committee to carry out plans and put over the National Fish Day as far as British Columbia was concerned. With Mr. Payne, Mr. Frank E. Payson, secretary of the Vancouver branch, was to co-operate. At the final meeting of the committee Mr. Payne reported regarding the plans he had in view and he was told to go ahead. Long before the 9th began to loom up in the offing there wasn't a soul in British Columbia let alone Vancouver that could read or talk but what knew that Fish Day was on the way. Every member that used the mails received a large rubber stamp to stamp all outgoing mail to remind their correspondents of Canada's National Fish Day, and a notice to the effect that they were appointed individual committees to see that fish day news was spread abroad. Both telegraph companies stamped all incoming messages also. Every retailer of fish was notified when fish day was to be and asked to help. Every hotel and restaurants, and every railway and Steamship commissary department was asked to see that fish was served on National Fish Day. As far as your correspondent can find out every one of these public places served fish on the 9th, and in many instances elaborate menus were arranged for, especially in the clubs. Meantime the newspapers were printing reading notices of all kinds and descriptions, and on the Saturday previous to fish day the first large advertisement appeared and was followed by two more before the 9th all inserted by the Vancouver branch. Incidentally there was an advertising campaign carried on by Goss-Millerd Packing Co., and the Wallace Fisheries Ltd., in connection with their canned fish. This all helped to create talk about fish day. On Monday previous to fish day banners appeared on street cars saying "Eat Fish," "Canada's National Fish Day, Wednesday, February Ninth." There were enough signs so that when cars stopped on opposite corners the public could see the signs on two cars at once. Delivery trucks also were well placarded and thousands of paper posters were distributed all over the province and to the stores in Vancouver for window display.

On the Thursday previous to Fish Day Mr. F. E. Burke, chairman of the Vancouver branch of the C. F. A., delivered a talk to the Kiwanis club after which the club, by a standing vote, decided to have fish for their

regular lunch on Thursday the 10th. At the Gyro club, Mr. H. B. Bell-Irving, Director for British Columbia of the C. F. A., gave a talk on fish the same day and this club all agreed to eat fish on fish day. On the Tuesday before National Fish Day, Mr. J. S. Eckman, vice-chairman of the Vancouver branch, gave a talk before the Rotary club, on what the National Fish Day meant, and the club, by a standing vote, agreed that each member should eat at least one meal of fish on National Fish Day (by the way, they had fish at this lunch too, which was the day before Fish Day). President Hager was to have delivered this talk but was called away from the city unexpectedly. Mr. F. E. Payson, secretary of the Vancouver branch, gave the first of these series of talks at a dinner of the Made-In-B.C. campaign committee the week previous. During the same week that Fish Day fell in, there was an advertising campaign being carried on in connection with **Made-in-B.C.** goods and that committee co-operated with the fisheries association in their advertising, which was to the advantage of both. On the Tuesday previous to Fish Day the judging was done on window displays of both fresh and cured fish and canned fish. Three prizes were donated by the Canadian Fisheries Association for the three best fresh fish displays and three prizes for the three best canned fish displays. This aroused more interest than usual and there were more displays to be judged which meant that the public were shown more fish displays than had been shown in previous years. An interesting feature in this connection was that outlying districts had displays that had never tried for a prize in previous fish day contests. The story of the displays appears in another item. These window display contests always work well from the marketing standpoint as the clerks in the stores usually receive the money from the prizes and their friends among the customers are always interested in their stores getting the prizes. This talk lasts for many days and as all prize winners receive special display cards showing which stores won the prizes it acts as an advertisement for a long time. The prizes for the fresh fish were donated by the Canadian Fisheries Association, Vancouver branch, and those for the canned fish displays, by the B. C. Salmon Cannery Association. Results are not known as yet as the quantity, but there was surely a record made as to the amount of all varieties of fish that have been sold for this year's National Fish Day. There was a car of frozen salmon brought into Vancouver from the Columbia Cold Storage Company and disposed of at 25c per fish and this also caused a lot of talk and advertising and everything that was fish was good advertising for the great day. The Vancouver branch are certain that they went over the top in good shape this year on Canada's National Fish Day.

PRINCE RUPERT LOOKING FOR A BIG FISH YEAR IN 1921. WILL THE GOVERNMENT ASSIST?

There is only one thing that can hold Prince Rupert back from having the biggest year in its history as regards the landing of fish at her docks, and that is lack of refrigerator car facilities. This was the statement of Mr. T. H. Johnson, Managing Director of the Canadian Fish & Cold Storage Co., Ltd. recently. Should this prove to be the fact (and we all sincerely hope every fish offered may be taken) the entire matter as to cars is right up to the government. Prince Rupert, as a city, is doing everything possible to draw the fishing fleet to that port, and if for any reason anything is done or not done that will prevent the fish being handled there, it is not Prince Rupert's fault. A great deal of telegraphing and correspondence has been carried on between the British Columbia Officials of the Canadian Fisheries Association and the Eastern officials in an endeavor to have the Government hurry to completion thirty refrigerator cars which were ordered a long time ago. President Hager of the C. F. A. has been most energetic in this matter, working in conjunction with Prince Rupert branch of the association, and it is hoped that some definite action toward hastening the completion of these cars will have been accomplished by the time this is read. Now these thirty cars will not be enough to entirely clear the situation. More cars than these are needed and the Government should realize that not only is the National Railway losing a chance for big earnings but good hard money is being kept away from the country. If during a month 1,000,000 lbs. of halibut is turned away from Prince Rupert it means that out of \$100,000.00 a large percentage is left in Prince Rupert as payment for supplies and wages.

Prince Rupert is geographically located as the Grimsby of the Pacific Coast and everything possible should be done to help make it so. When the government for any reason does not do its part then it is not playing the game. It is not good business to turn away products that are brought to your doors and for which there is a market waiting. This is what is being done when sufficient refrigerator cars are not on hand at Prince Rupert to take of the fresh fish when offered. It is directly up to the Government inasmuch as they own the railroad which is responsible for the furnishing of the refrigerator cars.

WE'LL SAY IT DID.

"THIS YEAR WILL EXCEED PREVIOUS EFFORTS" was the gist of a wire that President A. L. Hager of the Canadian Fisheries Association sent National secretary F. W. Wallace regarding Canada's National Fish Day, and as the heading says WE'LL SAY IT DID. There happened to be four conventions in Vancouver during the week that February 9th fell in and the writer asked the Manager of Hotel Vancouver if he would serve fish on National Fish day and he said "Sure, I'm going to serve it every day this week." Guess he did too. There were three convention lunches going on at the same time in the Hotel and they all got fish, and they all enjoyed it. Everyone was talking fish the entire week. The papers were full of fish talk and fish stories and cartoons. The canning firms helped out and the retail stores did their share. Chairman R. R. Payne of the local committee certainly thought up all the original stunts to put over that was possible. He even got Nanaimo and Victoria to working along lines that made these two cities realize they

had a fishing industry. "Bob's" one idea for the past few weeks has been that Vancouver had to have enough fresh fish to go round as he had to back up his propaganda. It finally came to where he had to go out and round up a crew of fishermen and bring a boat-load of herring which was put on the market through the retail stores at 4 lbs. for 10c. where they had been selling about 4 lbs. for 25c. There was enough fresh fish of all kinds to please the most exacting of the fish consuming public. As to news, well anything with the word fish in it seemed to find its way into the papers and in some instances they even used the word fish in headings on subjects that were entirely different. We'll tell the world that Al. Hager knew whereof he spake.

A FEW FISH DAY STATISTICS FROM VANCOUVER.

During Monday, Tuesday, and half of Wednesday (Wednesday is a half holiday in British Columbia) there was a total sale of fresh, frozen and cured fish amounting to 200,000 lbs. in Vancouver alone.

Between 75,000 and 100,000 lbs. of canned fish were also sold or approximately 1,250 cases or (if one lb. tall cans) 75,000 to 100,000 cans.

One firm sold a special package under their brand which they advertised those three days. There were 6 cans in this package consisting of five and one half pounds of fish and the total sales amounted to 5,736 packages, (31,748 lbs.).

The winner of the first prize for best fresh window display, P. Burns & Co., Ltd., Granville Market, 817 Granville street, had an increase of 80 per cent in one day's sale as compared with the best day of any previous week. That was in fresh fish alone and they sell canned fish as well.

Economy Market, Chris. Johnson, 71 Hastings St., winner of 2nd prize, sold \$500 lbs. of herring alone and sales 150 per cent. larger.

P. Burns & Co., Mainland Market, 12 Hastings St., West, winner of 3rd prize, sold 1,500 lbs. of herring alone and sales more 100 per cent higher.

This of course does not show the increase in other stores where the ration of increased sales were just as great.

IT IS NOW THE BRITISH COLUMBIA FISHING AND PACKING CO., LTD.

Announcement has been made that the BRITISH COLUMBIA FISHING and PACKING CO., Ltd., has taken over, from the first day in January, 1921, as an operating company, and assumed all the liabilities and assets of THE BRITISH COLUMBIA PACKERS ASSOCIATION. The registered office of the British Columbia and Packing Co., Ltd., is now situated at Union Bank of Canada Building, 410 Seymour St., Vancouver, B.C.

Mr. T. H. Johnson, Managing Director of the Canadian Fish & Cold Storage Co., Ltd., of Prince Rupert was in town during the first week in February on business. Mr. Johnson also went to Seattle while he was South. As representative of the Prince Rupert Board of Trade, Mr. Johnson placed a resolution before the Associated Boards of Trade of British Columbia regarding the Government hurrying to completion of sufficient refrigerator cars to take care of fresh halibut shipments from Prince Rupert.

CANNED PINKS MAY BE SOLD RIGHT HERE AT HOME.

During the few days preceding National Fish Day it was amply demonstrated that canned pink salmon could be sold right in Canada to our own people when certain canned salmon firms did a little advertising to try it out. When a thing like this in Vancouver goes over, it surely will go over in other parts of Canada. Pink salmon is a wonderfully economical food and if placed before the public properly the response will be so great that it will be a case of greater production rather than closing down part of the canneries. When will the canned salmon producer realize that it is time for them to go out and sell their goods rather than to sit back in their offices and wait for the broker to phone them for prices and buy their goods from them as has been done for years past?

Selling any kind of goods is a great game and when one realizes the amount of food stuffs that are being sold today because the producers get out and sell goods that have never been heard of before, one wonders what the canned salmon producer can be thinking of.

It isn't necessary to get over a temporary difficulty by swapping canned pink salmon for liquor when a sure and permanent market is right here in Canada for a large share of the pack of pinks if the producers would go after it. And by the way, it was an outsider that put this proposition up to the canners, which was simply another case of having the buyer come to them. The public are waiting for a good economical food to be placed before them and by getting the retailer to sell the pinks at right prices and then tell the public about them, the increased sales will be an eye opener.

VANCOUVER SHELL FISH FIRM DOES A GOOD YEAR'S BUSINESS.

Outside of the larger firms engaged in the distributing of fish in British Columbia are a considerable number of smaller firms. Included in the list of smaller firms is that of L. Perrin & Co., who are engaged in the shell-fish business. During the year 1920 from January 1st to Dec. 31st this firm shipped the following: 15,558 doz. crabs, 43,212 lbs. of shrimp, 25,000 lbs. smelt, 9,000 lbs. oolichans, 3,400 lbs. shad, 1,700 lbs. carp and 1,000 lbs. whitefish. There was also sold some frog's legs, and a few lobsters were disposed of. It isn't the size of these figures that are interesting but the fact that without a large center of population this firm is building up a nice business in their particular line. The fresh fish they are handling are from fishermen that put their time in another kind of fish when they are not going after crabs or shrimp.

Many of these shellfish were shipped as far South as San Francisco as the demand in British Columbia is not large enough to absorb the entire catch.

PRINCE RUPERT CAR SHORTAGE COSTS MONEY

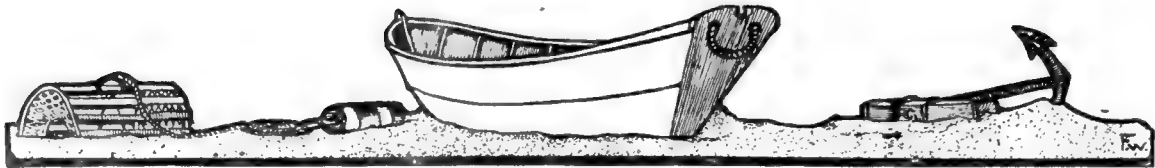
It has been figured out that a total of 103 cars of halibut left Prince Rupert during 1920, and that there were not enough cars available. When a shortage of cars occurs the news is flashed to different points along the coast and the halibut fleet with their catch discharge at some other port. Figured at 10c per lb. this would mean that \$200,000 was lost to Prince Rupert from the shortage of cars. This is a large amount of money and there is every reason why Prince Rupert should complain of the delay in getting a sufficient supply of refrigerator cars to handle the business offered.

MR. A. L. HAGER, PRESIDENT OF THE CANADIAN FISHERIES ASSOCIATION IS ELECTED VICE-PRESIDENT OF THE UNITED STATES FISHERIES ASSOCIATION.

President A. L. Hager of the Canadian Fisheries Association has been honored by a unanimous election to the office of Vice-President of the United States Fisheries Association. In notifying Mr. Hager of his election to the Vice-presidency of the United States association, President Gardner Poole, of that association stated that their association would be very much pleased if he would accept the office. Mr. Hager accepted the election and believes that by so doing he would be helping to promote closer relations between the two countries in connection with the great fishing industry. These engaged in the industry on the Pacific Coast feel that they have been honored by having so representative a man as Mr. Hager chosen from among them to represent them to the South of the line. Without doubt the selection of Mr. Hager was made with a full knowledge of the qualifications of the man. There is no man engaged in the fishing industry that understands better the conditions of the industry from every point of view. This knowledge applies not only to Canada but over the entire world where fish are used. When questions of international import arise there is an assurance that all matters will be considered intelligently from every angle.

TWENTY-FIVE CENTS FOR A GOOD FROZEN SALMON FOR FISH DAY.

Two men in Vancouver disposed of a carload of salmon containing 3,000 fish in less than eight hours. All sales were individual fish in most cases. One small advertisement and some publicity in the "Buzzer," a publication issued by the tram company, was all the publicity required to have the public walk two blocks out of the way off the main street of Vancouver and purchase these frozen qualla salmon all wrapped in paper ready to take away. The fish came from the Columbia Cold Storage plant and the car was set on the B. C. Electric tracks. The sale of these fish in such a short time demonstrated that the public are out after economical food and that a large turnover may be made on any kind of product if the price is right. It is not necessary to make prices so low that money may be lost, but if the value is there and the public are told about it, they will buy every time. If the retailer of fish would realize that they could turn over more fish at the right prices, they would make more money than they have ever made. If lamb chops are 35c per lb. and halibut or salmon are selling at 35 to 40 cents per lb., it is dead certain that it will be only now and then that the fish will be sold in quantities at all comparable with meat. This not alone applies to fish but to other foods, wearing apparel, etc. The public today are suspicious of the retailer and until quality comes up and prices are down to the right basis, they will not buy in quantities. The sale of this car of fish demonstrates just how the public are feeling. It has always been contended that Vancouver was a fresh fish town, but it would seem that they will eat frozen fish when they get it at right prices. Mind you it is not contended that this 25c price was a right price but a 50c price would have sold the fish just as readily with the right kind of publicity. The trouble is in the fish business that the right kind of marketing methods have not been inaugurated to get the best results. Large turnovers at similar profits per sale will net larger aggregate profits in the end.



The Story of John Leckie, Limited

A Brief Sketch of the Well-known Fishermen's Outfitters

Half a century ago, when comparatively little thought was being given to Canadian fisheries as a commercial proposition, John Leckie, who had previously come to Canada from Scotland, took a look into the future and shrewdly saw that in years to come there was to be a big demand for equipment to enable the Canadian fishermen to prosecute their calling and expand the industry. In those days there was a certain amount of fishing in the Great Lakes, but it was not carried on as a highly commercialized proposition until later. In the development that took place during the past fifty years John Leckie has played a prominent part. His first venture was in a comparatively small way in premises on Front Street, Toronto, under the name of John Leckie, marine, hardware and fishing supplies, and it was from this that John Leckie, Limited, the present big marine hardware business at 77 Wellington Street, sprang.

It is interesting to note, in connection with a brief history of the business, that the founder, John Leckie, started his first store on Colborne Street, Toronto, where he handled dry goods. He had arrived in Toronto from his birthplace, Glasgow, on May 21st, 1857, and obtained a position with the wholesale dry goods firm of Shaw and Turnbull, which, although well known in those days, has long since passed out of existence. Five years later Mr. Leckie started up business for himself in the dry goods trade. As the years went on he began to specialize in fishing nets and twine products, till finally his house was one of the largest wholesale firms in that line of business in the Dominion.

The erection of the present fine building at 77 Wellington street in 1907 was the natural evolution of a carefully managed and progressive business in-



Marine Hardware Department

stitution which has been an allied enterprise of the Canadian fishing industry for over half a century. Naturally there have been some changes in the executive staff of the company, but the fine traditions of the founder and his associates have been followed throughout the years, and now, as a half a century ago, *quality* and *service* are the guiding principles. The president and general manager of the company is Mr. Samuel Barbour, who has the marine hardware business at his fingers' ends through his long connection with the trade. Mr. Barbour, who received valuable training and experience in the netting mills of the Old Country and the United States, took over the general management of John Leckie, Limited, in 1914, and under his regime and that of J. A. Macaulay, office and sales manager, the business has made great strides. Mr. Macaulay, who is a Southampton boy, has been with the firm for fifteen years, starting in as office boy and working up through various executive positions to his present responsible post.

On the three floors of their building the firm have 25,000 square feet of floor space in use for the display, manufacture and handling of their goods, all of which is thoroughly systematic and indicative of the modern methods of business the company follows. The sales office is one of the finest in Canada and a feature of the establishment is the sail loft where the firm has an up-to-date equipment for manufacturing its own sails, tents, flags and other canvas goods. The second floor is devoted to the business office and marine hardware, cotton, duck, etc., while the basement has been given over to netting, twines, rope, anchors, etc. In the sail loft there are thirty-five sewing machines in operation



Oiled Clothing and Fishing Equipment

turning out sails, tents, flags, and the various lines of canvas goods handled by the firm.

Among the lines handled by John Leckie, Limited, are the famous Knox, Best and Salmon ticket quality, and Barbour, Lion and Crown quality linen gill netting, which are noted for their superior durability, true number of threads, size of mesh, etc., and are manufactured in the extensive and modern plants of W. and J. Knox, Ltd., at Kilbirnie, Scotland, and Wm. Barbour & Sons, Ltd., Lisburn, Ireland. The firm also handles the Gold Medal Cotton Seine Twine, which is when required, supplied in the famous Gold Medal Seine and Pound netting. Mr. Barbour reports a great revival of trade with the fishing fraternity since the close of the great conflict. During the war, due to Government work, acute raw material and labor conditions, the firm



Toronto Head Office, Warehouse and Factory

found it difficult to meet the demands made upon their resources but conditions are rapidly changing now and the company has about reached the point where everything required by the fishermen can readily be supplied. Their large stock includes linen gilling nets, gilling twines, Sea island cotton gilling nets, side line and seaming twine, pound nets, drag seines, dip nets, minow seines, hoop nets, fishing rope, Cedar floats, Lead, Boat hardware, nautical instruments, lamps of all types, life boat equipment to Board of Trade Regulations, Life jackets, ring buoys, Blocks of all kinds, wire, manila rope, anchors, oars, pumps, fishermen's oiled clothing, etc.

THE PUBLIC DO LIKE FROZEN FISH.

In the center of Vancouver, B. C. a fresh fish town (so called) on February 7th, a carload (3,000 fish) were sold right from the car at 25c each. The public walked up and took their fish away as fast as they could be handed out. A car of frozen qualla salmon was spotted on the track of the B. C. Electric Co. and at 7.30 in the morning the people began to show up and ask for their fish. From that time on until the last fish was disposed of late in the afternoon there was a steady stream of people coming with their twenty-five cents and going away with their fish. The working man, the office man, and women and children; some taking two and three, and one boy staggered away with all he could sling in a sack. There was no one class represented but all classes took advantage of the chance of getting good cheap food. Make the price right and the public will buy and come back for more if the quality is there. Vancouver has always had the name of being a fresh fish town, but the writer knows for a fact that the buying public will buy frozen fish if the quality and price is right. They realize that fish are frozen when the run is on and the cost of production is at its lowest and that if frozen when in good condition they will come out good later on. Another thing influenced this buying and that is that the public is still suspicious of the retailer. With lamb chops at 35c per lb. and halibut and salmon at the same price which will they buy the most of? If the prices of fish were reduced to a more reasonable figure to the public there would be a larger turnover by the retailer as the public want to get all they can for their money. The fish stores are not the only ones at fault in this respect as all kinds of necessities are still held at altogether too high figures. Study market conditions and increase the turnover thereby increasing your profit. Remember that there is no such thing as a fresh fish town. The public will buy frozen fish just as quickly as they will fresh fish if the price and quality are right. In any event the Vancouver people showed they would celebrate National Fish Day by eating fish.

Every once in a while during preparations and the observance of Canada's National Fish Day in Vancouver, some one would ask if there was another fisheries convention under way. They haven't forgotten the last one.

COOPERAGE TO START AT PRINCE RUPERT.

Mr. W. E. Denning, Secy. of the Longshoreman's union and a returned soldier, and William Wilson, government inspector of the herring pack at Nanaimo, are starting a cooperage plant at Prince Rupert with aid from the Provincial industrial commission. A site has been secured at Cow Bay. With the patronage promised from the large fishing companies in the Northern district the new undertaking should meet with success.

CAPT. W. J. SELIG OF PRINCE RUPERT ACQUIRES A NEW HALIBUT SCHOONER.

Capt. W. J. Selig is the new owner of the "Cedric," which he brought over from Wrangel last month. Capt. "Bill" will add the "Cedric" to the Prince Rupert halibut fleet. The boat is fifty feet over all and has first class power equipment, and will make a fine addition to the fleet.

A NEW SHIP'S LOG.

Many endeavours have been made to produce an automatic, practical, and reliable log. Several logs have been constructed during late years based on the Pitot tube, the principle being to obtain, by means of measurement of the speed pressure, not only the rate of speed of the vessel, but also the distance run. This is accomplished by measuring the difference between the water pressure produced by the speed of the vessel and the hydrostatic pressure. This method is probably the only one on which an absolutely reliable log can be based, as it obviates the sources of errors and the disadvantages in other systems with movable parts under water.

Logs based on the Pitot principle have, however, hitherto either been very bulky and impractical, or when they have been provided with air or liquid transmissions they have been troublesome to handle, and sensitive to blows, vibrations, and variations of temperature.

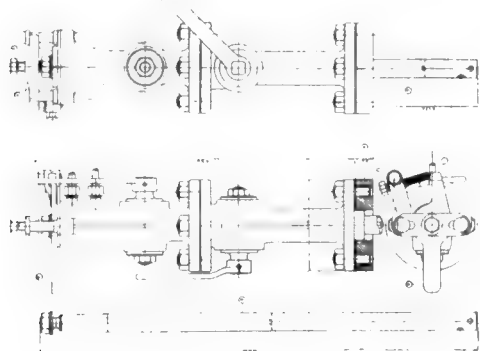


Fig. 1

The so called Navigator Log which is now being placed on the market is constructed on the Pitot principle, but is distinct from its predecessors, inasmuch as it is entirely automatic, and independent of all external conditions under which it acts.

This Log has been tried out very carefully in a large number of vessels, some of them of large tonnage, and the unanimous opinion of the captains using the Log seems to be that same is very sensitive, accurate and reliable.

The log is said to begin to act as soon as the vessel is set in motion, and to register at a very low speed (1 to 1½ knots). It is claimed to be equally reliable at low, high, or varying speed, and in heavy seas.

The Navigator Log consists of the following parts: Bottom cock with Pitot tube (Fig. 1), central apparatus or speed recorder (Fig. 2), and distance recorder (Fig. 3).

The bottom cock should as a rule be placed amidships and so deep below the water line that the risk of the tube coming out of the water when the vessel pitches or rolls is eliminated. The bottom cock is screwed fast to a belt plate of wrought iron, which must be riveted to one of the plates of the ship when in drydock. From the bottom cock the tube protrudes about 5" vertically through an 1¼" hole in the bottom of the vessel. The tube is provided with two passages opening out in two holes of 5-16" diameter, one facing the direction in which the ship is travelling, and the other facing sideways. The hole facing towards the

ship's bow registers the water pressure produced by the speed of the vessel, while that on the side gauges the hydrostatic pressure, or that resulting from the draft of the ship. These pressures record themselves automatically upon a membrane in the central apparatus of the engine room, which measures the difference between the speed and draft pressures of the vessel

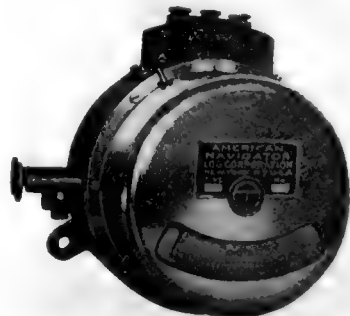


Fig. 2

and thus determines her speed. The distance travelled is transmitted by electric current to the distance recorder on the bridge, or any other place or places desired. The transmission being electrical makes it entirely independent of dirty pipes, the vibration of the vessel, or any changes in temperature. The current is supplied by a storage battery, which can be recharged by the ship's own current. A battery of 20 ampere hours is sufficient for about 18,000 nautical miles without recharging.

One of the advantages in the construction of the Navigator Log is that its Pitot tube does not contain any movable parts, and, therefore, it cannot get out of order. The Pitot tube, which lies far beneath the surface of the water, cannot be injured by ice or floating objects, and there is no loss of efficiency should the tube be partly filled with mud or weed, as long as there exists an opening of 1-16". If necessary the tube can be drawn in and cleaned in a few minutes. Should the vessel happen to strike the bottom and the tube thereby be bent to such an extent that it cannot be taken in, it can be pushed out into the water and a reserve tube slipped in, which operation is a very simple one.



Fig. 3

Among recent installations of the Navigator Log might be mentioned the SS. "Eclipse" (9,000 tons), and the SS. "Huron", both of the U. S. Shipping Board, the M.S. "Afrika" (14,000 tons), of the East Asiatic Company, Copenhagen, the SS. "Catalonia", Swedish Lloyds, and a large number of other vessels.

The log described above is, as will readily be understood, suitable for vessels of larger tonnage.

Another type of the Navigator Log is made, suitable for motor boats and smaller craft generally. Same consists of the Pitot tube with speed indicator, but no distance recorder. This type is sold at a price that will put it within the reach of every motor boat owner.

The Log is sold in Canada by Swedish Steel and Importing Co. Limited, Montreal.

THE WORLD TRADE OF THE CANADIAN FISHING COMPANY.

It's a far cry from the Behring Sea to Liverpool and London, but modern magic eliminates distance. Today the Billingsgate fishmonger will sell you Behring Sea halibut as tasty as any piece of halibut you ever ate, or a piece of spring salmon that creates that more-ish taste. To Postumize "There's a reason." That reason is up-to-date, modern methods of catching and handling fresh fish. If there is one concern in any line of business that has perfected the operation of their particular business that is the Canadian Fishing Co., Ltd., and the parent company the New England Fish Co. From the time the fish are taken from the hook or the nets every detail for the proper care of the catch is given particular attention. The result is that today these two companies are carrying on the largest fish business on the American continent.

During a recent talk with Mr. A. L. Hager, President and General Mgr. of the Canadian Fishing Co., Ltd., and Director and Vice-President of the New England Fish Co., the writer discussed the matter of world trade as regards the fish business from Vancouver. Although having ideas as to possibilities ahead for the exporting of fish from Vancouver your correspondent had not realized until the interview with Mr. Hager just how far the world trade in fish from the American continent had progressed. The New England Fish Co. in the United States and The Canadian Fishing Co., Ltd., in Canada, have for a good many years past been shipping more or less fish to the U. K., and during recent years the business has grown until today, frozen, salted, smoked and canned fish of many varieties produced on the Atlantic and Pacific coasts are being shipped to all parts of the world. With headquarters at Boston, Mass. and Vancouver, and all branches at Ketchikan, Alaska, Prince Rupert and Barclay Sound in British Columbia, Seattle, Wash., San Francisco, Calif., New York, Philadelphia, Gloucester, and Portland, Maine, shipments are being made to the U. K., Europe, South Africa, South America, Australia and New Zealand, Straits Settlements and China. Of course the bulk of the shipments go to the United Kingdom, and the firm handling the fish there are the largest in the fish business with a distributing system that covers England and Scotland and part of the Continent.

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Canadian Milk Products Limited
10-12 St. Patrick St.,
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The domestic business covers Canada and the United States most thoroughly.

With steamer transportation today from Vancouver to all parts of the world, and facilities constantly improving, The Canadian Fishing Co., Ltd. is continuously reaching out for new markets, and just as soon as exchange conditions improve an enormous business will develop.

CAPT. TONY MARTINSON BUYS THE "LIVINGSTONE" AT PRINCE RUPERT.

One of the most successful skippers sailing out of Prince Rupert is Capt. Tony Martinson, and with the money earned from last season's catch Capt. Martinson has purchased the halibut schooner "Livingstone". The "Livingstone" has a capacity of 100,000 lbs. of halibut. The boat went ashore last autumn and the local shipyards repaired her.

Last year, with the "Agnes B.," Capt. Martinson was high man for Prince Rupert and his crew pulled down \$5,500.00 each, which left a tidy sum for the Captain. With his money and the returns from the "Agnes B.," Capt. Martinson purchased the "Livingstone" and it may be assumed that there will be some sizable catches landed in "Rupert" by the 1920 high line crew.

HERRING RUN STARTS AT PRINCE RUPERT.

The season's herring run started at Prince Rupert, February 8th, and promises to be a very good run this season.

The London & Petrolia Barrel Co., Limited

LONDON, Ontario

Hardwood Mackerel Barrels
and Half Barrels

Experience has proven that Fish packed in
LONDON BARRELS reach their destination
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BUY THE BEST. QUICK DELIVERIES.

EASTERN AGENT :

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OIL RECOVERED from **FISH WASTE**

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REFERENCES :

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Dunn's & Bradstreet's
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The Corn Exchange
Nat. Bank, Phila.

THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., MARCH, 1921

NO. 3

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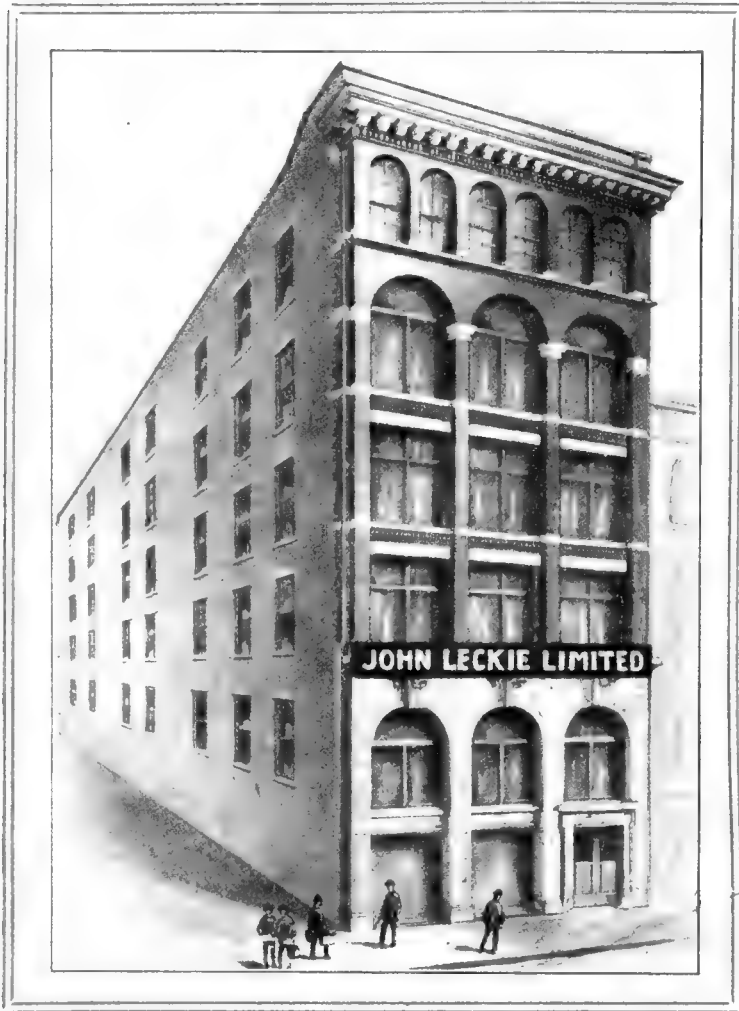
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Cedar Floats, Lead,
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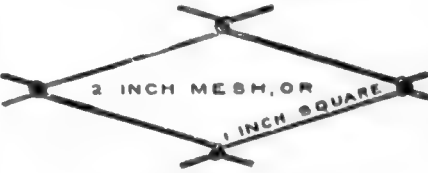
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WE ALWAYS USE STRETCHED



MEASUREMENT OF THE MESH

ALL FITTINGS, LINES, LEADS AND FLOATS, MENDING TWINES, ETC., IN STOCK



NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

PARTING WILL BRING NO PAIN.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliations. Also a Deputy Minister in charge who will have direct access to the Minister.

The disorganized condition of our foreign markets; the threatened tariff barrier on the part of the United States and the urgent necessity for the development of our natural resources to pay the country's debts demands that a distinct Fisheries Department under the jurisdiction of a distinct Deputy Minister be at once inaugurated.

The Canadian Fisheries are of sufficient importance to command the appointment of a distinct Cabinet portfolio with a Minister in charge. That is what we want to see—a Ministry of Fisheries—but we feel that asking for such an appointment is like asking for the moon. But, while we have the notion that such a proposition is not likely to be entertained, yet we are strong in our convictions that such a portfolio is a necessity and will have to be established within the near future.

There does not seem to be much hope of having a Ministry established by the present Government but "we 'ave 'opes" that a future administration may give ear to our desires and act upon them.

For the present, however, we see no earthly reason why the Fisheries Department cannot be severed from the Marine Department and a Deputy Minister of Fisheries appointed. The cost of so-doing wouldn't amount to a hill of beans.

If ever the fishing industry needed careful fostering and assistance from the Government, it is at the present time.

PRINCE RUPERT REFRIGERATOR CAR SHORTAGE.

Action followed closely upon the heels of the article in the last issue of the CANADIAN FISHER-

MAN on the above subject. A species of flurry occurred in the Railway dove-cote, when the facts were made public and Hon. Mr. Lemieux and Mr. William Duff quoted from the article in the House of Commons. The aggressive member for Lunenburg, using the facts published in the CANADIAN FISHERMAN, supplemented by other information, made a strong speech upon the subject and vigorously condemned the action of the Government Railways.

Latest advices from the railway officials are that sufficient refrigerator cars will be secured to fill the needs of Prince Rupert and construction will be rushed on the thirty cars ordered.

Just why the order for Express Refrigerator cars was given to the National Steel Car Co., at Hamilton, is something difficult to understand. This concern is only equipped, we believe, for the building of freight cars. They could only build the chassis of the Express refrigerators. The rest of the car would have to be finished elsewhere. Why was the order given to them?

FORMER DEPUTY MINISTER RETURNS.

Alex. Johnston, former Deputy Minister of Marine & Fisheries, who left the service some time ago to take a position with the British Empire Steel Corporation, has decided to return to his old position.

Mr. Johnson is an extremely capable and efficient Deputy Minister and we are glad to see him back. Though primarily Deputy Minister of Marine, yet Mr. Johnson is the most sympathetic and best-versed Deputy of Fisheries that we have so far had in charge of the Department.

While, personally, we are glad to see Mr. Johnston back at his old post, yet we are not at all in accord with the dual office he holds. The Fishing Industry of Canada demands a distinct Department of Fisheries with a distinct Deputy Minister in charge.

THE UNITED STATES TARIFF.

Since our fish market in the United States is threatened by a tariff barrier, some figures made public by Canada's Finance Minister, Sir Henry Drayton, in a recent speech, are of interest.

Canada imported \$23,000,000 worth of fruit from the U. S. during the last nine months. Though Canada prides herself on apple production, yet she imported 198,327 barrels of apples during that period.

Canada imported vegetables to the amount of \$4,772,000 from the U. S. during the nine month period quoted, yet Canada is ranked as an agricultural country.

Textile importations to the tune of \$87,000,000 came from the United States. Candy to the amount of 1,686,900 pounds in weight came from outside of the country. Both these commodities are manufactured in Canada.

In the few items herewith mentioned—articles which Canada is well able to produce herself—our account with the United States runs to the amount of \$115,900,000.

Coal to the value of over \$100,000,000 is imported from the United States annually. We have the largest coal areas in America awaiting development.

The quotations above, which are but random selections, show that Canada is a pretty good customer of the U. S. A.

It is pretty certain that a tariff barrier enacted by the United States against Canadian products will result in retaliatory action by Canada.

FISH IMPORTS INTO CANADA.

With the threatened Custom's barrier against the export of Canadian fish into the United States, the question of enlarging the home market for Canadian fish comes to the fore.

During the Fiscal year ending March 31st, 1920, fish to the value of \$4,051,882 was imported into Canada from outside sources. Some of the varieties imported are species not produced by Canadian fishermen to any great extent, but what is the sense of importing the following:—

	Value.
Dried cod, haddock and pollock	\$328,492
Fresh cod, haddock and pollock	108,914
Halibut	205,789
Herrings, pickled or salted	555,520
Lobsters, canned	99,401
Salmon, canned, fresh, etc.	463,804
Canned sardines, sprats, anchovies and other fish packed in oil, etc.	526,200

In this little list of fish products which we have imported and which we produce and export ourselves in large quantities, the Canadian market has supported the foreign producer to the extent of \$2,288,120.

CHART OF ATLANTIC COAST FISHING GROUNDS.

The Department of Fisheries, Ottawa, are to be highly commended for the splendid colored chart of the Atlantic coast fishing grounds produced under their auspices and now issued by the Department of the Interior.

The map, which is a large one, depicts the off-shore fishing banks and gives the distances between them and the various Canadian and American ports. The depth of water and the species of fish obtained around our coasts and on the off-shore banks are

clearly marked. The various transportation lines from the seaboard to inland points are also given.

A glance at the map shows the advantageous position of Canadian ports to the various off-shore fishing banks.

A copy of this map is well worth securing by every Atlantic fish producer. It should also be mounted on linen and distributed to the schools and colleges throughout Canada. Copies may be had by writing the Department of Fisheries, Ottawa.

CUP CHALLENGER READY FOR LAUNCHING.

The Lunenburg fishing schooner "Bluenose" designed and built as the Canadian challenger for the International Fisherman's Cup will be launched from the yard of Smith & Rhuland, Lunenburg, on March 26th.

The "Bluenose" will fulfil conditions by engaging in the salt bank fisheries this summer and will sail for the banks with the fleet during April.

Much interest is being taken in the launching as the vessel is said to be a clipper and the finest of her type yet designed.

TECHNICAL EDUCATION FOR FISHERMEN.

A start towards the technical education of fishermen is being made in Nova Scotia under the auspices of the N. S. Technical College. Beginning next winter, the Technical College will inaugurate classes of instruction in the operation and repair of marine oil and gasolene engines.

It is proposed to hold the classes at the larger fishing centers in the Province during the off-period from January to April and it is hoped that the classes will be extended to include other subjects later on.

FISHERIES STATISTICS FOR 1919.

The 1919 Fisheries Statistical Report has been recently issued by the Dominion Bureau of Statistics. A resume of this Report was published in the "Canadian Fisherman" some time ago.

The total marketed value of the Canadian fisheries for the year 1919 amounted to \$56,508,479—which is a decrease from the \$60,250,544 value of the previous year.

LETTERS TO THE EDITOR.

Re Alleged Embargo on Fish by France.

Sir,—With respect to an article which appeared a couple of months ago in the "Canadian Fisherman," and also appeared on various occasions in the press of the country, to the effect that France had placed a prohibition on the exportation of fish, I wish to inform you that this article had no foundation in fact, and the origin of the story seems to be a mystery.

The Department has received advice from Lt.-Col. H. Barre, Canadian Trade Commissioner in France, that during the war a few prohibitions were decreed by the French Government on the export of fish, but they were only temporary measures. No prohibition whatever has been enacted since the armistice and none is anticipated. Lt.-Col. Barre has had this fact confirmed by la Direction Generale des Douanes.

I am, Sir,

Your obedient servant,

E. HAWKEN,

Acting Deputy Minister of

Marine and Fisheries.

“CARPE DIEM!”

The Pathetic Story of a Foreign Fishery Official's Mission to Ottawa in Quest of Information

(Secured and Recorded by Canadian Fisherman's Dictograph Correspondent)

The Sultan of Slambak was reclining on a divan after partaking of a hearty meal of fricaseed carp and backsheesh. He puffed, every once in a while, at the amber mouthpiece of a narghile pipe and his soul was full of a benevolent contentment. Slambak was prosperous. It did not belong to the League of Nations and therefore required no army or navy to enforce peace on its neighbours; income tax was unknown and everybody in Slambak had a case or a jug in their cellars. Oh, happy, happy Slambak!

While the Sultan debated in his mind as to whether he'd spend a nickel or two in the purchase of a new wife for his harem or a Ford for his personal convenience, a Cabinet Minister crawled into the private chamber on all fours and prostrated himself before the August One. "Spit it out!" snapped the Sultan in the classic English he had picked up at an American college.

"Oh, most wonderful King! Most impressive potentate! The Earth trembles at the tread of thy—" began the Grand Cabunk in the florid line of preliminary talk common to Oriental Statesmen and Canadian Cabinet Ministers.

The Sultan made an impatient gesture with the mouth-piece of his water-pipe. "Can the comedy!" he interrupted harshly. "When you open up with that soft-soaping tosh I know that something's wrong. What's up? Is it another cent a gallon on gasoline or do my several mothers-in-law plan to visit and stay a while? Get it off your chest and cut out the address of welcome!"

The Grand Cabunk banged his head on the hardwood floor. "Alas, Most High, I am the bearer of evil tidings," he ventured in a voice pregnant with sorrow. "The Royal carp in the Royal Fish Ponds are dying. Six more departed this life today—"

The Sultan straightened up with a sudden start and a look of anxious concern clouded the complacency of his swarthy face. His bejewelled hands strayed towards his rotund epigastrium and a sense of hollowness therein began to obsess his imagination. The Royal carp dying? It could not be! The calamity must be averted cost what it may! How could he entertain foreign diplomats and concession hunters unless he could feast them upon the dish that Slambak boasted as its chief claim to fame? Filled carp fried in cinnamon oil and garnished with cloves, frankincense and myrrh—(the recipe is a Slambak secret and is not to be found in the Fish Cook Book issued by the Canadian Naval Service Department).

The Sultan, having the benefits of an occidental education, was no slouch when action was demanded. He kicked the Grand Cabunk to his feet in the orthodox manner and ordered an immediate convocation

of the Slambak Cabinet. The Ministers came scurrying from their various bureaux, divans and ostermoors and squatted at the foot of the Throne.

"The Royal carp are dying off," explained the Sultan brusquely, "and I will, myself, begin a remedy. The Captain of the Royal Guard will see that the Minister of the State Fisheries is decapitated at dawn. To ensure that my Cabinet employs its thoughts towards schemes for rehabilitating our fish ponds, I will execute one member of the Cabinet for each fish that dies. Beat it and get busy! The meeting is adjourned!"

There was much consternation in the Ministerial sanctums of Slambak that night and the Cabinet scurried around consulting astrologers and ouija-boards for a solution of the problem. The Minister of Fisheries accepted his fate with true Mohammedan fatalism. He was to lose his head at sun-up and though he had but little occasion to use it in his Ministerial capacity, yet it was a handy thing to have attached to one's person. The more he thought about the approaching separation, the more anxious he became to retain all that belonged to him and anxiety caused him to effect some use of that hitherto unused portion of his anatomical make-up.

It was the hour before dawn when a considerate jailer brought him a small collation to refresh his soul ere taking the Sunrise Limited for Paradise. As he ate sparingly of this backsheesh and canned Pink a sudden thought struck him. He picked up the tin in which the salmon had been incarcerated and regarded the vari-colored label with unusual interest. Laboriously he spelt out certain words—"Canadian Pink Salmon. Product of Canadian Fisheries. Finest in the World!"

"Bismillah! Gazeeka!" he cried triumphantly in the Slambakian tongue. "I'll pay for a few more hair-cuts yet! Allah is *bon!*" He clapped his hands and the jailer appeared. "Get me an audience with the most High. Tell him I have a plan. Be quick or my face will curse thee from a basket!"

The Sultan was awake, as a numerous progeny were already howling for their morning meal, and he granted the favor of an interview to the doomed Minister. "What dost thou crave, Boan Hed?" he growled from under the quilt.

"Most august King," said the Minister Boan Hed humbly, "there is a country across the sea where the fisheries are so great that they transcend all other resources. They send their fish to the uttermost corners of the earth and I have heard it said that their skill in administration and fish culture is the wonder of the world. Let me journey to this Canada that I may seek knowledge of these things—" The Grand

Cabunk of Fisheries handed out a line of talk which did his dome justice and the Sultan was impressed. "Journey thou to this Canada and bring back the wisdom of the fishes," quoth the potentate finally. "Fail——" He paused and favored Boan Hed with an ominous glance, "——and you won't need a new Borsalino at Easter."

And thus it came to pass that Ali By Boan Hed, the Grand Cabunk of Fisheries of Slambak, arrived in Ottawa with a numerous retinue of guards and scribes and registered at the Russell House. After breakfasting sumptuously at an arm-chair hash-mill on Sparks Street, he and his staff headed for the Hunter Building to wait upon the Honorable Mr. Neptuno, Minister of Marine, Minister of the Naval Service, and Minister of Fisheries of Canada. As he sped up in the elevator, the Slambakian minister marvelled at the capacity for administration embodied in the Canadian statesman. Three important departments controlled by one man meant some job and some man!

In the course of the morning, the Hon. Mr. Neptuno blew into his official sanctum with stately tread and becoming dignity. A respectful and well-trained secretary waited upon the great man with an air of suppressed excitement and when his Chief had hung his hat and coat on the peg, he burst forth with the news: "Your Excellency! The Great Cabunk of Fisheries of the Sultanate of Slambak with a numerous retinue awaits in the outer office. They have journeyed hence that they might learn of your famous fisheries administration—your fame having travelled far——"

The Hon. Mr. Neptuno's face blanched and he dropped limply into his chair. "Good Heavens!" he groaned. "Fisheries? Are you sure he didn't come to learn about my Mercantile Marine or my Navy?"

The Secretary made a negative gesture. "Fisheries is what he wants to see you about," he observed. "He's the Minister of Fisheries down in Slambak and the Sultan of the burg has sent him specially to see you that he might absorb the sweetness of fishery wisdom that drops from your lips—that's the way he put it."

"Stall him off for a day or two," said the Minister weakly. "Tell him I'm sick, or busy, or engaged 'in a Council meeting—Oh, you know how to do it——"

The Secretary looked sorrowful. "Your Highness, I have already tried that line of guff," he answered dolefully, "but the whole gang have brought their sleeping mats and their charcoal braziers with them and are prepared to camp in the hall until you see them. The Cabunk told me that having reached the Piscatorial Mecca he was going to locate by the tent of the Prophet (meaning you, sir) until you deigned to receive him. The Cab said his head was at stake——"

"So's mine!" snapped Mr. Neptuno. Then more hopefully, he asked, "Are there any of our newspaper men along with them?"

"None, Excellenz!"

"Is Bill Duff, of Lunenburg or J. H. Sinclair, of Guysboro' in the building?"

"No, Little Father!"

The Minister gave vent to a sigh of relief and his nerve returned. "Keep them busy for an hour or two while I prepare for them," he commanded briskly. "Send that fish man to me—what's his name, you

know—I so seldom see the chap that I can't recall his name or his face——"

"You mean the Deputy Minister of Marine and Fisheries, sir?" respectfully interposed the Secretary.

"No, no!" snapped the other testily. "He doesn't know any more about the fisheries than I do. I mean that fishery official that I gave a new title to when those fish merchants were bothering me a while back."

The Secretary had a wave of returning consciousness. "Oh, yes, you mean the Assistant Deputy Minister of Fisheries——"

"That's the man! Bring him here through the back door and all the loose fish experts you can lay your hand on. Get me statistics on our fisheries and hang a few pictures of fish on the walls. A plaster cast of a smelt or a halibut would look good on my desk and see that my fishery regalia is put out ready for me to receive these Eastern ambassadors——" After receiving his instructions, the Secretary dissolved himself through the green baize door.

While the Grand Cabunk was whiling away the time engrossed in viewing the matrimonial trials of one "Jiggs" in the Ottawa newspapers, the Hon. Mr. Neptuno, with fishery experts to the right and the left of him and a Blue Book in front of him, was absorbing a knowledge of his fishery administration with that sponge-like facility common to cabinet ministers. But the Hon. Mr. Neptuno was finding it hard sledding. What he didn't know about his Fisheries Department would fill the Parliamentary Library; what he did know could be written on a postage stamp. Mr. Neptuno was an aggressive, hard-working and business-like Minister but his *forte* was the more *genteel* administrations of Marine and Naval Service. These two departments he kept in the front parlor; the fisheries were up in the attic or out in the wood-shed and far from Ministerial ken.

In the course of time, the Slambakian delegation were ushered through the green baize door and into the presence of The Presence after checking thir scimitars, kresses and umbrellas with the Secretary. Mr. Neptuno, arrayed in his official robes as Minister of Fisheries (a suit of yellow oilskins and a pair of rubber boots) laid his trident against the wall and motioned the prostrated Slambakians to their feet. After the introductory ceremony, he handed the cigars around and the gathering became delightfully informal. "Most High and Mighty Administrator," commenced the Slambak Ambassador. "I have journeyed far for my August Master the Sultan that I might learn from your Highness the secrets of Fisheries Administration. Your fame had reached the far corners of the Earth, Noble Lord, and the fishery resources of your country are said to be unexcelled."

The Hon. Mr. Neptune nodded. "Some resources, Mister, if I do say it myself!" he observed pridefully. Then fearful that he might forget what he had so laboriously committed to memory, he opened up with Page IV, Sessional Paper No. 17d, II George V, A. 1921.—the permanent annual preface to the Canadian Fisheries Report. "You must know, my illustrious seeker after knowledge," he intoned sonorously, "that Canada possesses the most extensive fisheries in the world, are the abundance, quality and variety of their products are unexcelled. The fertility of Canadian waters——" Skillfully he delivered the whole forty-four lines of the little piece without a single mistake and when he wound up with the kinds of gear used in the Lake fisheries, the Slambakians were visibly impressed.

"Marvellous!" commented the Cabunk.

"What tremendous wisdom!" chorussed an astrologer. "Mahomet is a piker compared with his Excellency!" respectfully murmured a janissary.

"Have you got that all noted down?" asked the Cabunk of a toiling scribe.

"I'm afraid not, August One," faltered the pen-pusher. "The Mighty One speaks too fast and too learned for my correspondence school education—"

"That be d—d!" cried the Cabunk angrily. "All those pearls of wisdom lost because of thy inefficiency. Janissary! Off with his head instantly!"

The Hon. Mr. Neptuno rose in his chair with a benevolent smile. "Spare him and my carpet, your Excellency," he said benignantly. "I will provide you with a copy of my speech ere you leave our fair city." Mr. Neptuno felt that all was now plain sailing. He had got the why and the wherefore of the Canadian Fisheries off his chest and he had confidence in his ability, as a cabinet minister, to stand off, or worry through, any other inquiries.

The Grand Cabunk of Fisheries of Slambak explained to Mr. Neptune something of the fell disease which had stricken the carp of his country. "As the carp is our national fish and our cooking of carp is a famous tourist attraction, His Highness the Sultan is greatly exercised over the fatalities in the carp ponds. I am sent over here to find some remedy. Failing, I lose my head."

Mr. Neptune nodded sympathetically. "I quite understand, your Excellency. We too run the same danger of losing our heads, but why worry, sir? He who worries least, lasts longest!"

"But, your Highness, I won't last very long if I fail to find a remedy for our dying carp. The carp is a peculiar fish, as you know, sir. As one of the *genus carpiodes* and of the species—er—"

"*Carpe diem*", ventured the Canadian Minister loftily.

A scribe sniggered and brought ferocious glances in his direction. To cover his temerity, the luckless scrivener raised his voice in laudatory praise. "Oh hear the Great Lord of Wisdom! Mark well what he says, brethern! *Carpe diem!* Enjoy the present day! Is it not a great and noble policy?"

The Hon. Mr. Neptuno smiled calmly and handed the cigars around once more. At an *impasse* in the conversation one can always peddle the smokes. He felt somewhat flattered at the way his random phrase had made a hit and getting away with it made him reckless with his box of Quebec Perfectos.

Biting off the end of his Corona Cabbajo, the Slambak Minister lucifered up and continued. "It would appear that a parasitical nebulae has attacked the imbricated maxillaries of our carpiodes and a lesion has occurred within the Pons Winnecke. As you know, sir, this lesion causes a deficient—"

"Deficit? Ah, yes," murmured the Hon. Mr. Neptune, reflectively, "we know too well what *that* is in this country. My friend in charge of Railways has had it for a long time. I too have it in the Marine, but I'm keeping it dark—very dark." He looked cautiously around to make sure that Bill Duff had not slipped in among the delegates.

The Slambak official discoursed at some length upon the symptoms of his carp's ailments. He was a pain-staker, that Slambakian minister. He ran symptoms down to the Nth dimension. Minister Neptuno found the foreigner's voice exerting a soporific influence over him and he quietly slipped off his rubber boots and closed his eyes. About an hour afterwards he awoke

and found the strangers all reverently waiting for him to speak.

The Hon. Mr. Neptuno cleared his throat and rose to his feet. The scribes got their pencils ready to record the words of the Fisheries Solon and the gathering listened with bated breath.

"Gentlemen of Slambak," said the Minister solemnly. "On behalf of my Government and myself, I can assure you it is a great honor for us to meet you." He covertly pressed a button marked "VALEDICTORY ADDRESS No. FOUR" and a concealed phonograph carried on the speech he had started. The Hon. Mr. Neptuno merely gestured and went through the motions. Record Number Four, in his voice, did the work and did it well. It was a great brain-saver was Record Number Four.

"We, in Ottawa", droned the phonograph, "are always pleased to meet delegations of the brainy men of industry. You are the leaders in your profession and the expression of your desires and ambitions is what we busy Government officials seek. I am not a politician, gentlemen. I am a plain business-man. I made my pile in the jam line and I am sympathetic with my fellow business-men. I know what they are up against. What with the Farmer's Party and the Labor Unions, you have a hard row to hoe. But, I am glad to say that, under my jurisdiction, the fish business is increasing wonderfully. It is destined to become the greatest of our natural resources.

In concluding, I wish to express my appreciation of your visit and I hope you will come often. I think you should come at least once a year—not oftener. What you have told me has been of the greatest interest to me and my department, and speaking as a plain business-man, you can return to your homes with the assurance that your requests will receive my earnest consideration. Doubtless nothing will be done this Session, but you can always call again. Take the door to the right on going out. I am glad to have had this opportunity of meeting you."

When the record finished a bell rang and the Secretary opened another baize door and motioned the delegation outside. The Grand Cabunk of Fisheries of Slambak looked somewhat dazed and made no move to follow his retinue. The Hon. Mr. Neptuno gave him a sly wink and beckoned him over. "Let the rest of the gang beat it," he whispered. "You and I will have lunch together at the Rideau Club, but I'm not blowing the crowd to a free feed. Times are tough."

The depression of spirits which was seizing Ali By Boan Hed lifted somewhat at the invitation. No doubt the Great One desired to impart his wisdom over the bread and salt and in the privacy of his tent. Ali By looked forward to the luncheon.

In the words of the poet, it was "some gorge!" Neptune dispensed hospitality and food with a lavish hand and Ali By toured through the menu from olives to tooth-picks. Then over the coffee and cigars, they settled down for a nice, comfy chat.

"You haven't heard about my Merchant Marine Fleet have you?" asked Mr. Neptune. "No? Dear me! My publicity man is not on to his job. We'll have to send one of our ships to your country. I named them all my own self with real Canadian names. Every steamer has "Canadian" on its bows and stern. There's the "Canadian Squatter", the "Canadian Wildcatter", the "Canadian Mushrat" and the "Canadian Hatrack". That's the bigger ships. We have also a tremendous flotilla of smaller craft—the "Canadian Skunk", "Canadian Plunk" and "Canadian Bunk"—(You will re-

mark the euphony in the names. I sat up nights thinking 'em out). In my capacity as Minister of Fisheries I did a lot for our fish trade when I named one of my ships the "Canadian Fisher". Think what a great advertisement it is for them? And still they kick! My next ships will be named "Canadian Kicker" and "Canadian Knocker". We have a few! Yes, I had 'em all built here in Canada. Wherever there was water, I had a ship built. We built 'em up on the Lakes in two halves and joined 'em together after we got the sections past the canals. If the money had lasted I would have had ships built on Lake Winnipeg and hauled to salt-water over the snow in winter-time. We have built over sixty ships and spent about seventy-five million dollars on them."

The Slambakian gasped. "Money's no object with you, sir," he remarked admiringly. "And, I presume, they are paying propositions and adding much gold to your country's treasury—"

"You said a mouthful," interrupted Mr. Neptuno. "Not only adding but subtracting—with the accent on the subtracting. I'll need another seventy-five millions to keep 'em running soon, but think of the publicity! Just imagine strolling around the docks in Bangkok and seeing the "Canadian Boozer" at the wharf! Think of crossing the Pacific and sighting the "Canadian Graftor" outward bound to China and rolling down the Trade Winds with a lading of good Canadian mud ballast! Picture yourself on an island in the South Atlantic and seeing the "Canadian Bootlegger" pass by in water ballast on her way to pick up a cargo of nitrate in Chile; or the "Teetotaler" running eased hootch from Glasgow to Buenos Aires! Keep 'em moving is my motto whether they pay or not. It's grand publicity. The Canadian people have a long purse and a little parting from their kale does 'em good. Me and my friend in the Railways know how to make 'em cough up."

"And, of course, your ship-building yards all over the country got a splendid start. They are now prosperous?" ventured the other.

"Some of them are and most of them ain't," replied Mr. Neptuno and a shadow crossed his genial features. Adroitly, he changed the subject. "Of course, you've heard of my Navy?"

The Slambakian shook his head. "My ignorance is profound—" he apologized.

The Canadian Minister favored him with a commiserating glance. "Where have you been all your life?" he asked. "Never heard of my Navy? Canada's Sea Scourge? My Bulwark of the Deep? Nelson's Nursery? Lord, man, but your news service is out of date in Slapback. I just started it a few months ago. The Old Country presented me with a light cruiser, two destroyers and two submarines. Upon that fleet I intend building a Navy that will be an eye-opener unless me and the United States President get together and limit armaments."

"And what is your Navy for, sir?"

"What is my Navy for?" stuttered Neptuno somewhat at a loss for an answer. Nobody had ever asked him that question before and it was disconcerting. "Well, I guess it's primarily to defend Canada's coasts."

"Then if Guatemala or Paraguay—whom I understand possess Navies—were to insult your nation, you would sail down and wipe them out?"

Neptune thought for a moment. He didn't know off-hand just how strong the Navies of these countries were so he played safe. "My Navy is for the defense of Canada's coasts only."

"But if these countries insulted you—would you take no action with your Navy?"

"If they were bigger than mine? Not on your life!" said the other decisively. "We'd pass that job on to little Old England. She soon see that our honor was upheld. Now, how about taking a stroll over to the House?"

The Slambakian looked at his watch apprehensively. "Alas! I must leave on the three-thirty for Montreal and Slambak. My time is nearly up. Allow me a few minutes more of your valuable day. Tell me of your Fisheries Administration. That must be the most important of all."

"Yes, yes, very important," said Neptuno vaguely, "but rather intricate, don't y' know, and not very interesting. I have a Johnny in the office who looks after the Fish end of my administration."

"He is one of your Deputies, I presume? A partner of your brains and wisdom and intelligence? One who confers with you often and receives thoughtful direction and wise advice?"

"Well, not exactly," replied the Canadian cabineteer. "He is not a Deputy Minister. He's an Assistant Deputy Minister and he reports to my Deputy of Marine. I never see him."

Ali By Boan Hed looked puzzled. "Your Fisheries Administrator reports to the Deputy who has charge of this great Canadian Marine and your light-houses and such-like. Isn't that rather odd?"

"It may appear so," answered Neptuno gravely. "But we Canadians are an odd people. We pattern our Government Administration upon that of the Chinese whom, as you know, boast of an ancient civilization—"

Ali By was still groping at half-speed through the fog and Neptuno kindly illuminated the intellectual gloom. "You see, sir, we classify our administrations into their distinctive kingdoms. We have animal, vegetable and mineral. Animal and vegetable are administered by the Portfolio of Agriculture; mineral by the Department of the Interior and the Fuel Controller. Mine is the water kingdom. I hold sway over everything that is on the sea and in the sea, also the seas and the waters within our Dominion jurisdiction. I control Navy, Marine and Fisheries. In the next shake-up of the Cabinet I shall probably corral Canals, Stock Promotions and Liquor—all of which are heavily watered. Now, do you understand?"

Boan Hed nodded. He didn't, but hated to admit the fact. "Then you do not actively interest yourself in the Fisheries end of your Portfolio?" he observed. "You leave that to your Deputy Minister of Marine?"

"You've said it, Mister!"

"But of all your Departments is not the development of your immense fishery resources a thing to be desired above all others?" ventured Ali By. "Is it not better to accumulate revenue than to disburse it?"

The Minister Neptuno regarded him with a commiserating smile. "Ah, my friend, your economic education is all wrong," he said gently. "You have absorbed the Jerusalem Theory—the iniquitous doctrine practised by business-men of freezing on to the mazuma. Our Government have long since discarded that code. We let the people themselves develop the natural resources of th country and we tax 'em all the traffic will bear and spend the money—"

"In developing the natural resources?" interrupted Ali By.

"Not by a long chalk, but by buying rail-roads that are unprofitable, building ships at high prices and run-

ning them when private concerns fail to do it with their own. When there are no rail-roads to buy, we build 'em up into the Arctic and construct ports on Hudson's Bay and such-like places. My Navy will soon absorb a goodly whack of the country's revenue when I get it started—"

"But don't you take any interest in developing your Fishery resources at all? I should think that a goodly revenue would come to your country by so doing."

"No doubt, no doubt," assented Neptuno, "but that would be a denial of the principles upon which our form of Government is founded."

"Then you cannot tell me anything as to how we, in Slambak, might improve our Fisheries Administration or how we might cure this carp disease?" Ali By spoke plaintively.

The Minister of Marine, Navy and Fisheries loftily ignored the question; looked at his watch and rose to his feet. "I'm due at a Council Meeting in five minutes and your train leaves in ten. I've had a most delightful visit with you and I'm glad to have been able to help you out in this fish matter. We statesmen must stick by one another irrespective of nationality. And, now,

I'll bid you good-bye. Tell your Sultan that I'll have one of my ships over in Slambak within a month or two—"

"We do but little business with the outside world," murmured Boan Hed dazedly. "There is no cargo to be got—"

"Cargo be d—d!" interrupted Neptuno jovially, "I'll send one of them anyway and let you see what they're like. Bye-bye, now, and don't stop too long in Montreal on your way home." And the Slambakian ambassador found himself out on the street headed for the Railway Depot.

The retinue awaited him at the station. The Chief Gazoek salaamed and enquired humbly. "Your Highness has learned much wisdom. There is an expression of gravity upon thy august countenance. The Honorable Neptuno—"

"Has saved his face but I'll lose mine", growled the Slambakian Cabunk curtly. Then with an air of resignation he said, "Home, Hassan, home! The axe of the executioner will save my poor head the trouble of dopping out the way they do things in this strange land. Life's too short! Carpe diem! Kismet!"

The Lamprey

By JAMES P. KELLY.

Friend Reader:

How would you like to go a fishing equipped with only a pair of cotton gloves, and as many sacks as you cared to carry, and after fishing for three or four hours take stock of your catch and find that it ran upward of two thousand fish weighing better than half a ton in all.

Though this may sound like "too much fish", it is nevertheless a story of fact, the story of the Lamprey Eel, and you can duplicate this at several locations on the Pacific Coast, where the Lamprey eel on his annual trip up stream encounters Falls, and being unable to get by otherwise climbs up over the rocks.

The Lamprey, or Lamprey eel as it is commonly known, is a most interesting fish. Being as it is, the first round on the ladder of the Red-blooded vertebrate, it is the subject of closest study to the zoologist. Its utilitarian history reaches back into the twilight of antiquity; taking a prominent place on the tables of the epicures of ancient Rome, being entwined in medieval stories of regal splendor and playing an important part in the economic life of some of our own aboriginal tribes of modern times. And should McCauley's New Zealander, in his research into ancient methods of paper making, stop off from his biplane, at Oregon City, in the month of May, to study the ruins of the old Paper Mills, I am quite satisfied, that he will still find the Lamprey making his weigh up the rocks on the face of the Willamette Falls, as their ancestors have done for thousands of generations.

The Lamprey received its name from the fact that it is frequently seen holding on to rocks. Lampere: to lick up or suck; Petra, a rock. The Lamprey is an eel-like fish averaging about sixteen inches in length, it has a single nostril opening in the center of the skull, and gills consisting of a series of seven openings running back from the head proper, along both sides, for about three inches. Its mouth is such a perfect mechanical

sucker that, if present against a smooth body, even after the animal is dead, it will lift several pounds in weight! It differs from all other vertebrate in that the gills in the adult do not connect with the throat but into a respiratory tube lying below it. Pliny, the naturalist of ancient Rome, tells us, with that certitude we find so frequently associated with the inexact knowledge of his day, that there are seventy-two varieties of fish without shells. While this is not five per cent of the now known varieties, he includes the Lamprey among them, giving it a place among the delicacies of the times.

The Lamprey is not used as an article of human food, to any extent, by white men on the Pacific Coast. It nevertheless possesses an extremely high food value, exceeding in this respect even the Chinook Salmon, the King of food fish in the Pacific waters. The dry meat has a protein content of over 84 per cent and the yield of oil from the Lamprey equals the yield of oil from the best Herring,—about 40 gallons per ton.

The Lamprey belongs to the Anadromous fish—coming up the rivers to spawn. The annual run takes place in the Columbia and Rogue Rivers with the early run of the Chinook Salmon, April, May and June. In the Yukon River, however, the run takes place in the early winter. The natives take them in great quantities for dog food; and they also use them at times for food themselves. They, knowing about the time the run is due, keep holes cut in the ice through which a watcher occasionally dips a net. When the first Lamprey is caught, the signal is given, then all the men who have dip nets get busy and dip eels (as they are called there), placing them in great piles, like sticks of wood, as they freeze as soon as they are taken from the water. When the rear guard has passed on, the natives move further up the river, and cutting through the ice, renew their attack until they have all they need. The run, in the Columbia river at least,

and I think also in the other rivers in Oregon and Washington, does not come up in this compact way, but stretches out like the Salmon run. I have noticed in the Columbia River, that a few scattering specimens arrive in February and March, although the main run takes place in April and May.

The quantity of the Lamprey in the rivers of the Pacific Coast is rather surprising, even to men familiar with these waters. I approximate the annual run in the Columbia River to be between 700 and 1,000 tons, and there is reason to believe that the annual run in other Pacific Coast streams is equal to, if not greater than that in the Columbia, in ratio to the volume of the waters. The only stream whose run has been actually determined is the Willamette River. In 1915 the run at Oregon City, on the Willamette River, was approximately one hundred tons. The Northwest Fish Products Co., that year having taken sixty-five tons for oil and a careful survey showing that 35 tons had passed over or died in the vicinity of the Falls. The Lamprey in his migration follows the bottom of the river and therefore is not liable to be noticed until he arrives at a cascade or falls or comes to his shallow spawning ground. The Lamprey does not possess the speed and endurance of the Salmon and is therefore unable to negotiate the extremely swift waters at the cascades or falls along the rivers. He therefore depends upon his ability to climb by means of the sucker mouth which he possesses. In extremely swift water the Lamprey travels in short runs, taking hold of whatever he may find on the side or bottom, rests awhile and then shoots forward again a few feet. When he comes to a cascade or falls, being unable to leap it as salmon frequently do, he proceeds to climb over in any place he may find water trickling down the face of the rocks. Holding on with his sucker mouth, he makes a jump by giving his body a vigorous twitch, gaining several inches, then resting for a few minutes. I have seen the Lamprey hanging thus on a perpendicular wall for days at a time, sometimes climbing thirty to forty feet to the top of the dam. An unusual sight is presented each Spring at the Willamette Falls at Oregon City, where sometimes a ton or more Lamprey may be seen hanging to the face of the dam or wiggling their way toward the top. They appear to possess an extremely sensitive sense of smell; a channel of swift running water filled with wriggling Lampreys which it had taken them hours or perhaps days to fight their way along, will be cleared in a moment should an ounce of tobacco juice or a piece of dead Lamprey be thrown in the water above. In the early days of Oregon the native Indians gathered annually during the Lamprey run to obtain their supply of smoked Lamprey, and during the three years that I was able to observe the Lamprey run, some Indians always showed up for their toll of the run. Their method of catching was very primitive. Some of the natives used cotton gloves, others removed their shoes and taking their socks for mittens proceeded to pick the Lamprey off the rocks. By picking the lowest one first the remaining ones were undisturbed and waited their turn to be garnered. Little or nothing has been written as to the habitat of the adult Lamprey. The only cue that I have ever received as to his adult habitation came from occasionally finding a Lamprey in the stomach of some deep sea fish. Of this we will write further on.

When the Lamprey arrive at their spawning ground,

they begin in pairs or groups of pairs, to clear off a section of a gravelly ground for a spawning bed, this they do by fastening on to a stone or stick with their sucking mouth and swimming down the current with it. They will continue at this work for days until the bed is fixed just to their liking, when the eggs of the female and the milt of the male are deposited together in the sand and the sand immediately on the upper side of the bed is stirred up so as to cover up the eggs. It is assumed by most authorities that the Lamprey dies when it spawns as do most anadromous fish. This is a matter which is extremely difficult to determine. The only anadromous fish which I know that does sometimes return to the ocean is the Steelhead. These have been caught at times returning to the ocean in a very emaciated condition after spawning. I have given this question a good deal of personal study and am able to answer satisfactorily one of the objections by those who maintain that the bulk of the Salmon and Lamprey do not die on spawning. The claim is made that if the hundreds of thousands of Salmon that spawn in the creeks die, why do we see so few floating down on the surface of the waters? My answer is the Salmon and Lamprey of the Pacific Coast after spawning never float when dead.

For several reasons I spent from April to October on the Willamette River below Oregon City and examined scores of Salmon found floating in the river and in not a single case did I find a dead Salmon floating which had not been injured and in no case had it spawned. Whereas on the bottom, in shallow water, on the Clackamas River, and other streams hundreds of dead spawned Salmon could be found. On experimentation with Lamprey, I found that a Lamprey killed before spawning, will sink to the bottom of the stream where it remains from three to thirty days or even longer before it floats, depending on the depth and temperature of the water. The same rule holds true also of Salmon injured that die before spawning, but the fish that spawn naturally is so wasted that the specific gravity of the body is greater than the water and sinks to the bottom. Owing to its wasted condition also, it does not generate gases that decrease the specific gravity, and cause it to float as in the case of those which have not spawned. Instead the body gradually and very slowly wastes away without coming to the surface of the water. This is also the case when Salmon are spawned artificially. "The body never rises but when thrown into the stream drifts down slowly along the bottom which in the case of late fall spawning, fish will not disintegrate for several months and become in the wonderful economy of nature according to actual observation the food for the young fry" (O'Mally). In connection with this it is interesting to note that beluga whales have been kept for six weeks beneath the cold fresh water of Alaska streams, with so little deterioration that the blubber on rendering show less than one half of one per cent F. F. A. almost as fresh as when first taken. (Magill, Beluga Whaler).

Alexander Meek, professor of Zoology in the University of Durham, who has made a close study of the Lamprey, in his book "Migration of Fish" is inclined to believe that the Pacific Coast Lamprey is properly classed with the river Lamprey, though he considered they go to the ocean. He does not think they go far from the mouth of the rivers. I have found Lamprey in the stomach of fish caught when fishing on the Halibut banks at considerable distance off the coast, and

am inclined to believe they cover a considerable area of the ocean bed in their life wanderings.

An adult Lamprey is never seen in the Pacific Coast streams any more than Salmon except at the time of the run, but like Salmon there are some who arrive a long time ahead of the annual run, and there are some very late stragglers. No immature Lamprey are found in the annual spawning run. The size is singularly uniform averaging three-fourths of a pound, the largest specimen taken which I have observed in a three seasons catch, being two pounds, and the smallest rarely less than one-half pound. The Lamprey possess the ability to live a long time out of the water if in a cool and moist place. I have frequently carried specimens for hours in a sack which when thrown into a stream swam off and seemed no worse for their experience. If a vigorous Lamprey be laid on a warm dry rock, however, he dies within a few minutes, apparently in intense pain. The Lamprey possesses in his pointed tail a powerful marlinspike which he does not hesitate to use to obtain his liberty in case of his being detained against his will. If he can find an opening in his prison however small into which he can insert even the finest edge, his liberty is pretty well assured. Fill a sack with Lamprey and in a few minutes the sack is decorated with tails sticking through and if the material is not strong the Lamprey will break through to liberty. If a barrel or box is filled with live Lampreys leaving a quarter of an inch slit into which a tail can be inserted, as many Lampreys as can, will get their tails together and unless the box be well put together, the board will be broken off. When canned for food the Lamprey of the Pacific Coast is very similar in taste to the eel of the Atlantic. When in 1914 Mr. Reimers and myself began the first attempt to put up Lampreys commercially the samples sent out, were regarded by users of the "Hamburg All", as the most commonly known brand of eels were then called, as a very good substitute.

There is a ready market for the oil of the Lamprey in the Tanning industry, as the Tanners say that the oil does not spot the leather. This is doubtless owing to its high power of penetration. The Lamprey no doubt plays the same part in the economy of the deep, as the Herrings, Sardine, Smelt, etc., forming an important article of food for the fish which man in turn uses as food. The oil of the Lamprey possesses a high power of penetration and from the results obtained from several experiments this oil appears to possess the quality of nourishing the cellular structure when applied subcutaneously. In connection with this I know of several cases of old wounds that have refused to yield to other treatment to heal rapidly when kept soaked with Lamprey oil. Its high power of penetration makes it very valuable as a massageing oil, but its odor is of such an unpleasant character, like most fish oils, that it cannot be used for this purpose until deodorized. It was in an attempt to deodorize this oil without hardening it that Walter A. Schuck, an oil expert of Portland, discovered the process of Hydrogenating without a catalyzer.

Owing to the fact that the cousin of the Lamprey, the Hag-fish, is a parasite and a still nearer relative, the fresh water Lamprey, is also a very destructive fish, taking the life of Salmon and other fish in great numbers, the Pacific Coast Lamprey is also accused of being destructive of Salmon and other fish, and unjustly so. I have never seen a Lamprey stick to or injure a Salmon or other fish; nor have I found an authentic case of any kind.

If a Lamprey takes food of any kind after entering the rivers, it is principally small crustacean found on rocks, etc. There are many superstitions attached to the Lampreys and eels which to minds of most people are the same. Pliny tells us that eels rub themselves against rocks scratching off particles off their bodies which in the heat and light become young eels.

A comparison between the life history of the Lamprey and the true eel shows some interesting and striking contrasts. The true eel is spawned in the ocean hundreds of miles from shore, but as soon as the larvae stage is fully passed, he strikes out for fresh water where he spends his time till fully grown when he returns to the ocean. If at maturity, when the migration time approaches the eel finds himself landlocked he immediately proceeds toward the sea overland until he strikes a stream and owing to the particular construction of his gills can travel overland for many miles. His travelling of this character is usually done by night. In his life's history he is the original "Jykell-Hyde" and until recently he got away with it although it was known there was something suspicious about his life history. The eel is spawned far out in the ocean, the young larvae having been found one thousand miles from shore. In its early stages it is known as *Leptocephali*, a dark ribbon like creature coming almost to a point at each end; and was regarded as a distinct species. In the next stage he becomes rounded and transparent, and was known as the glass eel, also regarded as a separate species, then he begins to take on the color and the same general appearance of the adult eel and is known as an elver or young eel. It is at this time that he appears in the fresh water. We owe much to Professor Grassi, a Sicilian naturalist, who about thirty years ago reported the result of his work, unravelling the mystery of the life of this deceptive fish.

The life history of the Lamprey shows the exact contrary. He is spawned in fresh water and lives his adult life in the ocean—when he can get to it—coming to fresh water only, to spawn. Like the eel he too passes through a larvae stage in which he bears no resemblance to the adult Lamprey. This larvae was not until recently known as being a stage of the Lamprey but was known as a distinct species. The true eel in the winter buries himself in the mud at the mouth of rivers. It is in this semi-dormant state that most of them are taken for market. Whether or not the Lamprey do this I have never been able to ascertain. The Lamprey, though not so susceptible to injury as more highly organized fish, are nevertheless sometimes driven from their natural spawning ground by the march of civilization. In some of the rivers in England the Lamprey run, as well as the run of the true eel, has entirely ceased, though at one time it was the source of a large and profitable business.

This story would not be complete to the mind of the student of British history if it omitted mentioning the fact that Henry 1st, King of England, in the 12th Century, lost his life from eating too heartily of Lamprey, of which he was inordinately fond. Justly earning the unenviable epitaph:

"Though monarch of a great Domain
And ruled it wise as monarch might
Yet wore he still the vassals chain
The bondman of his appetite."

Indebtedness acknowledged to the works of: Wade, Hagner, Wood, Parker & Haswell and Jordan.



DEVELOPING QUEBEC'S FISHERIES

BY

COLIN McKAY

Hon. Frank Carrel, through his paper, the Quebec "Telegraph," has done much to arouse interest in the possibilities of the fisheries of the Province of Quebec, and more particularly of the Gaspé coast. Numerous articles in the "Telegraph" have pointed out that Quebec is the only province in the Dominion where the value of the catch of sea fish has not shown an increase, even comparable with the increase in prices; and the editor has canvassed the reasons for this apparent lack of development at some length. Chief among these reasons, it appears, are inadequate transportation facilities, lack of cold storage, and inefficient marketing facilities generally.

One sees occasionally in the Quebec papers advertisements calling attention to the fact that dealers have on hand excellent stocks of fresh fish imported from Portland, Me., or Boston, Mass. And, according to the "Telegraph," the consumers in Quebec City pay good prices for fish. That journal reports that during the last week in February when haddock was retailing in Quebec for 12 to 15 cents, in Toronto the stores were advertising haddock at 10 cents. A greater difference in price was shown for halibut, though it is not specified whether the halibut came from the Pacific or the Atlantic. In Quebec city halibut was retailing at 25 to 35 cents; on the same date the quotation in Toronto was 18 cents. So far as Atlantic caught fish are concerned, Quebec should be able to quote lower prices than Toronto, for a big factor in fixing prices is the cost of transportation. And the figures quoted above are of little value for comparative purposes; the quality of the fish must also be compared. In later issues of the "Telegraph" Quebec fish dealers took the trouble to protest against the imputation of profiteering. One dealer stated that the people of Quebec city demanded fish of a superior quality. Only a few days before he had laid in a stock of "chicken" halibut, but had not been able to sell it at 10 cents per pound.

At the same time the position by the Quebec "Telegraph" in regard to the fisheries problem in its larger aspects was justified by the explanations of the high prices of fish prevailing in the ancient capital. One dealer stated that most of the fish sold in Quebec city came from Boston and Portland, but when asked why supplies could not be obtained from Canadian sources said he did not know. This dealer told the "Telegraph" that he bought haddock in Montreal for 8 cents, and that the express charges were from 3 to 4 cents per lb. This is not the rate from

Montreal to Quebec, according to the Express Company's schedules, but that is not the point.

The question is, as the "Telegraph" particularly says, why Quebec should purchase fish from Boston or Portland by way of Montreal, when it ought to procure its sea-fish supplies from Gaspé in summer and the Maritime Provinces in winter.

The problem of the development of Quebec's fisheries were recently brought prominently to public attention by a large delegation from the Gaspé Coast which waited upon Premier Taschereau and some of his ministers in the ancient capital. The delegation was accompanied by Hon. Dr. Lemieux, M.P., Hon. Frank Carrel, Mayor Samson, of Quebec, J. T. Ross, president of the Quebec Board of Trade, Mr. Lafrance, manager of the Banque Nationale, and others. The delegation asked for aid in the development of the fisheries, and especially for improvement in transportation facilities. Emphasis was laid on the importance of cold storage depots to assure a steady supply of bait, and conserve the catches of fish. Some members of the delegation thought there was need of improvement in the type of boat used by the Gaspé fishermen; and it was suggested that the Provincial Government should assist in providing an experimental boat to demonstrate the advantages of employing larger craft and more up-to-date equipment. Such a boat, with equipment, would, it was said, cost about \$15,000.

Premier Taschereau expressed interest and sympathy with the objects of the delegation, and promised serious consideration of the needs of the coast fishermen. He announced that his government had decided to vote a subsidy of about \$25,000, in addition to the Federal subsidy, to improve the transportation service by water below the City of Quebec. He intimated that one of the objects of this subsidy should be to assure that some of the lower river boats would have cold storage facilities available for the transport of fish and other perishable products.

Hon. Frank Carrel, who strongly supported the requests of the delegation, declared that the fishing industry might be made a very valuable asset of the province. Both the Gaspé Coast and the North Shore were bordered by fine fishing grounds, and moreover they were within reach of the great fishing areas of the Atlantic. But at present the fishermen of Quebec were laboring under serious disabilities; they needed proper transportation facilities and cold storage in order to realize their opportunities.

HOW TO MANUFACTURE BONELESS COD.

By A. C. DAY, Fishery Officer, Musquodoboit, N.S.

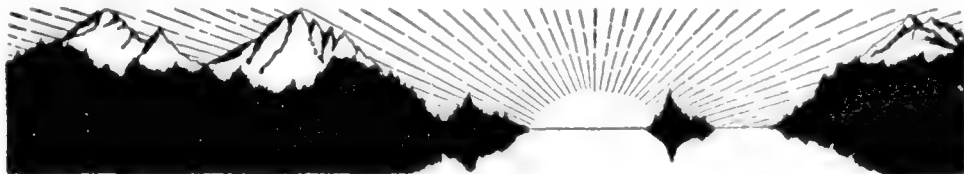
After gutting and heading, the fish are put into a soak-tub and covered with salt water until split. It is not necessary to let them soak long as immersion in the tub is more for the purpose of washing the fish, but they may remain in the water over-night if not convenient to prepare the day received.

The fish are next taken from the tub and split then dropped into a tub of clean water. After rinsing, all black skin and blood is taken from the napes. Into clean water once more and then the fish are taken out and salted in tight receptacles—tanks, tubs, puncheons or barrels. Salt very heavily as this is what keeps the fish white. The fish should be completely covered with salt and as the blood has been

thoroughly cleaned off, the pickle will be clear and the fish white.

The fish should lay in salt at least two weeks, but, if intended to be made up at once they do not require so much salt though they require much more than fish intended for hard-drying purposes. (N.B. The small fish intended for drying in the ordinary way should be culled out and salted very lightly).

When the fish are removed for manufacturing, they are washed in their own pickle, left in kench for a day or two and then skinned and boned. Lastly, they are dried for a day and a half if the weather is good, or two full days if not right good drying weather. They do not require to be as hard as ordinary dry cod but should be sufficiently dry to prevent them becoming slimy for four or five months.



Salmon Fisheries in the Fraser

The Hon. Wm. Sloan, as Commissioner of Fisheries for the Province of British Columbia has just released for publication, a report made to him by Dr. C. H. Gilbert, of Stanford University, on the run of sockeye salmon to the Fraser River in 1920, that will be of great interest to all engaged in that industry because of its relation to the run that may be expected in that river this year.

Dr. Gilbert, who has been retained by the Provincial Department since 1912 for the scientific study of the runs of salmon to our waters, is the leading authority on the life of Pacific salmon. From an annual study of the scales of a large series of sockeye taken from the catch made in each of our principal salmon streams since 1911, Dr. Gilbert has been enabled to segregate the age groups of the runs to the various rivers and determine the years in which they were hatched. While the runs of sockeye to the Fraser have been shown to consist predominately of four year old fish, it has also been shown that in the season immediately preceding the year of "the big run" to that river, the run was always made conspicuous by the occurrence of large numbers of individuals which were but three years old, termed grilse, which constituted a class apart from the main body of the run and which were rarely found accompanying the runs to the Fraser in other years. These grilse were all males, undersized, pale in color of flesh and poor in oil, and were hatched from the eggs deposited in the season which produced the big run of the following year. Being of inferior grade to the four year old fish, most canners, being jealous of the quality of their pack, put up the grilse separately and were thus in a position to compare their abundance in the year of their occurrence with that of four, or eight, or twelve years previous. From such observation it came to be believed that whenever the number of grilse was relatively large, the big year which followed would be correspondingly increased in comparison with other big years. The direct relation between the two runs has been made fully manifest by Dr. Gilbert's

investigations. He demonstrated that whereas the usual run of sockeye to the Fraser consisted of four year old fish, the grilse were but three years old and made their appearance in the run one year earlier than the four year fish which resulted from the same spawning. Consequently, if the spawning of the previous big year had been exceptionally productive, it would result in an exceptionally large run of four year old fish in the big run of the following year.

It has been shown that the catch of 1913, which produced a pack of 2,400,000 cases of sockeye, was the result of the abundant seeding of the up-river spawning beds in 1909. The catch of 1917, which came from the depleted spawning in 1913, produced a pack of but 560,000 cases. Notwithstanding that the catch of 1917 was but 20 per cent of that of the previous big year and that the spawning beds in 1917 were not as well seeded as in 1913, some doubt has been expressed as to the permanent effect of the blockade on the runs in the big year. Some have even advanced the opinion that the blockade of 1913 was effaced in 1917 and could not affect future runs, and that the catch in 1921 would approximately equal that of the big years 1905, 1909 and 1913, and they advanced that opinion notwithstanding that the reports of the Provincial Department showed that the spawning beds in 1917 were even less abundantly seeded than in 1913, the year of the disastrous blockade. Dr. Gilbert, in his present report, reviews the evidence in the case and adds very materially to the forecasts already issued by the Department. He shows that the catch of 1912, the year before the record run of 1913, contained 20 per cent of grilse; that the catch in 1916 contained less than one-fourth of that number; and that the catch in the following year was but one-fifth of that of 1913.

In commenting on Dr. Gilbert's report Mr. Sloan said:—

"The relation, therefore, of the proportion of grilse found in the catch of the year immediately preceding the big year runs shown by Dr. Gilbert,

appears to have been a significant and reliable index of the size of the run in that year. That being so, the fact that in the catch of 1920 but three grilse were found in the nineteen hundred and fifty specimens examined by him, wholly agrees with the conclusion derived from the Department reports of the conditions of the up-river spawning beds of the Fraser in 1917. The reports of that year and Dr. Gilbert's present paper forces me to the conclusion that the run of sockeye to the Fraser this year will, as he concludes, range itself definitely with the lean

years on that river, and that the former big years of the Fraser must now be regarded wholly a thing of the past."

"Dr. Gilbert's paper must, I think, impress the fishing interests of the State of Washington of the necessity of prompt action, and that the methods that must be adopted to re-establish the runs to the Fraser, which in former big years were so profitable to them and our own interests, will be equally successful in restoring the runs of the lean years."

Dr Gilbert's paper is of such value that it is here reproduced.



Will there be a Large Sockeye Run to the Fraser River in 1921?

By Dr. CHARLES H. GILBERT.

Ominous Prediction by Noted Salmon Authority. "The Big Year.....Wholly a Thing of the Past."

It may be assumed that any indication of the probable size of the sockeye salmon run to the Fraser River in 1921 will be received at this time with lively interest. Fishermen and salmon packers, and all who are concerned with the salmon situation, are aware that 1921 is a lineal descendant of those "big years" on the Fraser which, prior to 1917, occurred without fail in every fourth season, and brought such incredible hordes of salmon to the fishing grounds and into the river. Even after the depletion of the river had become pronounced for the three "small years" of each cycle, still the quadrennial big years remained unimpaired. And they would probably have maintained themselves until now, but for the accidental blockade of the Yale Canyon in 1913, precisely in time to intercept the spawning run of that big year.

The coincidence was most unfortunate. Had the blockade occurred a year earlier, or a year later, comparatively little damage would have resulted. There would have been time to apprehend the seriousness of the situation, and to remove the barrier—as was subsequently done—before a big year should come round. But in 1913, the catastrophe had become irreparable before adequate measures of relief could be taken. The canyon was already full of struggling salmon, destined for up-river spawning grounds, trying in vain to force the blockade. Myriads of them subsequently weakened and died, still retaining their spawn; and they formed decaying masses on the bars and shores of the river below Hell's Gate. Thus the up-river spawning grounds in 1913, for the first time in any big year, were left relatively bare of fish.

These facts were fully set forth by Mr. J. P. Babcock in the Report of the Commissioner of Fisheries of Brit-

ish Columbia for 1913, and their bearing on the unfavorable prospects for 1917 was plainly stated. As the season of 1917 approached, interest in this problem became intense. The question was much debated whether the immemorial big year on the Fraser would again repeat itself, or whether the warnings of the experts would be justified in the event. Some of the packers took counsel of their hopes rather than their fears and made preparations for the usual pack of a big year. The result is still painfully fresh in our minds. By most strenuous exertions, and an intensity of gleaning never before witnessed, a pack of 560,000 cases was produced; little more than one-fifth of the pack of the big year of the previous cycle.

Two entirely independent lines of evidence had pointed to a greatly decreased run in 1917. One of these we have already mentioned, based on the insufficient seeding of the up-river spawning beds in 1913. The other method forms an interesting side-line of prophecy, which could not be developed in that cycle until 1916, the year before the season which so anxiously was being awaited. We shall proceed to discuss the second more in detail, inasmuch as it is now equally applicable to the year 1921.

It is known to all packers and fishermen that the year before the big run was always made conspicuous by the occurrence of large numbers of greatly undersized individuals, which evidently constituted a class apart from the main body of the run, and in the small years of each cycle were rarely encountered. They were not only undersized, but they were all male fish; and their flesh was relatively pale in color and poor in oil. Being thus of small value to the trade, they were not very welcome visitors. The canners who were

jealous of the quality of their pack put them up separately as an inferior grade, and were thus in position to compare their abundance in the year of their occurrence with that four or eight or twelve years previously. From observations made in this manner, it came to be currently believed that whenever the number of small fish was relatively large, then the big year which followed would be correspondingly increased in comparison with other big years. It was believed that some basis for forecasting the size of the big run was furnished by the relative numbers of undersized sockeyes that were included in the run of the previous year.

The reason for such possible direct relation between the two became apparent in the course of our investigations of the ages of salmon. It then became known that whereas the usual run of sockeyes to the Fraser were maturing in the fourth year of their age, these undersized males—or **grilse**, as we call them—were maturing in their third year; and they would therefore make their appearance in the run one year earlier than would the four-year fish which resulted from the same spawning. If, then, the spawning of the last big year had been an unusually successful one, this might be expected to result in an exceptionally large run of grilse three years thereafter, and an equally exceptional run of the four-year fish which would constitute the big run of the following year. The number of three-year grilse in the year before the big year might well, therefore, give a clue to the probable size of the big year itself.

Our investigations for the Provincial Fisheries Department of the Fraser River sockeyes began in 1911, and have permitted us but three opportunities to witness this run of grilse; in 1912, in 1916, and now during the last season, 1920. In the first of these, 1912, the big years were still undisturbed, for the grilse of that year had developed from eggs laid down in 1909, when the pack of sockeyes of the Fraser River had totalled over a million and a half cases. The 1912 grilse came from a successful season, and the proportion which they formed of the 1912 run could be accepted as an approximate statement for the corresponding years of previous cycles. Tests made throughout the season indicated that about one fish in five of the total run was a grilse. This condition in 1912 was followed in 1913 by a big year of the first magnitude, resulting in a pack of well over two million cases.

It was with these data in our possession concerning the relation of the grilse to big-year runs, that we approached the season of 1916. The grilse that would run that year would have developed from eggs deposited in the year of the blockade in the Yale Canyon. Should they show a decided reduction in numbers compared with 1912, their condition would reinforce the argument from the impoverished spawning beds of 1913, and a dismal outlook would be presented for 1917. It is a matter of record that the grilse of 1916 were only one-fourth as numerous as in 1912; and it is equally a matter of record that the pack of 1917, compared with that of 1913, suffered an equal reduction.

For the year 1921, the same two lines of evidence are available; that derived from the condition of the spawning grounds in 1917, and the independent evidence to be derived from the numbers of grilse that made their appearance in the run of 1920. As to the condition of the spawning grounds, we have again the testimony of Mr. Babeock, and from this, the prospect seems gloomy indeed. Not only was no improvement found

over the conditions which had produced the curtailed run of 1917; the situation, on the contrary, had become definitely worse. The spawners throughout the up-river district seemed scarcely more numerous than in many of the lean years of past cycles and could be expected to produce nothing better in their turn.

Material to establish the numbers of grilse to be found in the run of 1920 was collected with great care, under the supervision of Mr. Babeock. Collections of scales for age-determination, accompanied by data concerning the length and sex of the fish, were obtained at frequent intervals throughout the season. When the receipts of the cannery were small, the entire catch was examined. At other times, liberal samples were obtained, taken at random as the fish lay on the cannery floor. Secured in this manner, the nineteen hundred and fifty individuals which we have examined can be safely accepted as presenting a reliable cross-section of the entire run.

We have now, by microscopic examination of the scales, determined the ages represented in this complete series. In the early part of the investigation, as first tens then hundreds of individuals passed under our observation without a single three-year grilse appearing, it seemed that this group must be entirely absent from the run. But our 355th specimen, taken June 28th, proved to be a three-year male; a second, the 515th fish to be investigated, appeared in the catch of July 5th; and a third, which had been taken August 16th, was the 1666th sockeye of our series. Thus, in 1950 sample sockeyes, taken throughout the fishing season, but three grilse were included. In 1912, an equal number of samples contained approximately 200 grilse; and in 1916, an equal number, collected in the same manner, and including the entire run, contained 63 grilse.

Insofar, then, as the number of grilse can be considered an index of the size of the run in the following year, the evidence from the 1920 run wholly agrees with that derived by Mr. Babeock from the condition of the up-river spawning beds of the Fraser in 1917. From both of these lines of evidence, the conclusion is forced upon us that 1921 will range itself definitely with the lean years of the Fraser, which for the three years of the previous cycle produced an average pack for each year of 265,000 cases, and for the corresponding three years of the present cycle, an average pack each year of 90,000 cases.

The "big year" of the Fraser River, it seems, must now be reckoned wholly a thing of the past. Any methods which might be successful in re-establishing it, would be equally successful in raising the traditional lean years of the Fraser from their present low estate to an equality with the old-time "big years", when untold millions of spawning sockeyes fought their way through the rapids of the Yale Canyon and distributed themselves over the unequalled spawning areas of the upper river.

McAVITY ISSUES PROPELLER BOOKLET.

An interesting eight page booklet has recently been issued by the Marine Department of the T. McAvity & Sons, Ltd., St. John, N.B., on the subject of bronze propellers. Much valuable information is given on the action of the propeller, pitch, slip, and the methods for finding the measurements and percentage of the two letter factors. Hints on the selection of, and the installation of propellers are also included.

The booklet will be mailed free to all enquirers.



Salmon Propagation in British Columbia

By J. A. MOTHERWELL, Chief Inspector Fisheries
for B. C.



During the past few years experiments have been carried on by a number of the Federal Government hatcheries in British Columbia to the end that the most efficacious method of propagating salmon might be discovered. Particular attention, of course, has been given to the sockeye variety.

While the efforts of the past few years have been proved beyond a doubt to have been fruitful, at the same time it has been recognized that the methods employed left much to be desired. Considerable attention has been given, with small quantities of sockeye salmon fry at several of the hatcheries, to the retaining in ponds and feeding until they attained such a size as would allow of their being able to take better care of themselves when released and so assure a larger return when maturity was reached.

Owing to the fact that the proposed International Treaty, at present before the American Senate for ratification, provides for a permanent Commission which would have the power to deal with the sockeye question in the Fraser River District, including the propagation of this species, it did not appear to be desirable to launch out into any extensive new system until the policy of the proposed Commission was known.

Owing, however, to the delay in ratification, and also to the fact that each season has shown more emphatically the great necessity of some action being taken immediately for the purpose of restoring the sockeye run to the Fraser River, it has been decided to immediately go ahead and adopt the system of holding sockeye fry over the first summer at least, and if possible, for twelve or fifteen months.

To this and several months ago the Fishery Department took steps to see that as large a portion as possible, with present facilities, of the hatch now in the hatcheries might be so held.

In the Fraser River District several ideal locations have been found and the Federal Department is negotiating for the purchase of these sites for the purpose of installing extensive systems of ponds this summer, and in the meantime, permission has been obtained from the respective owners for the use this season of the streams passing through their property, in order that a portion of the present hatch can be accommodated and which will obviate the delay of a year.

There are six sockeye salmon hatcheries on the Fraser River system, and at every one of these there will be a portion of the present hatch retained in ponds and held as long as possible up to a year. At all of these establishments plans are being developed which will ensure the installation of an extended system at each point during the coming summer, in order that a much larger portion of the fry resulting from the take of eggs this fall can be retained.

This method is not to be confined to locations in the immediate vicinity of the hatcheries, but a survey is being made as soon as the weather conditions permit, with a view to finding suitable points along the Fraser River system, both above and below Hell's Gate, where ponds can be constructed.

Arrangements have already been made by the Federal Department for an inspection by its officers of the streams in the upper reaches of the Fraser, above Hell's Gate, and convenient to the Pacific Great Eastern Railway, which will ensure good transportation facilities, and it is confidentially expected that a sufficient number of suitable points will be found which will make it possible to this summer commence in a considerable way the efforts to restore the run of the sockeye species above Hell's Gate, by means of the retaining pond system.

Operations similar to those arranged for the Fraser River District have not been confined to that District, but also cover the more important sockeye areas such as Rivers Inlet, Skeena River, Vancouver Island, and all other areas frequented by the sockeye salmon.

At all the eleven salmon hatcheries in the Province, the retaining pond systems are being greatly extended, and it is anticipated that although a considerable portion of the present hatch in the Province will be retained; next season this proportion will be very greatly increased, and at all points operations along these lines will be pushed to the greatest extent facilities will allow.

The Department has been experimenting also, during the last few years, with planting fry in lakes which are barren of fish life and which contain an abundance of natural food and an outlet by which the fry can reach the salt water. These experiments have been most successful, and fry in from seven to ten weeks have attained a growth which under natural conditions would require the best part of a year. At hatcheries where it is difficult to instal retaining ponds, and where these barren lakes are available, they are being utilized to the fullest extent.

Another method, with which the Department has been experimenting during the past few seasons, and which gives promise of good results, is the planting of eyed eggs in gravel. This system can be used at points to which it is impossible to transport fry. During the past six weeks the Officers of the Department have planted a quantity of sockeye eyed eggs in suitable streams, and lakes along the Coast, by means of a specially prepared contrivance which permits of the planting of eggs under the water, and under natural conditions.

We have every reason to believe that this system is one which will prove of very great value. Operations will be continued along these lines each season, and it is expected that streams which have been depleted of sockeye salmon will be rapidly restored, and that the supply of this desirable species will be greatly increased.

The writer is very optimistic and feels that the sockeye salmon fishing of the British Columbia Coast can be restored to a large extent—although it cannot be expected that what was known as the big run on the Fraser River can be brought back, as it is realized that the operations will benefit one year as well as another.

Window Displays with Canned Fish



These two Photographs of Prize-winning Window displays featured by Vancouver Stores on National Fish Day, show, in an Excellent manner, what can be done in the way of Artistic Exhibitions of Canned Fish. Displays like these are "attention compellers" and help to sell the goods.



FRESH VERSUS FROZEN FISH.

We believe in giving all sides of a debatable question and the following article from the British "Fish Trades Gazette" referring to a CANADIAN FISHERMAN article on the subject of frozen fish, is worth reading.

"The discussions which have taken place in this country with reference to the comparative merits of fresh and frozen fish, and the general feeling that frozen fish will be but little in demand when fresh can be obtained, have attracted attention on the American continent. The *Canadian Fisherman* has taken up the cudgels on behalf of the frozen article, heading its leader. "Frozen Fish the Solution." Reference is made to the "refusal" of the English people to buy frozen fish and to the long journeys made by fish in ice "with certain primitive insulating materials" on the continent. It is boldly said that "authorities on the matter insist that the freezing of fish is the logical and economical way of transporting it, but the consumer can't see it." Yet it is the consumer who will decide the issue. The Canadian journal is of opinion that many obstacles would be removed in regard to the use of frozen fish if the public were "properly advised". In England, it says, the scheme of freezing fish has fallen into such disrepute that investigators are now at work to discover some other means of preservation which will not attract prejudice, reference being made in this connection to dehydrating by an electrical process. But our esteemed contemporary sees no necessity for all this investigation.

The Disadvantages of Frozen Fish.

It is admitted that frozen fish do not meet with popular approval, but that, it is said, does not alter the situation. It has been stated by many investigators—Dr. E. D. Clark's two years' study of the question at the Food Research Laboratory of Philadelphia is specially referred to—that fish suffers no appreciable loss of food constituents through preservation by freezing. "The system, then, is all right, and it serves its purpose splendidly." It is recommended that efforts should be spent not in searching for new methods or devices, but rather in correcting public opinion and removing the unwarranted prejudice against frozen fish. It may be admitted that the process of freezing does not materially alter the nutritive value of a fish—a pound-weight of the frozen article may furnish as many "calories" as a pound-weight of the fresh. But the value of a food does not depend only on its nutritive properties. There is the item of flavour, which is often very highly paid for, and with justice, for flavour has a distinct physiological value in nutrition and gustation, as well as an economic value. Now, frozen fish, as put on the market, very often have lost their original appetising flavour. Sometimes they may have acquired an unpleasant flavour, or be quite flavourless, and it is folly to expect the consumer to appreciate or prefer frozen fish if fresh can be procured. Observation and experiment show that frozen fish deteriorate in quality, if not in nutritional value. No one will assert that a fish which has been cold-stored for a year or two years is equal in quality to a fresh fish. Autolytic changes start from the moment the fish is dead, and they continue to go on during the whole period of storage. The quality of a frozen fish deteriorates with every day it is in storage.

The Ideal Method.

If fish are absolutely quite fresh, are frozen rapidly by the brine method, and are properly stored, they will probably remain in very good condition for several weeks, and some will do so more than others. The writer has tasted brine-frozen and air-frozen fish of various kinds, up to five weeks after they were frozen, and this is the conclusion of his trials. The less the period that elapsed from the freezing, the better the flavour. Fish frozen commercially may be more or less stale; not only have the intrinsic autolytic changes been going on, but there may be incipient decomposition; when such fish are thawed they are not only in the same bad condition, but worse. The fish, which are frozen practically alive, as in the "sharp-freezers" in Maine, which I spoke about a few weeks ago, or like those taken through the ice in winter in Lake Winnipegosis, Canada, which are immediately "frozen to death" by the cold air and then hauled by dog-teams to the nearest railway station—such fish ought to eat well after some time, and would eat all the better if they had been swiftly frozen in brine. The *Canadian Fisherman* advocates a campaign to instruct the Canadian housewife in the virtues of frozen fish. One way would be to open shops in the chief centres and sell frozen fish, as frozen fish—brine-frozen and frozen alive, or near it. It is useless to try to deceive the public, and if they can be educated to prefer frozen fish, well and good.

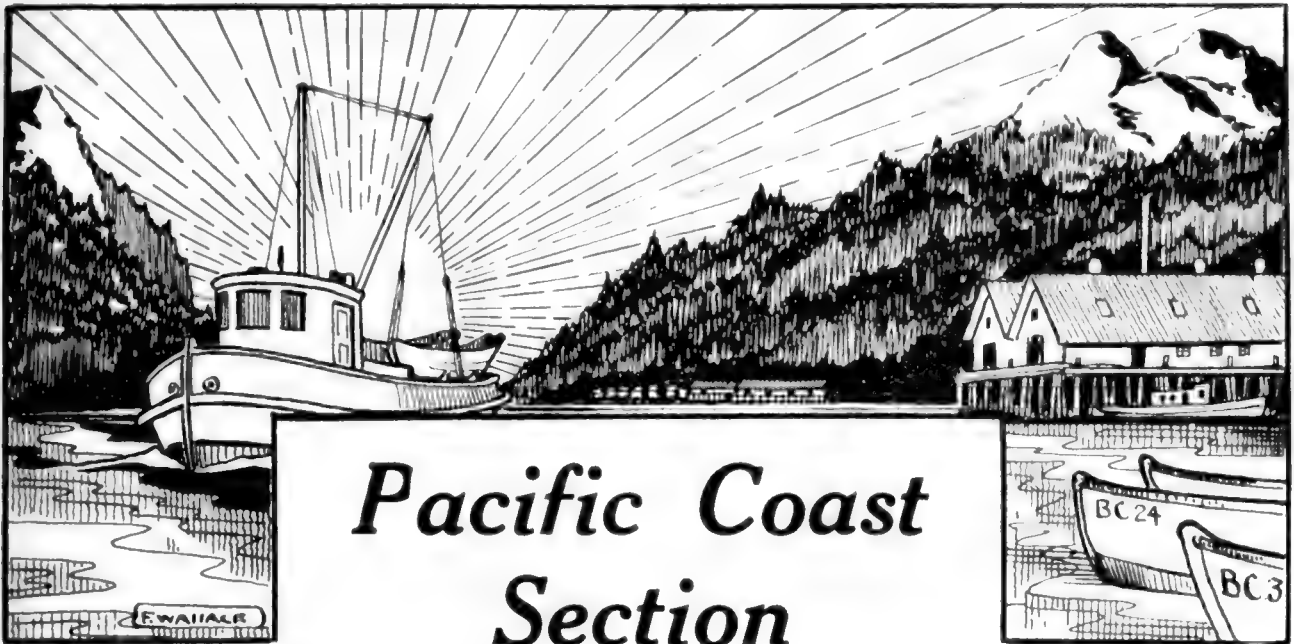
SKALU LOSES PROPELLOR.**TARPAULINS AND BLANKETS FOR SAILS.**

Bound for home with a cargo of fresh Red Spring Salmon, and trying to make port in season for the market with her highly perishable cargo, the big gasoline carrier "Skalu" threw her propellor off the west coast of Vancouver Island on the night of March 10th.

Capt. Clarence Newberry was in charge and as soon as the accident happened he ordered his crew to unship the cargo boom and rig a temporary square sail from the hatch tarpaulin, and then with blankets rigged a foresail. By this time there was a gale of wind and the "Skalu" made 6 miles in an hour under the temporary rig. The captain headed up the Straits of Juan de Fuca toward Victoria. Along about daylight the wind died down, and as they were then off Sooke harbour two of the men made shore and walked seven miles to the telegraph office and sent a wire to Vancouver. At Sooke they arranged for a gas boat to tow them into the harbor.

The "Skalu" is one of the Canadian Fishing Company's carriers plying between Vancouver and the West Coast of Vancouver Island. The gasoline schooner "Pescawha" was sent to Sooke to tow the "Skalu" to Vancouver, where she went in drydock to ship a new propellor.

Capt. Newberry is a Vancouver boy, born and raised here. His parents are good old Newfoundland stock which accounts in part for Capt. Newberry's liking for the sea. It shows the chances for a boy who has the pluck and brains. Capt. Newberry started with the Canadian Fishing Company only a few years ago as a boy from school and has worked up to his present responsible position in a very short time.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd. 528 Winch Building, Vancouver, B.C., Canada.

Dependant on Sufficient Refrigerator Cars



This fleet landed 445,000 lbs—20 carloads of Halibut at Prince Rupert in one day, March 1st. 1921. This is the business the Canadian National Railways are treating as of no account and not worth catering to.

SEATTLE CHAMBER OF COMMERCE ON SALMON OUTLOOK FOR 1921.

Seattle, Wash.—The 1921 salmon pack will not be more than 20 per cent of the normal six and a half million cases put up in the average season, and canneries that operate will just about salvage their inventories. This prediction is made on the authority of leading packers, brokers and bankers, in close touch with the producing, marketing and financing phases of the industry who declare conditions do not warrant a larger pack.

There should be, according to experts, a relatively big run of all varieties of salmon this year from the ocean to the spawning beds in the rivers of the Northwest from the Columbia to the Yukon, this being the four-year and two-year cycle season.

Of chinook, sockeye, and red salmon, which is not very plentiful, a fair pack will be made, but of the more plentiful and more widely popular pink and chum varieties there will be a small pack.

Canning operations in the Columbia River will be not far from normal volume, it is said. Puget Sound packers are making no preparations whatever to work their plants. In British Columbia there will be no operations, according to the present outlook, except in sockeye packing. There will be but little activity in Southeastern Alaska, probably not more than 10 per cent of the ten-year annual average. In Bering Sea and Western Alaska operators are planning to pack all the Alaska Red and Chinook Salmon they can get, as the last two seasons have been very small runs of these varieties.

The condition of the salmon market and the present state of finances in the industry, according to the best opinion, make it entirely out of the question to put up anything like a full pack in 1921. About one-third of the last pack, more than 2,000,000 cases remains in Pacific Coast warehouses. Eastern and southeastern jobbers have for a long time been buying in small lots, just enough to meet day-to-day demands, even though Pink and Chum salmon which cost \$5 to \$6 a case to pack has been selling at \$3 a case from Seattle warehouses.

These jobbers are extremely cautious buyers, the last twelve months and more, because many of them have suffered heavy losses as a result of fluctuating prices in many lines. Also, the retail demand for salmon in all parts of the country dropped off one-half during the war and has not until very recently begun to mount toward the pre-war position. The export demand is still practically dead.

Financing of salmon packing is handled largely by Seattle banks. According to authoritative information none of them has made commitment for 1921, and but few applications have been received.

"Packing in 1921 is not a bankable proposition," said Godfrey L. Wakeman, assistant manager of the Bank of California. It is not bankable because the market price of Pink and Chum Canned Salmon today is below the cost of packing. With limited buying and with local warehouses still containing more than a third of last year's pack, why should salmon men go out in 1921 and pack salmon at approximately last year's cost per case, when they could not dispose of it at even the cost price? Why dispose of present stocks at the offered prices, which do not permit of repacking these grades? Continued operations and sales under the present prices would mean the end of one of the largest industries in the Northwest.

Eastern jobbing houses will find they have made a grave mistake, according to this banker and other men in close touch with the industry, if they continue to act on the belief that the report of a much curtailed 1921 pack is plain bluff.

"With no pack in 1921," Mr. Wakeman said further, "the growing retail demand for salmon throughout the country, as a result of efforts being made by the Association of Pacific Fisheries, will clear out all present stocks. There was in 1903 and again in 1907," he continued, "a similar situation in the packing business." Calamitous predictions were made on all sides but they did not materialize. It was a condition which eventually worked greatly to the benefit of the industry."

CANADA STILL THE GOAT IN THE DISTILLATE QUESTION.

The following figures speak for themselves:

	Gal. cts.
The price of gasoline in Seattle during the second week in March was	38-75
In Vancouver at the same time was	40-50
The price of distillate in Seattle during the second week in March was	26-625
In Vancouver at the same time was	31-5

These prices are figured allowing difference in measure and exchange between the United States and Canada. The price in the United States is dropping and in Canada has been raised recently. What is the reason? Canada has been getting the high prices regularly and the fishing industry is hit hard all the time on their fuel supply. Even Juneau, Alaska has a plentiful supply of distillate at less than it can be purchased in Vancouver.

A good instance where the Canadian fish buyers are up against the low prices of distillate and gasoline to the south of the line is right now on the West Coast of Vancouver Island. The American buyers can come to the fishing grounds and with their low cost of operation and sale of fuel to the fisherman buy the fish right from under the nose of the Canadian buyer. With a difference of 5 cents per gallon in favor of the American buyer the fisherman naturally secures the best price he can which is afforded by trading for the fuel at the low prices. The result is that approximately 75 per cent of the salmon catch on the west coast today is going to the Americans.

Why shouldn't Canada have just as low prices as the U.S.?

MR. FRED HARRISON IS ASSISTANT TO CHIEF COMMISSION OF FISHERIES OF BRITISH COLUMBIA.

It was good news to the friends of Mr. Fred Harrison to hear of his appointment to be assistant to the Chief Commissioner of Fisheries for British Columbia. A telegram from the Civil Service Commissioner, Ottawa, confirmed Mr. Harrison's appointment the first part of March.

Fred began service with the Fisheries Department in 1913. A native of New Westminster he was one of the first to volunteer join up with the 7th battalion and saw service overseas. Congratulations are in order and every one in the industry believes Fred will fill the bill in the new position.

B. C. CANNED SALMON MARKET.

With the results being obtained from proper publicity methods by the Puget Sound canners, and also with the results being obtained by good marketing methods of a couple of B.C. packing firms it is a wonder that the other packers do not get together and take a chance on obtaining the same good results by some marketing methods other than those which have been in force ever since the industry started. If an arrangement had been in force such as was suggested to the packers last fall such a thing as cutting prices on the good packs of pinks would never have happened and today a good part of them would have been marketed right here in Canada, and at good prices as compared with the present prices. This statement is made with a knowledge of what has been accomplished by other lines of business that have been up against similar conditions. There is a tendency to act along lines leading to new marketing methods by some of those engaged in the salmon canning industry and the quicker real action is taken toward an improvement in this direction the quicker the prices will be stabilized. Get the public to ask for pink salmon (this is the particular variety that is referred to by your correspondent) and with proper distributing methods price and quality may be regulated by the industry itself.

Just now the same uncertainty as to price still obtains, but there is a tendency to stick for the present prices with the idea that there may be a firming up. On the U.S. side of the line the prices have already firmed up on account of the advertising campaign that is being carried on.

SEAPLANES TO BE USED IN FISHERY PATROL SERVICE ON BRITISH COLUMBIA COAST.

During 1920 the British Columbia Branch of the Dominion Fisheries had under consideration the employing of seaplanes for fishery patrol work, and during a recent trip which Chief Inspector Motherwell took in one of the seaplanes of the Jericho station of the Dominion Government air service, Major Motherwell, accompanied by Maj. McLaurin of the air station and five others, recently flew to Vancouver Island and skirting the island from Victoria to Nanaimo the practicability of the seaplane for fishery patrol service was established to the entire satisfaction of Major Motherwell. Rivers, islands and fishing craft stood out with remarkable clearness. During the closed season, when fishing is entirely prohibited, the seaplane would be of inestimable value, but when fishing was in full force, their use in the field would be limited as it would be impossible to see whether the boats bore license numbers or not. Obstructions in streams could be easily discerned from the air and this branch of the work would be considerably augmented. What appealed to Major Motherwell as one of the most attractive features in the use of the big machines was the great saving in time. Overseers may be taken to inland lakes and headwaters of salmon or other streams in a few hours as compared with arduous journeys of a week or more under the present conditions.

It is planned to establish several petrol stations between Vancouver and Prince Rupert at which the machines may secure fuel.

WEST COAST SALMON CATCH POOR SO FAR.

Up to March 10th the catch on the West Coast of Vancouver had not been at all good. This was not on account of there being no fish, but owing to poor fishing weather, the fishermen have not been able to fish steadily. The season started quite early but the weather has been too rough for fishing. Two to three tons will come in at times, which just about fills local requirements.

AMERICAN SALMON PACKERS GETTING RESULTS FROM PUBLICITY CAMPAIGN.

Very encouraging reports are being received by the publicity committee of Association of Pacific Fisheries, who are handling the publicity campaign for the Puget Sound salmon packers. As a result of up to date methods inaugurated in the marketing of the pink and chum varieties of canned salmon sales increases running as high as 200 per cent have been reported by jobbers in localities where publicity has been used. Owing to the entire list of packers not taking part the campaign has not been as elaborate as could have been wished but those who waited to see what would happen as a result of the campaign are now becoming encouraged to get in line and a larger fund will be the result.

The publicity committee report: "In every city where advertising has been started and where trade scouts have carried on sales promotion, there has been an appreciable movement to the commodity."

WALLACE FISHERIES ISSUE NEAT RECIPE BOOKLET FOR HOUSEWIVES.

In line with latest advertising campaign which is being carried on by the Wallace Fisheries in marketing their "Kiltie Brand" canned salmon, this firm have now issued a neat compact recipe book giving fifty canned salmon recipes.

The foreword in this recipe book advises the housewife regarding the food values of canned salmon and how sanitary such a prepared food is.

In looking through this booklet one wonders that more variety has not been used before this in the preparation of canned salmon for the table as there are surely many ways for the tasty preparation of this palatable food.

The more publicity given the different methods of canned salmon for the table the more the public will want to buy this product.

CANNED FISH BEING PUT BEFORE THE PUBLIC IN A TASTY WAY.

One or two firms are gradually getting their brands of canned fish before the public in an up-to-date manner. Among them is the firms of Gosse-Millard Packing Co., Ltd. During the National Fish Day week this firm started a publicity campaign in Vancouver pushing their brands of canned fish. This package included one oval 1-lb. tin of kippered herring in tomato sauce, one 1-lb. tall tin of fresh herring, one 1-lb. tall tin of pilehards, one 1-lb. tin of kippered salmon, and one 1-lb. tall tin of pink salmon. These were all neatly packed in a pasteboard container and with each package was a recipe book. The entire sample package was retailed at 98 cents. As a result of their campaign carried on in the newspapers for four days previous to the National Fish Day a total of 5,736 packages were sold in Vancouver alone. Since then the publicity has been extended

to Victoria and the results have been very successful. It is planned to extend the same campaign to the prairie cities. The price, however, will necessarily have to be made a little higher on account of freight charges but it will be low enough to interest the public. As a result of this campaign the public have asked for repeat orders, on the pink salmon especially, which demonstrates that our own Canadian public appreciate an appetizing low priced food product.

SHIPPERS OF FROZEN FISH TO EUROPEAN MARKETS TO HAVE FORTNIGHTLY SERVICE FROM PACIFIC COAST.

During a recent visit to Vancouver, Mr. F. G. Volk, of New York, Asst. General Manager for the Holland-America Line, announced that there would be a fortnightly service between the Pacific coast and European ports after the first of April. Six new steamships, three for the Royal Mail Steam Packet Co., and three for the Holland-America line will be added to the three already operating between the Pacific and Europe. The new steamers will be of 15,500 dead-weight tons, and each will have 3,000 tons of refrigerator storage space for the carrying of frozen fish, fruit and dairy products.

Results obtained from the shipping of frozen fish and fruit on previous sailings from Vancouver have been most satisfactory, and it is expected that this business will rapidly increase.

The Vancouver office is in charge of Mr. R. G. Parkhurst who will handle the local business of both lines. Col. E. J. Nash is special representative in North America for the Royal Mail Steam Packet Co., with offices in Seattle. Mr. E. de Lanoy is San Francisco agent for the Holland-America line.

This service should help to develop an already large trade between British Columbia and the European markets in frozen and mild cured fish.

ENGLAND IS AWAITING WITH INTEREST FOR COLONEL CUNNINGHAM'S LECTURE TOUR.

Among the news items in the January issue of the "Canadian Export Pioneer" which is published in London, Eng., is one that tells about the proposed tour of Colonel Cunningham. This is good publicity for Canada and the canned salmon industry, as it refers particularly to the lower priced grades of salmon and gives the reason for the tour which Colonel Cunningham is undertaking in connection with these goods.

WELL KNOWN ENGINEER MEETS DEATH ON S S NEW ENGLAND.

William Peacock, formerly second engineer on the S.S. "New England", belonging to the New England Fish Co., was killed in the engine room of that steamer on Sunday morning, Feb. 20th. When the "New England" was laid up about the first of the year, Mr. Peacock was paid off, but as he was a very good man, he was taken on as a pipe fitter when work was started on the overhaul, and as such was employed up to the time of his death. The chief engineer had given him permission to sleep on board the ship.

Steam was got up to test out some of the pipes on Saturday the 19th, but there was to be no work on Sunday.

Sunday morning, Mr. J. R. Davis the superintendent, was notified by the watchman that he had heard an

explosion on board the steamer, and upon going down to investigate, Mr. Davis found that there was no fire under the boilers, which explains why the ship had not blown up. Upon further search the body of Mr. Peacock was found. No one knows how the accident happened.

A native of London, Ont., the victim of the accident carried engineers papers and was well known on the Sound and on the British Columbia Coast, having worked on various ships for the past twelve years. He leaves a wife and one son, the latter an engineer on a coast steamer.

NEW MARKETS BEING OBTAINED FOR CANNED SALMON BY THE ADDING OF NEW LINES OF WATER COMMUNICATION FROM VANCOUVER.

Exporters of Vancouver in the canned salmon line are obtaining new accounts now that better shipping facilities are being furnished from this rapidly growing port. Points in Central and South America can now be reached in competition with the U.S. exporters who had a monopoly on this trade owing to lower freight rates. With other countries of the world being linked up with the port of Vancouver by direct steamship lines new business will rapidly result and this means much to all lines of business in Vancouver.

PINKS AND CHUMS WILL NOT BE PACKED TO ANY EXTENT IN 1921.

The salmon canners of British Columbia are not planning to pack any more pinks and chums this season than they can help. This means they will endeavor to catch up with the market. Owing to the conditions of world trade, exchange, etc., last season's pack did not move out as it was hoped they would. The result is that the packers are overstocked and must curtail their packs for this season.

PLANS FOR THE OPENING OF SALMON CANNERIES MOVING SLOWLY THIS YEAR.

Owing to the unsettled conditions just now, the British Columbia salmon canners are not sending the number of men North as early as has been the case usually. In line with their plans to pack less of the low priced grades, and to cut expenses to the lowest possible level it will mean that less supplies and less help will be used than in previous years. For this reason the usual signs of activity noted around the cannery offices at this time in previous years is missing. Some packers are not going to open up all their canneries this season. There is still uncertainty about the situation and this has resulted in the slowness in opening up.

BRITISH COLUMBIA NOT EXPRESSING OPINION ON THE WASHINGTON STATE FISHERIES COMMISSION.

The packers in British Columbia cannot at this writing give decided expression to their ideas of the Washington State Fisheries Commission. They have not had time to digest the entire act, and do not care to express ideas until they have time to look into it more fully.

The Fisheries department naturally are not in a position to say anything until some action has been taken on the proposed treaty now before the U. S. Senate. After action has been taken on the proposed treaty, in all probability, a full discussion of the new Washington State Commission will take place.

VANCOUVER WHOLESALE FRESH FISH MARKET.

Shell Fish.

CRABS — are now being brought in from Vancouver Island, and although the market is not brisk at the same time something is doing all the time.

SHRIMP. — Scarce at this time.

LOBSTERS. — Perrin & Co. report that they are bringing in some Eastern lobsters fresh, and these should be on the market by the 15th of March.

Fresh Fish.

COD. — Fresh local caught cod are still selling at 15 and 16 cents.

SALMON. — Red spring from the west coast of Vancouver Island are bringing 23 cents per pound dressed, heads off, and a fair supply is coming in.

CARP. — There is quite a trade for fresh carp, and they are bringing about 15 cents now.

SOLES. — Local caught soles are selling for 9 cents. The local catch is fair and the fish are not as large as they have been for a few months past.

SABLE FISH. — Fresh stock is coming in from the North, and are selling at 12 cents per pound.

WESTERN HADDIES. — The London Fish Co. report that their western haddies are selling well at 10 cents per lb. in 30 lb. boxes.

SMELT. — Silver smelt are off the market.

HERRING. — No fresh stock coming in as it is closed season.

OOLICHANS. — Columbia River smelt or oolichans are coming right along and are bringing 9 cents per lb.

NEW SMOKE HOUSE.

The Charles Anderson Fish Co. have built a new smoke house in the old quarters formerly occupied by Butterfield and Mackie. Foot of Gore Ave.

CANADIAN FISHING CO., LTD., STARTS FIRST HALIBUT TRAWLER ON LAY.

On February 22nd, the gasoline trawler "Inskip" belonging to the Canadian Fishing Co., Ltd., left on her first halibut fishing trip under the new lay with the fishermen. Under this plan the boats may be operated more economically than when operated under the old method.

The boat carried four men, where previously there were seven, and the men all share in the catch. If this trip proves satisfactory, there is every probability that other boats belonging to the company will be outfitted and sent out on the same lay.

Some of the companies in Seattle have been operating their boats on the lay plan for some time past with good results.

HALIBUT PRICES FLUCTUATE ON THE PACIFIC COAST.

During the month previous to March 10th, prices of halibut on the Pacific Coast reached 18-13c and dropped as low as 8-4c, the latter price was toward the end of this period, and then the prices began to firm up again. The catch has been fair.

Mr. J. A. Motherwell, Chief Inspector of Fisheries for British Columbia, states that owing to the canners deciding to can only a small quantity of chums and pinks, if any at all, the department would give all their attention to clearing sockeye streams this season. This will mean that considerable work will be done in streams

frequented by the sockeye where under ordinary conditions such streams would only receive a share of the season's work.

BUTTERFIELD & MACKIE IN NEW QUARTERS.

Butterfield and Mackie have moved into the fish shed at foot of Gore Ave. on Gore Ave. dock. Mr. James Smith is back from the West Coast of Vancouver Island and is looking after the business as formerly.

PRINCE RUPERT ITEMS.

It is stated authoritatively in local salmon fishery circles that fourteen out of the fifteen canneries on the Skeena River will operate this season, the only one which will not work being the Port Edward plant. As for the canneries on the Nass, Rivers Inlet and in other districts it is expected that all will open with the exception of those that pack exclusively the cheaper grades of fish.

The market in these lines being glutted with last year's pack no more will be required and very little will be packed. The only variety in which the pack will be normal this season will be sockeyes. On account of these market conditions the year's pack will be a light one and the season will be short. The report that only six or seven canneries on the Skeena will operate is, however, emphatically denied by many intimately acquainted with the business and who are in a position to know.

The first cannery to open this season will be the Balmoral plant at the mouth of the Ecstall River and the largest cannery in the North. In May it will commence to pack springs. The rest of the canneries will commence packing about June 20 when the sockeye season commences. All the canneries of the B.C. Packers in this district, it is officially announced will operate this season.

Over a thousand tons of herring has been frozen this year already by the Canadian Fish and Cold Storage Co. and there is yet two weeks more of herring fishing, according to the general opinion of those engaged in the business. This herring is to be used as bait in the halibut fishing.

TAKES CARGO TO SEATTLE.

Prince Rupert, March 18.—Because of refrigerator car shortage here, the fishing vessel Panama Polaris has sailed for Seattle with her cargo of more than 100,000 pounds of halibut.

KAMCHATKA FISHERIES.

(From Vladivostock Correspondent)

Last season of 1920 was a disastrous one for fishermen of the East coast of Kamchatka; none of them have returned the expenses and the majority had nothing but expenses owing to the fact that in some places the run was too early, and in some others the fish did not turn in at all.

The run on the West coast, however, was such an abundant one that fishermen had to stop fishing; capacity of fisheries and supply of salt being up before the run was over. But this does not mean that the season was a success for every one even on the West coast, as owing to stormy weather and shortage of shipping facilities, on several occasions not only the whole catch has been left behind but even fishermen themselves were left to face the hardship of winter as the Govern-

ment failed to provide the Russian Volunteer fleet with necessary means to send a relief ship thereto.

Relations between fishermen and local population though not being as good as could be desired, were friendly enough, but total absence of Government control has given facility to various abuses, especially to illegal traffic with spirit. Prices for salmon in the next 1921 season are expected to be as follows: sockeye, 30 sen (15 cents) per fish; cohoes, 35 sen or 18 cents; king salmon, 35-75 sen per fish; chums, only 25 sen or 13 cents per fish.

The Japanese attitude was a quiet one during the last season and presence of their warships in Kamchatka waters was only to protect life and property of Japanese fishermen, but they had nothing to do with the fishing control which was represented by a small cruiser "Commodor Bering" of the Board of Fisheries until she ran ashore off the southern extremity of the Peninsula and became totally lost owing to the absence of help; thus the only efficient patrol boat was lost.

The Japanese attitude towards the Board of Fisheries during next season will be entirely different as far as some unofficial rumours run. According to these rumours a Japanese fishing official tendered the following demands to the Board of Fisheries: "The auction of fishing rights which is to be held on 16-18 February next must be an open one and the usual practice of competition by means of sealed packets to be discontinued. Rights of Japanese covering, according to the Russo-Japanese convention, only the maritime fisheries must be extended over estuaries, rivers and bays. Considering Russian inspection and patrolling inefficient Japanese will establish their own patrolling and inspection, Russians are allowed to participate to this if they find it necessary. All fees and payment due to the Board of Fisheries must be paid to their account with State Bank of Japan and the payment will be handed over to Russian authorities as soon as a stable and legal Government, recognized by the Allies, is established over Far East, but after a compensation had been made to Japanese subjects for the loss of lives and property suffered from the Bolsheviks at Nikolaieffsk, on the Amur, and along the coast of Okhotsk Sea, which is reckoned to be about eight millions yen.

COLD STORAGE FISHING BOATS WILL OPERATE AS INDEPENDENTS THIS YEAR.

The Canadian Fish and Cold Storage Company is sending out its boats to fish on the independent lay instead of as company boats. The Chief Skugaid, a six-dory boat, left recently for the halibut banks in charge of Captain Lawler, this being the first of the company's boats that has ever fished as an independent. It means that the owners will get one fifth of the proceeds of the catch, out of which they pay a bonus to the captain, and keep up and insure the boat. The captain and other fishermen share the other four-fifths equally after paying operating expenses.

The company is planning to send also the Sitka and the Zebassa, both six dory boats, on a similar plan, and if a suitable skipper can be secured the Sumner may also go out. Owing to the excessive cost of operating under the company lay, the big steamers will tie up indefinitely. No attempt will probably be made to operate them as independents.

Mr. Johnson, manager of the company, explains that the cost of operating the boats is too great under the company lay and there is nothing to do but tie up the larger ones and operate the smaller craft as independents.



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FROZEN FISH JUST AS PALATABLE BUT CHEAPER THAN FRESH.

The value of frozen fish in food is not generally appreciated by the people of Canada. Experiments have recently been conducted by Dr. Clark, investigator in the United States Bureau of Chemistry, which prove that the food constituents undergo no change in freezing, and the food value of fish is the same a year after it is frozen, as when landed. Care should be taken, however, in thawing out. If the fish is thawed out in hot water it loses some of its food value, and also its flavour. The fish should be allowed to thaw out gradually by placing it in a cool place.

The frozen fish industry is becoming very valuable to the country, as it provides a means of conserving fish which would otherwise go to waste, fish being caught greatly in excess of the demand at certain seasons of the year. It is the only method at present known of preserving fresh or mildly cured fish in transit to remote markets, and it seems that until some other method of shipping fish is discovered the Canadian people inland must depend on the supply of frozen fish. They must be brought to realize that fish preserved in this way is as valuable as food, and just as palatable as fish used fresh. The one important distinction is that frozen fish can be supplied much more cheaply.

A LITTLE MIXED.

"What is an embargo, Bill?"

"It's what you put on ships to keep 'em from going out, Sam."

"It ain't, you fool. That's the anchor."

THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., APRIL, 1921



To the Fishing Industry



A Traditional Trade Mark



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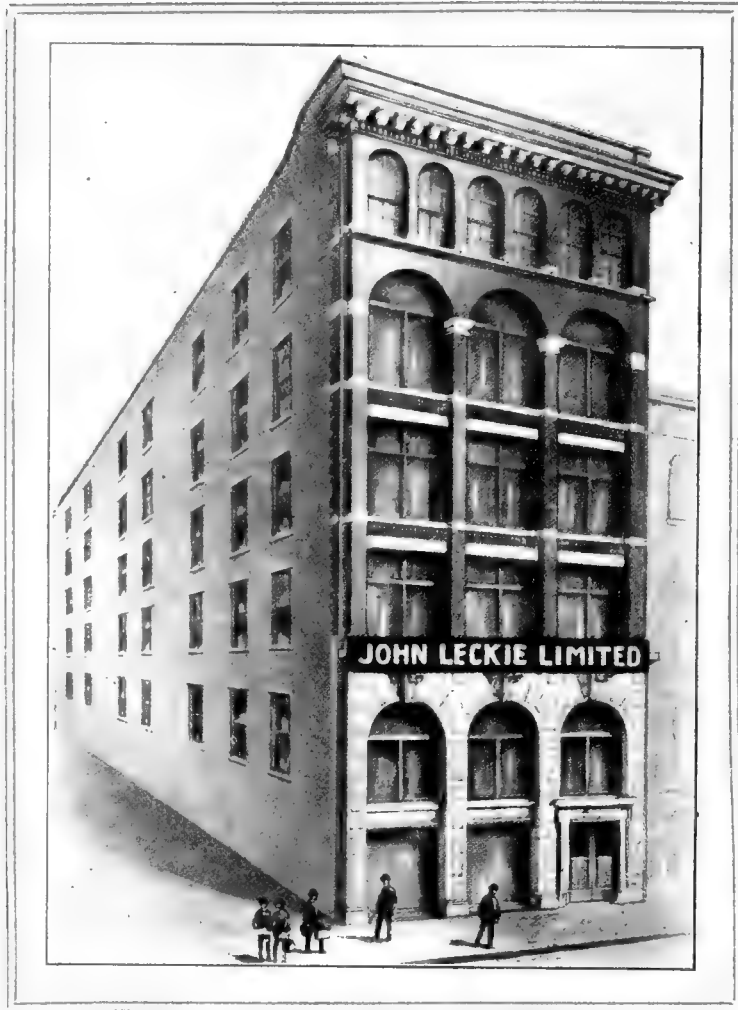
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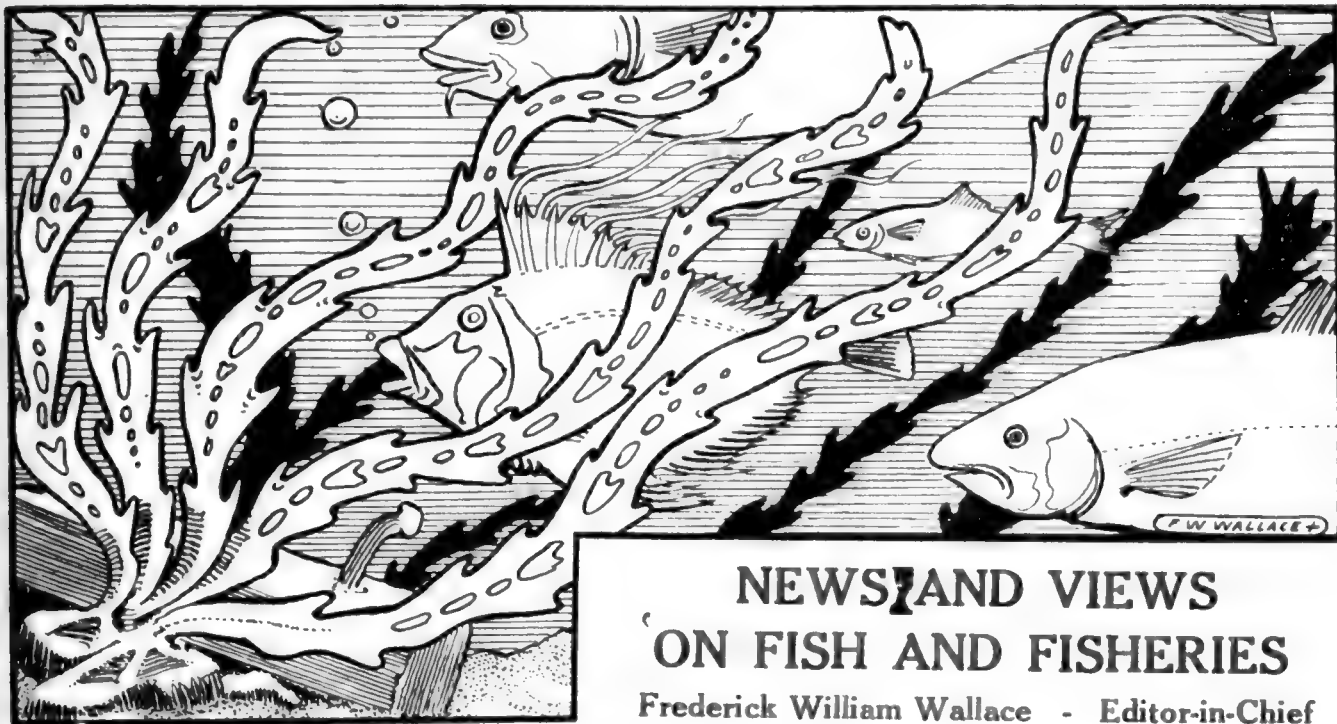
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NEWS AND VIEWS 'ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

NORMAL VISION REQUIRED.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

With regard to the request by the Fishing Industry of Canada that a separate Department of Fisheries and a Deputy Minister of Fisheries be organized and appointed to aid in the greater development of our fisheries, we hear that a prominent Cabinet Minister stated, when interviewed on the subject, "that it was not policy to increase expenditures or create new Departments under present conditions;" and that even though the expenditure would be very small in the appointing of a Deputy Minister of Fisheries "it was the principle more than anything that he was opposed to."

When one makes a survey of our fishery resources and conditions in the Industry, a statement like the above inclines us to the belief that there is something in political associations that causes a species of myopia to affect the vision of our statesmen. The perspective becomes distorted in the oddest manner and the appreciation of values is warped as completely as though Ottawa atmosphere were charged with qualities not found elsewhere.

This curious disease results in reckless extravagance on the one hand and miserly cheese-paring on the other. It results in the creation of Departments and Ministers and Deputy Ministers for the administration of matters which are of small moment and the disregard of things that are worth while.

Taking our particular grievance, the Minister looking after the interests of the Canadian fisheries considers that a Deputy Minister for the Fisheries Department is unnecessary, but Deputy Ministers for Naval Service and Marine are quite in order. From all reports, the Minister of Marine and Fisheries and Naval Service is not in favor of segregating the Fisheries De-

partment from that of the Marine and does not favor the appointment of a Deputy Minister of Fisheries to lighten his labors or make of his Fisheries Department an office which he will have cause to be proud of when the day comes that he vacates the portfolio.

The Fisheries Department is attached to the Marine and is necessarily overshadowed by the troubles which are investing that particular administration at present. Through no fault of the Fisheries Department it suffers from delinquent associations which no doubt inspired the statement that it was not policy to increase expenditures under present conditions. The Marine "twin" got away with seventy million dollars of the country's money in a policy which should have ceased when the War ceased. Had but one tenth of that staggering amount been devoted to fisheries development there might have been a different story today.

What this country needs is separate portfolios for all our natural resources — Agriculture, Forests, Mining and Fisheries. These, with Trade and Commerce, Finance and Customs, should be the leading administrations. The "spenders" — Railways, Marine, Militia, etc., should line up last.

FROM SHELL FISH PEDDLER TO MILLIONAIRE-KNIGHT.

Beginning his career as a digger of cockles which he peddled around Cleethorpes and Grimsby, a pioneer in Great Britain's fishing industry recently died in the person of Sir George F. Sleight, Bart.,—steam trawler owner, philanthropist and millionaire.

From peddling shell-fish, he became a fish dealer in Grimsby in a modest way and working early and late with no staff, his energy was rewarded and the business developed. He started investing in sailing smacks and produced fish—becoming eventually a leading smack owner. But it was when steam trawling came in as a means of catching fish that George Sleight showed keen foresight and ability. There was much opposi-

tion to steam trawling and many predictions of disaster to those who went into it, but Sleight led the change and became a steam trawler owner.

When the Great War broke out, Sleight owned 75 steam trawlers—being the largest individual owner—and he immediately offered 50 to the British Admiralty for war purposes. Thirty of his trawlers were lost through enemy action. To keep up the fish supply, he purchased a number of obsolete craft and fitted them out for service. For his services, he was knighted in 1918 and was created a Baronet in 1920.

Some years ago he inaugurated a scheme for recruiting 300 lads to be apprenticed for a term of 4 or 5 years to be taught the fishing business. He planned to find them homes with Grimsby war-widows and to feed, clothe and train them himself. On securing their master's certificates, he guaranteed to aid them in securing boats for themselves.

In Great Britain there are several men of Sir George Sleight's type in the fishing industry—men who started at the bottom rung of the ladder as fish peddlers and fishermen and who are now knights and millionaires. Upon analyzing their careers it will be found that these men worked a little harder than their mates and did not adhere to union hours; they saved their money and invested it in improving their businesses, and every one was quick to realize innovations in their industry and did not hesitate to change their methods.

In Canada, we have a few bright men engaged in the fishing industry whose lives are modelled upon the qualities of their successful British confreres. These men are sympathetic to new ideas and generally back every movement to better conditions and aid development in the Canadian fishing industry. Time will prove the saneness and good judgment displayed in their policy.

THE RACING FISHERMEN.

The Salt Bank fleet of fishing schooners are off for the Atlantic fishing ground this month, and an era of sail-carrying and super-seamanship has infected the Banksmen of America's Atlantic coast.

The International Trophy for Fishing Schooner Races donated by the "Halifax Herald" is destined to grow into an event of world importance which will overshadow the famed America's Cup, and the interest of the general public is now aroused in the contest which will be held this Fall between the best hookers in the Canadian and American fleets.

Lunenburg is pinning their faith on the schooner "Bluenose" recently built at Smith & Rhuland's yard from designs by W. J. Roue of Halifax. Shelburne feels that the "Canadia", designed by the Mayor of the town, Amos Pentz, and built at McGill's, will feature as the challenger for the Cup which the Gloucesterman "Esperanto" won from the "Delawana". A host of Lunenburg and Yarmouth skippers will be trying their respective hookers out in the hope that a latent turn of speed may develop that will permit of their entering the elimination contests. Race talk will dominate the yarns around the bait-boards and dress keelers of the fleet and much sailing wisdom will develop in the gossip "for'ard of the pawl-post."

Both Boston and Gloucester are apparently looking to the "Mayflower" as the defender of the Trophy and this craft is now afloat and ready for sea before April ends the final date for compliance with conditions. The

"Mayflower" is not an orthodox fishing schooner from all accounts, but she is eligible. Her lines are frankly that of a yacht, but if she does the work of a commercial fisherman on the Banks and catches a trip of fish and pays her way, then she is a pioneer in fishing schooner architecture just as the Burgess "tooth-picks" and the McManus "round-bows", the knockabouts and semi-knockabouts, were pioneers in their day.

The "Mayflower's" skipper knows that every Canadian fisherman is keenly watching his vessel's performance, not so much as a sailer—they know she'll be a slippery craft by the build of her—but as a fish carrier. If he fails to bring in a catch of fish approximating the average, then the stigma of "yacht" will possibly interfere with the "Mayflower's" chances as Cup defender. And in addition to the Canadians, we have a notion that the men of Gloucester will repudiate the American defender.

However, we must admit that we have no fear that the "Mayflower" will fail to deliver the goods. Her skipper is a smart man and she'll have a picked crew of trawlers—men who would bring in a high-line trip on a raft. The only thing likely to interfere with "Mayflower" as a defender is some peril of the sea which she is unable to withstand.

All three vessels are big schooners as fishermen go and all are beautiful craft. The "Bluenose" is evidently the best hatted of the trio but sail-spread does not always speak for speed.

Apart from our desire to see our own vessels win the Trophy, the Canadians who are back of the Race and who invested in the new schooners are to be congratulated for their initiative and for inaugurating a new era of friendly rivalry in seamanship between the two great North American nations. The revival of a science which was fast vanishing will bring them a reward in the tributes of those who love the sea and wind-driven ships.

THE FRIED FISH TRADE.

In this issue we print an article issued from the Marine and Fisheries Department Publicity Bureau on the subject of "Fish and Chip Shops."

During a visit to Great Britain last Fall, the Editor of the *Canadian Fisherman* made a close investigation into this particular phase of the fish business and was impressed by its importance in maintaining the British fisheries and in providing a source of cheap and palatable food for rich and poor alike. The "Fried Fish Shop" of the Old Country is the real "community kitchen" of the poorer districts.

It is said that there are over 25,000 such shops in Great Britain preparing and distributing a weekly average of eight million pounds of fish—one quarter of the country's weekly consumption of food fish—and the steady demand from this trade is the backbone of the home market. Experts state that some thirty million meals per week are distributed from Britain's fried fish shops which gives an idea of how fish is used over there.

We believe that there is a future for the fried fish and chip restaurant in this country; in fact, we believe it is something we must encourage and develop to the limit if we desire to increase the home consumption of Canadian fish.

To successfully establish such restaurants in this country, we are of the opinion that such will have to be Canadianized to suit our particular tastes and mode of

living. Sea Food Grills — a more pleasing name than "Fish and Chips" — built in the sanitary style of our modern cafeterias and "arm-chair lunches" and featuring several varieties of fried fish would appeal to us more than the little "shop" of British cities. The frying ovens would need to be enclosed and ventilated to remove the odor which emanates from frying fish and boiling oil or fat. This is important in the securing of leases of desirable locations and in drawing customers.

This matter appeals to us as being of such importance that we recommend the larger producers and distributors in the Canadian fishing industry to give the subject serious study and to encourage every effort to establish these fish and chip restaurants in Canadian cities and towns. It is only by such that we will ever materially increase the home market for our commoner fish and numerous species that are at present being thrown away through lack of market.

THE PROPOSED U.S. TARIFF ON IMPORTED FISH.

It is pretty difficult for Canada to suggest to the law framers in the United States just how they should construct their tariff that it may bear lightly on Canadian exporters to the United States market. We all know that a tariff imposed on our fish exports will hit our producers more or less severely, but the framing of a tariff is the inalienable right of a nation and something that no outsider has any right to interfere with. In the proposed fish tariff, Canada's part is taken by the American consumer who eats our fish and those legislators who believe in no barriers to trade.

Certain Canadians in the fish business talk of retaliating by closing Canadian ports to American fishing vessels who are, at present enjoying certain privileges. It is doubtful if such a move would have any great effect. In the days when the fisheries relied upon the sailing schooner and hook and line, the Canadian ports on the Atlantic coast afforded convenient bases at which the American vessels could secure bait, ice and supplies. But the United States have now a huge steam trawler fleet which is independent of Canadian ports and by means of which they can secure a great catch without making use of any conveniences which our ports afford to sailing schooners. Upon the Pacific Coast, retaliation of such a nature, would be more effective as American halibuters would be restricted to Washington and Alaskan ports for ice and bait.

But retaliation is not a good argument. The best argument is that of Canada's annual purchases from the United States. We are a mighty good customer to the American producer and manufacturer and there is a pretty considerable element in the U. S. who desire to retain our custom. A tariff barrier against Canadian products means that we will take stock of the situation and buy elsewhere or produce the goods at home.

The tariff policy of the United States is not going to be framed on the representations of American fish dealers who desire to exclude Canadian fish. There are a number of dealers, who want our fish, to offset the arguments of the high-tariff party. There is also the consumer who wants cheaper food and there is the very large body of people who are anxious to maintain the freest interchange of products and manufactures with Canada. Just who will win the tariff fight is difficult to guess, but no threats or hints of retaliation from Canada will affect the issue. The Americans know just what we can do and what they stand to gain or lose and they will frame their tariff laws to suit themselves.

FISHERIES ASSOCIATION PROTESTS LIMIT OF FISH CASES.

A suggestion from the Express Companies that the net weight of fish in boxes per express be limited to not more than 200 lbs in weight was opposed by the Executive of the C.F.A. at a meeting on March 30th. The following resolution was passed.

WHEREAS suggestions have been made by the Express Traffic Associations that net weight of fish in boxes shipped by Express be limited by regulation to not more than two hundred pounds.

AND WHEREAS the Fishing Industry of Canada have found, through years of experience, that the weights and sizes of fish boxes in use at present are the best and most economical means of shipping fish and any minimum weight regulation will be detrimental to the Industry. It is admitted, that, in some phases of the Fishing Industry, it is possible where high-priced fish are concerned to ship them in two hundred pound boxes and such is being done, but insofar as low-priced fish are concerned, it is economically impossible to ship them in boxes containing such a small weight;

THEREFORE, the Canadian Fisheries Association desire to record their unanimous opinion that any such regulation enforced by the Express Traffic Association or other companies, will result in higher cost of fish to consignees—which same is not desirable and such proposed regulation is strongly protested by the Canadian Fisheries Association.

We understand that the suggestion was dropped on receipt of the opinion of the Industry.

SHIPPING OF SHORT LOBSTERS.

A recent editorial in the Yarmouth, N.S. "Herald" regarding the shipping of short-sized lobsters is worthy of reprinting:

"A practice is being indulged in by some lobster fishermen along the coast, but just where The Herald is not able to say, of shipping short lobsters in their crates to the Boston market. These lobsters are a distinct loss to the fishermen every time, as they positively get no return for them, as the fish are taken from the packages, dumped into Boston Harbor and go far in restoring the depleted lobster fishing grounds in that vicinity. A well-known lobster buyer who came from Boston on Friday and during the season spends thousands of dollars in Western Nova Scotia in buying lobsters for his company, told The Herald on Friday morning that such action on the part of the fishermen was deplorable and that there should be something done to stop it.

He further said that out of one shipment of over 1,300 packages made a fortnight ago 2,200 pounds or about 3,000 undersize lobsters were taken from the crates and dumped overboard. In Boston, continued our informant, nothing under a nine inch lobster is allowed on the market and there is a band of fish wardens at the piers with nothing else to do but cull the packages as they are landed from the steamer from Yarmouth or any other port. Those wardens absolutely refuse to pass a fish that measures a fraction of an inch under the nine inch mark and over it goes into the deep, again to be later caught up by the Portuguese and other alien fishermen, who during the summer season infest those waters, and whether the lobster comes up to the nine inch mark or not is readily purchased by the summer hotels and resorts along Boston

Harbor without passing of the fish warden's inspection or going on the market.

Fishermen, by the foregoing, can readily see the loss they are suffering through that practice, for although they may think an 8 $\frac{3}{4}$ inch lobster which they may take from their traps will pass the sharp eye of the Boston culler they are greatly mistaken and it means just one more crustacean for the alien fishermen along that Harbor.

We publish the above at the suggestion of the Boston buyer who stated it was nothing short of a crime to see the great waste of those fish to Nova Scotia waters, after every shipment that is received in Boston by the steamer from Yarmouth. The Herald trusts that the information will receive kindly consideration of its hundreds of readers who are engaged in the lobster industry and that it will have a tendency of establishing a more careful culling before shipment is made."

The attitude of our contemporary is to be commended especially after we hear that the Massachusetts Fisheries authorities are rigidly inspecting live lobster shipments from the Maritime Provinces. All shorts are being seized and dumped into the Massachusetts waters for the rehabilitation of the lobster fisheries there.

The Canadian fisheries and Canadian fishermen lose, not only the lobsters, but the future productivity of the fishery in our coastal waters, and the shipping of undersized lobsters from Canada is not only wasteful but also a senseless looting of our heritage for the benefit of the U.S. fishermen.

BRITISH COLUMBIA CANNERS ASK PREMIER FOR SEPARATE FISHERIES DEPARTMENT AND DEPUTY MINISTER.

The following petition was recently addressed to the Hon. Arthur Meighen, by the B. C. Salmon Cannery Association:—

"The salmon cannery and others engaged in the fishing industry in Canada, are of the opinion that the present arrangement under which the two departments of Marine and Fisheries are administered is not conducive to the best interests of the fisheries.

As you are aware the Fisheries Branch was recently transferred from the Department of the Navy, and the Department of Marine and Fisheries was again renewed.

Under this arrangement there is an Acting Deputy Minister of Marine and Fisheries who has direct communication with the Minister (the Hon. C. C. Ballantyne) relating to all matters affecting the joint Department.

It is considered eminently desirable that the Deputy Minister, who is to a very large extent, responsible for the policy and administration of the Department, should be a man fully conversant with everything pertaining to the operations of the fisheries and conservation of the supply.

It is respectfully, but earnestly submitted that whilst the two branches of Marine and Fisheries, may continue to be under one Minister — there should be a "Deputy Minister of Fisheries" appointed, whose duties shall be confined to that Branch only, who shall have direct access to the Minister, and be an officer of sufficiently long experience to be qualified to advise the Minister on all fishing matters arising for the consideration of the Department.

The cost will be so comparatively small, that the members of this Association do not think it will in any degree influence your Government in deciding a matter so vitally affecting the welfare of the fisheries.

In 1919 the value of the Canadian fisheries was \$56,485,579 of which British Columbia produced \$25,301,607.

In 1919 the Dominion Revenue from the fisheries amounted to \$356,590.99, of which British Columbia contributed \$266,491.41.

Being so far removed from the seat of Government, and so deeply interested in the successful development of the fisheries, I am sure you will appreciate the necessity for the chief executive officers in Ottawa being men of experience in the business, and conversant with all conditions on the respective districts where operations are conducted.

All which is respectfully submitted.

I remain,

Yours faithfully,

B. C. Salmon Cannery Association.
(Signed) W. D. BURDIS,
Secretary.

CANADA—A GOOD CUSTOMER OF THE UNITED STATES.

Almost Nine Hundred Millions Annually.

Summary of the Trade of Canada with the United States: Month, Ten Months, and Twelve Months.

Ending January 1919, 1920 and 1921.

Imports into Canada for consumption:—

	Month of January	10 months ending Jan.	12 months ending Jan.
	From U. S.	From U. S.	From U. S.
1921 ..	\$51,844,857	\$743,726,156	\$898,984,675
1920 ..	74,486,007	645,838,799	754,652,222
1919 ..	59,431,482	641,389,601	753,146,209

Exports from Canada (Canadian Produce):—

	To U. S.	To U. S.	To U. S.
1921 ..	\$32,490,302	\$474,734,684	\$551,522,444
1920 ..	40,924,527	387,240,423	456,683,481
1919 ..	38,836,250	385,430,112	445,337,307

The above table is reprinted from the general summary of the trade of Canada and gives justifiable cause for thought.

The figures clearly demonstrate the disproportionate amount of imports from the United States into Canada over the exports from Canada into the United States.

SEVENTH INTERNATIONAL FISHERY CONGRESS.

The Seventh International Fishery Congress will meet in Santander, Spain, in July 1921, and will be in session until August 3rd. By a Royal Decree, King Alfonso has created an executive and organizing commission to make preparations for the Congress. The last Congress was held in 1913 at Ostend, Belgium.

MACKEREL SHOWING UP.

Mackerel is now being marketed in New York. The first fare of 6,000 lbs was landed by Capt. John Matheson of the "Helena" at Fulton Market recently and fetched 65 cents.

It is reported that the Canadian Government will continue the mackerel scouting inaugurated last season by the cruiser "Hochelega," and that charts will be compiled showing the movements of the fish throughout the season.

THE DRIFT NET.

Items From Everywhere.

Gaspe Cod might be landed in the city of Quebec at the price of 4 cts per lb. says Mr. Chas Biard of Perce. But for this he wants a refrigerator car service which would enable Gaspe fishermen to get carload lot rates for their shipments. Mr. Biard complains that the fisheries of Gaspe are handicapped by the fact that the Maritime Provinces and New England, have better facilities for shipping their fish to Quebec, Montreal and Toronto. But Gaspe is not the only fishing district in Canada that complains of inadequate transportation facilities to inland cities.

Hon. W. F. Coaker, Newfoundland's Minister of Marine and Fisheries, is a hustler, whatever may be said of his policies which at any rate cause loud controversy. After two months in Europe, he journeyed to New York and Washington to study fishing conditions and emergency tariffs. And after the Harding administration took charge of Uncle Sam's affairs, he made it a point to see that Newfoundland's attitude to the proposed American tariff on fish was made abundantly clear to the powers that be. If Canada followed the ancient colony's example in this matter, no publicity has been given to its enterprise.

The French Administration at St. Pierre and Miquelon has decided to impose an unusual tax on the fisheries. Cod landed in ports of the colony from French vessels engaged in the Bank fishing will pay entrance dues of 1 franc 50 centimes per 100 kilogrammes. Cod landed from craft engaged in the shore fisheries will pay a tax of 50 centimes per 100 kilogrammes.

Newfoundland exports considerable quantities of salt and dried fish to the U. S. markets. It now has plans to develop trade in fresh fish with Uncle Sam. It is reported that tentative plans have made for the organization of an American-Newfoundland Company with a capital of \$4,000,000 to establish a steamship service with boats of 18 knots between St. John's and New Cork, mainly with the object of developing the fresh fish trade. The report is interesting—and possibly premature.

Commenting on the conditions which must be met by vessels entering for the International fisheries race, the "Halifax Herald", donor of the trophy emblematic of the championship of the North Atlantic fishing fleets, says:—

"They must spend at least one season on the Banks, not as on-lookers, but as FISHERMEN. To sail to the fishing grounds and lounge around for the purpose of complying with the letter of the regulation and evading the spirit will not do. However speedy the contestants are speed is only one of their recommendations.

"On the other hand there can be no objection whatever to the construction of schooners which do not adhere rigidly to type. The development of the schooner has not ceased simply because every vessel in the North American fishing ports looks almost exactly like its neighbor. It is possible that out of the numerous designs a new standard of fishing craft may be evolved. If such be the case, the races will be fulfilling their purpose.

"With each succeeding stage of development in any department there have been those who regarded further

evolution as a thing impossible. Yet all experience goes to show that these have merely furnished newer foundations upon which to improve the things that are an advance to greater heights. To exclude the fishing schooner from this would be assuming that the schooner has reached a state from which advancement is not possible.

The assumption is scarcely reasonable.

Let the racing schooners be any type conforming to the regulations of the contest, but they must first, last and always be FISHERMEN."

Passing of the free lunch counter indicated to the closing of saloon bars, says the Gloucester Times was responsible in part for the depression in sardine prices which packers say are now below the cost of production and close to pre-war figures. Competition resulting from increased importations of foreign sardines after the war was another factor.

Although the 1920 pack of Maine sardines is said to have been more than 500,000 cases short of that of 1919, more of last year's sardines are held in storage than usual owing to the poor demand and the unwillingness of the packers to sell at present prices.

The average pack of Washington county factories, including those in Eastport and Lubec, is 2,250,000 cases of 100 cans each. Prospects for an average in the 1921 season, which opens April 15, are conditional, according to the packers, on an improvement of demand from jobbers, with labor and packing materials expected to be lower than last year.

DO NOT USE DOG-TEAMS IN WINNIPEGOSIS FISHERIES.

A correspondent writes the Editor regarding an article on "Fresh versus Frozen fish" which appeared in our March issue. The offending paragraph was culled from the British "Fish Trades Gazette" and is not our description of the winter fishery in Lake Winnipegosis. We do not blame our correspondent for getting hot under the collar at the imputation that such archaic and arctic methods of transportation are used in our fisheries.

"We take exception to a sentence in an article in the March issue of the *Canadian Fisherman* reading thus: "Fish taken through the ice in lake Winnipegosis, Canada, which are immediately frozen to death by the cold air and then hauled by dog-teams to the nearest railway station."

Never are any of our fish hauled to the railway station by dog-teams. That would be a physical impossibility to accomplish. All dog-teams ever used for by our fisherman were as a means of getting out over the ice to the nets from the winter camps, a distance sometimes of seven or eight miles from the camps. Our winter caught fish are hauled down lake Winnipegosis by teams of horses to the railway station distances varying from fifteen to one hundred miles. In the same way over on lake Winnipeg winter caught fish are hauled to the railway station a distance of as much as two hundred and fifty miles. It has cost as high as three cents per hundred pounds of fish per mile to haul our winter caught fish to the railway station, so that you will readily understand that stating that our winter caught fish are hauled by dog-teams to the railway station would have the effect of disparaging our industry in the minds of the general public.

The industry of producing winter caught fish from Western Canada's lakes is a very large industry. As a

rule each winter around 1000 carloads of fish are produced, and 85% of the production is sold in the United States. Unfortunately already the trend of public opinion is that the cost of producing our winter caught fish is infinitesimal which has the effect of making it very difficult to obtain fair prices for our fish. Naturally therefore we resent any incorrect statement appearing in the Press that will have the effect of further disparaging our industry in the minds of the general public.

We trust you will give this correction publication in your valuable journal."

FISHERIES SCHOOL.

Ottawa, April 12.—A floating fisheries school for the Maritime Provinces for training and research, is projected.

Dr. L. W. Gill, director of technical education in the Department of Labor, will visit Halifax and other centres on the east coast next week with a view to looking over conditions and making plans. The proposed school will not be permanently located at one point, but may conduct successively classes off Halifax, St. John, Charlottetown or Sydney. The classes would be largely held during the winter months, when fishermen are at leisure; and during the summer research work would be followed. Special attention is to be given to packing, and Dr. Gill thinks methods may be arranged for marketing many species of fish which are now overlooked. Common sense ideas must guide in the organization of the enterprise, and, says Dr. Gill, local conditions will be met. For this reason, the school could not be modelled on any other now existing.

Dr. Gill says he has been urging the establishment of such a school on the British Columbia coast, and there is no doubt that both institutions will be created in due course. Leaders in the fishing industry, it is stated, are fully convinced of the value of such educational work. It is intended that all those interested in any branch of fishing or marketing fish may attend the classes.

CANADA'S FISHERIES FOR FEBRUARY, 1921.

The total catch of sea fish on both coasts during the month of February was 166,751 cwts. with a value in first hands of \$691,030, against 278,398 cwts valued at \$652,970 for the same month last year. The greater value for the smaller catch of this year is due to the catch of herring, a cheap fish, being very much less, and that of halibut and smelts, more expensive varieties, being rather greater.

There was an increase of almost 10,000 cwts in the catch of cod, haddock, hake and pollock on the Atlantic coast, but the value was not equal to that of February last year. The lobster fishery, which opened on November 15th, yielded 7,448 cwts up to the end of February, against 5,642 cwts for the same period last year. The whole catch was marketed fresh. The smelt fishery resulted in a catch of 15,424 cwts against 11,517 cwts. The landings of halibut in British Columbia amounted to 22,468 cwts against 12,335 cwts in February last year. Of the halibut landings in February this year, 11,943 cwts were taken by American vessels.

The herring catch in British Columbia for the month was not more than 79,146 cwts against 219,780 cwts in the like period last year. Herring were as abundant as before, but owing to the poor condition of the Oriental market, the fishery was not prosecuted to the same extent as in the preceding year.

LAKE FISHERMEN WHO AIDED HATCHING WORK DURING 1920.

Herring Eggs Collected by the Fishermen in Lake Erie for the Dominion Government, season 1920, were as follows:

Albert Vary	1,200,000
McKenzie & Glover	1,380,000
Dr. G. H. Jackson	1,140,000
Nichol & Smale	360,000
Thorne Dunn	1,260,000
Moore & Stanton	1,140,000
H. Taylor	1,200,000
P. Glover	420,000
A. McDonald	720,000
Brown Brothers	360,000
R. H. Long	300,000
John McAuley	1,680,000
Capt. D. McDonald	1,440,000
Capt. R. Davidson	1,200,000
Capt. C. A. Lyons	660,000
Capt. J. Nichol	2,640,000
Norman McAuley	2,040,000
Carl Williams	960,000
A. S. Brown	520,000
J. E. Pastorius	760,000

Whitefish Eggs Collected by the Fishermen in Lake Erie and Detroit River for the Dominion Government, season 1920, were as follows:—

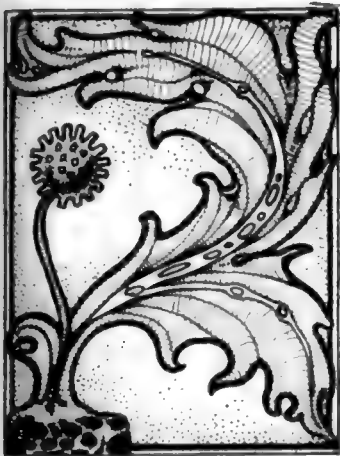
Wm. E. Dewey	470,000
W. P. Conway	1,520,000
Barnes & Ammonite	1,820,000
Harris Brothers	3,020,000
Andrew Graham	8,260,000
McCormick & Deffinbauch	6,980,000
Albert Barnes	340,000
A. Stewart	120,000
B. Westcott	5,840,000
Angus Girardin	6,200,000
Urius Loop	840,000
David Livingstone	1,480,000
John Bruner	2,760,000
E. Handy	2,380,000
Lorne Julian	1,320,000
John Dewey	460,000
Metcalf Brothers and Watson	460,000
A. E. Crewe	920,000
Baldwin Brothers	560,000
R. Goodison	30,000

MR. PAULHUS LEAVES ON EUROPEAN TOUR.

Mr. J. A. Paulhus of Montreal, Vice President of the Canadian Fisheries Association, with Mrs. Paulhus, was a passenger to Havre on the "La France" which left New York on April 19th. Mr. Paulhus will visit France and England on a vacation tour and will return sometime in June.

A. E. CREWE MOTORS TO FLORIDA.

Mr. A. E. Crewe of Merlin, Ont., spent part of the winter on an automobile trip from Merlin to Florida. The "bus" was successfully navigated to its destination in the South by Mr. Crewe and a post card from Tampa to the CANADIAN FISHERMAN stated that everything went well.



“FISH AND CHIPS”

AN INDUSTRY WHICH WOULD BENEFIT CANADIAN FISHERIES.

BRITISH FISH RESTAURANTS CONSUME QUARTER OF CATCH.

The people of Canada must eat more fish. That they should do so is the common interest of all. Our fishery resources are the greatest in the world, and they form one of our outstanding national assets, but at the present time they are developed only in a fractional degree. Being a national property, it is, naturally, everyone's concern that the fishing industry be developed to its maximum and our waters made to disgorge latent wealth to the very limit of their productivity. But increased consumption of sea foods must obviously precede increased production, because without a market in view it would be wanton waste to slaughter the edible creatures of the deep, and, furthermore, it would be utter folly on the part of fishermen who depend upon the industry for a livelihood.

To those engaged directly in the industry, the interest is more vital. The development of a broader local market means an expansion of their business. It is reasonable to assume then that any movement to stimulate the demand for fish among the people should receive the first and most ready response from those commercially concerned. Without their co-operation, and very generous co-operation, too, it cannot be expected to convert our Canadian people to the fish-eating habit. In large measure the success of any enterprise rests with them individually.

We Make a Suggestion.

There is a valuable institution in Great Britain known as the “Fish and Chips Shop.” In some parts of Canada it is known, but little better than as a novelty. Authorities in the Old Country attribute to the humble Fish and Chips Shop credit for increasing the national fish consumption by a large percentage. During the war it was regarded as one of the most valuable food distributing agencies; to such an extent was it valued, in fact, that it received special concessions from the Government as to supplies of oils and fats and other requirements. The fried fish business is really one of the most important branches of the industry in Great Britain. A few facts will illustrate this point.

Of the annual local fish consumption of 16,000,000 cwts. in Great Britain more than one-quarter is sold through the 25,000 or more Fish and Chip Shops scattered throughout the land. The shops cook a weekly average of 80,000 cwts., along with 200,000 cwts. of potatoes, while in the process of preparing the fish no less than 20,000 cwts. of oils and drippings are used.

The people of Great Britain spend each week ap-

proximately \$2,430,000 in fried fish shops, which represent an average weekly distribution of 30,000,000 cheap nutritious meals. These figures are not conjectural, but are based upon the registered requirements of the trade with the British Ministry of Food.

A most interesting observation in connection with the British fried fish business is that the 4,000,000 odd cwts. of fish used by them each year is mostly of a class too small or otherwise unsuited for the ordinary fish dealer's slab. The demand created through the fish friers thus obliterates a great deal of waste and consequently causes a cheapening in the balance of the fish marketed through other channels.

Fish Must Be Low Priced.

That the success of the fish trade is dependent upon low prices is axiomatic. In Canada, as in other countries, experience has proved that high-priced fish cannot compete with meats and other products showing little difference in price. But cheap fish is an attraction. It will take years to instil into the popular mind that fish is a good substantial food, and until this is accomplished, cheapness must be presented as a big inducement to purchase.

A condition which enters seriously into the marketing of fresh fish in Canada, which is not experienced in smaller European countries, is the great length of rail hauls from landing points to centres of distribution. Montreal, the chief distributing centre in Eastern Canada, is approximately 1,000 miles from the fish receiving stations. Our system of distribution cannot be otherwise than faulty, because the business offering is not sufficiently inducing to make the railways and express companies provide better service. The demand must be developed first, because in the present stress of things it is impossible for transportation companies to create facilities not justified from a business standpoint merely to assist in the patriotic expansion of the industry. Under normal conditions this might be urged, but where Canadian trade from all quarters is pressing for accommodation, it cannot now be reasonably expected.

The promotion of the fried fish business is one of the very best means of increasing demand, not only because of the enticement it offers to purchase a cheap fish meal, but because it will create a fish-eating habit, which will work into the household. The institution in the Old Country is considered of such importance in this regard that it is being encouraged and supported in every way by the British Trawlers' Federation,

Limited, the actual producers of the fish, and those most interested in finding a market for their catch.

Will Educate People.

Sir James Crichton Brown, F.R.S., Vice-President of the Royal Institution of Great Britain, and an eminent brain specialist, declares that "fried fish from a fried fish shop is presented in its most palatable form." He goes on to say that "the mere frizzling of fish in a pan on the top of a thin layer of fat is not frying in its best sense. The portions of fish should be covered by the high-heated oil,—cotton seed oil for preference,—so that all their good qualities may be bottled up."

As a general rule Canadian people do not know how to prepare fish to retain all the fine properties. But the fish frier knows how, and he employs his knowledge in catering to the public. People may learn from the frier what fish, properly prepared, really offers. They will take their "find" into their homes.

In a few spots in Canada the fried fish shop is to be found. In Montreal there are several such places, and the amount of fish they dispense is convincing proof that through the medium of the fried fish shop lies the road to a heartier fish appetite among Canadians. In Winnipeg and Vancouver, as well as in some other large centres, they may also be found.

Figuring on the basis of population, if Great Britain has more than 25,000 fried fish shops, Canada could stand 2,500 of them. Allowing for scattered population this may be reduced to 1,500.

As a business venture the "Fish and Chips Shop" is worthy of investigation.

As a means of increasing consumption and developing the industry it should have the encouragement of all interested in the business.

NEWFOUNDLAND URGING ENTRY OF SCHOONER IN INTERNATIONAL RACE.

The "Trade Review" of St. John's, N.F., is urging Newfoundland fishermen to enter a schooner in the International Races at Halifax this Fall.

In an Editorial upon the subject, the "Trade Review" says:—

THE GREAT SCHOONER RACE.

"As the Banking season approaches, interest in the coming schooner race out of Halifax next Fall increases. None but bona fide Bankers that are employed in the Bank fishery for at least six months previous will be eligible to compete. The Canadians are building two schooners this Spring specially for the competition, viz:—The "Canadia" at Shelburne and the "Bluenose" at Lunenburg. At Essex, Mass., the Americans have built the "Mayflower". All these will go to the Bank fishery this season.

It would be a great advertisement for Newfoundland if we were in a position to compete with a Newfoundland built vessel and a Newfoundland crew. Choice now would have to be limited to the Bankers on the South West Coast, and if there is a good sailer amongst them it would be well worth while to make the trial.

There is no doubt about the fact that our men know how to sail and handle a vessel. All we want is a suitable schooner and there are many people believe that it is possible to get one amongst the Bankers of the South West Coast."

We have no doubt but what the Newfoundland entry would be welcomed by the Cup Trustees and all enthusiasts, and the race would be the better for another contestant.

CANADIAN MARKET FOR FISH IS INCREASING.

That Canadian sea food is becoming more popular throughout the Dominion is demonstrated by statistics which have been compiled during the past year by the Fisheries Branch, Department of Marine and Fisheries, Ottawa, based upon the movements of fresh and frozen fish by freight and express from Atlantic and Pacific stations to points in the interior. The information does not take into consideration the extensive supplies being placed on the Canadian market from inland fishing areas, nor does it include canned, cured or pickled fish. There is every indication, however, that the increase in the demand for fresh and frozen fish in the Canadian market applies to the commodity in other forms as well.

During the first six months of 1920, approximately 15,260,000 pounds of fish were transported from both coasts to interior markets. As a general rule, the first part of the year is more prosperous for those engaged in the industry than the latter half, chiefly because of the fact that the former includes the Lenten season. In spite of this, however, shipments from both coasts increased to about 19,400,000 pounds during the latter six months. The increase of more than 4,000,000, when a falling off would have been quite understandable, is clearly indicative of the growing popularity of fish.

The quantity of fresh and frozen fish moved from both coasts during the year was about 34,660,000 pounds, about 19,830,000 pounds of which emanated from Atlantic stations.

Trade from Pacific fishing stations showed the greater development during the year. In the case of the Atlantic coast the increase in movements in the latter half of the year as compared with the early half amounted to only 690,000 pounds, while from the Pacific coast the increase was nearly 3,500,000 pounds, or more than fifty per cent of the previous six months' business.

The gains in the Atlantic business were very equally distributed, but with a marked extension of business west of Ontario.

The Pacific business progressed with the distance. The market in Ontario increased its demand for Pacific fish by nearly 100 per cent, while Quebec and the Maritime provinces increased their demand in almost equal proportion. Undoubtedly the Pacific coast is developing in importance as a source of supply for the Canadian market.

GOOD SPAWNING YEAR.

The salmon-spawning grounds in British Columbia were in excellent condition during the season just closed. The natural spawning beds were well seeded and in addition the various hatcheries collected approximately one hundred million eggs of different species. All the hatcheries operated by the Department of Marine and Fisheries were filled to capacity and in a good many instances much larger collections could have been made.

The following shows the collections of salmon eggs in the different watersheds:—

Fraser river	52,185,500
Skeena river	12,734,000
Rivers inlet	12,077,000
Vancouver island	22,984,000

NO FOUR CENT COD FROM GASPE.

Writing in the "Quebec Telegraph" recently, Mr. Meinert A. Wick, a fish merchant of L'Anse au Beaulieu, makes the following observations of the price of Gaspé fresh codfish.

Reading through the columns of "Quebec Telegraph" of March 17th, I found an article stating, Gaspé cod could be sold in Quebec city for 4 cents a lb., information given by Mr. Charles Biard, of Perce, Gaspé.

This gentleman is supposed to be one of the most prominent fish dealers of the coast, and according to his statement the fish could be marketed in Quebec city for 4 cents a lb. I fail to understand how this gentleman can market cod fish in Quebec at such a low figure.

Allow me to figure as near as possible the true calculation which you have to face when we get refrigerator car service, which the price of 4 cents is based on.

Cost of box material, nails, labor to make them, not only on 100 lbs. of fish, but 100 lbs. of ice as well, so the capacity of the box will be for 200 lbs., \$1. Ice and packing expenses, \$1; truckage from Perce to Cape Cove station, as low as 30 cents; refrigerator car rate less than carload lots, as far as information at hand, 1½ cents a lb., \$1.50; commission 5 per cent, if it is possible to make arrangements this way, which I doubt. No fish dealer will undertake to do business at such a low percentage, 20 cents; telegrams, stamps and interest, 10 cents, which is as low as we can calculate, this makes a total of \$4.10 c.i.f. Levis station or Quebec city if possible.

You might think that there is too much ice for the amount of fish, but the experience has always called for just as much ice as fish if not more, either shipped by refrigerator car or express, what we call for refrigerator as a matter of fact is only ice cars and therefore not always possible for the train crew to keep the temperature of the car as it should be. I have had occasion many times to look at the thermometer in these cars and have found the temperature carrying from 32 to 38 and some times up to 40 degrees, of course the iced fish will to a certain extent help to keep the temperature in the car about the same, if not too long on the way. Another factor is this, in the summer months Quebec and especially Montreal city have almost tropical heat, so you see there is a very good reason to ice well and this must be done in order to land fish in perfect fresh state.

Now this is only cost of packing, truckage, transportation, commission interest on capital invested. And we have not yet paid for any codfish, no allowance for shrinkage and worked on no profit. Shrinkage in four days in ice at least 10 per cent on 100 lbs. 40 cents net loss. How can any business be done that way? There are no fish dealers or fishermen who, if they market their own goods directly, can work on less profit than 1½ cent, and this is the minimum.

Depreciation of building tools, machinery and upkeep of fish establishment during season ¼ cent per lb. and if we add another ¼ for claim against quality, breakage and disappointment connected with the marketing of this commodity which is very reasonable. What will the fish then cost? Naturally it will be according to this \$8.

I do not think that any fish dealer at any place in Eastern Canada can market fish, if they have to take into consideration that they have to thoroughly clean

and wash the fish as soon as it comes from the fishing boats in order to face the quality which the people are now asking for, at less cost.

I have had an opportunity to speak time and again with our fishermen since the aforesaid price was published, asking my opinion as to price of 1921 catch. I told them it was impossible for me to give any information whatever as to price. I also pointed out that we have all to hope for better prices and change of market condition, in order not to be discouraged. Quite a number of young fishermen came from the lumber camps and expected to fish, but at the prevailing low price, they told me they were returning to the camps or elsewhere to try to get a living. These men have home and family, and more or less land to look after and protect and therefore do not like to go away because they all have to cultivate the land and are about finished when the codfish season starts.

What is the good of boosting the Gaspé coast for us and encouraging the people to stay with us, if we are quoting prices three months ahead, as low as Mr. Biard has done, which means no way of existence for them.

BOSTON CLAIMS TITLE AS WORLD'S GREATEST FISHING PORT.

Boston, April 15.—Rank as the world's greatest fishing port was claimed for Boston today in the forty-sixth annual report of the Boston Fish Bureau.

A total of 118,558,902 pounds of all varieties of fresh fish was landed at the fish pier in 1920 by vessels making 3,342 trips. These receipts exceeded by 9,000,000 pounds those of 1918, the previous bumper year. Grimsby, England, has previously been regarded as the principal fishing port.

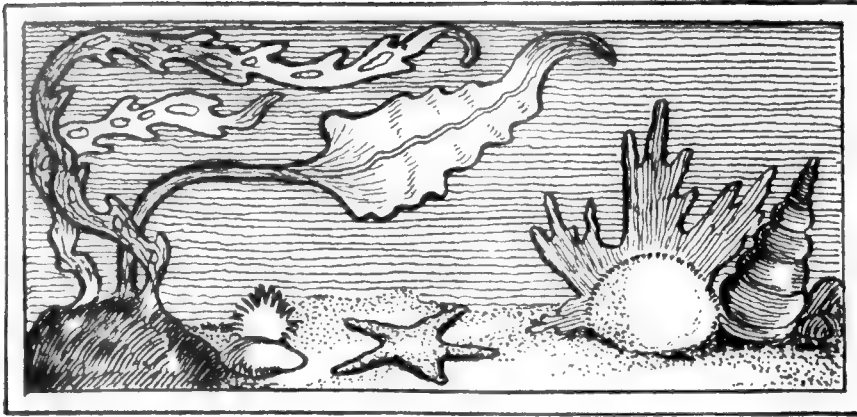
The largest stock and share ever made in the fresh halibut fishery in the Atlantic went to the credit of the schooner "Joffre," Captain Chris. Gibbs, which stocked \$13,047 with the crew, sharing \$312 each for three weeks' work.

MARKET CONDITIONS IN BRAZIL TO-DAY.

Owing to a heavy duty, in some cases as high as 100 per cent, the consumption of canned fish is small. In spite of this high tariff there is however a small market created not only by the demand of foreigners but by the consumption inland. There are no shipping facilities for fresh fish inland. At the present price of the milreis new business at this date is almost nil. It must be remembered that Brazilian waters teem with the finest fish in the world and the coast towns therefore are supplied with an abundance of fresh fish brought daily to the doors of the inhabitants. The natives in the hinterland who cannot get fresh fish with a few exceptions cannot afford to buy canned fish. Canned fish is stocked not only to satisfy the taste of the exclusive few, but for the supply of hotels, ships and in small quantities inland for mining and lumber camps, rubber and coffee plantations, etc.

JAPAN EXPORTING CANNED FISH TO SWEDEN.

A message from Gothenburg says that Japan is beginning to prove a dangerous competitor to Norway as an exporter of tinned fish, according to the *Manchester Guardian Commercial*. It is reported that some time ago a couple of cargoes of Japanese tinned fish were imported into Sweden from Great Britain and sold at lower prices than Norwegian goods.



PRINCE EDWARD ISLAND FISHERIES

(SPECIAL CORRESPONDENCE)

Charlottetown, April 25.—In the Provincial Legislature this session there was a very lengthy debate on a resolution respecting our fisheries, an industry that is second in importance to that of agriculture, in this Province.

This resolution went on to say that this industry is in a precarious condition, and very few fishermen are making preparation for the coming season. It further stated that the bounty under the provisions of the Halifax award is of greater benefit to the fishermen of the neighboring Province than to those of Prince Edward Island. In Nova Scotia schooners are used to a large extent, and as the bounty is paid at the rate of \$2 per ton, fishermen in that Province fare better than the Island, who do their work in smaller boats. These they are obliged to use by reason of the lack of harbors (especially on the north side), and generally exposed to shore front. The resolution requested the Federal Government to consider this position of our Island fishermen and formulate some fairer basis for the awarding of bounties, and to distribute the arrears of interest which accumulated between 1878 and 1882, at which period no bounty was paid.

It also requested the Federal Government to initiate educational work with the object of teaching up-to-date methods of catching, dressing, curing and preparing codfish for market.

There was also a request to restrict or prohibit the operation of bean trawlers as these are detrimental to the industry.

The clause in the resolution which evoked the most discussion was that with regard to lobster fishing, which is the principal branch of the industry here. It reads as follows: "The Federal Government is asked to make compulsory the use of standardized heavily coated tin plate for lobster cans, and to standardize the present can to permit a greater quantity of preserving fluid. The slightly coated tin and the lack of such fluid has occasioned great loss to packers since the present regulations went into effect."

The last clause urges the continuation of the Federal Government of the investigation into the cause of the disease that has resulted in almost the complete extinction of our oysters, and to take some remedial action.

Practically every member in the Legislature has fishermen among his constituents, as every district borders on the shore. Many of the speakers on the

resolution were men who are or have been extensively engaged in lobster packing, such as Hon. R. N. Cox, Morell, Hon. Benj. Gallant, Bloomfield, B. W. Lepage of Charlottetown who formerly operated a large lobster cannery in Rustico, H. D. McLean, Souris, J. P. McIntyre of Savage Harbor. Several merchants who extensively deal in fishing supplies also took part in the discussion. These included Mr. Creelman McArthur of the firm of Bruce McKay and Company, Summerside, who seconded the resolution, which was moved by Mr. D. C. McDonald of East Point. There was some difference of opinion regarding the lobster situation. It is estimated that there are about 25,000 cases of the Island pack now unconsumed, part in Europe and part on this side. The contention was made by some members in the Legislature who were voicing the opinions of the fishermen and packers throughout the Province that a considerable portion of the pack went bad, the fish becoming discolored, owing to the regulations passed by the Fisheries Department two years ago, but not put in force until last year. These regulations called for the placing in a half-pound can six ounces of meat. A number of the speakers took the ground that this reduced the quantity of pickle in the tin with the result that discoloration set in. It is said that one firm alone had 400 cases condemned for discoloration and that in other parts of the Island there were heavier losses. Some of the members who were in the packing business, such as Mr. McLean, declared that this was an entirely erroneous contention, that one of the causes of discoloration is lack of care in handling the fish from the time they are landed from the boat until they are put in the cans. If lobsters are not allowed to stand before being put in the boilers or in the coolers before being canned then there will be no discoloration. The majority, however, contended that the regulations were to blame, and another clause was added to the resolution, asking the Government to rescind the regulations for this year so that it would be permissible to put in 5½ ounces of meat instead of 6. For next year there will be a supply of larger cans to enable both the requisite quantity and preserving fluid to be used. While the question was being threshed out in the Legislature, Inspector Gallant and Mr. W. H. Tidmarsh, who was in the packing business, were touring the Province, addressing meetings of lobster fishermen and packers, and urging them to take greater care in handling and putting up their fish as the demand today is for the best quality.



THE MIGRATIONS OF FISH

Much Knowledge Remains to be Discovered of their Submarine Wanderings

By COLIN McKAY.

Years ago there was a general opinion that most fish were great travellers, roaming up and down the oceans, if not around the world. A chart published nigh a century ago professed to show the annual movements of herrings, which, according to popular belief then, set out on their journeyings from the coast of Norway, passed round the British Isles, crossed over to Greenland, and returned to Norway when they wearied of their holiday jaunts. A British admiral, famous a hundred years ago, was not mystified by the migration of mackerel; he said that towards winter they left the coast of Europe and proceeded to the Arctic seas where they stuck their heads in the mud, and remained for the season of cold and gloom. Mr. Edouard Le Danois, doctor of Science, attached to l'Office Scientifique et Technique des Pêches Maritimes of France, has an interesting article on the migration of sea fish in a recent number of *Le Journal de la Marine Marchands*. M. Le Danois says that the old theory that fish were great travellers was first questioned by two French Scientists, Lacepede and Valenciennes, who worked with Cuvier, the great naturalist. Lacepede, and afterwards Valenciennes, observed that herrings caught in different places exhibited some physical differences; and from this they drew the conclusion that there were different varieties or species of herrings, inhabiting different regions of the sea. The German scientist Heincke later established the existence of different varieties of herring, and was able to assign each a local habitat. The discoveries thus made in regard to herrings led to the investigation of the movements of other kinds of fish, and the general conclusion that the migrations of fish are limited in extent seems to have been fairly well established. The scientists, however, admit that what they do not know about the migration of fish is still a very considerable quantity and that they are a long way from being able to provide the definite knowledge the fisherman wants—how to tell where and in what quantities he will find the fish he seeks to catch, the various rendezvous and the direction and seasons of their journeyings.

M. Le Danois informs us that scientists have established that each species of fish follows a general law of migration, determined by the temperature, salinity and density of the water, as well as the oxygen contained therein, and that within the bounds of the general law that the physico-chemical properties of each species require for their proper stimulæ certain conditions of the water in which they live. The principal causes of migration are the quest for food and the requirements of reproduction. Most fish have for

a large part of the year what may be called a fixed abode: a local habitation which varies according to the species. There are the *littoral* species, fish that remain close to the shore; then there are the border species which are found at the middle depth of the Continental Plateau, the pelagian species found on the slopes of the plateau, at depths of from 50 to 400 fathoms and the deep sea or abyssal species found in depths of 500 fathoms or more. The pelagian species, to which nearly all the cod family belong, is the most important for commercial purposes. While their normal habitation is on the banks at a depth of 80 to 500 fathoms, they are sometimes found, especially at the time of reproduction, at depths of 30 and even 20 fathoms.

At the period of reproduction, the physical changes in the body of fish make them seek water of less density than their normal habitation. Salinity and temperature being the factors of importance in density, the fish seek warmer water by rising nearer the surface, or they seek regions of the sea containing a quantity of fresh water, regions which are under the influence of great rivers or melting icebergs. In the case of salmon, shad, sturgeon and lamprey, this biological necessity has an extreme manifestation, and the fish leave their normal habitat, the sea, and proceed up rivers—often long distances—for reproductive purposes. Their tissues at this period being soft and flabby, they find in the soft river water the desired diminution of density or pressure.

The migration which precedes reproduction is a movement of concentration, a grouping together. With the exception of a few species, such as dogfish and skate, the inhabitants of the sea do not copulate, and if they did not crowd together at the time they throw off their eggs and spermatozoides the reproductive products would be largely lost. Some species throw out millions and even thousands of millions of eggs or spermatozoides per fish, but unless the egg of the female is fertilized by contact with the spermatozoide of the male, reproduction does not take place.

After the spawning period, the fish are weak and voracious, and they enter upon another migration—a hunt for food. And this migration is one of dispersal, the better to increase their chances of obtaining food. They make their longest journeys at this period, and are frequently found far from their normal habitat. Spanish mackerel, for instance, leave the coast of France and go north of Ushant on the northwest coast of France, and to the Irish coast, while cod and haddock proceed south through the

North Sea and English Channel as far as the Gulf of Gascony. Also, species of haddock normally found in warm southern waters go north to the latitude of the Faero Islands. After the fish have made their hunt for food and grown strong and fat they return to their normal habitats by easy stages.

Dr. Le Danois says that generally speaking, fish are rarely caught in their normal habitation. At any rate it is much easier to catch them during their migration, this being particularly the case with the border or coast species such as plaice, salmon and herring, and the pelagian species, such as cod, haddock, turbot and dorics. And, unfortunately, during the migration period fish are less valuable for commercial periods than at other times.

All of this is no doubt interesting and shows that the work of the International Council for Sea Exploration, and the researches of the different national fisheries services have not been barren of results. But for all that it appears that science has yet a tremendous lot to learn of the migrations of fish. At the same time the progress so far made has not been without practical value to the European fishermen, and more extended work of a similar nature on this side of the Atlantic might be useful.

CONDITION OF CANNED SALMON MARKET IN GREAT BRITAIN.

Trade Commissioner J. E. RAY

Manchester, March 7, 1921.—The British Government having revoked the Canned Salmon Prices Order (1920), it has been considered an opportune time by the writer to investigate the condition of the market for the benefit of Canadian canners.

As the result of interviews with a number of importers in Manchester, it is learned that the sales of canned salmon recently have been much below the normal, and there is much doubt regarding the possibility of a revival in consumption. The diminished sales are due to several causes, among them being the large stocks still on hand, the general slump in trade which has caused widespread unemployment, thus reducing the purchasing power of the people, and the high prices still ruling owing to the reluctance of retailers to forego the large profits to which they have been accustomed during recent years.

The view was expressed by some of the firms interviewed that after Easter there should be a fair demand for best red Fraser, but it will have to be offered at much lower prices than those at present ruling.

Alaska red falls fell last week to 65s.; other brands were from 75s. to 80s. per case. Finest red sockeye halves are quiet in demand, with prices ruling from 100s. to 108s. Medium red and pink are dragging at irregular prices. Cases of halves (8 dozen), middle cut, are offering at 120s. A big drop in prices is anticipated during the summer months. A few retailers are endeavouring to increase the demand by slightly lowering prices.

British Imports.

Some idea of the consumption of canned salmon in the United Kingdom may be gathered from the following schedules:—

	1913	1914	1915	1916
	Cwt.	Cwt.	Cwt.	Cwt.
United States	265,817	510,338	555,524	850,745
Canada	275,362	352,177	387,171	479,364
Total from all sources	600,560	883,170	1,014,102	1,395,291

	1913	1914	1915	1916
	Cwt.	Cwt.	Cwt.	Cwt.
United States	342,779	329,334	475,865	102,328
Canada	221,164	181,338	487,402	164,340
Total from all sources	689,373	1,139,642	924,536	

A noticeable feature in connection with the imports is the progress made by Japan in her sales to the United Kingdom, which advanced from 28,925 cwt. in 1913 to 167,539 cwt. in 1919. The quantity imported from that source in 1920 is not stated in the Board of Trade returns, but it appears to have been larger than in the previous year, judged by the total imports from other than the chief sources (Canada and the United States), which were 657,868 cwt., compared with 422,013 cwt. in 1919, or 597,352 cwt. greater than in 1913.

FROZEN MEAT WAS ONCE UNPOPULAR.

Frozen Fish is Due for its Innings—People are Bound to Accept it—Will Solve Big Problem.

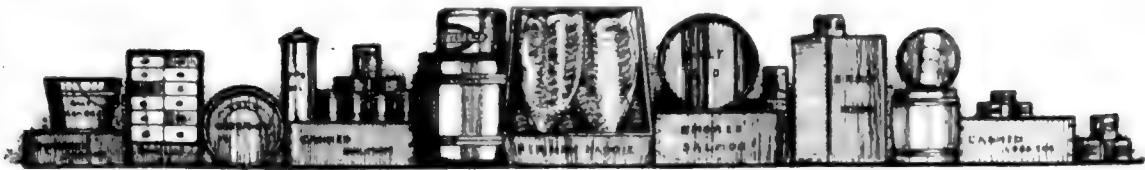
Thirty years ago or less the people of this continent had a confirmed prejudice against frozen beef, but it has vanished completely today. People now realize that frozen beef is as good as fresh beef. In fact whether or not it is frozen or fresh never enters into their mind when they enter the butcher's shop.

A few years ago, a similar universal prejudice existed against frozen fish, but this, too, is gradually disappearing. Until the feeling against it is entirely abolished, it will not be possible to supply all parts of the country with good sea food. It seems to be a generally accepted truth that the solution of our problem of distribution in Canada is to be found in moving fish in a frozen state.

If fish are to be shipped in a fresh condition from the Atlantic coast or Pacific coast to inland centres, they must be forwarded by express in refrigerator cars. Delivery must be speedy and handling must be careful. This necessarily expeditious delivery costs considerable money and adds to the retail price of fish. And, which is most important, where the haul is a long one, it is impossible to set down fresh fish in as good condition as frozen fish.

In Great Britain, in the United States, and even here in Canada, experimenting is going on for the purpose of finding some other means of preserving fish. Dehydration and other methods are being much discussed in the old country just at the present time, but a point which seems to be overlooked is that any process introduced must run the gauntlet of public opinion just the same as the freezing system. The latter system has been applied and accepted as satisfactory in the treatment of meats so that it does not seem a far journey to convince the public that freezing as applied to the fish is just as successful a means of preservation.

When the practice of freezing meats was first introduced, there is no doubt that in many instances freezing was employed to save goods from utter loss. The same, very likely, applied to fish. But to-day the frozen fish industry has developed to such a stage and its possibilities are so imminent, that the utmost care is being taken in providing first-class goods. Fish is frozen soon after it is taken from the water and not, as a good many people seem to think, at a later stage, when the article is verging on putrefaction.



Market For Canned Fish in India and Middle East

By Trade Commissioner H. H. POUSETTE.

Canned salmon is the one class of provisions which in the Middle East seems to be largely imported from Canada. The word *seems* is used as the statistics do not show the countries of origin of the various kinds of provisions, but the opinion is based on information gained from importers, and from observing the labels of tins displayed in shops. But the imports from Canada are more noticeable in Java and Malaya than in India and Ceylon. There is no apparent reason for this unless it be that the canned salmon is more easily shipped to Singapore, and from thence through the Malaya and to the Netherlands East Indies, than it is to Indian ports. For the year ended March 31, 1920, the imports into India amounted to 14,693 cwt. of tinned and canned fish, and into Ceylon the imports were 117,762 pounds for the year 1919, the larger part of which can safely be said to be composed of salmon and sardines, particularly the former.

The market for red salmon is small, and is confined practically entirely to Europeans; nor can it be said that there is in India a market for chum salmon outside of Burma. The greatest demand is therefore for pink salmon, or the medium grade. As Canadian salmon bears as good a reputation as the United States product, aggressive methods should obtain for Canada as large a share in the trade as her competitor across the line, or even possibly capture the greater share of it. In view of the fact that British dealers would prefer to handle a Canadian product to that of one outside of the Empire, Canadian exporters should feel encouraged to make every effort to control the imported salmon trade of both India and Ceylon. As has been stated, the consumption in India of chum salmon outside of Burma is very small, but in the latter province there is plenty of opportunity to do a considerable amount of business. The Burman is very fond of fish, and this predilection is fully shared by the Sinhalese. What they mostly demand is that it should be cheap; consequently chum salmon should appeal to both of these peoples.

Sardines are being imported from the Pacific coast as well as from Europe. Dealers were not in agreement as to whether the Pacific Coast sardines would run the Portuguese off the market, or *vice versa*. Apparently it is largely a question of price. Sardines usually come packed in 15-ounce tins. Importers had a good deal to say in regard to the packing of fish. The cases should be marked with the number of tins which they contain, and the net contents; for instance, a case of salmon should be marked 48 15-ounce tins. Locally these cases are spoken of as "48 ones." Tins are distinguished between flats and tall. The former are usually oval and contain 15 ounces, but there are also halves containing 7½ ounces, and quarters 3¾ ounces. The sardine tins should come packed in sawdust. Sardine tins are imported with and without keys.

The tinning and sealing of the cans is most import-

ant. One importer instanced a shipment of sardines which was badly tinned, in consequence of which the oil leaked out, discolouring the labels and the tins. The result was that it was impossible to sell the goods, so that a considerable loss was sustained. If one tin in a case bursts or leaks, it will probably spoil the other forty-seven, and if sandpaper to remove discoloration is used, it is quickly noticed by the purchaser, and immediately raises his suspicions. In matters of this kind the bazaar is very particular and even suspicious, so that to do business it is necessary that the appearance of the goods should be such as not to raise doubts of any kind.

There is a fair market for tinned herrings, particularly when packed in tomato sauce. English herrings, both kippered and in tomato sauce, are preferred to the United States article, and according to dealers the public will pay a slightly higher price for the former, the reason given being that they are better known and have a better reputation.

On the west coast of India sardines are caught and packed. Originally this enterprise was in French hands, the idea being that sardines would there be packed for the French market. However, this enterprise did not turn out to be the success anticipated for it by its projectors, as apparently the French public could not be persuaded that these sardines were the true ones, and consequently would not purchase them. This industry was a few years ago taken over by a Madras firm, who have built up a successful trade, but their product is not able, according to importers, to compete with the foreign article. One hears a good deal about the Swedish movement, but if one may judge by the remarks of dealers, it does not extend to canned fish, as the Indian public prefers the foreign article to the local, believing it to be better, although this is denied by the Madras packers.

In Burma the natives obtain a local fish which they make into a preparation called nappi. Apparently the fish is allowed to decay and then made into the form of a paste which is eaten with vegetables. Inquiries were made as to whether Canadian codfish might not find a sale for the purpose of being made into nappi, but dealers were not very encouraging, apparently fearing that the price would be against it. However, as the Burmese, as already stated, are fish eaters, the experiment might be quite worth trying, not only with codfish, but also with tunny fish or other cheap kinds which are shipped from the east coast of Canada.

The sale of canned lobster is exceedingly small, as owing to its price it is confined entirely to Europeans, and then probably to those with good incomes.

Labelling of Fish Tins.

The question of labelling tinned fish is not less important than that of tinned fruit. Canned salmon should have an attractive bright label, as such a one appeals to the Oriental. This remark, however, does

not apply to tinned sardines, as it is not customary to give them gaudy colours. What has been pointed out, however, by importers is that the labels of sardines should have on them two good medallions, and the reason given for this was that the first sardines introduced to the market were the Portuguese, and their tins had emblazoned over a black ground two medallions, and consequently the bazaar looked for them on the tins of that particular class of fish. These remarks were made in Rangoon, and it was strongly recommended that Canadian sardines should be similarly labelled, as the Burman is very strong on marks, and as long as he can see the two gold medallions he is quite satisfied that it is the kind of sardine that he wants.

Before leaving the subject of tinned fish, it should be stated that one of the largest importers in India remarked that a distinction should be made between herrings and sardines. He said that the Scotch herrings were labelled herrings "a la sardines" to distinguish them from the ordinary sardines. He advised this, to avoid disappointment on the part of purchasers, who might buy on the name. He also suggested that the packing of herrings should be confined to oval tins, and sardines to the small square ones, as the public were used to the latter.

INSPECTION OF PICKLED FISH AND BARRELS.

(The foregoing Act became effective on April 1st.)

The Fish Inspection Act of 1914, has been amended by the Fish Inspection Act of 1920. The new Act becomes effective on the Pacific coast on November 1, 1920, and on the Atlantic coast on April 1, 1921.

The main purpose of the new Act is to require that all pickled fish be fit for human food; that such fish be packed in water-tight barrels of a standard size; that the barrels contain the proper weight of fish and that the fish be as represented by the marks placed upon the barrels by the packer. Fish packed by fishermen or other persons for their own use and not intended to be sold are exempted from the provisions of the Act.

The following is a summary of the requirements:—

1. All barrels or other containers in which pickled herring, alewives, mackerel and salmon, except mild-cured salmon, are to be packed and marketed must be made in accordance with the standards defined in the new regulations, and marked by the maker with his name and address. The length and thickness of staves are to be as defined in the regulations made under the Act of 1914. In other respects the standards of requirements for barrels, with one or two minor exceptions, are similar to those defined in the old regulations.

2. All herring, alewives, mackerel and salmon, except mild-cured salmon, packed in salt and pickle in water-tight barrels or other containers, must be cured and packed in accordance with the requirements of the new regulations.

3. On the end of each barrel or container filled with either of the above named kinds of pickled fish must be stencilled by the packer or the first dealer who repacks or reconditions the fish his name and address, the grade and the weight of the fish in the barrel or container. Pickled fish shipped by a packer to be repacked or reconditioned by the first dealer or buyer in Canada, if ungraded, may be marked "ungraded"

but the containers and fish must in other respects be in accordance with the requirements.

4. Competent inspectors will visit coopers' shops and curing places for the purpose of giving instruction and advice, but the new Act does not require them to visit such for the purpose of stamping or branding the output of coopers and packers. There will be no official brand.

5. Coopers must see to it that their barrels are properly made and that their name and address is shown thereon. Packers or repackers must likewise make sure that their fish are properly packed and that the marks they place on the containers truly and correctly represent the contents.

6. At any time or place which may be found suitable or convenient, after the barrels or containers have been packed with fish, marked and made ready for market, an inspector may examine samples of the containers and fish in order to ensure himself that the containers are in accordance with the standard, and that the fish are as the marks on the containers represent them to be.

7. When an Inspector finds barrels or other containers, in which pickled fish are packed, not up to the standard, he will mark such barrels or containers with the words "Below Standard"; and when he finds that such barrels or containers do not show the name and address of the maker, he will hold them until such name and address is ascertained. For such violations the barrel maker becomes liable to a fine not exceeding fifty dollars for a first offence.

8. Further, when an Inspector finds that the fish are not of the grade or not of the weight shown by the marks, or not of good quality, he will mark the containers with the words "Below Grade," "Below Weight," or "Below Quality," as the case may be, and the packer or repacker of such fish becomes liable to a fine not exceeding fifty dollars for a first offence.

9. When an Inspector finds that the barrels or other containers have no marks to show the grade and weight of fish, or if the name and address of the packer or repacker is not shown, he will seize and hold such fish until such name and address is ascertained, and the packer or re-packer, in such case, becomes liable to a fine not exceeding fifty dollars for a first offence.

10. An Inspector may detain, for the time necessary to carry out an inspection, any shipment of pickled fish if he has reasonable grounds for believing that the marks on the containers constitute a violation of the Act. In such case he will immediately notify the packer or owner.

11. Pickled fish imported into Canada for sale must be packed in barrels similar in character and equal in quality to those required under this Act. The marks on the barrels must show the kind, grade and weight of fish and the country of origin. The name of the country of origin only is required to be shown on barrels of pickled fish imported for exportation.

12. In the event of a dispute between an Inspector and the packer or owner as to quality, weight or condition of the fish or the size or condition of the containers, the packer or owner may appeal to the Minister who may order a re-inspection.

Copies of the Act and the Regulations in detail will be distributed to all concerned. Meantime the Department will be pleased to answer all enquiries from packers, coopers and dealers with respect to the operation of the Act.



THE GROWTH OF FISHES

By PROFESSOR A. G. HUNTSMAN, University of
Toronto, Biologist to the Biological Board of
Canada.

(Paper Delivered Before American Fisheries Society.)

"Greater production" is the cry of the present day and the imperative need of the hour. In the realm of living things, either plant or animal, this production is virtually synonymous with growth. The desired product is the result of growth, and the problem of growth is, therefore, one of extraordinary interest to us. With the broad lines of this problem we are familiar through our knowledge of the life history of man, if from no other source. The early part of life is the growing period and under suitable conditions, such as with sufficient food of certain kinds, sufficient water and air, a temperature not too extreme, and no unfavorable circumstances of poison or disease, the growth of man proceeds uninterrupted, but with gradually decreasing intensity, until the period of maturity is reached, when general growth ceases.

The problem of growth is an enormously complex one and has ever new angles. This is shown by the comparatively recent discovery in certain foods of special substances, to which the name of vitamins has been given, and which have a wonderful effect in accelerating growth. That, from the standpoint of growth, we can improve upon what nature shows us, is demonstrated by the use of the method of forced feeding in poultry and of caonization for cockerels.

We are greatly handicapped in our study of growth in fishes by their living in the medium of water, to which we have only imperfect access. It is a comparatively easy matter to watch the growth of plants, and in the case of animals, if they live on land, one can keep them under almost constant observation. But we can only see a short distance into the water, and even that view is interrupted by every breeze, however slight, that agitates the surface. Consequently our knowledge of the growth of fishes has been extremely limited, for until very recent years it was a moot point as to the age attained by the commonest fishes, except for a few that could be kept in restricted bodies of water under more or less artificial conditions.

The special difficulties of the case have been overcome in indirect ways. The statistical method was popularized by C. G. J. Petersen toward the close of the last century. In this method the population of a certain kind of fish in a given locality is examined by taking samples at random and measuring these. It is found that, if the sample be comprehensive enough, the individuals fall naturally into groups according to size, the groups of smaller size being most distinct. Seeing that the fish has a definite spawning period, which is

annual, each group is to be considered as consisting of fish born in a certain year, that is, belonging to a certain year-class. One group will consist of those individuals that are in their first year, another of those in their second year, and so on. In this way the average size at any given age may be found. Not only this, but we may follow the growth of any group by taking samples from time to time and determining the average size of that group, from which data the average increase per unit of time can readily be calculated.

This method has disadvantages. It is often difficult or even impossible to obtain comprehensive samples, owing to segregation of different ages. Also, if the growth be slight, compared with the amount of individual variations in size of those of the same year-class, the groups overlap in size and cannot be distinguished. The discovery of another method has been, therefore, of the greatest value.

Over three centuries ago, when the microscope was first invented Van Leeuwenhoek, the pioneer microscopist, living in the eel-eating country of Holland, discovered not only that eels have scales, but that their scales show rings, which he interpreted as indicating years. Only at the beginning of the present century was this discovery extended and used in the study of the life history of fishes.

The scales are not the only parts of the fish that exhibit such annual markings. Similar lines to those of the scales can be seen in the ear-stones and in the bones, particularly the vertebrae; but in the majority of fishes the scales have proven to be the most valuable of all the parts in this respect. It is, indeed, astonishing for one to be able, as I was recently, to say on returning home and noticing a fish scale adhering to the oilcloth of the kitchen table: "You have been having a five-year old whitefish to eat lately." One might have gone further and have given its probable size and perhaps even the name of the lake in which it was caught, as well as other features of its history. It is known that the arrest of growth due to disease or other causes is recorded in the scales. C. K. Gilbert maintains that the salmon from different rivers on the Pacific coast can be distinguished by the peculiar effect of each river on the growth of the salmon in early life as shown in its scales. E. Lea has shown that the herring of the year-class of 1904 had a peculiar growth in their year, in the north of Norway, that made it possible to distinguish them from those of other regions. A certain Atlantic flatfish grows so slowly in the Gulf

of St. Lawrence, as compared with the Bay of Fundy, that it was possible for me to correct a dealer as to the source of his fish after an examination of the scales.

The formation of annual rings or zones in the scales is dependent upon a yearly periodicity in growth. "Warm-blooded" or, more strictly speaking, homoiothermal animals are in large measure independent of outside temperature, for they are able by means of a heat-regulating mechanism to maintain an optimum temperature in their bodies. Poikilothermal or "cold-blooded" animals, like plants, vary in temperature with their surroundings, and their activities, including growth, must await a favorable season. In the majority of fishes that have been investigated there is a diminution of arrest of growth during the cold part of the year, and therefore, the age rings on the scales are to be interpreted as "winter-checks."

When these checks can be seen, the determination of the age of a fish is simple enough, but caution must always be exercised. In fishes, such as the salmon, which have a long period of embryonic development including the winter season, it would not be expected that this first winter would be shown on the scales. But, even after hatching, a considerable time must elapse before the scales begin to appear in the skin of the young fish. It is at the time of metamorphosis from the larval or postlarval condition to the final stage, that the scaly coat makes its appearance. Even in the fishes that have a rapid development, such as the saltwater herring, if spawning takes place in the late summer or in autumn, the young fish will remain scaleless during the first winter. Not only so, but a spring-spawning fish may pass the first winter with many of its scales undeveloped or so small that no check is registered. Another difficulty arises when the growth for any year is slight, for the checks may come so close together as to be indistinguishable, which is particularly the case in the later years. Unlike so many animals with which we are familiar, the majority of fishes do not reach a definite full size beyond which growth ceases; but under favorable conditions, many continue to grow throughout life, although at a greatly diminished rate when well advanced in years. In these the size attained is limited only by the rate of growth and the duration of life. Carp and pike are reputed to have lived for as long a period as one hundred years, but if the conditions are unfavorable no great size will be attained. It is doubtful whether the age of such long-lived fishes can be determined from the scales, although the annual markings do show that certain fish have lived for at least a quarter of a century.

When the checks are definitely marked, it is possible from measurements of the distances between successive winter checks to determine the amount of growth in each year of the life of the fish, as has been practised by J. Hjort and other Norwegian investigators working with him. Here also it is important to use discretion in our interpretation. We have found that the ratio of the growth of the scale to the growth of whole fish is a changing one, but by allowing for this a fair approximation to the actual amounts can be made.

The scales of certain fishes exhibit, in addition to the checks, a varying width for certain, usually concentric, structures known as circuli. The interpretation of the width of these as depending upon the rapidity of growth would indicate that growth is more rapid during the first part of the growing season,

which view is confirmed by other methods of investigation. The seasonal growth may be studied by the statistical method, the scale method, or by a combination of the two, as well as by the method of direct observation, when this is practicable. Great differences in seasonal growth have been found. Many of our fishes begin rapid growth in spring or in early summer, but we have found that a certain flat-fish (*Hippoglossoides*) begins the season's growth in the Bay of Fundy in the winter when the temperature of the water where it lives is still going down. This fish is remarkable because of being able to grow when the temperature is below 32° F. Although the Bay of Fundy, from its having a higher bottom temperature than have other parts of our Canadian eastern coast, promotes the most rapid growth in this fish of which we have knowledge, it is unfavorable for it in other ways, giving a slower growth in later life, a lower maximum size, an earlier death, and no opportunity for successful breeding.

We have perhaps surveyed the ground sufficiently to show what an interesting and virgin field of research has been opened up by these recently developed methods for the growth-study of fishes. The importance of this work should be evident to everyone. Much of our fishery legislation will be altered by the results obtained in it, and it should show among other things beyond what age it ceases to be profitable to leave the fish of a certain species in the water, how intensively it is wise to fish a certain species, and how long it should take for recovery from overfishing.

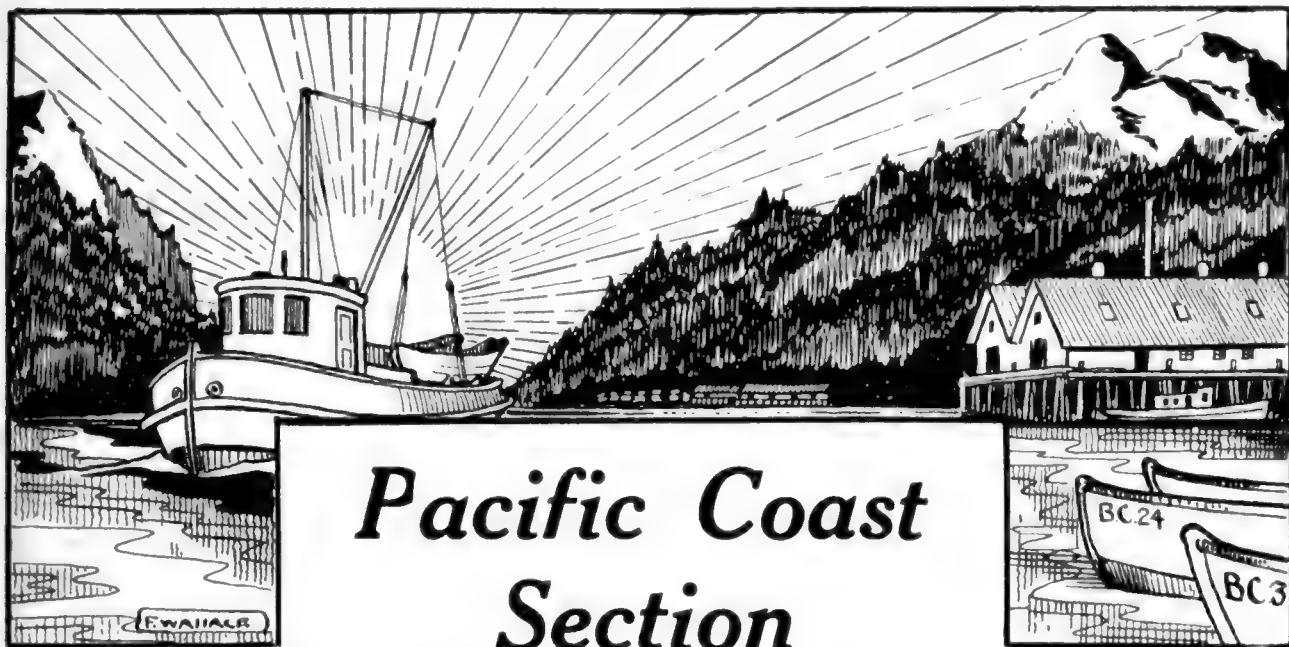
A WORK OF GREAT VALUE TO STUDENTS OF FISHES.

The Department of Conservation of the State of Indiana has recently issued two illustrated volumes detailing the result of a physical and biological study of the waters of Lake Maxinkuckee, by Dr. Barton H. Evermann and Howard W. Clark, that are of great scientific value to all students of nature and especially to those engaged in the practical study of fish life and problems.

Maxinkuckee Lake lies in northern Indiana and is typical of the many thousands of lakes of glacial origin in eastern central North America. The volumes contain a more accurate record of the aquatic life to be found in that lake than is known of the life in any other body of water in the world. The text and illustrations afford students of other waters a working model that is a scientific classic. The record of the investigation greatly increases our knowledge and understanding of the physics and biology of our Canadian lakes, since it contains accurate data on the life of fishes, their abundance, distribution, breeding and feeding habits, period and rate of growth, size at different ages, food value, parasites, diseases, enemies, relations to other species, season and method of capture, and many other records that are of value to those engaged in practical fish work.

There are thirty-three colored plates of such fishes as the large-mouthed and small-mouthed black bass, rock bass, blue-gill sun fishes, perch, white and black crappie, cat-fishes, and many minor fishes that are not often shown in colors, and there are innumerable half tones of unusual merit, all of which are of great aid to students.

The Commission of Conservation of Indiana has given to the world a most comprehensive, valuable and practical work.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd., 528 Winch Building, Vancouver, B.C., Canada.

COL. F. H. CUNNINGHAM IN ENGLAND.

Col. F. H. Cunningham, formerly Chief Inspector of Dominion Fisheries for British Columbia has arrived in England and is carrying on actively in the interests of the British Columbia salmon canners. Firms there are taking a great deal of interest in the canned salmon advertising campaign and something definite as to plans for putting the campaign into force will be forthcoming at an early date. The canned salmon market in Great Britain and on the continent runs from March to October. That is this is the most active season for the movement of this class of food-stuff.

At the present writing there is nothing available as to just what steps or along what lines the advertising campaign will take but these are being carefully considered by all concerned and it is hoped that in the next issue of the *Fisherman* more information in this connection may be given.

VANCOUVER WHOLESALE FISH MARKET.

Cod.—When the cod season opened for the sale of fresh local caught cod, the fishermen were on hand with a good supply, and the price opened at 15 cents but inside of a week after the first of the month the price had skidded with the result that today local caught ling cod are being sold at from 6 to 8 cents per lb. This is some drop and for the time being is really low priced food. It has really been a cause of supply and demand conditions.

Halibut.—Halibut is being quoted today at from 12 to 16 cents according to sizes. The supply is not very plentiful as there has been some stormy weather.

Salmon.—Red springs are quite plentiful and are selling at around 20 cents per lb. dressed heads off. The only supply is mostly coming from the West Coast of Vancouver Island.

Blue Backs are beginning to show up and are selling at 20 cents per lb. dressed heads on. This nice small fish is great eating just now, and should find a ready market.

Smelt.—These are local caught silver smelt and are very scarce as a result the price is high. They are bringing 17 cents per lb.

Shad.—This Columbia River fish is now on the market and is bringing 20 cents per lb.

Carp.—From the Columbia River is selling at 12 cents per lb.

Mackerel.—Fresh mackerel from California is now on the Vancouver market and is selling at 20 cents per lb. dressed heads on.

Sable Fish.—Fresh sable fish is scarce.

Herring.—Fresh stock is off the market.

Filleted cod.—The London Fish Co. say they are having some fine orders for their fancy filleted cod at 15 cents per lb.

Shell Fish.—Crabs are in good supply and also shrimps. L. Perrin & Co., are also handling lobsters and turtles, and report a good demand for frog legs.

MANY CANNERIES TO REMAIN CLOSED THIS SEASON.

The salmon packers will not operate nearly as many canneries this season as last. Outside of the following districts there will be practically no canneries in operation: Fraser River, Rivers Inlet, Bella Coola, Skeena River and Naas River. The B.C. packers are the only packers to operate on the same scale as last season. This means that practically the only districts operating are those in which the sockeyes are packed or other high grade salmon. As an illustration of the conditions that will exist the coming season it is reported that one cannery will have five former managers working.

"SKALU" SAILS UNDER LAY PLAN.

On April 4th the "Skalu" belonging to the Canadian Fishing Co., Ltd., sailed from Vancouver for the halibut grounds. The crew are working on a lay and good results are expected for all concerned. Capt. J. Fiddler was in charge of the "Skalu."

FISHERMEN NOT APPLYING FOR GILL-NET LICENSES VERY EARLY THIS SEASON.

Fishermen have not begun to apply for gill-net licenses in any large numbers so far this season is the report of the fisheries department in Vancouver. Those that have applied are securing permits until the regular licenses arrive from Ottawa.

WAGE AGREEMENT ON THE ALASKA PACKERS FLEET REACHED.

The dispute between the Alaska Packers' Association and the seamen on their fleet, which has held the fleet in port for some time past, has at last been reached is the report from San Francisco. This means that the fleet will sail before the end of April for Alaska. This has meant a great deal to a large number of workers. About 7,500 men were affected and until the wage question was settled the Company would not send the fleet North. As it is the fleet will now clear for Bristol Bay from San Francisco as soon as possible. According to the new agreement the men will accept payment of seven cents per fish and \$150 for the trip as against \$200 dollars for the trip last year, and nine cents per fish.

400 GALLONS OF DISTILLATE EXPLODES ON THE "INSKIP." ENGINEER BLOWN OVERBOARD.

The Canadian Fishing Co.'s "Inskip" is certainly a staunch boat. On March 24th, while off Egg island, Queen Charlotte Sound, the heater on the deck of the "Inskip" overturned and set fire to the distillate. Engineer Eckett was standing beside the tank containing about 400 gallons of this fuel and the explosion blew him overboard; at the same time setting fire to his clothing. There was a gale blowing and the vessel was facing heavy seas. The engineer was thrown into the heavy seas running but one of his shipmates threw him a life belt which he was fortunate enough to grasp and then Capt. Wells with another of the crew went after him in a small dory. After getting the engineer, who was badly burned, back on board, the crew proceeded to put out the flames which were by this time well under way. They finally extinguished the blaze and then, under sail, made for Takush Harbor up Smith Inlet. They finally made a logging camp and here Engineer Eckett's burns were attended to as the wife of one of the loggers was a trained nurse.

The Company's boat "Tartoo" was sent North to bring the "Inskip" down and reached Vancouver on the 1st of April. It was found upon examination that the hull of the "Inskip" had not been injured by the effect of the explosion or the flames, and the only repairs to be made was the replacing of the tank. This was done while the vessel was tied up to the Company's dock, and on April 12th the "Inskip" again left port for the fishing grounds. This speaks well for the builders of the hull, as there is sure some force when a tank of 400 gallons of distillate decides to expand under pressure. Engineer Eckett was able to sail with the vessel

BLUE BACKS ARRIVE.

The first blue backs of the season reached Vancouver on April 9th, and were eagerly snapped up by the wholesalers.

PRINCE RUPERT FISHERMEN NOW WORKING ON LAY.

The gasoline boats of the Canadian Fish & Cold Storage Co. are now all fishing on lay and good results are being reported although the catches will improve with good weather.

"WESTJACK" IN WITH A GOOD CATCH.

The "Westjack," owned by the Western Packers, Ltd., and in charge of Capt. Wagg, arrived in Vancouver on April 11th with 10,000 lbs. of halibut which sold for 9 and 12½ cents. The cargo was bought by the Canadian Fishing Co., Ltd. The "Westjack" is working on a lay and is meeting with good success.

OLD TRAWLER "CANADA" TO BE DEEP-SEA TUG.

The old iron steam trawler "Canada" built in Beverley, Eng., in 1892, and brought to the Pacific Coast by the British Columbian Fisheries, Ltd., and latterly purchased and operated as a halibut dory-man and a steam trawler by the Canadian Fishing Company, Ltd., Vancouver, has been chartered by Capt. Barney Johnson and will be used as a deep-sea tug.

Though almost thirty years old, the "Canada's" iron hull has withstood the ravages of time and she has yet a useful career before her. Her sister ship, the "Imbricaria" owned by the same company, are the oldest trawlers in the Canadian fleet.

A CONTINUOUS SUPPLY OF FRESH HERRING FOR BAIT.

According to recent reports from Prince Rupert, the halibut boats will not want for fresh herring bait from now on. The N.M. & R. Fishing Co., have been granted a permit to impound live herring for bait at Captain's Cove, Pitt Inland, which is about 50 miles from Prince Rupert.

Several hundred tons of fish are already impounded and a larger supply is being brought in. There are two boats at work seining the herring employing nine men in all. Capt. James Neville is in charge at Captain's Cove.

The halibut boats requiring bait receive same at Captain's Cove, after leaving Prince Rupert. American boats are served as well as Canadian boats, as authority for the sending of a customs man to Captain's Cove has just been received from Ottawa.

The taking of live herring will continue until well into the end of April and it is expected that there will be a sufficient supply on hand when the herring season closes to last well along into May and possibly later. When the pound at Captain's cove is filled another pound will be established nearer to Prince Rupert. After the taking of the live herring is over the two boats in use will be used to deliver bait to the halibut fleet.

The idea of impounding herring for bait has been talked of for some time past and apparently this effort is a well planned attempt to fill a long felt want among the halibut fishermen. In Alaska they have been impounding herring for bait for some time past and the results have been very beneficial. There was no waiting for bait and it was always in good shape.

HALIBUT HAS BEEN SCARCE.

Owing to bad weather in the North the halibut catches have not been as large as could have been wished. The weather is now improving and there should be some good catches landed.

STEAMERS TIED UP ON ACCOUNT OF ENGINEER'S STRIKE.

The trawlers of the Canadian Fish & Cold Storage Co. have been tied up for some time on account of an engineer's strike. It is hoped that a settlement will be arrived at soon as the weather conditions are now improving and good fishing should be had.

RED SPRING SALMON STILL TOO HIGH PRICED TO HANDLE LARGE QUANTITIES PROFITABLY.

With better weather on the West Coast of Vancouver Island the trollers are securing larger catches of red springs. There is, however, a tendency to hang back on buying as the price is altogether too high to land them in Vancouver and handle any quantity. The present wholesale price in Vancouver is 20 cents per lb., dressed heads off and it does not take many at this price to flood the market. Until the prices lower somewhat there will be no large quantities handled by the large firms.

THE CANNED SALMON MARKET.

The great question now agitating the minds of the holders of canned salmon is why should a man or firm cut prices when they cannot make sale. This is really an old out of date play in the great game of commerce. Until every other effort is made to move any kind of merchandise today the resort to price cutting is not made until every effort is exhausted. When the salmon canners get together and remedy this great evil that is spoiling their entire enterprise? It is pretty safe to say that the firm or perhaps individual that instigated the last cut in the price of canned salmon is not a believer in the art of advertising his goods, and the writer is pretty sure this firm is not a firm of canned salmon packers, but simply sells the pack. Why be influenced by those who are not up to date? Some people think that the only way to sell goods is by personal salesmanship. The only way that the canned salmon will ever be sold in Canada and other countries where genuine advertising is in use is by a properly conducted advertising campaign. This applies particularly to the lighter colored grades of canned salmon.

Strong efforts are now being made to stabilize the prices of all the lighter colored grades and the very fact that there are very few lots now moving should cause the canners to realize that now is the time to hold.

In the United States the price of these grades was firmed up by the advertising campaign that was started and good results have resulted from this campaign although it has not been carried on very long.

Mr. Henry Doyle, Vice-President of Northern B.C. Fisheries, Ltd., returned to Vancouver the first of April after several weeks trip to the East on business.

SOME EXPERIENCED MEN ON THIS HALIBUTER.

One of the halibut boats operating out of Vancouver with four men in the crew has three former skippers. We'll say this boat should bring in some fish unless the skippers have different ideas as to where to fish and each insists he is right.

POACHING REPORTED ON VANCOUVER ISLAND HALIBUT GROUNDS.

It has been reported that some of the smaller American halibut boats have been fishing inside the three mile limits off the West Coast of Vancouver Island. Chief Inspector Motherwell, of the Dominion Fisheries Department has despatched a fisheries steamer to this district to investigate.

PETITION FOR LARGER MESH FOR VANCOUVER SOLE TRAWLERS.

Wholesale dealers in Vancouver and sole fishermen who fish for soles near Vancouver are petitioning the Dominion Fisheries to have the regulations as to the size of trawl net mesh altered to increase the extension measure to 4 inches so that the smaller sized fish will not be caught. The matter is now under consideration by the department.

AMERICAN SHIP "COMPANION" SEIZED ON WEST COAST OF VANCOUVER ISLAND.

A ruling made by the Canadian Customs Department that no foreign vessel shall purchase fresh fish unless while lying at a port of entry, caused trouble for an American vessel on the West Coast of Vancouver Island. The customs officials received word that the American vessel "Companion" was creating a great deal of trouble for the Canadian buyers off the West Coast by buying fish from the fishermen. The customs men boarded the "Companion" and seized her for breaking the customs laws of Canada, after finding this to be the case.

BRITISH COLUMBIA FISHING AND PACKING CO. TO OPERATE SAME AS IN 1920.

At a recent annual meeting of the British Columbia Fishing and Packing Co., which is now the operating company of the B. C. Packers Assn., the board of directors was re-elected as follows:

President, W. H. Barker; Vice-President, Aemilius Jarvis; Directors, C. Sweeny, Wm. Braid, Robt. Kelly, J. M. Whitehead, E. E. Evans, all of Vancouver; E. W. Rollins, Boston, Mass.; Sir Henry M. Pellet, Toronto, Ont.; Mark Workman, Montreal; Geo. H. Smithers, Montreal; A. C. Flumerfelt, Victoria, B.C.

In announcing that the Company would operate fourteen canneries the same as last year, and put up about the same pack, Mr. W. H. Barker, President of the Company stated that although exchange conditions were adverse, at the same time there had been a good demand for the better grades of canned salmon at high prices although the lower grades had been neglected.

Referring to the annual statement, Mr. Barker referred to the fact that although the statement showed the usual profits at the same time it must not be lost sight of that these were at present about all in unsold stock. The company expect, however, to realize on the values placed on the unsold stock.

WHY CANADIANS MUST EAT MORE OF OUR SEA FOOD.

Dominion Offers Best Individual Market and is Capable of Quickest and Greatest Expansion.

It is estimated by people in a position to know, that fish consumption in the Dominion on National Fish Day exceeded that of any previous single day on record. What the actual consumption in pounds has been is difficult to estimate, but each of the larger centres throughout the country had extraordinary large sales on February 9. Montreal is said to have consumed more than 1,000,000 pounds, while Toronto is believed to have used more than half that quantity. Every effort will be made to induce people to hold to this increased fish ration throughout the year.

During the year 1920, Canadian fishermen produced between 800,000,000 and 900,000,000 pounds of fish. Or rather, they landed that amount. Had they been able to bring ashore and sell every edible fish they caught, their landings would undoubtedly have reached 1,500,000,000 pounds. It is estimated that one-quarter or less of the amount remained in Canada, which would bring the Canadian per capita consumption during that year between twenty and twenty-five pounds.

The United States lands about 2,000,000,000 pounds of fish each year, about two-thirds of which is taken off the Atlantic coast, or in waters not only equally but usually more accessible to fishermen operating from Canadian ports.

This would seem to make one point clear. We can land more fish in Canada each year. The fish are there, but we are to build up a market for them. Canada is the most important individual market for our fish, but as yet she is about the smallest consumer of sea food among the fish-producing countries of the world. Our fish exporters are improving their product each year and our foreign markets are developing. But the home market is stationary and has been practically so for years. If Canada is to forge ahead and take her position of justified pre-eminence in the fish-producing world, we must eat more fish at home.

ELIMINATE FISH FORKING.

Improved methods of handling fish are steadily working their way into the fisherman's operations. For some time past it has been impressed upon him that the use of the pitchfork really means partial destruction of the article which he hopes to market with profit. Some months ago the Fisheries Branch, Ottawa, circulated a poster indicating pictorially and verbally the injurious effects and the monetary loss occasioned by such primitive methods. The United States authorities took up the matter with their Atlantic fishermen at the same time and the combined influence seems to have been productive of some good results.

At a recent meeting of New England fishermen a strong movement was advanced to do away with the pitchfork altogether and use some other method which will not bruise or mutilate the fish. A good many in New England and along the coast of the Maritime Provinces have already abolished the fork and it is expected that before long the fish-fork with destructive prongs will be a thing for the museum.

CONSERVATION OF OUR FISHERIES.

In the time of Simon Peter and Andrew his brother, when hand nets were the most up-to-date gear for catching fish, and fishermen knew when their hauls continued to be light, that they had fished out a particular area. But, in these days, when demand may be increased and stimulated by long distance transportation facilities, the introduction of modern methods of fish catching, like the steam trawl, in which tons of fish may be taken at a lift, it is not easy to determine quickly and accurately whether a given fishery is being fished out. Intensive modern methods of fishing may for a few years give a larger catch, even when the supply of fish is diminishing. Depletion is therefore an insidious thing, creeping upon our fisheries before we know it. Sometimes it is far advanced before we even suspect its beginning.

But there is one pretty sure way of detecting it—that is by statistics of catch (not of value) over a period of years. If the catch keeps going down year after year, we may be sure, despite intensive methods of fishing, that the species under observation is being cleaned out. A statistical enquiry of this sort shows that there are several species of Canadian fishes in process of depletion. One of these is the sturgeon, a fish caught in large numbers years ago in the Great lakes, especially Lake Erie, and which was highly esteemed for its edible qualities. As late as 1900, the annual catch of this fish amounted to 2,645,722 lbs.; by 1910 it had decreased to 1,036,400 lbs., and, in 1919, only 27,700 lbs. was taken.

The shad, also, is almost extinct in our waters. In 1885, the catch was 14,535 bbls.; twenty years later it was 6,265 bbls.; in 1915, it went down to 3,867 bbls., whilst in 1919, production was only 1,038 bbls.

The "big run" of the valuable sockeye salmon, which occurred every four years on the Fraser river in British Columbia, is a thing of the past, due to over-fishing and to a rock slide near Yale during the construction of the Canadian Northern Railway, preventing the salmon from ascending the river to spawn in the tributary streams and lakes of the upper river. There are other fisheries, too, which a statistical study shows to be declining for Canada as a whole, and many individual streams and bodies of water are being depleted of valuable species. This is especially true of game fish which bring so many thousands of dollars worth of tourist trade into the country every year.

The remedy lies in prevention of over-fishing and in planting fry to replenish fished-out waters. It is remarkable what fish culture will do to rehabilitate our fisheries. In 1912, the Commission of Conservation, after a careful statistical study of whitefish production in the Great Lakes, represented to the Government that the supply of this valuable fish was being depleted and showed that the small annual plant of fry then being made was quite inadequate to make good the loss. Later, the Government increased its fish culture facilities and made larger plants of fry. The results speak for themselves. In 1910, the whitefish catch was 12,772,300 lbs. In 1915, it rose to 15,352,900 lbs., and in 1919 it reached 19,740,300 lbs., in spite of the heavy consumption of these fish during the war years. Private interests also have proved again and again that the planting of fry in streams and smaller bodies of water pays good dividends.

Alert public opinion and a well-informed indepen-

dent press are the most powerful assets in conserving all natural resources, fisheries included. The onus rests on you and me and our neighbours to take an interest in these things which, too often, are nobody's business because they are everybody's business, and, through private influence, press, and fish and game clubs, the makers and administrators of our fisheries laws should insist upon the conservation of our natural wealth.—
Conservation.

SOME RESULTS OF A STUDY OF THE HERRING OF LAKE ERIE.

The following extracts are taken from an illustrated lecture delivered by Prof. W. A. Clemens, of the University of Toronto.

This study was undertaken for the Biological Board of Canada in response to a request from the Lake Erie Fishermen's Association for such an investigation.

A very brief summary of the results follows:

I.—Species of Herring Found in Lake Erie.

In the western part of the lake four species have been identified:

a) **Jumbo Herring.**—(*Leucichthys eriensis*).

This herring formed the bulk of the catches in the pound nets in the vicinity of Merlin during the summer of 1920. The distinguishing characters are the more or less pronounced "hump", the very deep body, and the short broad tail. This appears to be a herring peculiar to Lake Erie.

b) **The Lake Erie Herring or Grayback.** (*L. artedi*).

This herring occurred in varying numbers in the catches all summer. It can be distinguished from the jumbo herring which it closely resembles by the very much narrower tail, the narrowed body and the smaller lighter scales.

c) **The Lake Huron Herring.** (*L. sisco huronius*).

This herring is the typical shallow water herring of Lake Huron, and occurs abundantly in the western portion of Lake Erie. It has a long spindle-shaped body and long narrow tail.

d) **The Georgian Bay Herring.** (*L. harengus*).

Only a few specimens of this species were observed in Lake Erie. It is an extremely slender fish.

In the eastern end of Lake Erie, that is around Long Point and eastward, four species have been identified.

a) **Jumbo Herring.**—It was fairly abundant around Long Point, but apparently decreases in numbers to the eastward.

b) **Lake Erie Herring.**—It was taken quite abundantly in the pound nets between Port Dover and Port Maitland.

c) **Lake Ontario Herring.**—Only a few specimens were taken which agreed with the descriptions and measurements given for the shallow water herring of Lake Ontario.

d) **A deep water or longjaw herring.**—This species is extremely abundant in the eastern portion of the lake. It formed the bulk of the gill net catches at Port Maitland in August and November 1920. It will probably prove to be identical with the longjaw of Lake Ontario or a variety of it.

The two chief herring of Lake Erie then, as they occurred in 1920 were the jumbo herring of the middle and western portions of the lake extending somewhat

into the eastern end, and the longjaw herring of the deeper waters around Long Point, and east of it and extending to some extent westward.

2.—Rates of Growth.

Examination of the scales for the purpose of estimating the rate of growth of the various species shows that the jumbo herring grows much more rapidly than any of the other species in Lake Erie. While a longjaw herring of five years of age reaches a length of about 10 inches and a weight of 9 or 10 ounces, the jumbo herring of the same age reaches a length of nearly 14 inches and a weight of nearly 18 ounces. The Lake Erie herring has a rate of growth much like that of the longjaw. It is quite apparent that in any future work in the artificial propagation of herring in Lake Erie that the spawn of the jumbo herring should be used chiefly and the spawn of the longjaw to some extent for the eastern end.

3.—Food.

The stomach contents of herring from all parts of the lake have been examined in order to obtain more accurate information as to the food. The results show that the herring feed almost exclusively on microscopic animals belonging to the group Crustacea, to which also belong the crayfish, lobster, crab, shrimp, etc. The longjaws from the deep water, feed chiefly on a larger shrimp-like. The number of these microscopic animals which must abound in the waters of Lake Erie in order to support the millions of herring and other fish must be enormous.

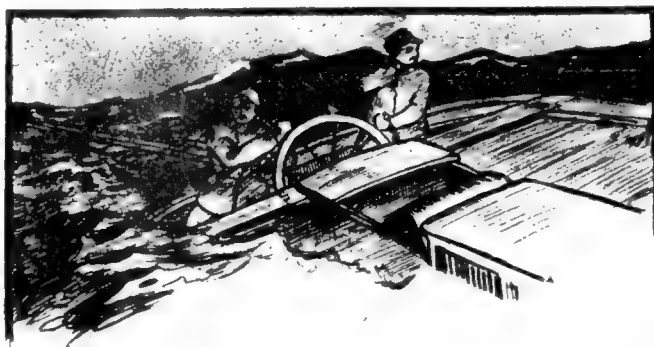
As stated previously the results obtained from this study merely point the way to a host of unsolved problems. Our knowledge of the distribution of the various species and their movements is very limited. We know little of the distribution and movements of the food organisms; of the temperatures of the water at all depths and at all seasons, and its effects on the movements and distribution of the herring and their food organisms. We need to have more accurate information regarding the spawning and the habits of the young; of the predaceous enemies, parasites and diseases. Until all this information is available, our regulations must be based on more or less insecure foundations.

UNUSUAL THING IN FISH CULTURE.

The spawning of female grilse is rather an unusual occurrence, and has rarely been recorded in the annals of Canadian fish culture. For the information of the uninitiated a grilse is the young of the salmon on its first return from the sea. The superintendent of the salmon-retaining pond at Miramichi, New Brunswick, during the season just closed, spawned two female grilse, neither of which weighed over 3½ pounds.

During the season of 1920 the run of grilse in the Atlantic rivers has been larger than for many years past. The eggs taken from the two female grilse have been kept separate and are now in good condition at the hatchery. The loss has been normal and not more than the average loss in the salmon eggs.

Students of fish culture will be interested in the development of these eggs, and the department is taking every care to have each process in their development closely watched and recorded.



STORIES of the SEA

AND THE

Grand Bank Fishermen

by *FREDERICK WILLIAM WALLACE*



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NOVA SCOTIA PAPER ENDORSES CAMPAIGN FOR DISTINCT FISHERIES DEPARTMENT.

The North Sydney "Herald" of February 4th devotes a two column editorial to the CANADIAN FISHERMAN's campaign to secure a distinct Fisheries Department with a Deputy Minister in charge. The "Herald" says in part:—

"The 'Canadian Fisherman' has again taken up the movement to have a fisheries department of the Dominion government, distinct from the marine and naval departments. Some time ago the Canadian Fisheries Association, composed of the men most actively interested in the progress of the fishing industry, found after study of what the fishing industry needed to take its proper place as a source of wealth and employment in Canada, that one of the most pressing needs, if not the most important, was a separate department of fisheries, or at least a deputy minister of fisheries, the position to be filled by a man well informed on the fishing industry and acquainted with its needs. The association passed a resolution to this effect, which was duly laid before the government of the day. The government was urged to give the industry this status, and it was pointed out how this would help in expanding the fisheries of Canada. The usual consideration was promised, but nothing was done. At various times since this proposal has been urged by those interested in the industry, but without result, and the 'Canadian Fisherman', a publication well informed on the industry, evidently thinks the time is opportune to again bring the matter to the front.

The 'Canadian Fisherman' points out that the administration of Canada's tremendous fish resources has always been a side line of some government department. It was first tagged on to the marine department, then to the naval service. Then it was kicked back to the marine. Now it is paid the least attention of the three branches of the department of marine, fisheries and naval service. There is an assistant deputy minister of fisheries under the minister, but he

has no real authority, and with the red tape that ties up the departments at Ottawa can only reach the minister thru the deputy minister. There has never been a deputy minister, the 'Canadian Fisherman' says, who really knew the fisheries end of the work, and besides the marine and naval service branches of the department were always considered the most important, received the most attention, and took most of the expenditure allotted to the department.

It is perhaps too much to expect the creation of a fisheries portfolio in the government. There are too many ministers now, and every minister means the appointment of a staff and satellites numbering a small army. The request of the Fisheries Association, however, is a reasonable one, and would not add much to the expense of the department. All they ask is the appointment of a qualified man as deputy minister of fisheries, and to have the fisheries work administered distinct from the marine and naval service, by which it is now overshadowed. This would lead to the proper governmental assistance being given to the development and encouragement of the fisheries, as has been done with agriculture under its department. The 'Canadian Fisherman' asks that all who are interested in encouraging and developing Canada's fisheries give this request their support."

AN INTERESTING STUDY REGARDING HABITS OF SALMON.

It is generally known that there are two runs of salmon each year, in the spring and in the fall. The fish spawn only in the fall but some enter rivers and streams in the spring, remaining there until the fall, while others remain in deep water until two or three weeks before the spawning period. An interesting problem which has been under investigation by the Fisheries Branch, Department of Marine and Fisheries, Ottawa, is to find the frequency with which salmon spawn, and whether the fish of the fall runs and their progeny always come in the fall runs.

The Department has for several years, after stripping the salmon, and before releasing them, marked a number with a distinguishing tag attached to the dorsal fin. In the year 1919 thirty-one marked salmon of the spring run were recovered in the spring, and none in the fall; of the fall marked salmon, about 80 per cent recovered returned in the spring run, and 20 per cent in the fall run.

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Official Organ of the Canadian Fisheries Association

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GARDENVALE, P.Q., MAY, 1921

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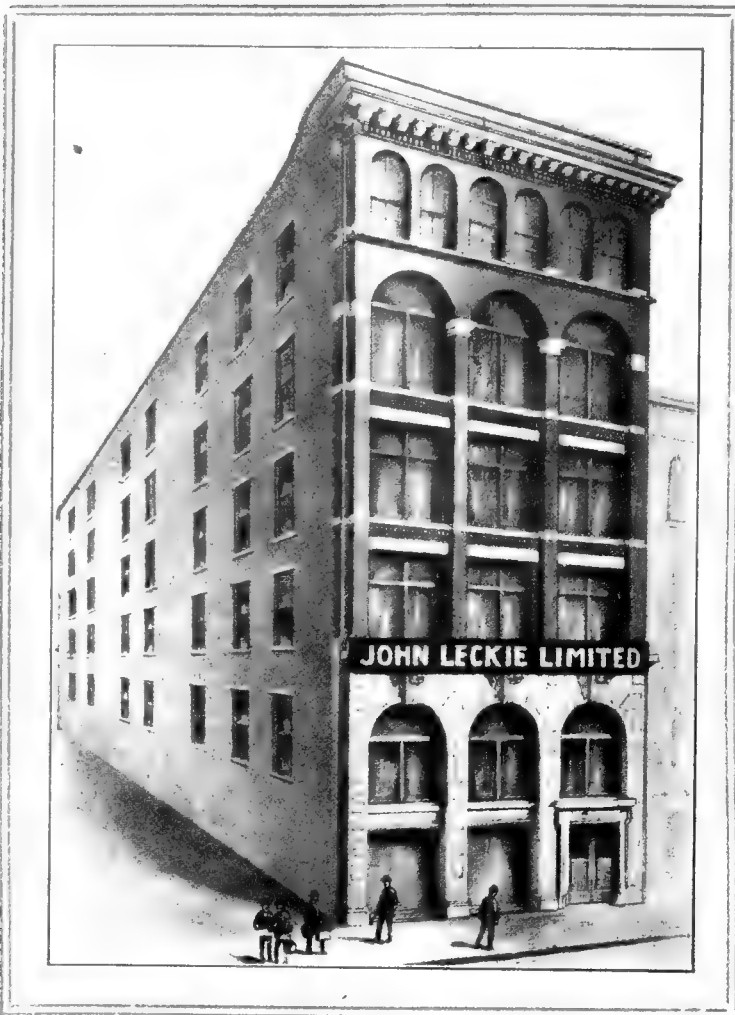
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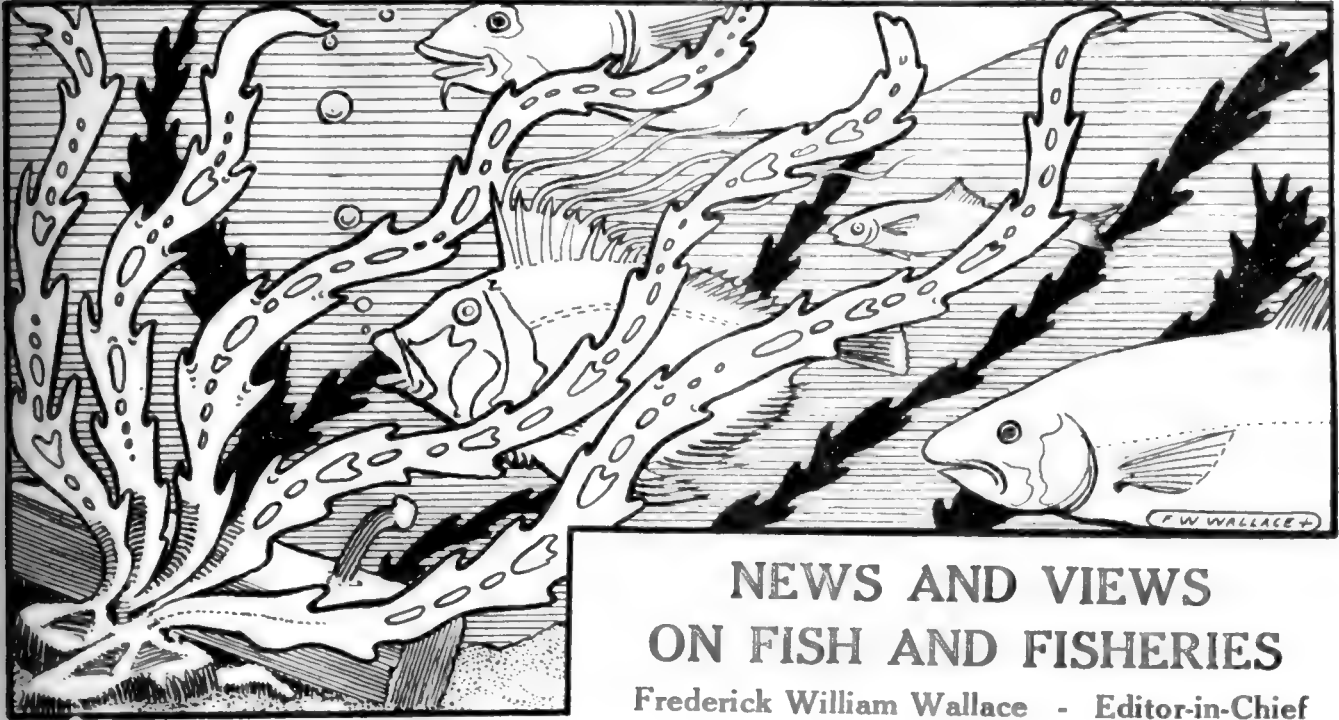
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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

A FALLEN IDOL.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

It would seem as though a parallel case to ours is to be found in the English fishing industry. The fish trade over there is cursed with a "side-line" administration and a plea for a Deputy Minister of Fisheries was made in the House of Commons recently by Mr. Pretzman. His arguments are worth printing as they are practically a repetition of our own. Says Mr. Pretzman:

"I wish to say a word about fisheries. I want to ask my right hon. friend, in the first instance, what arrangements are now made in his Department as to a Deputy Minister of Fisheries. He will remember that there has been a very serious complaint made by the fishing industry that they have no representative in Parliament to whom they can go and who will mother them and look after them and be responsible for their interests. They are tacked on to agriculture, which, of course, occupies the major attention of the Minister of Agriculture, and I think it is not perhaps sufficiently recognized in a time such as this, when we want to get back to production as quickly as possible, what an enormous advantage the sea-fishing industry has over every other industry in the country. You have not got to produce anything. Nature does it for you. The fish are there in the sea, and all that is required is that there should be proper arrangements, first, for catching them, and, secondly, for distributing them and placing them on the market; and also, as in the mind of every hon. member, if there is an industry to which this country is deeply indebted for war services, it is the fishing industry."

The present cabinet and the Minister of Marine and

Fisheries of Canada cannot present any reasonable argument in defence of the existing unsatisfactory system of administering the fisheries of the Dominion. It is just a case of not wishing to be bothered with the small task of reorganizing the Department and passing an Order-in-Council to effect same and appoint a Deputy Minister.

Hon. Mr. Ballantyne has neglected the fisheries section of his portfolio. He will continue to neglect it as long as he has to devote his thoughts and time to squaring up the troubles of the Canadian Government Merchant Marine. He will continue to neglect it as long as he and the Member for Lunenburg engage in verbal duels on the Merchant Marine. He will continue to neglect it when he journeys to Europe shortly that he might be handy to the Imperial Conference when Dominion Naval affairs are discussed.

When Hon. Mr. Ballantyne took the portfolio of Marine and Fisheries, the fishing industry held the hope that, with a smart business man heading the Department, a new era of fisheries administration would be inaugurated. As a business man, we hoped that he would see the necessity for developing the fisheries of Canada as one of the natural resources with great potentialities, and that he would, at once, set to work and organize a distinct fisheries department with a Deputy Minister in charge whose duties were confined to fisheries alone.

But Mr. Ballantyne's tenure of office has been one of marine and naval activities. He has launched Government ships; he has inspected ship-yards, welcomed the Canadian Navy to Halifax, and toured the ports in the interests of harbour construction, but his interest in fishery matters has been negligible.

He has been in many fishery centres but the fish trade never saw him. He showed no interest in them nor expressed any desire to meet fish men and talk things over.

It is too bad, as many splendid things might have been accomplished to lift our fisheries out of the rut had Mr. Ballantyne put as much energy into developing

the fisheries as he has in building up merchant marine, harbors and navies.

It is apparent that Mr. Ballantyne is not the Moses who will lead us out of the wilderness. He is not likely to interest himself in fisheries at this stage of his administration. The successful business man has become inoculated with the Ottawa atmosphere and absorbed political doctrines and methods of procedure until he is just as smart a politician as he was a business man—which same is to be regretted in his case.

THE NEW SALES TAX ON CANNED AND MEDICATED FISH.

In effect on May 10th, 1921, a sales tax of 1½ per cent must be collected on sales and deliveries by Canadian manufacturers or producers, and wholesalers or jobbers, on fish, canned or medicated. In respect of sales by manufacturers to retailers or consumers, the sales tax shall be three per cent (3%).

We presume this means that a producer selling canned fish to a distributor or jobber collects the 1½ per cent sales tax and another 1½ per cent tax is collected by the distributor or jobber when he sells to retailer. If the producer sells direct to retailer or consumer, the tax to be collected will be 3 per cent.

We understand that a license is necessary under the new excise Act and same can be secured from the nearest Inland Revenue office at a fee of two dollars.

Returns must be made as from May 10th. "Medicated" fish is understood to mean fish oil, such as cod liver oil, prepared for medicinal purposes.

INSPECTION OF CANNED SALMON URGENTLY NEEDED.

At no period in the history of the salmon canning industry of Canada has the necessity for compulsory inspection of canned salmon been so obvious. The falling off in the pack of red salmon, and the necessity for building up a market for pinks and chums to take their place at attractive prices, has created a situation whereby the market dictates just what is necessary to command the trade.

The Canadian Export Pioneer—a London, (Eng.) journal devoted to the building up of trade between Canada and Great Britain—in a recent issue quotes the following relative to the Canadian canned pink salmon;—

".....among the importing houses in England, past experience with the lighter grades of salmon is not forgotten, and it is quoted as a serious warning. In this connection, Mr. Powell, of Powell Brothers, 3 Eastcheap, London, E.C., told the "Pioneer" that after visiting Canada in 1911 he came back with the idea that the red salmon pack was steadily decreasing, and that it would be to everybody's ultimate benefit to push the trade in pinks. His firm, in fact, bought a lot of the pink fish, but their business was seriously interfered with by the inferior quality of some of the fish delivered. Finally, they got to know where the good and bad packs originated, and by importing only certain packs they built up a moderate business in pink

salmon, which was going smoothly at the beginning of the war.

Then, when the Government of the United Kingdom, under the food control, bought large quantities of pink salmon from Canada, Mr. Powell stated that they received some outrageously bad deliveries. Some of the so-called pinks were chum, and some of the parcels, it is alleged, contained a considerable percentage of tainted fish. During the continuance of food control these goods were held in reserve and when labour troubles threatened they were moved into the interior towns and stored in places unsuitable, all the usual storage accommodation being already congested. The result of all this was that the pink salmon was allowed to become in many respects further deteriorated. When the reason for keeping it had disappeared, it was sold at exceedingly low prices. The distribution of these goods injured the demand for salmon of all kinds, and the trade's view is that it will be a stiff business to get the demand fully re-created.

To-day, selected parcels of Canadian and Siberian salmon are offered at prices far lower than the price realized by the Government stores, and yet there is still little sale. This refers particularly to 1 lb. tins. The ½-lb. tins are in small supply and prices have accordingly firmed, but the demand is very limited, and prices are firm mainly because the stock is in strong hands."

A cable from London to the Montreal Gazette, dated April 28th, says in part:—

"The quality of Canadian fish, both canned and frozen, now being shipped to England is much better than some sent during the war, which is alleged by British importers to have given Canadian packers a bad name. A leading member of the canned goods section of the London Chamber of Commerce told your correspondent that of 25,000 cases of salmon which was sent as a gift to England by Canada during the war, some was given to the German prisoners, and much of the rest was so inferior that it had to be thrown away. "The gift was well meant, but a large part of the shipment, which was supposed to be pink salmon, was really chum," said this man, who is a member of one of the largest London importing houses. "There is a good market here for pink salmon, but for the credit of Canada, she should not try to send us any more chum."

The English importer quoted makes an unfounded statement when he talks about the gift of 25,000 cases of B.C. Salmon being inferior. These fish were rigidly inspected before shipment and were of first class quality and the publication of such a statement regarding them is being vigorously resented by the B. C. Government and the salmon canners. However, the utterance of such a remark is undoubtedly prompted by the poor quality of certain Canadian salmon received since British Columbia's gift.

Present conditions in the canning industry require that a demand for pinks and chums be built up in foreign markets by goods that are low in price and high in quality. Consignment shipments of "off-color" stock are killing the business and are responsible for such remarks as those quoted.

Inspection of a compulsory nature by the Canadian Government will have to be organized some day. It should be put into operation NOW.

THE FISHING SCHOONER RACERS.

All the new schooners destined to make a try to either defend or challenge for the International Schooner Race trophy are now at sea pursuing their lawful occasions. The American schooner "Mayflower" effectually trimmed the Gloucesterman "L. A. Dunton" on the various legs towards the Magdalen Islands, and it would appear as though the "Dunton" had no chance with the yacht-like Bostonian.

The "Bluenose" is on the Banks but showed no wonderful turn of speed up to the present; the "Canadia" appears to have impressed the sailing fans as being the slipperiest of the two possible challengers. However, when a vessel is loaded up with fishing gear, she is not in fast sailing trim and it is too early to judge.

The "Mayflower" still remains the storm centre of controversy. The fishermen of the Maritime Provinces and Gloucester contend that she is a camouflaged yacht and could never pay her way as a fishing vessel. Until she lands her season's trip of fish, it is too early to judge.

PRINCE RUPERT CAR SITUATION CLEARING.

Reports received by the Prince Rupert Branch of the C.F.A. show that construction on the new express refrigerator cars is well in hand and that the first car should be delivered for duty in May and the balance in June.

Reports of car shortage for April in the northern B.C. port show that the fish trade is still suffering, but it is admitted that the C.N.R. are giving good service with the cars at their disposal. The G.T.P. cars are all right, but those of the C.N. and C.G.R. are not equipped for travelling on most of the U.S. railroads, consequently their routing has to be confined to Canadian lines. A change in the trucks of these latter cars would fit them for wider service and it is possible that the Fisheries Association will urge that such change be made.

NEWFOUNDLAND FISH FORECAST.

The most rigid economy is being practised by merchants and fishermen in outfitting for the season's fishery this year. The price of dried codfish this Fall is forecasted as being around \$6 per quintal.

FRIED FISH SHOPS ABROAD.

The fried fish restaurant is being recognized as an important factor in providing lower living costs. German fishery organizations propose commencing a campaign to popularize the use of fish in Germany and consider that the fried fish shop is the best means of doing so. The scheme is mooted to organize a multitude of such shops throughout the German Republic.

PRESIDENT HAGER LOSES MOTHER.

Mrs. Mary T. Hager, mother of Mr. A. L. Hager, President of the Canadian Fisheries Association, passed away in Chicago on April 10th. Mr. Hager and other members of the family were with her at the last.

The late Mrs. Hager was a very unusual type of American woman and was characterized as one of the most progressive and highly educated women of her day. Born in England of English parents, Mrs. Hager came to America with her parents when a baby. She was educated at Iowa University and after graduating, took up the study of law. Graduating from the Iowa Law School, she became the first woman lawyer in the State.

A prominent advocate of women's suffrage and a president of the Ladies of the Grand Army of the Republic, the late Mrs. Hager held a commanding position in the social and political world. Her interest in Chicago philanthropic works endeared her to many in that city.

DEATH OF A. BOUTILIER, OF CENTREVILLE, N.S.

Digby, May 6.—The death occurred on May 4th of Alfred Boutilier, of Centreville, the head of the well known firm of A. Boutilier & Co., after an illness of apoplexy of but two hours' duration. He was born near Halifax and was 61 years old. As a young man he went to Centreville about forty years ago. Entering the fish business he gradually built up a large trade and the firm founded by him has been in the fish trade of western Nova Scotia for years.

CANNED SALMON PROPAGANDA.

Says the Canadian Export Pioneer in its April issue referring to Col. F. H. Cunningham's mission to Europe on behalf of the B. C. Cannery:

Lt.-Col. F. H. Cunningham's suggestion to the canned goods trade in England, for a co-operative advertising campaign to promote the consumption of canned salmon, is meeting with an encouraging reception. After an interview with the canned goods traders in Liverpool, Lt.-Col. Cunningham was invited to address a special meeting of the Canned Goods Trade Section of the London Chamber of Commerce, at which representatives of leading importers approved his idea as an excellent one, and the formation of a committee was suggested to take up the matter. The Colonel's scheme, put forward on behalf of the salmon canners of British Columbia, is to form a propagandist association to be called the "Associated Salmon Industry of the World," whose particular concern would be to educate the public on the value of the lighter coloured varieties of salmon, which are cheaper than the red salmon, but suffer, on account of their colour, disfavour that is unmerited from the point of view of food value. The association would remain an extensive advertising campaign for a year, estimated to cost £23,000, a feature of which would be the distribution, in conjunction with press advertising

and demonstrations of millions of copies of a booklet showing "101 ways of serving salmon." No mention would be made of brands or countries or origin, so that all salmon exporting countries would be able to participate in the scheme. The imports of canned salmon to the United Kingdom being about 1¼ million cases per annum, the estimated cost of the campaign represents roughly 4½d. a case, and Lt.-Col. Cunningham's proposal is that one-third of the £23,000 should come from the producers, one third from the importers and brokers, and the remainder from the distributors. There was a feeling at the London Chamber meeting that the canner should bear a larger share of the cost, as it was he who was chiefly interested in increasing the consumption of salmon, whereas to the importer and distributor, salmon was only one of several lines of goods handled in his business. This would appear to be not an unreasonable suggestion, and practical acknowledgement of the point, by the salmon cannery, would no doubt help to recommend the scheme to the other parties concerned.

QUEBEC FISHERIES JURISDICTION.

Since the decision of the Privy Council that all rights of jurisdiction over Quebec's tidal fisheries, and fisheries in waters accessible to navigation from the sea, are invested in the Federal Department of Fisheries, the Quebec Government fishery authorities refuse to relinquish the right to grant licenses for fishing in Quebec waters.

In a statement to the Quebec Telegraph, the Hon. J. E. Perrault, Provincial Minister of Colonization, Mines & Fisheries, states:—

"The decision of the Privy Council, dated November 30, 1920, has not given the Ottawa Government any rights which it did not have before. The Federal Government, under the constitution, has the right to regulate fisheries, and the Province of Quebec has never interfered in this respect.

"In a judgment given out by the Privy Council in 1918, the federal authorities were given the right of administering fisheries in the province of British Columbia, but Ottawa never interfered.

"However, when it comes to the right of granting licenses to fishermen to instal fishing apparatus, the Government of the province of Quebec is the only one which can issue permits in navigable or non-navigable waters, whether they are tide-waters or not.

"The public is the first to benefit from the recent judgment, since its right to fish has been recognized by the Privy Council.

"I cannot understand the reason why the federal authorities are now asking fishermen to secure federal licenses when the authorities never before imposed such a ruling. It is simply to annoy us or try to get some of the provincial rights. Whatever may be the

cause of such action, we will not give in and will not relinquish any of the rights we now possess.

"The province of Quebec is the owner of its territory and only the province may issue licenses for fishing apparatus attached to the ground. Ottawa has no right to give licenses and consequently fishermen must apply to the Department of Fisheries, Colonization and Mines, in Quebec, as heretofore, for these licenses."

FISHING BOUNTY.

M. H. Nickerson, commissioner of fisheries for Nova Scotia, has launched an agitation to induce the Canadian Government to place at the service of the fishing industry a matter of over half a million dollars, which, it is claimed, should have been paid in fishing bounties years ago. In 1877 the Joint Fisheries Commission made what is known as the Halifax award, under which the United States was required to pay to Canada the sum of \$4,500,000 as indemnity for certain privileges enjoyed by American fishermen in Canadian waters during the life of the Washington treaty. The United States paid over this sum in 1878, but Ottawa was not prompt to recognize the interest of the Maritime Provinces and Quebec in the expenditure of this money. It was not till 1882 that the Maritimes succeeded in having their claims to a share of the indemnity recognized. The leaders of the agitation were John Lovitt, of Yarmouth, and J. S. Eissenhauer, of Lunenburg, both of whom were largely interested in the Grand Bank fishing vessels. Their idea was that the interest on the money paid over by the United States should be distributed annually in the form of bounties, and Ottawa was persuaded to make the bounties to the vessel interests proportionately large, although the indemnity mainly represented payment for privileges which the American fisheries had enjoyed in our inshore waters.

Mr. Nickerson's argument is that the Canadian Government owes the fishing industry the interest on the indemnity for the four years previous to the first distribution of fishing bounties. This at three per cent would amount to a little over half a million. It is not suggested that the Canadian Government should distribute this sum in the form of additional bounties, but that the money should be placed to the credit of the industry to be used for purposes hereafter to be determined. Mr. Nickerson is of the opinion that the use of this sum would be most beneficial if applied to the general improvement of the producing, preserving and distributing branches of the industry; for instance in making provision for cold storage at points where cold storage is most needed.

Representations in regard to this matter have been made to the Government of Nova Scotia, New Brunswick, P.E.I., and Quebec, but as yet they have shown no eagerness to act, perhaps because they have other outstanding claims against the Dominion Government still unsettled.—C.M.

SELF-PROTECTION.

"You admit, then," said an Alabama judge, "that you stole the hog?"

"Ah sure has to, Jedge," said the colored prisoner.

"Well, nigger, there's been a lot of hog-stealing going on around here lately, and I'm just going to make an example of you or none of us will be safe."



Springtime Musings on Selling Fish in Canada

Plain Talk from a Practical Man.

By PISCATOR.

The future holds tremendous possibilities for the fish business in Canada. I am referring now not to the productive end of the industry, but to the development of Canada as a market for our sea products, chiefly in the fresh state. The key to the situation lies in the evolution of a system of distribution, and the volume of fish consumption of future years will be measured by the degree of efficiency attained. There is a lull just at the present time in the expansion of our population due to immigration restrictions. Now the fish trade should be making preparations for the provisioning of the great influx of fish-loving people, bound to occur as soon as the barriers are let down. If we wait until the flood starts the fish trade will play a role of decreasing importance in exact inverse ratio to the increase of population. We must keep abreast of the times and that means making adequate provision for the future, as well. I think I am not sacrificing my claim to conservatism when I estimate a hundred per cent increase in population in the next twenty years. Is the fish trade ready to provide for that? They must eat. If not fish, then something else.

As I have said, the future of the trade is involved with the question of serving the public. By distribution is implied not only the actual transportation of fish from landing stations to inland centers, but every transaction and handling necessary from the time the fish is taken from the water till it is delivered to the consumer. Our present scheme of distribution—well “there aint none.” Our mode of getting sea food to the consumer is not systematized. Like Topsy “it just grewed”. Experience with things of this nature, just as with the “self-made” man, shows that while they look all right on the surface, they do not bear close investigation. The more you study the more serious the flaws. Drastic changes are needed, and needed now. Five years hence they may be impossible.

In the outset, there are a few quite obvious truths which should be set down. In building up our local market for fish, Canada cannot adopt precedent. There are few for us to go by. England, undoubtedly, has an admirable fish service, but Canada is a country of vast distances and scattered population. Nor can we learn much from our neighboring republic. Like us, she has no adequate fish service, but her plight is worse. We have a chance to prepare for our future population. She has passed the stage where preparation is possible. We are yet in shallow waters where we may learn to swim. Our American fish traders have neglected to learn to swim until they find themselves in the vortex of the current. Their survival means hard work. In Canada the trade must strike out. Is it true that we are afraid to

take our feet from the bottom, figuratively speaking? We have our own problem to solve in the light of our own experience.

The first doctrine of my credo is this:

The public cannot be given adequate fish service by mongrel provision stores.

I do not refer to stores who have various lines on a departmental basis—in reality a collection of stores under one roof and one management—but to provision stores where fish is a sideline. In such places fish cannot be sold successfully. The grocer may make an apparent profit on his fish, but he loses trade in other lines by the objectionable fish display. Not only that, but he discourages the development of a fish appetite among his customers by presenting it to the very worst advantage. He has not the facilities for handling fish. In fact he knows nothing about it. It is no more his line than selling art pictures or agricultural machinery. He damns the business.

The sideline fish store in populous communities will never give satisfactory service. In country places the “general store” must function in this way, but fresh fish is not usually in demand where such an establishment suffices. Anyone who has taken the trouble to observe, knows that the environment has a lot to do with a customer. If I go into a grocery store that reeks with the odor of fish, with unsightly fish displayed without ice or without even protection from flies, my first impulse is to escape, then my stomach, naturally offended, dictates to my think-piece,—“No more fish for me.” But when I strike into a thoroughbred, pedigreed fish store and my nostrils take in good fresh air, untainted by foreign odors, where my eye is greeted with an array of immaculate white walls, counters and slabs, and a neat array of fish under glass cases, refrigerated and protected from flies. I feel my physiognomy assuming that expression which I have so often envied on that chap with Beecham’s pills. It’s a grand and glorious feeling. “I’ll have some of that. Yes, I’ll take it with me.”

I know the counter argument. These provision-plus-fish stores scattered all over a community give a wide distribution. That sounds all right in theory. But the fish they sell is fish that is absolutely needed, bought by people with an inordinate fondness for fish, or forced to eat it by religious direction. I venture to say that no one ever developed a fish-eating habit through their agency. A community of any density of population will maintain an up-to-date fish store. Give service and patronage is assured.

To encourage people to get into the retail fish business in real earnest—that is the problem. Are we prospective swimmers afraid to take our feet from the ground?

The second doctrine:

To retain the confidence of the people, traders must give reliable, conscientious service.

You know you can fool some of the people some of the time, but you can't fool them always. Traders are fools who believe a customer will not detect a bad fish. Some may consider it a stroke of genius to palm off a putrescent fish on an innocent customer. Personally, I think it much better business to throw it away. Your customer may say nothing, but later on you may scratch your head and inquire: "Why has Mrs. Brown stopped buying fish?"

The two senses in the human being which almost invariably endure while life lasts, though the others may weaken or fail, are tasting and smelling. Therein lies the failure of the dishonest fish dealer. One who has ever tasted a good fish will detect a bad one, and unless you want the less enviable and more worrisome task of keeping him supplied with bad fish, keep him provided with good ones.

The Canadian trade makes a distinction between fresh and frozen fish, and undoubtedly there is a difference. Do not attempt to deceive your customers by hiding this fact. If you deny that fish is frozen stock when it actually is, you repudiate your belief in the food value of frozen fish. More than that, you confirm any existing doubt on the part of the customer. Under this condition frozen fish will always stay in disrepute. Be honest with your patrons and they will reciprocate. If you have fish on display, indicate, if not by a sign, then by personal advice, that it is fresh or frozen. If the latter be the case, your customer knows how to handle it. Much greater satisfaction would be obtained should you sell frozen fish stiff and deliver them in the frozen state, to be thawed in the kitchen. Were this policy generally adopted there would be increased confidence in frozen fish and less difficulty in solving our transportation problem.

Number three of my credo:

You can't skin the public and get away with it. I do not mean to insinuate by this that the general practice among retail fish dealers is to charge excessive prices. It is not. But in some cases it is done. In one city recently there was a discrepancy of five cents a pound in the price of haddock in various stores.

It might have been thoroughly justified but, personally, I am a Missourian. People insist that fish be low-priced and if it's not they are suspicious, and, in truth, a difference of five cents per pound on such a cheap commodity should justify it. Mind you, this is an exception, I am convinced, but the failure of one individual reflects upon the trade, just as tinkering of a shyster lawyer tend to degrade the profession. In the latter instance, though, the shyster is ostracized by the legal fraternity. In the fish business breaches of faith with the public are tolerated.

That's one angle of the business. I have taken up the cudgels of the consumer and told the retailer what I expect of him. But that's not the whole story. The retailer depends upon a general distributor, usually, for his supplies. The quality of the latter in many instances, I feel positive, is not the fault of the retailer. If his patrons are dissatisfied his negligence is only contributory. Possibly financial stress overrides his scruples. Can he be held altogether to blame? He must live.

True, the public can't be fooled always. We are

part of the public, Mr. Distributor, and we know you are failing us, though, in a way, we are helpless.

Experience has shown us that you cannot successfully ship fresh fish in barrels. Mr. Distributor, what are you going to do about it? You have just as great an interest in developing the market as we retailers have. We can't give service to our patrons unless we get good service from you. That's logic. You can't evade it. The fact that you have been shipping in barrels since Noah quit the ark, or because your competitors are doing it, is no excuse for the continuance of the practice. The oil lamp was no hindrance to Edison's application of electricity for illumination, nor did the paraffine lamp obsequiously retire in favor of the age-old tallow stick. If we were to abide by this principle civilization would come to a standstill, and anyone who is satisfied to come to a standstill should not complain when others force him to the 'steenth shelf, back against the wall.

It has almost developed into an axiom that fresh fish must be shipped in boxes, and the shallower they are the better. In Scotland many years of experience has demonstrated that this is the most satisfactory system. The weight upon fish at the bottom of a ten or twelve inch box is not sufficient to impair the quality, but in barrels the bottom fish are in many cases pulped. If the barrel system was found unsuitable in Scotland where the hauls are short, there is nothing to justify it in this country. The practical solution is a returnable box, collapsible if possible, with standard cover, that is, the varying in depth only as the cubic capacity increases.

Another thing, Mr. Distributor. We like to get our weights. We must give our patrons a pound for a pound. Do ye also in like manner. Once we may have got 100 pounds in a shipment where 100 pounds was invoiced. Yes. Sometimes we hear a yarn about a seven-pound brook trout, but.... We've heard about overweights, too. But, as the vaudeville comedian says, that was in the days when free lunches went with beer. Now we get 96 pounds for a hundred. Perhaps only 90. You know there's going to be a shrinkage. Some of you allow for it. Some do not. Why not agree on the principle as to who shall stand the shrinkage loss and avoid the constant bickering over the point? Could you not all adopt a standard of 5 per cent for overweight? Our Western halibut producers used to do better than that.

And don't kid us either, Mr. Distributor, about our arrivals. We have to get our fish on time. If you can't deliver it, let us know. Perhaps somebody else can. We won't get sore but will respect you all the more for your honesty.

And if it happens to be frozen fish we are buying, remember we're not going to use it for bait. We intend to sell it for human consumption. If mackerel, for example, comes to us in a conglomerate frozen mass, as I saw recently, resembling a pack of very dirty dates with a verdigris mould, we rebel. Our customers are good-natured, but such characters as Job occur only in the Bible. We're frankly afraid to go too far with them.

Now let's understand. Frozen fish are to be frozen individually and packed nicely in pulverized ice. We'll look after the rest and perhaps between us we'll help get the public educated to relish it.

"But d—n it all", bursts in the distributor, "the blankety-blank railway causes all the trouble."

Well, there's no one else in sight to pass the buck

to, except the Department at Ottawa, and you can't conscientiously complain of inaction on the part of the administrative officers there. Let it go at the railways. We admit right off the bat, as it were, we need a fast service to get our fish to market in a fresh condition. To the main centers of distribution, such as Montreal and Toronto, the service is good. But my; don't we pay for it! And say, the whole Canadian population is not centred at Montreal and Toronto. The rest of Canada wants fish. The railways must carry it. But there you have the story — if we had some eggs, we'd have some jam and eggs if we only had some ham. Where's the building up of the rest of the market going to commence? Certainly the railways are not going to run special express service with a single haddie in the hope of carrying several carloads twenty years hence. That's not reasonable. In my opinion there must be an awakening all round. Each branch of the industry must do its share conscientiously. One hundred masons, each waiting for the other to start, will never build a wall. All working together, each in his own sphere, will make quick work of it.

As for the railways' co-operation...
Let us pray.

WINS FISH RECIPE PRIZE.

Ottawa, April 30.—Miss Muriel F. K. Osborne, of Vancouver, B.C., has been awarded the capital prize in a fish recipe contest instituted by the fisheries department. The sum of \$25 was awarded for the best in each province and \$25 additional for the best recipe in Canada. Miss Osborne won for British Columbia and her recipe for "West Coast Oven Fish" was also adjudged the best of all submitted.

Miss Lillian M. Smith, Yarmouth, N.S., was the prize-winner for Nova Scotia, and Miss Kathleen Baker, of Kingston, for Ontario. A great number of recipes were submitted, but no awards were made in any of the other provinces because the recipes submitted lacked originality. The prize-winning recipes are being incorporated in a booklet on fish cookery being issued by the department.

HATCHERY WORK ON GREAT LAKES.

Nearly 247 millions of whitefish fry were distributed this spring by federal fish hatcheries operating on the shores of the Great Lakes. Of this number, close to thirteen million were transferred to British Columbia waters, and the balance were released in the Great Lakes. About five and three-quarter millions herring fry were also released, making a total distribution of two hundred and fifty-two millions.

These figures record the operations of the plants at Collingwood, Sarnia and Kingsville. The fourth hatchery, at Belleville, was closed before the distributing season because of polluted waters. At Collingwood the number of fry released was nearly double that of last year. The total distribuion from the three hatcheries in 1920 was less than one hundred and fifty millions, or more than one hundred millions behind this year's achievement.

The comparative figures follow:

	1920.	1921.
Collingwood	32,860,000	58,780,000
Sarnia	34,340,000	54,500,000
Kingsville	82,000,000	126,137,000

LETTERS TO THE EDITOR.

Regarding the Lamprey.

Editor of Canadian Fisherman,

Dear Sir,—In a recent number of the Canadian Fisherman reference was made to the lampreys of the Pacific Coast with a statement that when canned they made a good substitute for Hamburg Aal. It is a question in my mind if it is not injurious to the sale of anything so good as lamprey if it is placed in the category of a "substitute" for anything. It is good enough in itself and in fact might make as much reputation for the canners of the Pacific Coast as it has made for the Hamburg dish, although the latter usually consists of lamprey in spiced jelly served cold.

Yours truly,

ROBERT T. MORRIS.

New York, May 9th.

THE SOUTH AFRICAN MARKET FOR CANNED FISH.

Indications of a potential market for canned fish in South Africa are pointed out in a recent London trade journal. At the present time salmon and sardines are the only varieties in demand, but it is believed that the sale of canned codfish and haddock might be built up. Previous to the war, sardines put up in cottonseed oil had a rather extensive sale. At that time 6 cents a tin was the prevailing price, but at present the price ranges from 12 to 25 cents.

FISH DINNERS POPULAR.

Served at Reasonable Prices on "National" Trains.

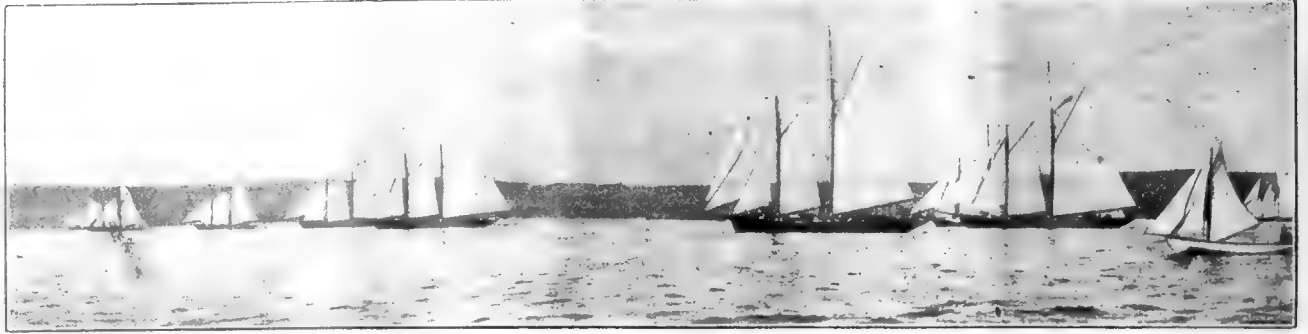
According to officials of Canadian National Railways, the delicious fresh fish, for which the Maritime Provinces are noted, is becoming a very popular item of diet with the public while travelling through the provinces by the sea. So popular that, on January 24th, it was decided to serve "special fish dinners" on the Maritime Provinces dining cars.

These dinners are served at 75c. per order and include a liberal portion of fish, with boiled potatoes and bread and butter. From January 24th, the day of their inauguration on the menu, until February 15th, 1,492 fish dinners were served and officials of the railway state they are in as great demand as ever.

Development of Lorient, on the northwest coast of France, as an important fishing port is under way. As planned, the port will rank in size with the British fishing ports of Hull and Aberdeen. The cost of the enterprise, according to advices received by the Bankers Trust Company, from its French information service, will be about 25,000,000 francs. The cold storage plant and annexes will cost 6,000,000 francs.

MACKEREL SHOWING UP.

The spring migration of mackerel struck the Nova Scotia coast on May 13th—the schools being sighted off the Cape Sable shore. The Government fishery patrol steamer "Arras" will trail the fish and wireless whereabouts for the benefit of the fishermen.



THE RACING FISHERMEN

SOMETHING ABOUT THE POSSIBLE CONTESTANTS FOR THE CHAMPIONSHIP OF THE NORTH ATLANTIC AND THE MEN WHO SAIL THEM.

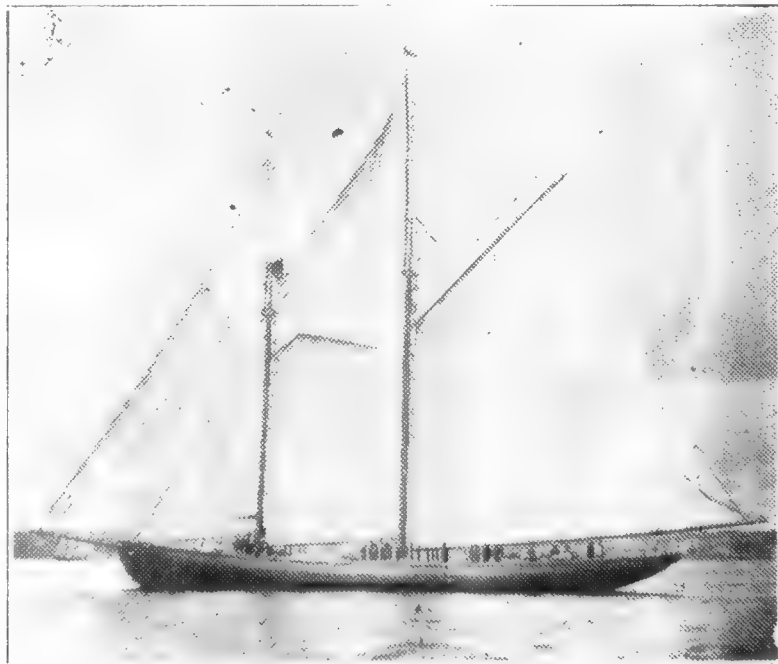
By Agnes G. McGuire.

Two of Nova Scotia's contestants for the defence of the International trophy for fishing vessels, now held by the Gloucester schooner "Esperanto," have been launched during the past month, the Lunenburg challenger, "Bluenose," taking the water on Saturday, March 31st, and the "Canadia," built at Shelburne, on Tuesday, April 5th.

Never in the history of the fishing industry has there been such widespread interest or enthusiasm in the launching of any craft, as has been evinced in these particular schooners, both splendid specimens of the workmanship of two yards, famed for their output, and each considered the best by their retinue of faithful admirers. In Lunenburg, when a man has a vessel built at Smith and Rhuland's yard, he is positive that he has the last word in excellent stock, build and finish; he knows the workmanship is as perfect as if he had super-

intended it personally.. The caulking is as meticulously done, the "trennels" are as numerous, and every minute detail is attended to faithfully, because that is the class of work that the shipyard stands for,—nothing short of excellence would be tolerated by either master builder, and on this they have built their fine reputation.

But, take a trip up Shelburne way and the citizens will assure you that if you want perfection, your schooner must be built by the Joseph McGill Shipbuilding and Transportation Company, and it is a fine thing for Nova Scotia, that these towns thus jealously defend their reputations. Each town has "the goods" to back up the assertions regarding the merits of their builders, and there is no danger of the old province by the sea losing the good name it has borne for scores of years, in regard to the building of fine ships, or the breed of men who sail them.



Schr. "Delawana" — Defeated by the "Esperanto".



The "Bluenose," Lunenburg's gilt-edged contestant, has just sailed for the "Banks," thus complying with the rule that states that by the 30th of April, all contestants must be on the way to the fishing grounds, her sole interest for the moment directed toward the work in which she will be engaged during the early summer. On Saturday, April 16th, at ten minutes to ten, the "Bluenose" cut adrift from the wharf of Zwicker and Company, where she had been lying since the day of her launching. Hoisting her sails, she pointed to the open sea, and soon had an opportunity to demonstrate her speed. The "Ocean Maid" was sighted about two miles ahead, and, eager for a brush, the "Bluenose" shot after her. Before the challenger had gone six miles, the "Ocean Maid" was far behind. A Pathe picture man, who had been shooting the "Bluenose" while on her first trip, from the tug "Mascotte," wanted to be put aboard, and the challenger had to lay to for several minutes to allow the tug to overtake her.

a spoiled beauty, before the thunders of applause from the crowds which lined the wharves. The time made on her initial journey must be considered excellent, as she was carrying all her fishing gear, ballast, about three hundred hogsheads of salt, and a good-sized passenger list, there being many enthusiasts desirous of seeing her on her first worth-while run. In racing trim she will be relieved of all that extraneous weight. She is constructed of specially selected stock, and is the last word in fine finish and excellent workmanship.

Of course she departs a bit from the ordinary type of fishing schooner,—her lines are finer, she has greater depth of keel, and her short bowsprit is somewhat of a novelty. Her mainmast towers high above the deck, some six feet higher than that of the "Gilbert Walters," the schooner which the skipper of the "Bluenose" sailed in the Fishermen's Race at Halifax last year; her mainboom is six feet longer and her mainsail has a spread of about 275 yards more of canvas than



The New Challenger "Bluenose" of Lunenburg.

All Lunenburg turned out to bid God-speed to the racer fisherman, and if good wishes are going to help, the "Bluenose" should do herself proud before the year is out. On the trip up, she certainly behaved like a lady. "She balances like a scale," said one of her crew, "One spoke of the wheel is all that's needed to make her answer under any kind of weigh at all, and she comes about without touching her sheets." "And on her first trial trip in Lunenburg," chimed in another, "she went with four points of what little wind there was, and her leeway could hardly be noticed."

As she passed the breakwater off Point Pleasant Park at Halifax, every whistle along the water-front shrilled and blared a welcome, and thousands of citizens hurried to the wharves to see this innovation in fishing schooners, on which so many are building their hopes that she may return the much-coveted cup to Canada.

In indifferent weather she had made the sixty-odd mile run in five hours and ten minutes, and riding with mainsail, staysail, jumbo and jib close hauled, her signal flags, name flag and "Jack" streaming in the breeze, she was a bonny sight as she sped up the harbor on a little show-off spin, curvetting and coquetting like

the ordinary schooner. Her full set of sails consists of mainsail, foresail, jumbo and jib (the outer or balloon jib and fore gaff topsail will be used only in racing), main gaff topsail, staysail, and the riding sail for use on the "Banks" while fishing. Her sails and rigging, of course, will stretch and the latter will need to be "set up" several times before it is properly taut.

There are critics who aver that her lines are not quite fine enough yet for a racer, but it must be remembered that the "Bluenose" is a fishing schooner, not a yacht. Everything, however, that fine finish and glistening paint can do for her, has been done, to make her a trap-py looking craft, but as her commander, Captain Angus Walters, succinctly remarks, "She's got to earn her keep, and for that she is a fisherman."

Her lines are, however, very pleasing, and there is an overhang forward and aft which, experts say, will give her lots of leeway. Her bow is cut away more than ordinarily and her quarters are not as heavy as usual, but the chief difference between the racer and the other Lunenburg schooners is that the keel is not as long proportionately. She has more "dead rise" and is more of the type of the American schooners.

Racing, she will have an overhang of thirty feet, her

acing water-line being something over one hundred and eleven feet, while over all from counter to tip of bow is one hundred and forty-one feet. The water-line limit, under the deed of gift of the International Fishermen's trophy, is one hundred and twelve feet, so that the "Bluenose" comes well up to the limit. Her sail spread also comes up to the limit, which is eighty per cent of the square of the water-line. Her cabin is beautifully finished in oak, with Douglas fir panels, and the berths in which eight men are accommodated, are hidden by gaily flowered chintz curtains. The captain's stateroom is a neat cozy retreat, fitted with everything necessary for comfort, and as a de luxe touch she has electric lights and bells. Her fo'cas'le has accom-

the other dories from the trawls in rough weather. Her wheel is almost all brass, her spars are straight and smooth and her deck edging is of best quality oak. Taken altogether, the "Bluenose" is a beauty and well worthy of the praise that is showered upon her.

Lunenburg is the home of handsome schooners. In the Fishermen's Race last year, there were splendid crafts, and the picture they made in crossing the line at the start of the race will linger long in the memory of all who watched them. The elimination races at Halifax for 1921 will be well worth seeing, and if the weather is favorable, there may be a surprise in store for the advocates of the new style schooners. If there is a good wind, there's a whole handful of trumps in



Lunenburg Has Many Possible Cup Challengers in Her Fleet.

modations for sixteen men, and is a snug haven, where the cook is monarch of all he surveys, in a domain which many a housewife would envy. The Lunenburg fishing schooners are far-famed for the excellence of the food served, and to be a cook on one of them is no sinecure. Any other member of the crew might camouflage,—the cook, never. It will be his duty when on the "Banks" to have breakfast at six o'clock, dinner at ten-thirty, supper about three, and the last meal when the day's catch is dressed and salted. When it is considered that he is cooking for twenty-one lusty, vigorous fishermen, it can readily be understood that he does not eat much idle bread.

On deck, forward, there are, as in all schooners, her chain and neatly arranged anchor on the starboard bow. Abreast of the companionway is the huge hawser, used in anchoring on the "Banks" while fishing. Besides this there are the trawl tubs containing trawling gear, gurry butts, splitting tables, fish kits and buoy lockers. There are also eight fishing dories nested, with one spare gasoline dory to be used for towing

the fleet and there's going to be some keen contesting, believe me.

The "Bluenose" was designed by W. J. Roue, of Halifax, and built by Smith and Rhuland. The "Canadia" was designed by Mayor Amos Pentz, of Shelburne, veteran of one hundred and forty launches. It is noteworthy that all the timber and lumber used in her construction is from the woods of Shelburne County. The duck for her sails was made in Yarmouth, all the men engaged on her are Canadians, and the citizens of Shelburne proudly boast that she will be sailed to victory by a Canadian.

Above the water-line she is painted green, and below, brown, and her name plate is particularly artistic. She is constructed of excellent wood and iron, and her lines are unusually graceful, giving her every appearance of a go-getter.

She will be sailed by Captain Joseph Conrad, of LaHave, who sailed to the "Banks" as commander of a fishing schooner for many years. Several years ago he retired, and bought a farm in Annapolis County, in-

tending to round out his days there. When the "Esperanto" wrested the Herald Cup from the "Delawana" last year, Captain Conrad felt the stir of the old sea-going blood, and at once decided to have a schooner constructed, that would have a try at bringing the coveted trophy back to Canada.

Accordingly, he had Mr. Pentz make the plans,—the "Canadia" is the result, and the citizens of Shelburne pronounce her the fastest schooner ever built in the Shelburne yards.

Up to the time of launching of the "Mayflower" at Essex, Massachusetts, as a contender for the honor of representing the United States in the International Fishing Schooner Races, there were rumors that this vessel was not a fisherman at all, but a semi-yacht, which was intended to indulge in some dilettante fishing, and after whiling away the summer, would be put into the races, to the disadvantage of other contestants of heavier build. The Gloucester salts were particularly critical, and whether a fishing schooner should be built for speed, threatened to cause an international marine controversy. The fo'c's'les of the fishing vessels of Boston, Provincetown, and Gloucester have been the scenes of stormy arguments, according to report, due to discussions of international fishing schooner championship and the craft that are mentioned for the title races next fall. There is keen rivalry as to which will gain the honor of defending the trophy against Canada. The "down-east" fishermen, of Nova Scotia are particularly keen on the question, and in virtually every boat out of Boston and Gloucester are men from the maritime provinces, who divide the partisanship of their present ports with those home ports from which they first went to sea.

The "Mayflower" was designed by W. Starling Burgess, and though every sort of criticism has been hurled at her from the day she had her inception on the builder's stocks at Essex, until her launching, she has been pronounced a genuine fishing vessel of the New England type, by W. J. Roue, designer of the "Bluenose," and Howard Lawrence, members of the Halifax Committee of the International Races, who made a visit to Essex on behalf of the trustees of the International Trophy at Halifax. Their judgment is that there is no material difference in the construction of this boat (the Mayflower), as compared with other United States fishing vessels. Whether she will be eligible as a defender of the international trophy at the race this year is entirely in the hands of the committee in charge of the United States Elimination Race. It is their duty to say what vessels shall enter the race as contestants just as the Canadian committee will decide on what vessels shall enter for the Elimination Race at Halifax.

It is stated that a well known yacht designer in the United States, after examining the lines of the "Bluenose," and who also had the privilege of seeing the "Mayflower," expressed his opinion very freely that the "Bluenose," if she wins the Canadian elimination race, and meets the "Mayflower" in the finals, will give a good account of herself. The "Bluenose," though of about the same length over all, is admitted to be a bigger and heavier boat than the "Mayflower," the Lunenburg boat's displacement being about 30 tons more than the American's.

It follows that the Nova Scotian vessel can carry more fish—her estimated capacity being 450,000 to 500,000 pounds. The American, which, under the deed

of gift, must go salt banking to qualify for the International, obviously cannot carry as much fish, but it is claimed for her that she will nevertheless be able to pack a very respectable fare.

The report from Essex is that many people are deceived by the fine-lined and long bow of the "Mayflower," which gives her a rather yacht-like appearance. It is pointed out that the average United States salt fishing vessel is on somewhat finer lines than the "down-homers" that go to "Quero", the reason being that Nova Scotia schooners are built to carry larger fares and also for the coasting trade. Added to this, comes the report from Essex, that the "Mayflower" is "slightly sharper than the usual American fishing vessel." Hence the opinion in some quarters that she is too much like a yacht. Gloucester's views, it is said, are that the "Mayflower" is too fine. Essex and Boston say that is not the case. Lunenburg has a report from a man who saw the "Mayflower" on the stocks that the vessel is "not a fishing boat but a schooner yacht." And so the controversy rages.

The "Mayflower" was launched with the most elaborate ceremonies ever held at the Essex yards. Her launching was so spectacular and vigorous that the huge wave caused when she struck the water, surged over the river front, drenching the spectators and rocking a movie camera man and his equipment overboard from a nearby ship. She was christened with real champagne, the little five year old daughter of the designer being sponsor. The little girl wore a crown of mayflowers and carried a bouquet of the same dainty blossoms.

The dimensions of the "Bluenose," the "Mayflower" and the "Canadia" are as follows:—

	Bluenose.		Mayflower.		Canadia.	
	Ft.	In.	Ft.	In.	Ft.	In.
Total sail area	10,937		10,775		10,300	
Length over all	141		143		138	6
Beam	27		25.9		25	2
Depth	11.6		11.9		12	
Depth of keel	14.6		16			
Bowsprit	17.5		14		13 1/2	
Mainmast	95		100		93	
Mainmast above deck	83		88		81	
Foremast	73		83		71	6
Maintopmast	53.6		52		52	
Foretopmast	48.6		42		43	
Main boom	81		72		84	
Main gaff	46		45		50	
Foreboom	36.6		34		32	6
Foregaff	32.6		34		50	
Main sail	4,100		4,292		4,075	
Main gaff top sail . .	756		700		875	
Foresail	1,640		1,832		1,500	
Fore gaff top sail . . .	560		520		450	
Try sail	1,305		1,025		1,350	
Jumbo	775		715		500	
Jib	835		870		850	
Jib top sail	966		750		700	

Gloucester is the chief objector to the "Mayflower," but, notwithstanding the fact that the "Esperanto" won last year, there were many Nova Scotians who did not concede that she was the fastest schooner in the American fleet. The "Josephine DeCosta," of Boston, and the "Progress" of Provincetown, were freely named, and J. M. Marshall, of Gloucester, Fred.

L. Davis and William H. Jordan, also have some fast ones, as well as the Gorton-Pew Company, who own the "Esperanto." The Gloucester men think that with the "Mayflower" out of the way, there would be a more even chance, and some of the owners have gone far enough to say that they would not enter against her. Their reason was that they felt it would be useless and a waste of time and energy to race one of the smaller and timeworn vessels against a craft built especially for racing and practically up to the limit of the rules in every way. It was felt that it would not be a race but merely a procession with the "Mayflower" always occupying the band position, and consequently up to today none of the local owners were looking forward to entering the elimination race, and would have accorded the "Mayflower" a walk-over.

Lunenburg has no feeling. The chief interest there is to see whether the "Bluenose" is going to prove herself better than those of the fleet which entered last year. The elimination races showed pretty fine work last year, and there's a good many who say enigmatically, "Wait." The work of the vessels on the "Banks" during the summer will prove whether the new vessels are real adaptable fishing vessels or merely floating freaks. Unless they can prove themselves bona fide members of the industry which the race was inaugurated to stimulate, the money spent on them is lost as far as the international trophy is concerned. Their efficiency in the matter of working the "Banks" is the chief factor that will admit or disqualify their entry. Without imputing any improper motive to their owners, it is well to repeat that no subterfuge will be tolerated and that everything must be square and above-board.

The caution is suggested by the expressed fears of those interested in maintaining the high standard of the race. The danger that it will degenerate into a mere contest of extravagantly built vessels is always present, and it is against this menace that the entire efforts of the sailing committee are directed. With both the United States and Canada represented on that body, composed as it is of capable and public spirited men, any decision could scarcely cut into the national bias of either country.

The committee is actuated by the sole purpose of providing some fillip to an industry in which both Nova Scotia and Massachusetts are vitally interested; anything that would tend to jeopardize the end in view will be excluded without a moment's hesitation.

On the other hand, if the "Bluenose," the "Canada," the "Mayflower" and the other schooners which have been built this year in both Nova Scotia and the United States are vessels evolved from a conscientious study of all the conditions, accommodating themselves to each and providing superior to the types of fishing-schooners that have plied the North Atlantic these many years, one of the great purposes of the race will have been achieved.

Just as the construction of the original motor car or steam engine did not halt their development, one cannot assume that the building of fishing vessels has reached the point from which further advance is impossible.

The interest engendered in the race to be sailed off Halifax in the fall bids fair to outrival any other international aquatic event that has yet taken place on the North Atlantic. With still several months to go, the series are being looked forward to with the keenest an-

icipation. This fact is obvious from the many lengthy reference appearing in increasing numbers in the press of both Canada and the United States.

This race must, however, be just what its name implies, — a *Fishermen's Race*. While the Americans run to more or less sonorous and highly descriptive adjectives in speaking of the big event, and characterize it, "The Fishermen's Derby" and "Deep-sea Regatta," they will find there is very little in a name. This race will be run by fishermen in fishing vessels. An editorial in the Halifax "Herald" puts the matter sententiously.

"The idea of the Fishermen's Race was born out of the tempest of good humored contempt with which deep-sea sailors greeted the announcement last summer, that one of the world-famous America's Cup races was called off because the wind was blowing too hard. Amateur or professional sailors, men who go to sea behind tapering masts and a spread of canvas for the fun of the thing or because that is the way they earn their living, were unanimous at that time that a sailing race which could not be sailed because the wind was blowing too hard, was no race at all. Here where we are sailing people, the feeling was particularly strong, and out of that feeling arose the demand for a test of endurance and speed between real deep sea boats, the kind of a race which would be better in a stiff wind than in a drifting match, under conditions that would make sure that the stiffer the wind, the better the race.

That was the kind of a race which was sailed last autumn between the schooners of the Lunenburg fleet, and it was the kind of race that was sailed between the "Delawana" and the "Esperanto." That is the kind of race we are looking for this year, and we are prepared to say quite calmly, but with a certain sternness perhaps, that that is the kind of race **WE ARE GOING TO SEE.**

The articles of the race state that the entries of REAL deep sea fishing boats only, will be acceptable. Folks who want freak yachts in freak races can build vessels to sail for the America's Cup. This international race is a FISHERMEN'S race, and the trustees of the Cup can be depended on to rule out any vessel which approaches the "freak" type or is not a "bona fide fisherman" in every sense of the word.

Gloucester produced a fishing boat which took the trophy away from us, temporarily. If Boston can build a fishing boat which can take the trophy away from Gloucester, or from Halifax, or from Halifax and Gloucester together, we shall say "GOOD FOR BOSTON," and try again.

But it will have to be a *fishing* boat. The Fishermen's Race is going to be the *Fishermen's Race* as long as Nova Scotia has anything to do with it.

ALBERTA TROUT REGULATION.

An Order-in-Council dated April 12th, amends the Fisheries Act as follows:—

"32. (a) In waters in that portion of Alberta northward from the International Boundary Line to and including the Bow River and its tributaries, no one shall fish for, or kill any trout (other than lake trout), or grayling (Rocky Mountain whitefish), from the first day of October in each year to the 23rd day of May following, both days inclusive."



Present Position of the Fish Trade in France

Lt.-Col. Hereule Barré, Canadian Trade Commissioner.

Paris, April, 1921.—The canned fish trade is suffering, like every branch of commerce, from depression due to the increase of unemployment and to the grave uncertainty of the position in regard to Germany. Merchants are consequently buying only sufficient to meet the immediate requirements. In regard to salmon, the market is further affected by abnormal selling conditions. One firm which has a large stock at Bordeaux is now offering salmon at 90 fr. a case free on rail at Bordeaux. The ordinary price is 100 fr. buying direct, and these offers from Bordeaux are attributed to the need to realize part of the stock so as to obtain cash to meet current needs.

Lobster.—Lobster, which is much more important than salmon as far as the French market is concerned, is now about 50s. a case cheaper than it was last year. The present price is about 150s. a case c.i.f. Havre. Some English firms are offering lobster at 145s. a case of 96 half-pound cans, but there are few buyers even at this figure.

There can be no doubt that the key to the recession in prices is the decrease in the purchasing power of the French working classes, due to temporary causes. When these disappear the demand for salmon and lobster is sure to revive. In good times, the French artisan is a great consumer of canned lobster. He considers it a necessary item in a good dinner. The chief sales of lobster in France are made in the manufacturing cities, such as St. Etienne, and among the miners in the north. There is no demand for it in the agricultural districts. The size which the French consumer prefers is the half-pound tin, sold retail at about 6 fr. 25 c. Next in order of preference, but a long way behind, comes the quarter-pound tin, then the pound, and last of all, the three-quarter pound size. Canadian lobster is well packed, attractive, and well liked by a large section of the French public, who will resume buying when the industrial situation improves and especially when exchange becomes less unfavourable. Many firms are at present afraid to risk making purchases as an improvement in the exchange value of the franc would compel them to sell their stock at a loss.

Crayfish.—One rival to lobster in the French market is Cape Crayfish, which is called Cape Rock Lobster on the labels and is known to the French as *langouste du Cap*. This article is obtainable at 100s. the case of 96 half-pounds tins c.i.f. Havre and sells retail at about 4 fr. 75c. the tin. The public seems to like it fairly well, but the wholesale dealers are rather chary of handling it, as they say it does not keep so well as lobster and there are sometimes complaints from customers who have got hold of a bad tin. So long as the Cape crayfish has this reputation, merchants will buy only small lots which can be worked off quickly, and it will not compete seriously with salmon or lobster.

Sardines.—An article which commands a good sale

in France at present, and may to a certain extent have temporarily taken the place of lobster, is the Portuguese sardine. There are quite a number of brands of this article on the market, but only two or three on which any reliance can be placed. As a general rule, the Portuguese packing is different. A packer may begin by supplying 1,000 cases of good sardines, but the next consignment is very likely to be inferior, and the third may be worse still. When there is reason to suspect any lot of these sardines, it is usually shipped to one of the African colonies, the coloured inhabitants of these regions being supposed to like a highly flavoured article. The Portuguese sardine is very inferior to the French sardine, but owing to its cheapness, it is to a certain extent temporarily filling the place of the salmon and lobster which French artisans can no longer afford. Canadian pilchards, packed in oval boxes, were placed on the French market some years ago, but were not a success. There might be an opening for them now if the price difficulty due to exchange could be overcome.

Salmon.—In regard to salmon, there are some points to be borne in mind with a view to the future requirements of the French market. What the French call the *boite basse*, or small tin standing only about a couple of inches high, was imported in large quantities before the war, but now is seldom seen. These small tins used to contain a slice out of a good-sized salmon, which was more presentable than the contents of the high tins usually are, and was preferred by the restaurants. It has therefore been suggested to me that Canadian packers should not abandon the *boite basse*. The present vogue of the tall tin of salmon is, of course, due to American army stocks. Before the war, chum salmon sold very well in France, because it was cheap and the French public knew of no other kind. The American army stocks made the French acquainted with pink, red spring, cohoe, etc., and they were soon recognized as being better than chum, but at present they are too dear. Pink, which is not much more expensive than chum, seems to be the favourite at present. White spring, though a very good fish, has little chance of success. The colour arouses the suspicions of the French consumer, who thinks he is being put off with an imitation of salmon. Pink is being sold by English dealers at 27s. a case of 96 half-pound tins, and 24s. the case of 48 pound tins c.i.f. Havre.

Salt Cod.—There might be a market in France for salt cod packed in wooden or strong cardboard boxes containing 500 grammes of fish. Under no circumstances should the English pound (463 grammes) be sent. The difference in weight confuses the French buyer and sets him against the article. The fish would have to be in good slices, and as well prepared and attractive as the French article, it being remembered, of course, that boats from Fécamp and other French ports obtain the same fish as those supplied to the Canadian

packers. It has also to be remembered that the sale of salt cod in France is practically confined to one week in the year—Holy Week—so that consignments from Canada would have to be timed in order to reach the distributing centres in France just before this season. For the rest of the year, any requirements not met by the French fisheries are supplied by Norway in barrels of 50 and 100 kilos.

Herrings.—Smoked herrings are imported from Norway, but the demand is small, as it is quite unknown

to the French people, and is only bought by the foreign population.

It should be stated, in conclusion, that there are complaints of defective communications between the Pacific Coast of Canada and ports in France. The last ship, the **Buenos Ayres**, took over two months on the voyage, and discharged her consignments of canned fish for France at London instead of Havre, thus increasing the loss through damage and theft. The next boat was three weeks late in starting.

“Eat More Fish and Live Longer”



By BUD.



(“Bud” is a young Prince Edward Island girl with five fisherman brothers. In a letter to the editor she explains her reason for submitting the following article as a desire to give publicity to the value of fish as a food. “Personally,” she writes, “I do not think that either the fishermen or the fishing industry of our glorious country gets fair play in many instances, and it is up to the fisherman, their wives and daughters, as well as those interested in the fisheries, to make the others “sit up and take notice” if you will please pardon the slang.”)

It has become an established and important fact that fish is one of our most healthful and nourishing of foods. Fish when properly cooked and daintily served is relished by all—rich and poor, sick and well—and indeed fish is very often served on the invalid’s tray when meat is strictly forbidden as it furnishes fat and nitrogen in the form of albumen and gelatine and, being easily digested, does not upset the stomach.

One does not easily tire of fish—there being so many different kinds, each with its own delicious flavor, and so many different ways of preparing each.

Take for instance the humble herring. Where we have only two or three ways of cooking, usually boiling and frying, the Norse-woman have nearly a dozen.

SAILING RACES ADD NEW INTEREST TO FISHERMEN’S LIFE.

The institution of the international fishermen’s race has introduced a new element of interest into the life of the bank fishermen—a kind of interest that will relieve the monotony of drab days of hard labor. The spirit of rivalry which has been evoked has called into being a new bond of union between the ports which will be represented in the elimination races, and between the fishermen generally of the two nations as well. Many unofficial races will take place this summer, which if they serve no other purpose will give a lot of zest to the life of the fishermen, and occasion much tall talk and good natured boasting.

This new rivalry, too, has invested the life of the fishermen with a new interest for the general public, and the comings and goings of prospective challengers are chronicled with avidity by the daily press. On her maiden trip from Boston to Shelburne the *Mayflower* carried two Boston newspaper men, and the Associated Press which serves with telegraphic news all the details

Where we throw away the leftover cold herring, they utilize them in making the most delicious dishes, which they usually serve for supper or breakfast.

Fish is a brain food—building up new cells and supplying new force and energy. Thus renewing the fagged brain and nerve.

Fish as a regulator is better than any bottled bitters. Being cooling and refreshing to the system they cleanse instead of clogging.

Fish adds zest and piquant flavor to the plainest meal.

You owe it to yourself. “Eat more fish and live a longer healthier life.”

New Herring With a New Flavor.

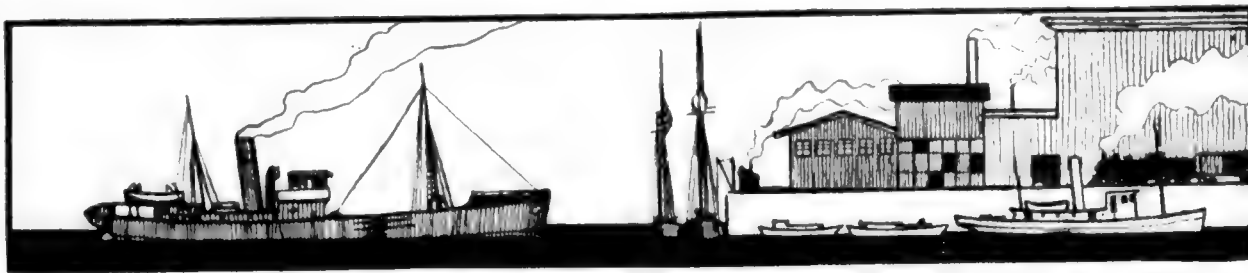
Scrape and clean fresh herring, roll in flour or fine cracker crumbs, dust with salt and pepper, and fry in melted butter until crispy brown on the outside, but do not burn. Remove to a hot platter and serve with a piquant sauce of one ounce melted butter, stir in one ounce of flour, add half pint of sweet milk, also salt and pepper to taste, then stir in two or three tablespoonfuls of mustard sauce which has been drained from mustard pickles, let boil up and pour over and around fish. Garnish with parsley and serve at once.

of the United States and Canada, is following the careers of the *Mayflower*, the *Blue Nose* and the *Canada* with unusual interest.

AMENDMENT TO PICKLED FISH INSPECTION ACT.

By an Order-in-Council, dated April 12, réclassifies the grading of herring as follows:—

31. The grades for pickled herring shall be large or No. 1, consisting of sound fish of good quality and measuring not less than eleven inches from the extremity of the head to where the flesh and tail fin meet. Medium or No. 2 consisting of sound fish of good quality and measuring not less than eleven inches from the extremity of the head to where the flesh and tail fin meet. Small or No. 3, consisting of sound fish of good quality and measuring not less than seven inches and not more than nine inches, from the extremity of the head to where the flesh and tail fin meet.



The French Fish Freezer at St. Pierre

Frigor, in the Fish Trades Gazette, gives the following interesting particulars regarding the French Fish Cold Storage at St. Pierre et Miquelon.

The Newfoundland Fish-Freezer at Newfoundland.

On one or two previous occasions I have referred to the scheme of the French Government with reference to the fisheries at Newfoundland, and the construction at St. Pierre of a large refrigerating plant. A very full account of this, with many illustrations and plans, appears in the January number of the Refrigerating World, from which the following is chiefly taken. It is described as "probably the largest plant of the kind in the Western hemisphere," and when one thinks of the great plants in the United States and Canada it will be obvious that the French establishment is really something on a gigantic scale. The view of the buildings from the harbour reminds one of the great square mediaeval castle, only much larger. In the old days the French carried on an extensive fishery at Newfoundland, both for the sale of the fish, and, perhaps still more, for the training of seamen for her fleets. By the Treaty of Utrecht, in 1713, Newfoundland was ceded to Great Britain, but the French were allowed to retain three small islands on the southern coast—Grand Miquelon, Petit Miquelon, and St. Pierre—as a foothold for the French fishery. For generations St. Pierre has been the headquarters for the French fishermen who frequent the Grand Banks and the fishing grounds of the Gulf of St. Lawrence and the North Atlantic. The island lies so close to the fishing grounds that the fishing craft—now many steam-trawlers—can deliver the catches in excellent condition. The war, and especially the practice of the American army, taught the French the value of refrigeration, and the object of the plant at St. Pierre is to freeze and store vast quantities of fish and then transport them to France. It will be of interest to watch how the scheme develops.

The Building.

A contract for the construction of the plant was made with a well-known American firm, Messrs. Ophuls, Hill, and McCreery, and the work was begun early in June, 1919. It was necessary to take to the island all the material, except sand, all machinery, etc., as well as the workmen. The buildings were completed by July, 1920, and the installation of machinery was completed in December last. The cost of the buildings, machinery, and concrete dock in front of the buildings was 1,200,000 dollars, or £250,000. The equipment and storage facilities are designed to freeze 200,000 lb. of fish in twenty-four hours and store 6,000,000 lb. of frozen fish, boxed ready for shipment to Europe. Two refrigerator ships have been built by the French Gov-

ernment, each of 3,500 tons capacity, so that the frozen fish can be called for at regular intervals. Both the main building and the power-house are of reinforced concrete, all floors being of the flat-slab type most suitable for the cold-storage industry. The buildings rest on solid rock foundations. The main building is six storeys high, and runs along the water-front 140 feet, with a depth of 85 feet into the hillside; it has a gross content of 600,000 cubic feet. The power-house is three storeys high, runs 75 feet along the water-front, and is 84 feet deep into the hillside. The dock is E-shaped, with a dock space of 300 feet long and 50 feet wide, running parallel with the building wall facing the harbour, and three piers running perpendicular to the dock out into the water. At low tide the minimum depth at the end of the piers is 27 feet, which is sufficient to accommodate the refrigerator vessels. There is also space for the mooring of several steam-trawlers and many dories at one time. The dock is equipped with all modern contrivances for unloading and loading fish and for handling coal for the plant and the trawlers.

The Distributing System.

The fish-washing and panning tables are situated on the dock, and the green fish as brought in by the fishing craft are delivered to the tables by suitable dumping trucks. From the tables the panned fish are carried on roller conveyors to automatic vertical elevators in the main building, which deliver the pans to the roller conveyor system running along the sharp freezers and placed on a roller conveyor which passes the full length of the freezing racks. At the rear of the sharp freezers are the glazing and boxing rooms, provided with automatic nailing machines and automatic weighers. Here the fish is boxed, weighed and marked, and delivered, by means of gravity conveyors, to a spiral chute on which fish is lowered to the various floors for storing or shipping. In addition to the automatic fish-hoist, an automatic ice-hoist is provided for delivering natural ice to all floors, and for unloading and delivering artificial ice from the third floor to the dock. A 4,000 lb., 125 feet per minute, freight-elevator is installed, running from the first to sixth floor.

Insulation and Sharp Freezers.

The entire structure of the main building is a cork envelope, split column being provided so that the cork can be carried in an unbroken sheet from the second floor to the roof. The second, third, fourth, and fifth floors are insulated with 6 inches of French casine impregnated corkboard. The ceiling and side walls of the sixth floor are insulated with 6 inches of cork, and the roof is insulated with 7 inches of cork. Owing to delays in delivery, part of the corkboard was obtained in the United States, viz.—Armstrong nonpareil, and

impregnated corkboard. The sharp freezers have a cubical content of 54,000 cubic feet. They are operated on the direct expansion system at a temperature of -25 deg. F. Each freezer contains 19,200 feet of 1¼-inch direct expansion pipe carried on steel supports. A gravity roller conveyor is provided in the aisle of each freezer. The sharp freezers are provided with fans for forced ventilation. In order to maintain a more uniform condition of the air, provision is made to store natural ice in each sharp freezer to compensate for evaporation during freezing. The second, third, fourth, and fifth floors have a capacity of 495,000 cubic feet, and are piped to maintain a temperature of zero F. They are piped for brine, and each floor contains 8,500 feet of 2-inch brine piping, the coils of which are carried on the ceiling. The boiler plant consists of two 212 h.p. Heine cross drum, high-pressure, water-tube boilers; the stack, of self-supporting steel, is 4 feet in diameter and 125 feet high. The engines are the Ames Unaflow type. The electric installation not only supplies the plant but furnishes light and power to the town of St. Pierre, one and a-half miles distant. St. Pierre and France may be proud of this great institution. It may give pause to any people who may be contemplating a raid on the English market with Canadian or Newfoundland frozen fish. It may be better to "wait and see."

PICKLED FISH REGULATIONS COMPULSORY.

Ottawa, May 21.—Regulations making it compulsory to grade and pack pickled fish according to standard and to prescribed containers, became effective on the Atlantic coast on April 1. Fishery inspectors and overseers have been for some time back urging packers to make the necessary adjustments in their plant and equipment so that those now affected are in a position to comply with the new order of things.

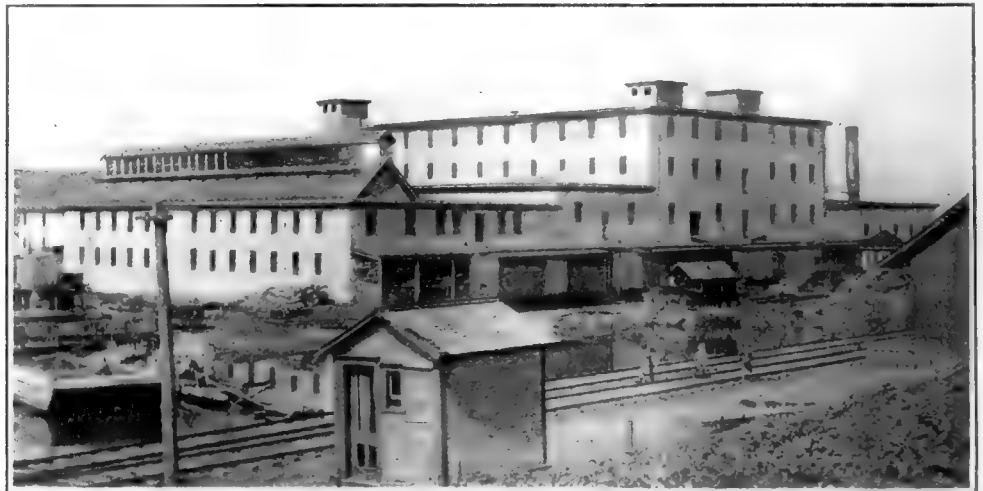
The regulations are practically the same as last year, with the fundamental distinction that while heretofore their observance has been optional, this year it is compulsory. There had been a considerable improvement with a portion of the herring pack but the good reputation being established by those who followed the previous regulations was being jeopardized by those who still followed antiquated and condemned methods. A change in the order of things entails some trouble and confusion, but the good to be gained outweighs by far temporary difficulties.

The regulations are already effective on the Pacific coast.

Some married men have so much tongue for breakfast and so much tongue for dinner that it is no wonder they take a little chicken for lunch.

CANADIAN FISH PLANTS--No. 1.

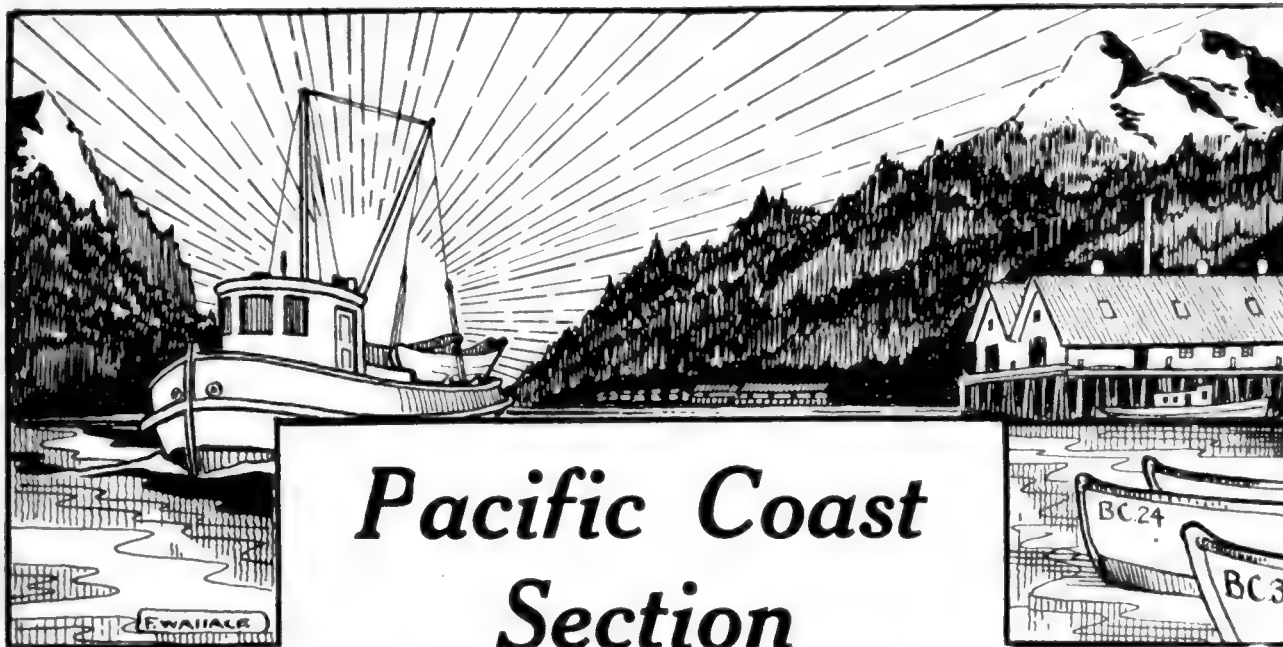
PLANT OF
LEONARD
FISHERIES, LTD.
HAWKESBURY,
NOVA SCOTIA.



Smoke Houses, Freezer, Cold Storage, Etc.



View of Plant from Water.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd., 528 Winch Building, Vancouver, B.C., Canada.

STATISTICS OF ALASKA FISHERIES FOR 1920.

The U.S. Bureau has completed a compilation of statistics of the Alaska fisheries for 1920 and a brief summary is now presented. It is apparent that the industry is retrenching somewhat, working away from the abnormal situation which grew out of the entrance of the United States into the World War, and returning to prewar conditions.

The total investment in the fisheries was \$70,986,221, a decrease of \$3,195,339 from 1919. The industry gave employment to 27,482 persons, or 1,052 less than in 1919. The products of the fisheries were valued at \$41,492,124, a decline of \$8,789,940. This decrease was due almost wholly to the lessened pack of salmon in southeast Alaska, chiefly in the canning, mild-curing, and fresh-salmon branches of the industry. There was, however, a notable increase in the quantity of salmon and in the utilization of waste material in the manufacture of oil and fertilizer. Material advances were noted also in the quantity and value of the output of the halibut, cod, and shrimp fisheries. The herring fisheries were more productive than in 1919, but there was a decline in value of products amounting to \$372,556, owing to the comparatively limited quantity of herring canned, whereas in 1919 canned herring was the product of greatest value from those fisheries. The production of shrimp was more than double that of 1919, while the whale and clam fisheries were considerably less productive than in 1919.

The total pack of canned salmon was 4,429,463 cases, a decrease of 154,225 cases, or approximately 3½ per cent. Southeast Alaska produced 2,225,011 cases, a decrease of almost 29 per cent from the pack in 1919. In central Alaska the production was 1,337,448 cases, an increase of approximately 73 per cent and next to the

largest pack ever made in that district, the pack in 1918 alone exceeding it. In western Alaska the pack was 867,004 cases, an increase over 1919 of 174,483 cases, or more than 25 per cent. The total value of canned salmon was \$35,602,800. Other products of the salmon fisheries were mild-cured, pickled, fresh, frozen, drysalted, and dried and smoked salmon, which had an aggregate value of \$934,284. Salmon by-products, consisting of oil and fertilizer, were valued at \$104,752.

The total catch of salmon in Alaska in 1920 was 65,080,539 fish, as compared with 58,172,665 in 1919, an increase of approximately 12 per cent.

The number of canneries operated in Alaska in 1920 was 146, or 11 more than in 1919. Of this number the southeastern district was credited with 82 (increase of 6), the central district with 36 (increase of 6), and western Alaska with 28 (decrease of 1). Some interesting changes were noted in the number of traps, seines, and gill nets used in the salmon fisheries. There were 443 driven and 208 floating traps, a decrease of 32 and an increase of 63, respectively. Beach seines decreased from 301 to 222, representing a reduction of 12,173 fathoms of webbing; purse seines from 490 to 488, with a reduction in webbing of 7,525 fathoms. The total length of gill nets was 460,947 fathoms, an increase of 9,763 fathoms over 1919.

Values of products of the other fisheries were as follows: Halibut, \$1,726,798; herring, \$1,303,614; cod, \$1,117,464; whales, \$562,302; clams, \$46,812; trout, \$13,662; sablefish, \$28,544; crabs, \$1,740; and shrimp, \$49,123.

"An eel," says Science, "will swim three thousand miles to find himself a mate"—and then, I suppose, he'll say that the lady-eel "lured" him into matrimony.

Canned Salmon Canard Refuted

No Truth in London Story That Gift of Canned Salmon was Inferior Chums

Hon. William Sloan Replies.

A cable despatch from the London correspondent of the Montreal Gazette quoting remarks derogatory to British Columbia canned salmon was forwarded by the Secretary of the Canadian Fisheries Association to Chairman F. E. Burke of the Vancouver Branch. Indignant denials of the statement have been received from British Columbia and all those who were interested in British Columbia's war gift of 25,000 cases of pink salmon to Great Britain are communicating with their London agents to trace the origin of the story and to demand a retraction.

Chairman Burke, realizing the damaging effect to B. C. salmon of the Gazette's cabled misinformation, called the attention of the B. C. Government, the salmon canners and the Fisheries Association to the matter and action is being taken to find out who gave the Gazette correspondent such a fairy story.

In the Montreal Gazette of May 19th, Hon. William Sloan, Commissioner of Fisheries for B. C., writes as follows:—

Sir,—I note in your issue of April 29th a special cable despatch from London under date of April 28th, forwarded by your Special Resident Staff Correspondent, in which he states:—

"The quality of Canadian fish, both canned and frozen now being shipped to England is much better than some sent during the war, which is alleged by British importers to have given Canadian packers a bad name. A leading member of the canned goods section of the London Chamber of Commerce told your correspondent that of 25,000 cases of salmon which was sent as a gift to England by Canada during the war, some was given to the German prisoners, and much of the rest was so inferior that it had to be thrown away. 'The gift was well meant, but a large part of the shipment, which was supposed to be pink salmon, was really chum,' said this man, who is a member of one of the largest London importing houses. 'There is a good market here for pink salmon, but for the credit of Canada, she should not try to send us over any more chum.'"

Permit me to state that there is no truth whatever in the statement made to your correspondent by "a leading member of the canned goods section of the London Chamber of Commerce." The statement is wholly untrue and is liable to injure the good name of British Columbia and its salmon canning industry. The facts in the case are as follows:

The 25,000 cases of salmon donated by British Columbia to the Imperial Government in the fall of 1914 consisted entirely of the choicest pink salmon packed in the province that year. It was all first-class and of that year's pink salmon pack. No other species of salmon was included in the shipment; it consisted entirely of the 1914 pink salmon pack. Before purchase and shipment it was most carefully inspected by the

three most competent salmon inspectors and buyers for British firms in the Province at that time, namely, Messrs. E. O. Cornish, representing Simpson & Roberts of Liverpool; W. P. Powell, representing Dodwell & Co.; and the late Frederick Hawkins, representing R. B. Green & Co., Liverpool. There were not in the world at that time three more capable and energetic judges of the quality of canned salmon than these men. They inspected and bought for British firms the bulk of B. C. salmon pack that year.

Furthermore, that salmon was inspected by Lieut. Colonel F. H. Cunningham, then chief inspector of fisheries for the Dominion in British Columbia; by D. N. McIntyre, deputy commissioner of fisheries for British Columbia; and by C. P. Hickman, inspector of fisheries for B. C.

Every one of the 25,000 cases forwarded in 1914 was personally examined by these men before the province bought and shipped it. The shipment attracted great local interest, and every move made in the matter was under close inspection of local press. Each case of the entire shipment bore a British Columbia label and the words "A gift to the Imperial Government."

Following the arrival in London of the shipment, the Imperial Government, at the request of the province, had the entire shipment carefully inspected by the Government food inspectors. They pronounced the entire lot first class. On the strength of their report being called to the attention of Lord Kitchener, he ordered 10,000 of the 25,000 cases shipped to the British troops in France. The use of this salmon by British troops attracted the French Government's attention so favorably that its agents bought in 1915 all the pink salmon pack on the Pacific coast obtainable. Every one of the 220,000 cases of pink salmon packed in British Columbia in 1914 was sold early in 1915. The British and French Governments continued to buy the pink salmon pack throughout the war.

The Imperial Government distributed 15,000 cases of the British Columbia shipment to the various cities and boroughs where there was distress. Many of them forwarded our London Agent letters of appreciation for the excellent gift of food.

Your London Resident Staff Correspondent can confirm all my statements by applying to our Agent-General, Mr. F. C. Wade, British Columbia House, London, S. W. There he will find the report of the inspection made by the Imperial Government, as well as copies of the letters from the cities of Lincoln and Birmingham and others, and the boroughs of Wandsworth, Holborn, etc., and Lord Kitchener's orders that 10,000 cases be reserved for the use of the army.

WM. SLOAN.

Commissioner of Fisheries for British Columbia.
Victoria, B.C., May 10, 1921.

PRICES OF COLUMBIA RIVER SALMON FOR 1921 SEASON CAUSE A SHORT STRIKE OF FISHERMEN.

The following prices were fixed on April 30th for Columbia River salmon by the Columbia River salmon packers: Chinooks, 9c. per pound; blue backs, 8c.; steelheads, 7c.; white sturgeon, 7c.; shad, 1c.

The price named for Chinook salmon is 3c. per pound under that of the season of 1920. All the fishermen in the Astoria district struck when the canneries offered them 9c. per pound for Chinooks. They had demanded 12c. but on the 30th offered to accept 10c. Since then they have decided to accept the following prices: 10c. per pound for fish 25 pounds and up, and 9c. per fish weighing less than 25 pounds. Conditions in connection with the entire canning industry are the most chaotic ever known and prospects are not at all good for the coming season. The condition of the market for the cheaper grades has a great deal to do with this but the market for the better grades is not what it should be to create an optimistic feeling.

COL. F. H. CUNNINGHAM TO CARRY OUT ORIGINAL IDEA OF PUBLICITY FOR B.C. CANNED SALMON.

Canada will continue to make every effort to have the mother country use canned salmon from British Columbia. This decision was arrived at by the salmon canners of British Columbia after careful consideration of entering into an advertising campaign which has been planned by interests handling American and Japanese or Siberian canned salmon in the United Kingdom. Col. F. H. Cunningham was sent to England some time ago to carry on a publicity campaign in the interests of the British Columbia salmon canners. Upon arrival in England he found the market well supplied with Siberian canned salmon and American goods. The interests handling these packs were in a quandary regarding the disposal of their stocks and decided on a strong advertising campaign. Col. Cunningham was requested to come in with them on the campaign but before making any move he got in touch with the salmon canners in British Columbia with the final result that they decided to carry on in the interests of Canada. Without doubt this was the best move and now if the Imperial Government could be prevailed upon to demand that all canned salmon should bear on their labels or have stamped in the end of each tin, in a prominent manner, the country of origin there is no doubt that Canadian canned salmon would secure the preference.

CANNED SALMON MARKET.

There is one thing practically certain and that is that most of the companies which have been relying on their old customers to order the old reliable brands in the past will have to get out and do some hustling in the future. Independent concerns have been doing some tall selling stunts during the past few months with the result that new brands are getting on the retailers shelves.

This coming season will not see any large packs of any kind of salmon put up. This applies to red meated fish as the lower priced grades. The market looks bad

to canners and there is not the least sign of optimism. This means that care will be taken in putting up all the packs this season.

A few lots are moving in the low priced grades, some to foreign consignees and some to Eastern Canada.

HALIBUT SCHOONER KING & WINGE HAS CLOSE CALL FROM FIRE.

With five thousand gallons of distillate stored in close proximity, fire badly scorched the engine room and galley of the halibut schooner "King & Winge" but fortunately the distillate was not reached by the flames. The "King & Winge" was at Prince Rupert at the time and later sailed for Vancouver with her 60,000 lbs. of halibut which were discharged at the New England Fish Company's plant. The "King & Winge" was the fishing vessel that stood by when the ill-fated "Princess Sophia" was wrecked in Alaskan waters.

LARGE STURGEON BEING CAUGHT IN BRITISH COLUMBIA.

Several large sturgeon have been caught in the Fraser River recently, one of them measured 13 feet from tip to tip and weighed over 900 lbs. The result has been that local restaurants have been serving sturgeon steaks for some days past.

GOOD SUPPLIES OF RED SPRING SALMON NOW BEING LANDED.

West Coast of Vancouver Island.—The fishermen are having good luck on the West Coast of Vancouver Island and the Canadian Fishing Co., Ltd., is receiving large supplies of red springs. Other companies are receiving small lots. Puget Sound traps and those on the Straits of Juan de Fuca, contiguous to U.S. boundary, began getting springs about the 9th of May.

Fraser River.—There is a good run of springs on the Fraser at this time (May 10th), and the local market has a good supply.

Prince Rupert.—About May 10th the first real large lot of red springs was landed from North Island and the Skeena. The outlook is good for a good supply from now on.

Owing to the uncertainty of the market it looks as though the canneries would not be using as many red springs this season as in the past couple of seasons. This will leave the market to the fresh fish and mild cure dealers.

SOCKEYES ON THE FRASER IN MAY.

The first sockeyes of the season have been taken on the Fraser during the first week in May. These are the genuine sockeye and weigh about 6 to 7 lbs. each. This is unusual for this time of the year.

HALIBUT SUPPLY HAS BEEN KEEPING UP.

Local halibut schooners and American schooners have been making very good deliveries of halibut to Vancouver for several weeks now. The Canadian Fishing Co. and the New England Fish Co., have been getting good stocks.

B.C. Cannery Desire Reduction in Fishing Fees

Industry too Heavily Taxed for Carrying on Profitable Business.

The following letter has been addressed to the Hon. C. C. Ballantyne, Minister of Marine and Fisheries, by the British Columbia Salmon Association:—

“The salmon canning industry of British Columbia is, at the present time, in the most difficult and critical condition in its history. During the recent war, the cost of production in every item rose to unprecedented figures, and under the stimulus of the urgent request of your Government, as well as that of the United States, for increased production, the packs of all grades of canned salmon were greatly augmented—added to which was the canned salmon produced in Siberia and Japan then placed upon the market.

At the close of the war, the British and other Governments were holding large stocks of these goods, which were sold by them in many instances at prices much below those at which they could be profitably produced, because materials, labour and expenses were not relatively reduced. The consequence is that the market for the cheaper grades of salmon is completely paralyzed, and the British Columbia cannery left with nearly three quarters of a million cases for which there is no present or prospective demand, though being offered at prices far below the cost of production.

The season of 1921 is rapidly approaching, but unless some unforeseen improvement in demand arises, it is certain that apart from the sockeyes and red salmon, there will be little or no packs of the cheaper grades put up.

This reduction in production will seriously affect the fishermen, who rely on the fall fishing to enhance their earnings, and preclude the cannery chances to earn any profit on their business, because the overhead and operating expenses per case will be relatively greater.

The serious character of these conditions will be more clearly recognized when it is noted that owing to the almost complete depletion of the sockeye fishing on the Fraser River, only 13 canneries will be operated this year, out of 33 plants which depend chiefly upon the supply of sockeyes for their raw material, and in the outlying districts where the packs are principally pinks and chums, the outlook is most discouraging.

The salmon cannery have over \$16,000,000 invested in the business and in 1920 paid out to the fishermen and cannery employees about \$6,000,000 in addition to the large expenditures incurred for tinplate, nets, boxes, gasoline, etc., etc.

In 1918 the fees for cannery, fishing and other licenses, taxes on fish, and per case \$ 48,784.50

In 1919 259,181.14

In 1920 230,782.01

to the Dominion Government, all of which represented “special” levies on the industry, such as are not demanded from other classes of producers. Heavy license fees and per case taxes are demanded by the Provincial Government. In the aggregate, these combined levies are greater than the industry can bear and continue to be operated with any possibility of success.

The foregoing references, do not include the large sums paid to the Dominion Government for customs

duties, Marine registration, Income Tax, etc., in the form of “general” taxes, of which the operators are prepared to pay their just proportion.

Special efforts are being made by the British Columbia cannery to stimulate the demand in Great Britain and Europe for the cheaper grades of salmon, and as you are aware, Col. F. H. Cunningham was engaged at a cost of \$15,000 to conduct an advertising campaign for the purpose indicated, and which, it was hoped would be assisted by your Department in the interests of Canadian general business, and of the especially embarrassing condition the cannery operators find themselves at the present time.

If the industry is to be perpetuated, with any chance of success, the cost of production *must* be reduced.

In respect to labour and materials, lessened costs will be a slow process, but your Hon. Department has the power to recommend, and the Dominion Government to enact, that the special levies on the industry shall be reduced to meet the emergency.

At present these salmon levies are:

Cannery License	\$500.00
Trap License	500.00
Purse Seine License	300.00
Drag Seine License	150.00
Gill Net License	10.00

Per case tax of 3 cents on all canned salmon except Sockeyes. Per case tax of 4 cents on Sockeyes. One-half cent per fish caught in seines.

I may point out that the cannery have also to pay the Provincial Government the following “special” license fees and case taxes:

Cannery License	\$100.00
Trap License	25.00
Purse Seine License	50.00
Drag Seine License	25.00
Gill net License	5.00

And a tax of 4 cents per case on all grades of salmon.

THE RELIEF WHICH THE CANNERY EARNESTLY BESPEAK FROM YOUR HON. GOVERNMENT CONSISTS OF:—

1. THE TOTAL REMISSION OF THE 3 CENTS TAX ON THE CHEAPER GRADES OF SALMON, WHICH ARE IN SMALL DEMAND AND CAN ONLY BE PRODUCED AND SOLD AT A HEAVY LOSS.
2. REDUCTION OF THE 4 CENTS PER CASE ON SOCKEYES TO 3 CENTS PER CASE.
3. THE REMISSION OF THE ONE-HALF CENT PER FISH TAX.

We feel we can rely upon your sense of justice and intimate knowledge of the situation, to do what is right and expedient in the premises; and pray that such measures of relief as will require the consent of Parliament, may be dealt with during the present session. All which is respectfully submitted.

Yours faithfully,

B.C. SALMON CANNERY ASSOCIATION.

“W. D. BURDIS,”

Secretary.

VANCOUVER WHOLESALE FRESH FISH MARKET.

Halibut.—Plentiful. Baby chicks selling at 8 cents per pound, chickens 10 cents, mediums 14 cents.

Cod.—Local live ling cod selling at 6 cents per pound. Plentiful supply.

Smelt.—Off the market. Oolachons also off. A good run on Fraser River, while they lasted.

Soles.—A very good supply. Fraser River red springs selling at 20 cents per pound, dressed heads on. A few sockeyes selling at same price.

Shell fish.—Crab plentiful. Clams 4½, Shrimps 23 cents. Good supplies of all varieties and market steady.

Carp.—Selling at 12 cents.

Shad.—Columbia River beach shad coming in regularly and selling at 15 cents per pound.

Herring.—Point Grey herring are quite plentiful, selling at 6 cents per pound.

SALMON CANNERS PROTEST NEW SALES TAX.

While the B.C. cannery are urging the Government to cancel some of the license fees and taxes at present levied on canned salmon, the Minister of Finance, in the recent Budget, levies a new sales tax on canned fish.

The Cannery Association have sent the following wire to the Minister of Finance protesting against the sales tax on canned fish.

New Budget brings canned fish heretofore exempt, under the sales tax. British Columbia salmon canning industry is in very critical condition, export market demoralized and flooded by Japanese production produced with cheap labour, and large quantities of our salmon on hand. Our cannery who are attempting to largely increase Canadian consumption realize that their efforts will be neutralized if the Sales Tax is imposed in addition to the heavy special Federal Taxes now imposed. You are earnestly requested that canned fish may be exempted.—W. D. Burdis, Sec'y., B.C. Salmon Cannery Assn.

SALT FOR FISHERY USE.

C. F. Rutgers & Company, Inc., 39-41 Cortlandt St., New York City, advise us that they are the exclusive agents for United States and Canada of a group of European firms who control a large quantity of the salt exports from continental Europe. They claim that two-thirds of a bushel of this fishery salt will achieve the same result for which a full bushel of Mediterranean salt would be necessary and that the high quality of their salt is very apparent when comparative analysis is made of the different salts on the market. They assert that their product is a perfectly dry salt with the highest possible percentage of sodium chloride and that it has advantages over other salts containing a high percentage of water which cause "Reddening" of the fish product.

Mr. Rutgers states that they are in a position to offer particularly attractive prices to Canadian producers and that they would be glad to furnish further information to the readers of the "Canadian Fisherman" as well as to prove the attractiveness of their proposition by submitting samples and quotations.

PRIZE-WINNING FISH RECIPES ARE ANNOUNCED.

Vancouver Girl Wins General Prize with her Recipe for "West Coast Oven Fish."

Ottawa, May 24.—Prizes have recently been awarded in the fish recipe contest instituted last year by the Department of Marine and Fisheries. The contributions from all parts of the Dominion were given expert consideration by Miss Bessie M. Philp, head of the School of Household Science, Macdonald College, Ste. Anne de Bellevue, Quebec. Unfortunately a large number of the recipes submitted had to be set aside because they lacked the most important feature—originality, and were apparently culled from standard books on cookery. Next to originality, economy of preparation and attractiveness of flavour and appearance were the standards by which the judges were guided. A twenty-five dollar prize was offered in each province and an additional twenty-five dollars for the best recipe in all of Canada.

Miss Muriel F. K. Osborne, age 15 years, Vancouver, B.C., in addition to winning the prize for British Columbia, won the general award. Her recipe for "West Coast Oven Fish" is herewith reproduced with the suggestion that housewives try it and decide for themselves if the commendation of the judges was well deserved.

"Take 1 small fresh codfish, skin, cut in pieces and dry with cloth, dip in flour, fry till pale brown. Take 3 medium-sized onions and six good sized potatoes, peel and slice thin. Line casserole with part of the potatoes and onions, sprinkle with salt, pepper and flour, a small quantity of finely chopped parsley, then put in layer of fish. Repeat alternately, putting potatoes and onions last. On top place two thick slices of fat, salt pork or bacon, and barely fill dish with water. Cover and bake one and a half hours in a slow oven. Bring to table in the dish in which it has been cooked."

In only two other provinces were awards made, chiefly due to the absence of originality. In Nova Scotia Miss Lillian M. Smith, aged 13 years, Yarmouth, captured the prize. Her recipe for "Soused or Pickled Mackerel" follows:

"Clean a two-pound fresh mackerel by wiping with a damp cloth. Cut in four or six pieces and put in baking dish. Sprinkle with salt and pickling spice. Pour vinegar and water over mackerel (there should be enough to cover). Cover and let simmer for three-quarters of an hour. Can be served hot or cold, but it is better served cold. This will keep for several days in the pickle. (If desired salt mackerel or herring may be used, but omit salt in recipe)."

In Ontario the prize-winning recipe was submitted by Miss Kathleen Baker, aged 15 years, Kingston. Her method of preparing "Pan Broiled Pickerel" is:

"Clean a pickerel well and wash thoroughly. Dry with clean white cloth. Have drippings and a little butter (or butter alone, if it can be afforded) well-heated in frying pan. Dip pieces of fish in milk, sprinkle with salt and pepper then roll in flour. Lastly roll it in bread crumbs. Put in grease and fry to a golden brown. Serve hot."

A man may marry a girl for her money only to find out that there are pleasanter ways of accumulating wealth.

EAT ONLY A POUND OF FRESH FISH IN NINE WEEKS.

While Meat Consumption of Canadians amounts to 137 pounds per Capita in 1920.

Food specialists declare that a judicious combination of fish and meat makes an admirable diet. It is insisted that neither should be used exclusively as a mainstay of the meal, but should rather be alternated. The texture of meats is, as a general rule, coarser than the flesh of fish and an alternation will give rest to the digestive organs and prevent a clogging of the system or an overworking of the body and consequent physical inefficiency.

While the force of the contention is readily seen, it is not always possible to take advantage of this prescribed regimen. Few countries are blessed with an abundant supply of meat and fish as well. But Canada is among the few. She has the food resources to make strict adherence to the alternating fish-and-meat diet both practical and economical. How far the average Canadian is from this dietary standard is demonstrated by figures recently compiled. During the year 1920, Canadians ate 137 pounds of meat per head. Their use of fish was about 22 pounds; and fresh fish, about 6¼ pounds.

In other words we ate a pound of meat every two days and a half, but it took us nine weeks to consume a pound of fresh fish.

This situation could be quite readily understood were Canada far removed from fresh fish supplies and made dependent upon canned and cured fish products from abroad.

RIGHTS OF FEDERAL DEPARTMENT IN QUEBEC FISHERIES.

An Order-in-Council dated April 20th, defines the rights assumed by the Federal Government over Quebec fisheries in the matter of licenses:

Section 9 — Leases and Licenses

Fishing by means of nets, weirs, engines or other apparatus, or contrivances of any kind, whether fixed to the soil or not, is prohibited except under license or permit from the Minister of Marine and Fisheries:—

(a) In the navigable tidal waters of the Province of Quebec;

(b) In those portions of the rivers and streams of the Province of Quebec which, whether tidal or not, are navigable and accessible by way of navigation from the sea.

The Jones Shipping Bill has militated against the shipping of Alaska salmon through the port of Prince Rupert as it prohibits the shipping of goods from one American port to another over Canadian transportation lines. Many Alaska merchants find the effect of the Jones Bill disastrous to their business and are working for repeal. Charles Goldstein, of Juneau, was in Washington recently launching a test case against the workings of the Act and the verdict is being eagerly awaited by Alaska shippers.

Business is now in full swing at the Fish Exchange at the Government Dock, Prince Rupert. The new premises are much more commodious than the old premises on the G.T.P. wharf.

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ETANG-DU-NORD, MAGDALEN ISLANDS

BRANCH AT GRINDSTONE ISLAND

The lobster catch this season around Magdalen Islands by what we can see since we opened to pack, beginning of May, will be far from the average of last season.

The daily catches are not half as large as last season at the same time and we are having splendid fishing weather.

We hope that if this season's pack is small, which we believe it will, it will help in putting the price of the fresh goods up.

Anybody who wants to speculate on six or seven hundred cases of one third one lb. can and two third halves of fresh canned lobsters the undersigned would be willing to accept a fair quotation delivered Steamer at Grindstone,

THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., JUNE, 1921

NO. 6

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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

THE WANTED SIGN STILL HANGS OUT.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

The dog-days are upon us and the hot weather is not conducive to argument. Parliament is on vacation; Minister Ballantyne is off to Europe in the wake of Premier Meighen, and nobody feels in the humor for the discussion of serious questions.

Many of the trade are possessed by their golfing record; others are wondering if the price of fish will firm up this Fall, and all are ready to agree with one another that business has gone to a territory somewhat hotter than the prevailing weather.

We too, will give our familiar subject a rest this time until enough mental ammunition is stored up to say something worth while.

We have to note that our aggressive British Columbia friends, at the annual convention of the B. C. Branch of the Canadian Manufacturers Association held recently, succeeded in having the Association endorse a resolution asking for the appointment of a Deputy Minister of Fisheries. When the matter was explained to them, the business-men assembled in the gathering had no hesitation in advocating such an appointment—a fact which shows they were business men. Had it been a political jaunt—? Well, it's too hot to speculate what they might have advocated.

INTERNATIONAL FISHERIES COUNCIL.

It is pleasing to record that a definite start has been made with the International Scientific Fisheries Council. The representatives appointed from Canada, the United States and Newfoundland met for their first meeting in Montreal on June 23rd, to map out a plan for co-operative fisheries investigation work between the three countries.

The Vice-President and Secretary of the Canadian Fisheries Association conferred with the Canadian representatives on the Council and suggested certain lines of investigation work which would be of benefit and interest to the fishing industry. Among the suggestions were the publication of special charts for fishermen giving fuller details of the Banks, soundings and the bottom thereof and investigations into the movements of the cod, haddock and mackerel.

We cannot expect a great deal from the Council at the start, but we are confident that it will grow to be a most important body—the outcome of whose investigations will be of much benefit to the fishermen of Canada as well as the other countries interested.

PROTEST MACKEREL SCOUTING.

A Western farmer during the War blamed the conflict in Europe for the number of flies which infested his house. A number of Nova Scotia fishermen and intelligent men too, are protesting that the vessels engaged in scouting for mackerel are driving the fish off the coast to the detriment of the shore fishermen. "The scouts frighten the fish, set them wild, and they won't go near the shore," they say and they further condemn the scheme as being only of benefit to the American seining fleet.

This statement is as wild as the mackerel are supposed to be. Two small steam trawlers acting as Fishery Patrol boats were assigned by the Government to look for the mackerel schools and report their presence and location by wireless to Canadian shore stations. These patrol vessels have done so since the fish arrived of the Canadian coasts and their work has been to keep ahead of the seining fleet and report the movements of the fish to the shore wireless station. On receipt of the message, the shore station wires the news to various ports on the Nova Scotia coast where traps and seines are located that they may be prepared for the fish should they strike inshore.

As none of the American seining fleet are equipped with wireless, it is manifestly impossible for them to receive the reports of the scouts. Furthermore, the presence of two small trawlers trailing them is not likely to stampede the mackerel from invading the in-shore areas when these same inshore areas are alive with motor-boats with unmuffled exhausts, coasting steamers and other craft.

The work being done by the commanders of the mackerel scouts is destined to be of great value to mackerel fishermen in the future. A complete record of the location, quantity, and direction of the schooling fish is being noted hourly and a track chart of their movements is being compiled. This information and other data recorded will be studied by scientific experts and it is hoped that much of the mystery surrounding the comings and goings of the mackerel will be solved for the benefit of the fishermen. For the fishermen to protest against this work being continued because of the fact that the mackerel are not striking inshore—a fact which cannot reasonably be traced to the scouts—is merely arresting an undertaking which has been started in the best interest of the fishermen themselves.

THE INDUSTRY PAYS ITS TRIBUTE.

In the midst of the plain business of catching and selling fish we are prone to forget that tribute in the form of human lives is often exacted for the finny spoil wrested from old ocean's depths. The fishermen, busy with net and hook and obsessed by the cost of living and low prices for his product, gives but scant thought to the hazards of his calling. Inured to the sea and its dangers, he regards the water much as a farmer regards his fields. Both are pastures out of which he has to draw food-stuffs in one form or another. The merchant, removed from the wind-harried wastes upon which the prime producer toils, thinks still less about the subject and devotes his skill to buying and selling and keeping out of the bankruptcy courts.

But occasionally Old Ocean thrusts a grim reminder under our eyes "lest we forget" that she demands a living tribute from those who loot her hoard, and her reminders are often grim, terrible to the victim, and horrifying to the imagination of those who vision her acts.

On June 3rd, the Boston schooner "Waltham" picked up a lone dory adrift on Georges Banks. In it lay the body of an elderly fisherman, shrunken with starvation and bearing mute evidences of fearful sufferings. Later investigations proved that the man, a native of Nova Scotia, went astray from his vessel on Friday, May 13th. From that fateful day (a sinister combination in nautical superstition), the dory drifted around the sea with its occupant slowly starving to death, until picked up three weeks later.

It is difficult to imagine that this poor fisherman could float around for such a lengthy period in what are practically inshore waters. Many vessels must have passed close to him during that time, but the sight-defying fogs of that ocean area effectually screened from view the boat and the pitiful red rag on a bamboo pole which the man hoisted as a signal of his distress.

The sea takes her tribute from the fishermen with startling suddenness. Death hands in no warnings. The man you were playing a little game of euchre with a moment or so before, goes out on the boom-end to help reef a sail and is washed into Eternity with his wild shout of surprise ringing in the ears of his horrified

shipmates. Dory-mates, with whom you ate breakfast, go overside in the full flush of life, vanish in the fog and are seen no more. What their end is like may be pictured with dreadful imaginings.

Fortunately, these mishaps do not often occur in these days, but all the fish in the ocean could not pay for the life of one man. We, who have but the remotest connection with the victim, find it hard to assess a value on their lives, but those who can are the widows and children, the parents and sweethearts, who remain to mourn.

CHARGE REGARDING BRITISH COLUMBIA'S GIFT SALMON RETRACTED.

The charge recently cabled from England by the Montreal Gazette's correspondent that B. C.'s gift of pink salmon to Great Britain during the war was composed of chums and inferior pinks, has been retracted and the fish have been given a clean bill by all those who consumed them.

This is a case which shows the necessity for taking instantaneous action upon statements affecting the good name of our fishery products.

PISCATORIAL PARAGRAPHS.

Mr. J. A. Paulhus, of Montreal, Vice-President of the Canadian Fisheries Association, has returned from a visit to Spain, France and Great Britain. Mr. Paulhus gained much health and information while abroad and imparts to us that the show he witnessed at the Folies Bergères in Paris "had 'em all skinned."

Mr. F. E. Burke, Chairman of the Vancouver Branch, C. F. A., has returned to the Coast city after a tour of the Prairie Provinces. "Crop conditions on the Prairies are marvellous, he writes, "and if we can only bring the start to maturity it should help Canada wonderfully from a business standpoint."

The fresh lobster shipping business from the South shore of Nova Scotia to Boston and New York for the season just closed promises to be a record. Over twenty-one thousand packages were shipped via Yarmouth—an increase of fifty per cent over last year. When returns are completed, the recent season will probably show up as the heaviest fished period in the history of the industry.

Packers are pushing the sale of pink salmon very strongly just now in the home market. There is a tendency towards marketing the goods under the packer's label rather than under those of the brokers and buyers.

There will be a large shortage of new fish in Lunenburg this spring. Last year at this time the fish merchants were in a position to place on the market 30,275 quintals of fish, while this year there are only 3,300 quintals, a shortage of 26,975 quintals, or 89 per cent. The vessels that came home and landed catches are as follows:—Vivian P. Smith, Wharton, 1200 quintals; Francis W. Smith, Mosher, 400 quintals; Marion Adams, Parks, 500 quintals, Mariou-Elizabeth, Westhaver, 500 quintals. Norma P. Coolen, Andrews, 600 quintals; total, 3,300 quintals—Halifax Herald.

THE NOVA SCOTIA-MEN.

Say! You chaps what rate as "sailors" in an engine-driven scow,
("Steamboatmen" I calls you 'cause there ain't no sailors now),
Bring yer carcass to an anchor there and lend to me an ear
And I'll tell you of some hookers what's been gone this forty year.

Them hard-case hookers—them Nova Scotia-men!

They built 'em on the beaches and they built 'em in th' cricks.
They carved her figger-head themselves an' fsahioned up her sticks,

They didn't use no blue-prints when they set her up in frame,
For her builders they was sailormen what knew the sailin' game.

Them Smart Blue Nosers—them Nova Scotia-men!

They owned 'em in Annapolis Windsor, River John,
Jest as able packets as 'you ever shipped upon.
Yarmouth ships, Maitland ships, hookers from Maccan,
The kind o' craft that took the eye of any sailorman.

Them fine old wind-bags—them Nova Scotia-men!

Them packets was a sailor's pride (for them what knew their work).

But a grim an' gloomy night-mare for the lads as tried to shirk,

And the mates could make a tops'l, cook a meal or shape a spar,

And find the longitude by sun or latitude by star.

Them 'cute Downeasters—them Nova Scotia-men!

Ye had to hand and reef and steer and heave th' dipsy lead,
And if you couldn't do yer trick you might as well be dead.
They was happy ships for sailormen, but hobos had no fun,
And when they dropped the killick down, the bums would cut and run.

Them hard old hookers—them Nova Scotia-men!

They were hell on scrapin' wood-work and we done it rain or shine.

In the Winter North Atlantic or a-broilin' on the Line,
While the moon was doin' duty as the Nova Scotia sun,
They kept the watches busy for the work was never done.

Them hard-worked packets—them Nova Scotia-men!

You scrubbed the decks each mornin' watch—they kept you on the hump,

With a bucket and a draw-rope as a Nova Scotia "pump".
We cleaned a heap of painted work when under their

command,

And Nova Scotia "soda" was a canvas rag and sand.

Them shined-up, hookers—them Nova Scotia-men!

You got no "lay-backs" in yer watch—they'd work ye 'till ye drop,

Bowsing sheets and halliards with the tayckle and the strop.
They carried sail in snifters when the gale would bend the mast.

Then 'twas, "Nip aloft, you sons o' guns and make them gans'ls fast!"

Them hard-driven hookers—them Nova Scotia-men!

In turning-to a crowd of toughs, the mates were mighty smart
With hand-spike and belayin' pin—a long forgotten art,
For all that sort of sailin' is gone beyond your ken
With the old Blue Nosers—wooden ships and iron men.

Them tough old packets—them Nova Scotia-men!

I can't help feelin' lonesome for the old ships that have gone,
For th' clankin' of th' wheel-pump in the hour before th' dawn,
And th' white sails pullin' strongly to a warm and steady draft.

And th' smell of roasin' coffee and the watches must'rin' aft
Them long-gone hookers—them Nova Scotia-men!

I'd like to ship off-shore again upon some Blue Nose bark,
And shout a sailor chantey in the windy, starry dark.
Or fist a clewed-up tops'l in a black southeaster's roar,
But it ain't no use awishin' for them days will come no more.
Them grand old packets—them Nova Scotia-men!

—FREDERICK W. WALLACE.

SALES TAX LICENSES.

The foregoing was received by the Sec'y. of the C.F.A., in answer to an inquiry.

"With reference to the question as to whether more than one license is required by firms or merchants having more than one place of business, or companies having several plants, warehouses and branch offices, you are advised as follows:—

1. A jeweller or a retail merchant having more than one store at which articles subject to the luxury tax are sold is not required to take out more than one jeweller's or retailer's license.

2. A manufacturer having several factories in which are manufactured articles subject to the Manufacturer's tax is not required to take out more than one manufacturer's license.

3. A manufacturer, wholesaler or jobber, having more than one factory branch office, warehouse, sales office, or other place of business is not required to take out more than one sales tax license.

4. Provided, however, that where a manufacturer has the wholesale or selling branch of his business entirely separate and charges a sales tax between the factory and the wholesale or selling branch, he shall be required to take out two sales tax licenses—one for all of his factories and one to cover the wholesale or selling divisions.

5. All branch offices, factories, warehouses, sales offices, stores or other places of business, must have on file a certified copy of the license taken out by their head office.

6. Collectors of Inland Revenue, when issuing the original license for the head office of any firm, or person, shall state, when necessary what other places of business it is to cover, and at the same time shall issue a certified copy for each of these places (a copy shall be deemed to be certified, when it is made out in the same manner and on the same form as the original, and has written or stamped upon it the words "Certified Copy" with the Collector's signature and date written under these words).

7. The certified copies will not be given to the person to whom the original license is granted, but shall be mailed to the Collector of Inland Revenue in whose division the branch offices are located.

Collectors receiving such copies shall enter them in a separate record from that of licensing issued by them in their division and after countersigning the copy, or copies, shall deliver them, or send them by registered mail to the proper person or firm. This will provide all Collectors with a complete record of licenses in use in their division, and auditors when examining licenses held by the branch offices of firms or merchants will note whether or not copies are signed by the Collector who issued the original and countersigned by the Collector, in whose Division the place of business is situated."

IMPORTATION OF CODFISH INTO SPAIN.

The "Gaceta de Madrid" for April 29 contains a Royal Order, dated April 28, which provides that, as from May 1, all consignments of salted codfish (bacalao) leaving the port of origin with a manifest vised later than that date must be accompanied by a certificate of origin, in order to be admitted into Spain at the "second tariff" rate of duty (viz., 24 pesetas per 100 kilogs).

Racing Fisherman Excite Nation-Wide Interest

The "Mayflower" is Feature of Controversy.
Is She a bona fide Fisherman?

By FREDERICK WILLIAM WALLACE.



The trio of fishing schooners who are the favorites for the International Fishing Schooner Race this Fall, are all on the Banks engaged in the plain hard business of catching cod. The **Bluenose** has landed her Spring catch and Captain Angus Walters, her skipper, is pleased with the performance of his craft in sailing and lying-to in a breeze of wind. The **Mayflower** has been in port once or twice and a week ago she had 140,000 of salt cod in her hold. As her carrying capacity is the crucial point in the argument of her critics that she cannot pack enough fish to pay her way as a fishing vessel, it is a safe presumption that Captain J. Henry Larkin will be working double-tides to stuff her hold to the hatch-coamings ere he returns to port.

The Shelburne racer, **Canadia**, is hand-lining, and up to this date (June 20th) has not reported. This vessel has not received the publicity accorded to the Lunenburg craft, but there are indications that she is a speedy craft and if not barred through shortage in water-line, has a good chance to be the challenging schooner if properly handled in the elimination contest.

The Gloucesterman **Esperanto** struck a submerged wreck off Sable Island and now lies in 16 fathoms of water. Gloucester interests have fitted out an expedition to raise the schooner and, if successful, there is every possibility that she will be repaired and equipped to enter the elimination trials as defender of the Halifax Herald Trophy. As the Gloucestermen seem to have "taken a scunner" against the Boston syndicate-owned **Mayflower**, they will scare up one or two speedboats out of their fleet to compete against the latter for the honor of defending the Cup. The new Gloucester schooner **L. A. Dunton**, was regarded as the hope of the old New England fishing port, but her sorry performance against the **Mayflower** on the various legs of the passage to the Magdalens, seems to have put her out of the running. Her skipper, Captain Felix Hogan, however, has a firm faith in the **Dunton's** sailing abilities, and he believes that, with some alterations and improvements in sail plan and ballasting, he can show the Boston hooker a stern wake when the time comes.

Controversy regarding the right of the **Mayflower** to call herself a fishing schooner rages hot and heavy. The stigma of "yacht" still sticks to her and is a favorite epithet of her critics. Caustic comments on her ability to stand the drag of winter fishing and to

carry sail in hard breezes brought forth a challenge from her owners to race the **Mayflower** with any other fisherman at any time of the year in an open sea contest. Captain Walters of the **Bluenose** accepted the challenge and suggests a race with a cargo of salt fish from Newfoundland to Brazil, thence to Turk's Island for a lading of salt to be carried to a port in Nova Scotia. Such a contest offers even greater possibilities than the Halifax race and suggests a revival of the days when clipper ships raced new teas home from China to London or stormed around the Horn from New York to San Francisco in efforts to beat the records.

We take it that the motive behind the Fishing Schooner Trophy is to encourage the designing and building of schooner types which will be an advance upon the present very handy and able model. But what constitutes the ideal fishing schooner? Is it the Lunenburg type designed for salt Bank fishing in summer and for freighting in winter, or is it the regulation all-year-round fishing vessel which may take a turn at halibuting, shacking, haddocking or salt fishing whenever the market or occasion demands?

In the former, a vessel with hold capacity is a necessity if she is to pay her way: in the latter, speed and weatherlines are the prime essentials. Is the International Race a contest for salt bankers only? If such is the case, then **Mayflower**, as a salt Banker and a winter freighter can only compare with the Lunenburg type at the cost of great effort on the part of her skipper and a financial loss on the part of her owners, for we do not think she can pack a big enough cargo to make her pay.

As a fresh fisherman running trips from Georges, Browns or Western Bank to Boston market, we believe the **Mayflower** would make an ideal craft providing she can stand the weather. Her hold capacity is quite sufficient for paying trips of iced fish and it is quite evident that she possesses the speed necessary for a fresh fisherman.

The writer recalls, when a member of the crew of the little Digby schooner **Albert J. Lutz**, engaged in halibuting in 1913, that we left Port Hawkesbury together with a fleet of twenty-three vessels—fishermen and coasters. Among the fleet were a number of fine big Lunenburg schooners — the **Delawana**, **Mary F. Flemming**, **J. B. Young** and others engaged in salt banking. We beat up the Straits to light airs which

freshened at nightfall to a brisk S.E. breeze and it was a neck-and-neck contest until we cleared the narrow waters, and off Port Hood the **Lutz** trailed in the wake of the Gloucester halibuter **Catherine Burke** while the **Mystery** of Gloucester hung on the lee beam. All the Lunenburg and Gloucester salt bankers, the **Elsie** and **Atlanta** of Boston, were far astern, and remained thus all the way to the Magdalen Islands. This, and numerous other contests, leads one to the belief that the

speed, and even if she wins the race, there is no likelihood of any owner building other vessels on her lines.

But if all-round fishing craft are eligible and the **Mayflower** proves that she can stand hard weather, then she should be regarded as an advance on the design of market fishermen if she wins the Championship this year, for her hold capacity is quite sufficient for fresh fishing trips.

Our hopes are pinned on **Bluenose** or **Canadia** and



SCHR. "MAYFLOWER" UNDER SAIL.

"Mayflower" is the most yacht-like fishing schooner we have ever seen. Note her sharp entrance but somewhat square stern.

average salt Banker of the Lunenburg type is not as speedy a vessel as the craft built for fresh fishing. Speed proved its usefulness on this occasion as it secured us our fresh bait before the crowd came along.

If the International Schooner Race is to promote friendly competition between the United States and Canada with the underlying motive of improving the salt Bank fishing schooner type, then we do not think the **Mayflower** is any improvement on orthodox design as it is evident she has sacrificed hold capacity for

we trust that the racing winds will be such as to prove that the sturdy design of these craft will rise superior to the sharp model of **Mayflower** for any kind of fishing. Our experience has shown that smart sailing, fine-lined vessels are the acme of discomfort in rough weather, while the fuller modelled hookers are a floating home, even when hove-to on shoal water. When a fisherman has to spend from five to ten months at sea in a year's work, bodily comfort deserves consideration even at the sacrifice of speed.

The Fisheries of Canada, 1920

A preliminary report of the Fisheries of Canada for the year 1920 has been prepared by the Dominion Bureau of Statistics, in co-operation with the Department of Marine and Fisheries.

Prince Edward Island	1,714,663
Manitoba	1,249,607
Alberta	529,078
Saskatchewan	296,472
Yukon	33,100

Production.

The total value of the Fisheries Production of Canada in 1920 was \$49,321,217. This is a decrease from the previous year of \$7,187,262.

*Note:— The value for Ontario is given for the year 1919, returns for 1920 for this province not yet being complete.

The chief commercial fishes in order of value were:

Salmon	\$ 15,595,970
Lobsters	7,152,455
Cod	6,270,171
Halibut	4,535,188
Herring	3,337,738
Whitefish	1,992,107
Haddock	1,126,703
Trout	858,042
Sardines	860,268
Smelts	789,361
Pickrel	682,277
Pilchards	540,265

Capital and Employees.

(1) Primary Operations.

The amount of capital represented in the vessels, boats, nets, traps, piers and wharves, etc., engaged in the primary operations of catching and landing the fish during 1920 was \$29,663,359.

Employees: The number of employees engaged in these operations in 1920 was 57,660.

(2) Fish Canning and Curing Establishments.

Capital: The amount of capital represented in fish canning and curing establishments in 1920 was \$20,512,265.

Employees: The number of persons employed in fish canning and curing establishments in 1920 was 18,499.

The total value of fisheries production in 1920 for each province was as follows:

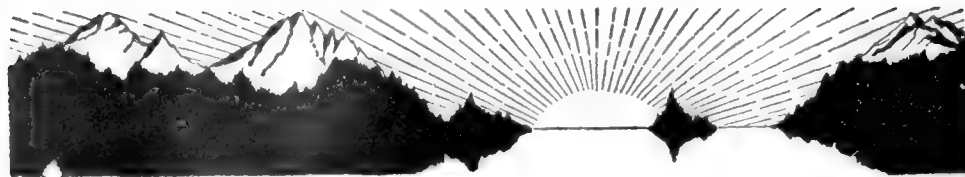
British Columbia	\$22,329,161
Nova Scotia	12,742,659
New Brunswick	4,423,745
Ontario	3,410,750*
Quebec	2,591,982

In the following table are shown the quantities and values of the chief commercial fishes caught and landed, and of the forms in which marketed,—sold fresh, canned, smoked, pickled, etc.

Quantities and Values of Chief Commercial Fishes, 1920, in Order of Value.

Kind	Quantity	Value
Salmon, caught and landed	cwt. 1,284,729	\$ 8,233,072
Marketed —		
Used fresh	cwt. 219,571	2,791,931
Canned	cases. 1,188,599	12,419,034
Smoked	cwt. 2,667	23,131
Dry-salted	cwt. 33,645	151,129
Mild-cured	cwt. 8,924	205,734
Pickled	cwt. 526	5,011
Total Value Marketed .. . . .	.....	15,595,970
Lobsters, caught and landed	cwt. 399,985	4,557,149
Marketed —		
In shell	cwt. 69,000	1,434,638
Canned	cases 163,299	5,687,484
Tomalley	cases. 2,619	30,333
Total Value Marketed .. . . .	.....	7,152,455
Cod, caught and landed	cwt. 1,982,706	5,232,831
Marketed —		
Used fresh	cwt. 118,755	702,667
Green salted	cwt. 167,840	932,173
Smoked fillets	cwt. 38,055	436,778
Smoked	cwt. 278	3,810
Dried	cwt. 444,776	3,809,470
Boneless	cwt. 25,547	344,215
Canned	cases 3,481	29,348
Cod roe	cwt. 40	400
Cod liver oil, medicinal	gal. 11,049	11,310
Total Value Marketed .. . . .	.....	6,270,171

Kind	Quantity	Value
Halibut, caught and landed	cwt. 262,726	3,533,969
Marketed —		
Used fresh	cwt. 262,434	4,533,650
Canned	cases. 41	410
Smoked	cwt. 77	1,128
Total Value Marketed .. . . .	.....	4,535,188
Herring, caught and landed	cwt. 2,056,681	2,255,506
Marketed —		
Used fresh	cwt. 206,381	874,975
Boneless	cwt. 611	6,670
Canned	cases 33,769	200,368
Smoked	cwt. 148,304	590,132
Dry-salted	cwt. 512,168	872,107
Pickled	bbl. 52,765	345,950
Used as bait	bbl. 182,675	361,349
Fertilizer	bbl. 73,729	86,187
Total Value Marketed .. . . .	.....	3,337,738
Whitefish, caught and landed	cwt. 178,382	1,282,112
Marketed —		
Used fresh	cwt. 177,932	1,988,220
Salted	bbl. 299	3,887
Total Value Marketed .. . . .	.....	1,992,107
Haddock, caught and landed	cwt. 441,745	878,914
Marketed —		
Used fresh	cwt. 107,500	455,647
Canned	cases. 17,020	129,654
Boneless	cwt. 136	1,780
Smoked	cwt. 67,750	625,214
Green salted	cwt. 25,433	74,440
Dried	cwt. 38,835	237,945
Total Value Marketed .. . . .	.....	1,522,680
Mackerel, caught and landed	cwt. 142,347	783,304
Marketed —		
Used fresh	cwt. 61,444	631,144
Canned	cases. 1,869	12,535
Salted	bbl. 26,144	483,024
Total Value Marketed .. . . .	.....	1,126,703
Trout, caught and landed	cwt. 67,300	667,569
Marketed —		
Used fresh	cwt. 63,781	827,559
Salted	bbl. 2,345	30,485
Total Value Marketed .. . . .	.....	858,042
Sardines, caught and landed	bbl. 196,649	284,848
Marketed —		
Canned	cases. 129,925	627,972
Sold fresh and salted	bbl. 164,101	232,296
Total Value Marketed .. . . .	.....	860,268
Smelts, caught and landed	cwt. 58,118	518,188
Marketed fresh	cwt. 58,118	789,361
Pilchards, caught and landed	cwt. 65,051	500,870
Marketed fresh	cwt. 65,051	682,277
Pilchards	cwt. 88,050	77,097
Marketed —		
Used fresh	cwt. 553	1,212
Canned	cases 91,929	503,937
Salted	bbls. 1,154	6,925
Used as bait	bbl. 9,937	28,191
Total Value Marketed .. . . .	.....	540,265



Why Canadian Fisheries Should Be Administered by Commissions.

An Able and Illuminating Exposition of the Scheme
by a Thoughtful Writer.

(By HENRY DOYLE, Vice-President, Northern B.C.
Fisheries, Ltd.)

Mr. Alex. Johnson, Deputy Minister of Marine and Fisheries, recently severely criticized the Civil Service Commission for restricting the usefulness of the government in the management of industries under governmental control. He emphasized the fact that through penuriousness in the matter of wages for services performed, it was next to impossible for the government to secure or retain competent employees.

During the past few years nearly every department of the Dominion government has suffered the loss of good men through private companies offering government employees higher remuneration for their services than the Civil Service Commission would grant them.

Mr. Johnson's remarks demonstrate that one of the inherent faults of government control is the lack of business management shown in their operations. The government, through its Civil Service, regards one geologist or one engineer as being equal to any other geologist or engineer employed on similar work. Under private administration the qualification of the individual is the deciding factor when engaging help. The government system tends to develop routine workers, whose efforts are principally devoted to maintaining the status quo with the least possible amount of friction or interference from outsiders. Private management of an industry tends to develop individual ideas, and the prospects of advancement and greater remuneration incite employees to improve their accomplishments.

In private operations most successful businesses restrict their activities to the accomplishment of one object. Take the automobile industry as an example. One factory devotes all its energies to producing batteries, another vacuum tanks, a third tires, a fourth bearings, and so on. Ultimately one firm turns out the completed machine, although perhaps assembling the various parts constitutes the bulk of its own performances. None of these companies engage in so many and varied undertakings that they are "jacks at all trades and master of none." They form as it were Commissions to produce batteries, tanks, tires, bearings, or complete automobiles, and they make successes of their operations.

Daily it becomes more evident that this Commission idea must be applied to government management of industries if success is to be achieved. There are so many trivial details, so much red tape methods, in operating large governmental departments that the really big things are obscured, neglected and lost track of. And no where is this more apparent than in the Department of Marine and Fisheries, where naval affairs

are the predominating factors, and where rules and regulations, laws and their enforcement, licensing and policing, protection and propagation of the fisheries, and all the minor details of a Dominion of nearly 4,000,000 square miles extent, are in the hands of one man—an ACTING deputy minister—to administer. Every credit is due Mr. W. A. Found, who fills this onerous position, but even the Minister himself if he devoted his time exclusively to fishery problems could not satisfactorily administer the industry of such a vast extent of territory.

The fisheries of Canada are administered by the Dominion government from Ottawa as one unit, despite the totally different problems affecting sections separated by nearly 4,000 miles of continent. The fishery interests of the Atlantic, Great Lakes and Pacific divisions have all asked that local commissions, with full administrative powers, be placed in control of the industry in their respective waters. The fisheries of the Atlantic pertain largely to the deep sea; are open to the competition of the world; and as such present features which are entirely lacking on the Great Lakes, and are of comparatively minor importance on the Pacific Coast. Those of the Great Lakes have problems which can only be adjudicated upon by properly authorized representatives of the Dominion on the one part, and on the other, of various individual American States which border on these international waters. The salmon fishery of the Fraser river in British Columbia has the same international complications as concern the Great Lakes fisheries, and the adjustment of its settlement lies between the Dominion of Canada and the local government of the State of Washington.

In the United States the ownership and control of local fisheries are vested in the individual states. Many attempts have been made in the past to assert Federal control, especially in international waters, but all such efforts have proven abortive, and the best legal minds of the American bar agree that Federal control would be unconstitutional. The administration of the fisheries being thus in the hands of each individual state, ipso facto each local fishery becomes a separate entity, and the State government, in effect, becomes a local commission with full administrative powers. Thus those engaged in the fishing industry in the United States do not suffer through ignorance of local conditions, or that indifference which is prone to occur where affairs are vested in an administration situated from 500 to 3,000 miles away from the sphere of operations.

But even though each State government controls the local situation it has been found in states possessing

fisheries of importance, that attending to other branches of governmental activities prevented the authorities from devoting to the fisheries the care and attention they deserved. Most states therefore appointed Fishery Boards, in whose hands were placed the control of fishery matters. Originally these fishery boards possessed only the power of carrying into effect laws and regulations made by the same legislative body that created the Board itself. But gradually the fact became more and more emphasized that satisfactory results could be obtained where the Fishery Board executives devoted all their time to the industry under their control; were unhampered by political interference; were familiar with the local phases of each individual problem which confronted them; and had within themselves full power to make rules and regulations for the administration and for protection of the fisheries, and could legally enforce such orders as were promulgated by them. Many of the eastern states, and California and Oregon on the Pacific Coast, have for some years past administered their fisheries through Boards possessing these powers, and other states have recently either followed their example or contemplate doing so. Until this year the fisheries of the State of Washington were administered by a single Commissioner who voluntarily requested the Legislature at its last session to appoint over his head a Fishery Board "empowered to regulate fishery operations to the extent of saying how, when and where they may be carried on, and with ample authority to enforce such regulations. This Commission should take the place of a Fish Commissioner, for the power to be delegated by the Legislature should be to three or four men rather than to a single individual. It can be elective or appointive, and should be apart from politics or partisanship; free to act solely for the interests of the State in rehabilitating and perpetuating a great natural resource now approaching destruction."

The Washington State Legislature acted favourably on this recommendation and the fisheries administration of that state is now vested in a Fishery Board such as was asked for. The Board created by this Act possesses more authority and power than is possessed by the Fishery Board of any other state, and is the model on which all future legislation of this character will probably be based.

But while in most cases satisfactory results are being obtained under State control, and more particularly so where the Fishery Boards possess full administrative powers, those engaged in the fishing industry where it is controlled by the U.S. Federal government, have experiences similar to those we are suffering under in Canada. This can best be illustrated by the conditions prevailing in Alaska.

The territory of Alaska, not possessing statehood rights, is under the control and administration of the U.S. Federal government. In this respect the situation as regards its fisheries is analogous to that of the Canadian fisheries. The Alaskan legislature does not possess the power of regulating the fisheries of the territory: it can only make recommendations to the Federal government as to what should be done. At the legislative session just concluded a petition was passed urging that fishery legislation be placed in the hands of a Commission. Their petition set forth, in part, as follows:—

Sec. 1. That a commission be created to be known as the "Alaska Fish Commission" to be clothed with al-

most absolute power to handle the fisheries of Alaska, being delegated to enforce stated close seasons in the several sections and to alter closed seasons to fit conditions. The members to be appointed and must all be residents of Alaska. The commissioners must have thorough knowledge of the fisheries of the territory and the experience necessary to enable them to administer the provisions of the act. The salaries to be fixed at \$6,000 a year, plus actual necessary travelling expenses.

Sec. 5. That the commission is granted full power and authority and it shall be its duty to enforce the provisions of the act and all other laws, rules and regulations and orders. And it is to be authorized to make and establish such rules and regulations as may be necessary. This shall include full power and authority to fix the amount of license fees from year to year, and to fix the time when the taking of several classes of food fish is prohibited."

In asking for this Commission the Legislature pointed out that:—The laws covering the Alaska fisheries are inadequate and antiquated. The regulations issued from the Bureau of Fisheries of the Department of Commerce, even when well conceived, are practically unenforced. Those in charge of the fisheries are seldom in Alaska. In this connection it is noted that the U.S. Commissioner of Fisheries has made only one trip to Alaska, and then only as far as Ketchikan with the joint American and Canadian committee."

"Although the Territorial Fish Commission has repeatedly urged greater protection of the fisheries and has pointed out the futility of present efforts, the Bureau of Fisheries has practically taken no steps to stop the uncontrolled stream fishing or other violations of their own regulations."

"Regulations of the fisheries of Alaska, even with the best of intentions, can never be administered from Washington by officials personally unfamiliar with local conditions. In enacting and carrying out of its own laws and regulations the Federal government has failed as it always must, when authority is vested in a bureau 4,000 miles away, and which does not even maintain a local agent with discretionary power."

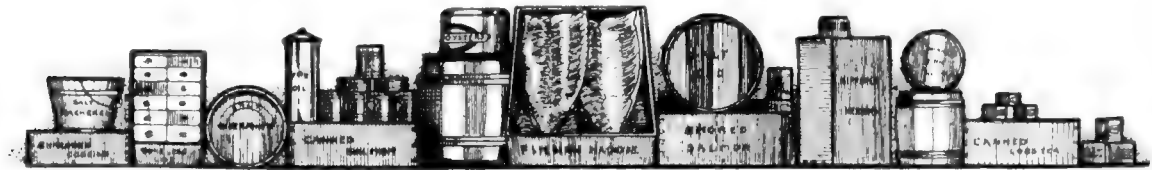
Thus whether administration is from Washington or Ottawa the results are similar. As the Alaska Legislature very properly puts it "the Federal government has failed as it always must, when authority is vested in a bureau 4,000 miles away." While the East has found from experience the evils of long distanced management the people of B.C. have felt it still more acutely, since they are 3,000 miles from Ottawa, and their fisheries differ in every respect from those of the Atlantic or the Great Lakes, which lie closer to the governing authorities.

The request for a Fish Commission for British Columbia, possessing full administrative powers, was asked of Hon. Mr. Ballantyne by the Vancouver Board of Trade, Great War Veterans Assn., Cannery Association, Fisherman's Union, and the public in general. So far the request has not been granted but no one doubts especially in view of what is transpiring elsewhere, that eventually a commission must be put in charge. In time similar commissions, or fishery boards, will doubtless be created for every province. That the Department at Ottawa is reluctant to give up their present authority is quite understandable. No one likes to admit that he has not carried out his responsibilities as well as another could have done. But the

insistent call for local fish commissions is not any reflection on the capabilities of the Fisheries authorities at Ottawa. They have done well: possibly better than anyone else could have done AT OTTAWA: but to again quote from our Alaska friends:—"Regulations of the fisheries, even with the best of intentions, can never be administered by officials personally unfamiliar with local conditions."

Finally it can be said that there is nothing unusual in the request that this great natural resource be placed under the administration of local commissions. Other industries are already operating under similar conditions. The railways of Canada are under a Railroad Commission, the dispensing of liquor in Quebec and B.C., the various Workmen's Compensation Acts, etc.,

are all turned over to Commissions to administer. And as the Board of Trade memorial to Hon. Mr. Ballantyne pointed out, the very Department of Marine and Fisheries, of which he is the head, deliberately transferred to commissions the same powers as regards the administration of harbour affairs as is now asked for as regards the fisheries. As the Board of Trade memorial sets forth:—"It is only reasonable to suppose that if the direction of Vancouver harbour matters warrants the establishment of a local administration board to operate and control them, surely an industry as vast, and with so diverse and intricate problems as our fisheries contain, would be still more in need of local administration."



"All Fish" Trains to Serve Neglected Markets

Present Consumption in Canada Could be Doubled by Better Rail Service.

By PISCATOR.

We cannot truthfully say that Canadians are not consistent fish consumers. The average consumption for the year 1920 is estimated at 22 pounds per capita. During that period only thirty-five million pounds of sea fish moved from Atlantic and Pacific ports to interior distributing centres, which means that people living elsewhere than along the coasts used at the rate of five pounds per head of sea fish. The balance of the 22 pounds was made up slightly of fresh water fish, but very largely of smoked and canned fish.

There are three important fish distributing centres in Canada, Montreal, Toronto and Winnipeg and they rank in the order mentioned. Calgary and Edmonton are centres of lesser importance along with Quebec. To these points fully ninety per cent of the thirty-five million pounds were shipped so that the territory surrounding these centres was tolerably well supplied with fresh fish. Figuring on the basis of area only an infinitesimal part of the 3,730,000 square miles which Canada covers is served with a fresh supply of sea fish, and the proportion of our population benefitting by the service is also but a small fraction of the whole.

In view of this condition we have no way of knowing whether Canadians, as a whole, will eat fish or not. If the small percentage of people who have an opportunity of getting fresh sea fish consume enough to bring the general average up to five pounds, there is no telling what the average would be if the service supplied one hundred per cent of the population. Statistics indicate that canned and mildly cured fish are popular among people outside the fresh fish districts. If their fondness for prepared fish is deep enough to bring the average consumption of this variety up to ten or fifteen pounds per annum, is it not reasonable to assume that they would be hearty

eaters of fresh fish were it made available to them?

A campaign is in progress at the present time, directed by the Fisheries Department, Ottawa, to increase the use of fish among our Canadian people. In view of the foregoing it is obvious that the scheme must constitute an expansion of the territory and an increase in the percentage of population served with fresh fish supplies. Montreal and Toronto are comparatively well developed markets, but there are points in central and northern Ontario where fresh sea fish, and even lake fish, are practically unknown.

It seems a rather remarkable situation that the people of Quebec city and the district east of Quebec along the south shore of the St. Lawrence should be scantily provided with fish or dependent upon supplies drawn from Portland, Maine, when at the same time the waters about Gaspé are teeming with popular varieties of fish of unexcelled quality. One may even go closer to the source of production and find a similar condition. Towns in New Brunswick are not properly supplied with fish produced almost at their own doors.

And these conditions will obtain unless there is some directing force to reorganize the present jerky distributing arrangements into a smoothly operating system. If Pacific fish can be laid down in quantities in Toronto or in Winnipeg, and even as far east as Montreal, is there any reason why all the territory traversed by our great railway systems between Vancouver, Prince Rupert and Montreal should be without sea fish? Similarly in the east, if fresh fish from Mulgrave and Halifax can be placed in Montreal and Toronto why should intermediate points not be served? The very train that carries supplies from Nova Scotia to Montreal and Toronto passes through territory where a fish-loving people are actually fish-starved.

Naturally there is a reason for this. Business like everything else in nature follows the course of least resistance. Montreal, Toronto and Winnipeg are populous centres and a market for fish can be developed there with more facility than in smaller communities. But, as in countless other instances, the law of least resistance is not the most efficacious nor the most profitable. Consider the fact that 35,000,000 pounds of sea fish went last year to supply the population centred within a short radius of the chief distributing points and one will readily see that the per capita consumption of the population to which the supply was accessible was really high. In striking a national average one is forced to include millions of people who never had an opportunity to secure fresh sea fish.

That our present arrangement is all wrong is quite patent, but the question as to who is to give practical effect to corrective measures is a horse of different color. It is very likely that after thorough investigation of the matter has been made, the federal authorities will make suggestions. Naturally they must be theoretical in their aspect, and the solution of the present difficulty will depend upon the judgment of the trade as to whether they can be given practical effect.

It is impossible to get other centres to accept such bulky shipments as are sent regularly to Montreal and Toronto. Perhaps in a few instances one will find junction points which would serve as supply centres for a limited population, but in large measure future distribution must be direct from coastal points and such a scheme is absolutely dependent upon a one hundred per cent fish train. Judging by the struggles of the trade in recent years to secure any degree of service from the railway companies, it is hard to imagine an all-fish train operating from our coasts. Of course, the Sea Food Special, which operated in 1917 and 1918 from the Atlantic seaboard was an all-fish train of a character, but the kind of service the writer has in mind, is a local all-fish train, that is, a train that will supply not only Montreal and such centres, but all intermediate points en route. With fish travelling on express trains it is absolutely beyond reason to expect a fish service that will mean a stop at perhaps every other station. Passenger traffic would not tolerate it.

During the war years such an improved service was unthinkable. Railway equipment of every description was utilized to the very limit. Now, however, things have changed. During the month of April this year more than 30,000 freight cars were idle and it is said that practically 1,000 refrigerator cars were standing in sidings. When traffic was straining railway equipment to the maximum, and vitally important traffic at that, was no time to inveigle the railways into any experiment no matter how brilliant the prospects. Today the situation is different. Railway equipment is lying idle and the lines should be willing to co-operate in any practical suggestions to develop trade. No doubt in its inception the service will not pay. But without the service there will be no increase in trade and not even a prospect of increased fish traffic on the railways.

In Great Britain the railways furnish a special service for fish distribution and it is stated on authority that the schedule in many instances is faster than for trains carrying the Royal mail. It is recognized that fish is a highly perishable article and must have speedy transportation to insure its delivery to the consumer in good condition. If in the Old Country where the hauls are short and population is dense a special ser-

vice for the transportation of fish is necessary, how much more is it essential in this country where the hauls are incomparably greater and where the population to be supplied is so widely scattered?

In Canada, it must be granted, refrigerator cars, both express and freight, are most satisfactory. But if these cars could be utilized in an all-fish service such as outlined above, they would perform an infinitely greater service. It is not unreasonable to expect that Government-owned lines would lend assistance to the project, especially in the east, in view of the alleged purpose for which the old Intercolonial line in the Maritime provinces was constructed. It is said to have been one of the schemes of confederation to link these provinces with Upper Canada and promote commerce. There is a school of thought in the Maritime provinces that feels that section of the country has lost something in a commercial way and gained nothing from the union. If it be conceded that the railway is not to be regarded as a profit-making enterprise is it not a logical request that an improved fish distributing service be instituted, having in mind the pre-eminent position which fishing holds among the industries of the east?

FISHERY FILMS PROVE POPULAR.

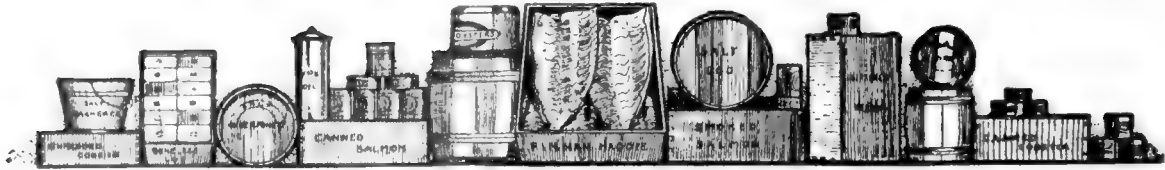
Motion picture films describing the Atlantic fisheries, which were made last year by the Marine and Fisheries Department, have now been fully released and are being shown on screens throughout Canada. Few, if any, industrial pictures are so animated and none has a greater attraction. They are creating unusual interest, combining as they do, to an unusual extent, education and entertainment. The films include an exciting picturization of tuna trapping on the southwest coast of Nova Scotia, a beautiful and lively picture of sport fishing on the Restigouche, commercial salmon fishing on the Miramichi and Baie de Chaleur, the lobster fishery, the sardine fishery, along with various other phases of the in-shore fisheries, together with a story of the dry fish business.

From an educational standpoint the pictures are filling a long-standing want. They serve to instruct our people regarding one of Canada's greatest basic resources and supply that which is omitted in public school education. The department has such faith in this means of disseminating knowledge that it is continuing its policy of projecting the industry on the movie screen. This year photographers will go to the Pacific coast and "shoot" the salmon, halibut, herring, pileyard, whaling and other branches of the industry and also film for the benefit of the public, the operation of federal fish hatcheries which are, in a very quiet way, performing an exceeding valuable work. It is expected to have these pictures released for the screen late in 1921 or early next year.

THE "ATCO NEWS".

The Atlantic Coast Fisheries Co., New York, are to be congratulated for the neat and interesting little fisheries paper which they are issuing monthly to all their shippers and customers.

The publication of house organs and private magazines has increased largely in recent years but we believe this is the first house magazine of a fisheries concern in America. In Great Britain, Lord Leverhulme's Mac Fisheries, Ltd., issue an illustrated weekly paper entitled "Mac Matters".



Nova Scotia's Fishing Industry

Report on 1920 Operations.

M. H. Nickerson, Commissioner of Fisheries for Nova Scotia, has submitted the following report on the Fishing Industry of the Province, which same is the most comprehensive survey issued in many years.

Mr. Nickerson, a well known expert on matters affecting fisheries, especially those of Nova Scotia, was on the 12th of August, 1920 appointed to this Department for the purpose of assisting in the collection and furnishing of information and data in connection with the fisheries of Nova Scotia.

Mr. Nickerson, since his appointment, has been active along the lines indicated and his report is here attached.

W. B. McCOY, Esq.,

Secretary of Industries and Immigration.

Sir:—I beg to submit my preliminary report on the fisheries of Nova Scotia, which statement, under the circumstances, can be little more than a mere outline.

Since my appointment for this purpose, in August last, the time has been too limited for a complete survey of such an extensive field, of various aspects and interests. The original intention was to deal with the subject under these heads: (1) Number and classes of craft engaged in the industry; (2) methods of fishing and manner of handling products; (3) different kinds of fish taken, their relative values and where marketed; (4) transportation, its drawbacks and possibilities; (5) revival of mackereling by purse seines and deep-sea drifting; (6) locating of inshore spawning grounds for school fish, etc.

The year now closing has not been a very prosperous one for any branch of the industry. In ground fish, over stimulation for a year or two proceeding led to the inevitable reaction, which made markets go wavering down and left immense stocks unmoved. Several other causes conduced to the stagnation felt in all fish producing countries as well as Canada. Fresh fares coming in by beam-trawlers were generally received in a poor condition. The rise in railway freights tended to retard certain shipments, and lastly an unusual discoloration of dried fish, widely prevalent, injured the trade by calling for a close cull on foreign exports, and making buyers hold off more than before. The supposed cause will be mentioned further on.

The record for net fish is more satisfactory, but in some sections there was a marked falling off. This was particularly the case with spring mackerel on the South Shore, the run for some unknown reason, passing wider than usual. Fall operations were more profitable, notably in West Halifax and the shore adjoining where good takes were made by floating traps. The market for fresh, was not as good as formerly but the salted article held in reserve, paid extremely well, some New York sales realizing \$40 per barrel. The future

no doubt will see much more doing in the latter cure, which is always the safest.

In lobsters, one of the great staples, canning was not up to the ordinary owing to the dead low decline of the European market. The outlook is by no means bright at present, and with the opening of the next season, fishermen will face a disastrous drop in price of takes delivered to the factories. In the live export business, from which the Western Counties drew millions annually the future holds little or no promise, since the cutting out of fall and winter fishing, by order-in-council, has put the State of Maine trade in that commodity right on its feet. When the Nova Scotia fishermen were compelled to stop work, those of Maine redoubled their activity, and their dealers rebuilt their huge pounds which were falling into disuse from our lively competition, and already their holdings for the spring market tally up more than two million pounds, which will almost, if not quite put our shippers out of the running. The ruling price from the boat this fall has averaged forty-five cents per pound, for Maine and New Brunswick. Nova Scotians will be lucky if they get fifteen cents a pound for their export next spring.

Nova Scotia's Field.

It is estimated that the Nova Scotia yield for the calendar year from shore and deep sea operations combined will not fall short of \$14,000,000. It is regrettable that Federal statistics make no account of the fares carried direct from the banks to Boston, or some other American port. The proceeds go to swell the earnings of Nova Scotia crews but it is lost for the purpose of exporting. In other words, because of the above omission, the annual value of our provincial fisheries cannot be correctly ascertained. It is hoped the Ottawa Government will in future see to it that an estimate at least is available.

Of the above value, fully four-fifths belong to the boat fishermen, that being about the proportion in number of men which the two branches bear to each other. Vessel fishing forms the pursuit of a comparatively few ports, Lunenburg leading far and away, while the work by the smaller boats, just under ten tons and fitted with motor-power as a rule, is the mainstay of the shore settlements around the whole coast. It is good policy to remember that the calling gives a greater percentage of domestic profit than that of any other natural resource in the Province. This fact is obvious, when we consider the development of the other great resources is by concerns not domiciled in the Province, and the moving of the several outputs are by lines mostly under outside control. The shore activities, besides benefitting a number of allied trades, directly sustain a large number of small coasting

steamers and gas smacks employed the year round in collecting and carrying the shore takes to the place of handling or the point of transshipment.

Militated Against Trade.

Increase in freight and express rates effective last fall told heavily against the trade in fresh and frozen. With a view to procuring a revision downward, I obtained from the transportation branch of the fisheries department a complete schedule of rates by different routes from all points in Nova Scotia to Montreal and the interior. There was little uniformity in the scale of tariffs, to the detriment of some localities, which officials on my request kindly agreed to consider. A reduction of rates on live lobsters is almost a certainty. Other changes for the better may be expected. Charges for conveyances would be comparatively light if water-carriage were more largely adopted.

Reforms Effectuated.

Mackerel Seining: The system of mackerel scouting, on due representation, will be continued in the future, so I am assured from headquarters. An official report says: "The service from all angles was a complete success. The fishermen for whose benefit the service was instituted are enthusiastic, and next season they will be in a better position to take advantage of it. M. H. Nickerson, Nova Scotia, was the originator of the scheme, and the department was prompt in putting the idea into effect." Which means that a fleet of seiners will go out from our harbors next spring—a pursuit abandoned by our people for thirty-five years past—and secure a good share of the spoil hitherto only enjoyed by their American neighbors.

Boat Tax Abolished:—The war revenue tax relating to pleasure boats was, by some misunderstanding of local agents, applied to new fish boats. I brought the case to the attention of the Inland Revenue Department and obtained a release from such taxes on the above craft. A refund of sums already paid was ordered by the Minister, and instructions as to proceedings were sent out to all sections interested. This timely release is said to have saved many thousands of dollars to the calling.

Curing and Preparing:—Most of the shore catches of ground fish are handled by local buyers for the fresh trade, or boneless manufacture. A great improvement is noticed in the treatment at receiving points. The fish are delivered from the boats, heads and entrails already removed, then they are washed before split and thoroughly cleansed afterwards for the salting down. The last stage of preparation leaves them without a stain, and the packing for shipment is now a fine art. Such advance in handling has been made a rule within a year, and no pitch-forking is practised now except at a few stands which are being instructed and advised in the latest methods.

Craft and Equipment:—Fine gas boats have almost entirely superseded the clinker built cutter or skiff rig. The Fishermen's Union at Canso has been largely instrumental in this advance there, most of the boats having motor-power at present. It is suggested that a larger class of boats will be soon found usable in parts where winter lobstering has been abolished. A deck-covering of some sort will be indispensable for working distant grounds in uncertain winter weather. Modern requirements will scarcely permit of a winter

vacation in a business that furnishes a popular article of food for consumers at home and abroad.

Utilizing Fish Waste:—That the enormous quantity of fish scrap, now going to waste, might be turned to good account as a by-product has long been recognized. I have lately given considerable attention to the matter, and was glad to learn that Prof. Ruttan, of McGill, who heads the chemical division of the scientific research, is a whole-hearted supporter of the proposal to establish factories for producing fishmeal at suitable points in the Maritime Provinces. He has favored me with a full report on the subject, with a partial description of what might be eligible spots for this new enterprise in Nova Scotia, and I am in correspondence with parties of capital and experience who would embark in it, provided they were assured of conditions and prospects. I am in hopes that next year will see this idea take tangible shape.

It is a pleasure to acknowledge the friendly attitude of the Ottawa Fisheries Department towards the present survey on the part of Nova Scotia; and also the moral support received from Mr. Ward Fisher, Chief Inspector of the Eastern division, as well as from the editorial staff of "The Canadian Fisherman." In some matters, collaboration to a certain extent is confidently expected from these quarters.

PRIZE WINNERS IN FISHERIES ESSAY COMPETITION.

Iva Haisman, Outremont, Quebec, has been awarded first prize in the Fisheries Department essay-writing contest, having submitted the best essay on "Why Canadians Should Eat More Fish". The contest was instituted last year and school children in all parts of Canada were invited to take part. Owing to the great number of essays sent in and the length of time required to properly examine them, announcement of the results has been delayed. Competitors ranged in age from 8 to 21 years and due regard had to be given to this point. It is interesting that the prize-winner for Nova Scotia is but nine years of age.

Iva Haisman, 16 years of age, won the \$25 prize for Quebec and the general prize of \$25 for the best in Canada. Prizes of \$25 are awarded in the other provinces as follows:

Nova Scotia.—Cyril Anderson, aged 9, Lunenburg.

P. E. Island.—Mildred White, aged 15, Abney.

Alberta.—Margaret Isabel Jackson, aged 16, Calgary.

Saskatchewan.—Frances Hankla, aged 13, Plenty.

British Columbia.—John Craig Oliver, aged 16, Kerisdale.

Ontario.—Divided between Bernadette Cooper, aged 12, Ottawa and Rodger Ross, aged 13, Palmerston.

School children in the provinces of Manitoba and New Brunswick failed to participate in the contest, although elsewhere in Canada they evinced considerable interest, and the essays show that they spent a great amount of time in study and research.

A business man advertised for an office boy. The next morning there were fifty boys in line. He was about to begin examining the applicants, when his stenographer handed him a card on which was scrawled: "Don't do anything until you see me. I'm last kid in line, but I'm telling you I'm there with the goods."

The Lobster Fishery of Western Nova Scotia

A Survey of the Industry and Official Statement Regarding the Existing Regulations.

Writing in the Halifax "Chronicle", Ward Fisher, Chief Inspector of the Atlantic Fisheries Division, Department of Fisheries makes the following statements under date of June 13th.

For some months past representations have been made through the Halifax daily papers, and the public press generally, that the lobster fishery regulations for Western Nova Scotia are unsatisfactory to the fishermen, and also to the shippers of live lobsters, and should therefore be amended so as to permit a more favorable fishing season and also a more favorable and profitable season for the live lobster trade. The following changes have been proposed:

(1) To revert to the fishing season which obtained previous to September 30, 1918, which permitted fishing for the five and one-half months from December 15th until June 1st.

It should be noted that the present season from March 1st, to June 1st was adopted in view of the apparent danger over-fishing, which was resulting in the decrease of the catch of large lobsters, and a proportionate increase in the catch of lobsters of a less size than eight or nine inches. The fishermen were alive to the danger, and to overcome it it was first proposed that a suitable size limit be imposed. On the representation of both fishermen and canners that a size limit would seriously affect the financial returns from the industry, the fishing season was shortened two and one-half months by eliminating the winter months from December 15th to March 1st. The fishery has been kept under close observation during the past three seasons, in order to ascertain whether or not the present short season has resulted in any advantage over the previous long season of five and one-half months. The information is to the effect that the fishermen generally are in favor of the retention of the present season, on the ground that catches for the short season compare favorably with the total catches for the several immediate long seasons previous to the adoption of the present regulations. While the prices secured in the American markets during the winter months, particularly December were much higher than for the spring shipments, yet the catches for the spring months were so greatly increased that the increase more than made up for the smaller prices. Further—winter fishing was much more hazardous and laborious. There is a very strong feeling that the present regulations should not be changed.

(2) To amend the regulations so as to provide for two seasons, one season from November 1st, to December 15th and the other from March 1st, to May 15th.

The representations in favor of this proposal are chiefly from the dealers in live lobsters, and have not been received with much favor by either the fishermen or canners. The dealers in live lobsters hold that the high prices to be secured in the early season would be highly advantageous to both the trade and the fishermen and therefore, as a business proposition, would be a wise move. The fishermen quite generally oppose the two season proposition. Many of them hold that it is quite impossible to operate for two short

seasons. Also, as stated under the first proposition, they hold that the increased catches taken during the present spring season more than make up for the increased prices to be secured during the proposed early winter season.

The canners are also divided on the question. From information at hand it would appear that the majority of the canners do not favor the two season proposition, chiefly on the ground that it would be impossible to properly and profitably operate the canneries for two such brief seasons.

(3) To amend the regulations by prohibiting the taking of small lobsters, and extend the fishing season so as to permit fishing for some six or seven months each year.

This proposition is apparently gaining much favor. The chief objection is that hitherto the fishermen have secured large returns from the sale of small lobsters to the canneries, and therefore the adoption of a size limit would cut off a considerable source of revenue. Many of the canners also object on the ground that to prohibit the taking of small lobsters would result in the closing of the canneries.

It may be said that a very considerable number of the fishermen favor a size limit with a longer fishing season, and there can be no doubt that the proposition appeals very strongly to all who are interested in the conservation of the industry. The experience in St. John and Carleton counties, New Brunswick, is pointed to as an evidence of the value in this regard. Under conditions similar to those prevailing in Western Nova Scotia, the fishery greatly declined. In the Grand Manan district the fishery had become almost extinct. From Seal Cove only one boat was engaged and the total receipts were \$300.00. This season there were 50 boats fishing 25,000 traps. The catch for the Grand Manan district to June 1st of the present year was nearly 5,000 cwts., having a value to the fishermen of nearly \$140,000.00. As the size limit is not less than nine inches, the catches are chiefly exported to the United States. No canneries are operated, and the fishermen are a unit in favor of the new conditions. During the present season one boat operating 120 traps took 580 large lobsters at one hauling, and another boat took 570 large lobsters at one hauling.

In the consideration of this proposition it should be understood that a suitable size limit will result in the closing of the canneries in the Western Nova Scotia district, as it would be quite impossible to successfully compete with canneries in districts where the catches could be secured at local prices, and especially in districts where no size limit obtained.

It will readily be seen from the above that a wholly satisfactory regulation of the industry in Western Nova Scotia is most difficult. It is easy to find fault with the regulations, for it is apparently quite impossible to frame regulations satisfactory to all engaged in the industry—and save the industry. It is quite evident, however, that the fishermen are alive to the embarrassment, and are approaching the matter in a most intelligent and commendable spirit.

Notwithstanding reports that the fishery during the

season just closed was unsatisfactory, it should be said, particularly with reference to the three great producing counties of Shelburne, Yarmouth and Digby, that the season has been a most prosperous one, as may be seen from the following statistics:—

The shipments of live lobsters by steamer from Yarmouth were 21,486 crates, as compared with 16,471 the previous year, showing an increase of 5,015 crates.

In addition there were 3,372 cwt. carried to American markets by the United States fishing smacks, as compared with 1,520 cwt. the previous year. The American well-smacks carried 3,372 cwts. as compared with 3,254 cwts. the previous year.

It will thus be seen that the catches for the live lobster trade were greatly in excess of 1920, when a most prosperous season was experienced.

Further, the pack of canned lobsters shows an increase for each of the three Counties, as follows:

YARMOUTH:—The pack was 12,654 cases as compared with 11,902 cases for 1920, or an increase of 752 cases.

SHELburne:—The pack was 8,587 cases, as compared with 7,933 cases for 1920, or an increase of 654 cases.

DIGBY:—The pack was 2,519 cases, as compared with 2,425 for 1920, or an increase of 94 cases.

For Queens County the total catch was 4,672 cwts. as compared with 4,600 in 1920.

From the above statement it would appear that the fishery is now in a flourishing condition. While it is quite true that the slump in canned goods resulted in more than a fifty per cent cut in the prices paid for small lobsters for canning purposes, yet the increase in the total catches have assisted in the prosperity of the fishermen in the past season.

Opportunity is here taken to make a statement with reference to the strong representations through the Halifax daily press, that the fishermen of Western Nova Scotia were engaged in the most reprehensible

practice of smuggling, or attempting to smuggle, small lobsters into the Boston markets, and that as such lobsters were in contravention of the Massachusetts fishery regulations, they were seized by the State authorities and planted in the waters of the coast, to assist in building up a fishery in competition with the Nova Scotia fishery. Therefore it has been proposed that the practice be prevented by the adoption of a size limit.

It should be stated most emphatically that the representations are not in accordance with the facts, notwithstanding that some 30,000 small lobsters were seized during 1920. Over 16,000 crates of live lobsters were shipped by steamer from Yarmouth to Boston during the season of 1920. Accepting the statement that 30,000 short lobsters were seized by the Massachusetts officials, the seizures would amount to less than two short lobsters to each crate of about 160 lbs.

The facts are as follows:—The shipping fishermen and dealers in packing the crates exercise every possible care to avoid including small lobsters. It is difficult, under the most favorable conditions to actually measure each fish, as the crates must be prepared for shipment without delay. The result is that an occasional lobster slightly under the regulation size is included, without any intent whatever to deceive. Some of the dealers handle thousands of fish on shipping days, and the fact that the seizures at Boston, after close scrutiny by the Massachusetts officers, average less than two fish to a crate, is sufficient evidence to show that our fishermen and dealers are not engaged in lobster smuggling.

A size limit would not affect the situation, as the very same conditions would obtain during the stocking of the crates for shipment. It is quite impossible for the shippers to be exact in their measurement of each lobster. Under ordinary human conditions an occasional fish, slightly under the size limit, may be expected to be included in the crates.

Oyster Cultivation under Sanitary Control.

Severe Regulations suggested by French Scientist.

By C. McKAY.

The Scientific and Technical Office of the Department of Fisheries of France, has recently published a pamphlet under the title of "Notions pratiques d'hygiène ostréicole". This publication was prepared by Mr. Hinard, inspector of the sanitary control of shell fish establishments. It may be obtained from le Bureau Scientifique et Technique des pêches, 3 Av. Octave-Greard, Paris. Price 2 francs.

Mr. Hinard's description of the conditions considered necessary to assure the proper hygiene of an oyster park, seems rather drastic. It may be doubted that his ideal is often realized; but his views are none the less interesting as showing the great importance attached by the French to the task of protecting oyster parks from contamination of any kind, and assuring cleanliness in their handling after they have been removed from the beds.

Anybody applying for permission to establish an oyster park, or a plant for the reception and distribution of oysters or any other sea product, must submit plans to the Department of Fisheries of France, and the

permission is only given, subject to the sanitary control of the Scientific and Technical Office. In order to assure the proper health of the oysters, it is considered necessary that the parks should be located in pure water — than is to say water from the open sea uncontaminated by currents containing improper material, from the wash of the shore or from neighboring rivers. To determine the hygienic quality of the water over an oyster park the French make a chemical examination of it. The first consideration is to determine the degree of salinity of the water, and for this it suffices to drop some chloride into the samples of water taken. If the water is pure the chloride will make little change, but if it contains organic matters these are resolved and made apparent. Other tests are made to determine if the water contains ammonia and nitrates which, if they exist in any quantity, favor the activity of microbes, or as Mr. Hinard puts it, indicate a veritable fermentation of the water. These tests involve a culture of the organic matter, and enable a computation of the number of microbes contained in a cubic centi-

meter of water. The scientists seek specially to determine the presence of infectious germs, and in particular the typhoid bacillus. All waters liable to be invaded by excrement are suspect, and the presence of bacilli generally regarded as inoffensive indicates a condition demanding preventive measures.

While the water of the open sea contains only bacteria without danger to men — so far as we know — it is not the same with littoral waters which are invaded by rivers or rivulets or the wash of rains bearing the debris and bacteria of the land. The ideal location of an oyster park is off an uninhabited coast, and as a general principle the park should be a considerable distance from sources of possible contamination; that is to say in locations where the sea water predominates, and a good degree of salinity is maintained even at low tide. According to M. Hinard, it is not enough that the park be hatched by pure sea water at high tide; if the oysters absorb impurities at low tide they do not get rid of them at high water. Oysters will not reject impurities simply because the waters are renewed. Often the process of rejecting undesirable substance is very slow.

An oyster park cannot be classified as salubrious, Mr. Hinard says, if it is periodically invaded by impure waters, that is to say by currents caused by spring freshets, by heavy rains flooding sewers, or by the discharges of mills or factories carrying on seasonal in-

dustries. Even when harmless in themselves, these discharges may be rich in organic matter which enable stray bacteria to develop and multiply.

M. Hinard devotes some attention to the hygienic requirements of establishments where oysters are assembled and retained, preparatory to their shipment to the consuming markets. Nobody, he says, should be allowed to handle oysters with unclean hands; nor should any employee be allowed to enter the retaining basins until he has cleaned the dirt of the land from his boots. The personnel must accept "une discipline hygiénique sévère," he says.

The location and construction of the retaining basins is a problem of great importance, we are told. For oysters a bath of fresh water is very dangerous, and even rain water is highly undesirable. Preferably the water in the basins should be replenished at high tide by a pump and pipe, the inlet of which is far enough below the surface to avoid the brackish water, and far enough from the bottom to preclude the stirring up of the mud, which is rich in bacteria. Where it is not possible to pump water at every flood tide, a reservoir should be provided and periodically filled, capable of holding enough water to supply the retaining basins for several days. Unfortunately in winter, water held in a reservoir, becomes too cold to be turned directly on the oysters.



Canadian Fish Plants -- No. 2



The Plant of the Lockeport Cold Storage Co., Ltd., Lockeport, Nova Scotia.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd., 528 Winch Building, Vancouver, B.C., Canada.

CANNED SALMON MARKET.

The canned salmon market is no better as to prices than a month ago. About the only encouraging thing in the situation is the fact that there are a few thousand cases being moved to the U. K. on about every boat that sails. The last boat which sailed the first part of June carried about 20,000 cases. The different canners who were interviewed were no more optimistic than they have been and there is no talk of there being any pack of fall fish. The price of Fraser River sockeyes has not been set and therefore the cost of this river's catch cannot be figured. No. 2 district has had the prices set but no prices have been figured as yet. Take it all in all there is really nothing to be said and all that any of the sellers are doing is just plugging along and doing the best they can under the circumstances.

SALES TAX IMPOSED BY THE OTTAWA GOVERNMENT ON CANNED SALMON.

After securing a rescinding of an excise tax about six months ago the salmon canners of British Columbia are now up against a sales tax of 3 per cent on all sales of canned fish. At first the canners were afraid this tax would apply to shipments to foreign countries but later advices from Ottawa, however, showed that the new tax only applies to sales within the Dominion of Canada. In making the sales to the wholesalers the 3 per cent will be passed on and they in turn will pass one half on to the retailer, as a charge. As the canners do not anticipate moving a large lot of canned salmon this year, owing to their not packing any of the cheaper grades and with a possibly small movement of sockeyes it looks as though the government would not get much of a return from this particular tax from them.

GOSSE-MILLERD, LIMITED, IS THE NEW NAME.

Owing to it being more convenient to carry on business in more than one province by working under one name and one charter the Gosse-Millerd interests have consolidated their different companies under one name and under one charter. The new name is Gosse-Millerd Limited. The old companies which have been absorbed under the new name are as follows: Gosse-Millerd Packing Co., Ltd., Gosse-Millerd (Alberni) Packing Co., Limited., McTavish Fisheries Ltd., Sea Island Canning Company Ltd., and the Star Cannery Ltd.

The personnel of the new company is the same as under the former arrangements; the obligations of the former companies are assumed by the new company and the accounts owing to the former companies are now payable to the new company.

DICK GOSSE BADLY INJURED.

Mr. Richard Gosse, Jr., manager of the Gosse-Millerd, Limited cannery at East Bella Bella, was injured by being crushed between the float at the cannery and a fishboat on the 18th of May. Mr. Gosse was standing on the float watching a fish boat come in and just as it came alongside he slipped and fell in between the boat and the float, his thighs being caught in the narrow space. Dr. Brown was on the scene in a short time and later in the day took his patient aboard the Union S.S. Camosun which was Southbound, and accompanied him to the city.

Dick Gosse is well known in the city and along the coast, and every one will be glad to see him about again. It will probably be well into July before he is able to be around.

VANCOUVER WHOLESALE FISH MARKET.

Salmon.—Red spring salmon are quite plentiful and are selling at 18c. per lb. dressed heads off. Bluebacks are also in good supply and are selling at 12c per lb. dressed heads on.

Cod.—Local caught ling cod are in good supply and are selling at 6 to 7c.

Habibut.—This popular variety of fish is arriving in good quantities and selling at 12 to 15c per lb. wholesale.

Soles.—Local caught soles are also plentiful and the price is 6 to 8c.

Smelt.—These are having a big run just now and are selling at 10c per lb. wholesale. It looks as though the dealers would be able to secure their supply for Winter shipments if the run keeps up.

Herring.—The fat Point Grey herring are now on the market in good quantities and some very fine samples of kippers are the result.

Carp are off the market.

Rock Cod and Perch.—These two varieties are selling at 8c per lb.

Black Cod (sable fish).—Very scarce at present.

SUPT. R. J. DAVIS IN KETCHIKAN.

Mr. R. J. Davis, Supt. of the New England Fish Co. has gone to the Ketchikan, Alaska, plant of the Company to look after the annual overhaul of the plant. Mr. Davis will probably be gone about two months.

DISTILLATE LOWER BUT NOT DOWN TO THE PRICE IN THE U.S.

Although there is a lower price on distillate; still the price in Vancouver is not down to Seattle prices by 1½c. and this is figuring exchange and difference in size of measure. Too bad the Canadian fishing firms have to pay through the nose for their supplies and then compete with the other fellow.

ANNUAL GATHERING BRANCH MANAGERS IN VANCOUVER.

The Branch Managers of the New England and Canadian Fishing Companies met with Mr. A. L. Hager, the President and General Manager at the headquarters in Vancouver, B. C. during the latter part of May. This was the annual get together of the West coast managers and a busy week was in order for all concerned. Those present were besides Mr. Hager, Mr. J. S. Eckman, Asst. Manager of The Canadian Fishing Co., Ltd., Mr. R. J. Davis, Supt., Mr. R. R. Payne, Supt. of Production, Mr. James Lee, Manager of the Atlin Fisheries, Ltd., Prince Rupert, Mr. Charles Ruckles, Manager of The Doty Fish Co., Kalama, Wash., Mr. Harry Nunan, Manager of the New England Fish Co., at Ketchikan, Alaska, and Mr. Wm. Dehaas, Manager of the Seattle, Wash., branch of the New England Fish Co.

SALMON CATCH ON THE WEST COAST OF VANCOUVER ISLAND NOT UP TO AVERAGE.

Up to date the catch of salmon on the West Coast of Vancouver Island has not been up to the average. This has been rather disappointing as the fishermen have rather hoped they could make up during the spring what they would not be able to get during the Fall. The price has as a rule been somewhat than it was last year.

West Coast traps have not had any run of springs so far and as a result are not making a very good showing up to date.

SOCKEYE PRICES SET FOR NORTHERN B. C.

The cannerymen met during the first part of the month and set the prices for sockeyes for Northern British Columbia as follows:

On the Skeena and Nass Rivers: The fisherman who owns his own boat and gear will receive 40 cents per fish, and the fisherman who operates boats and gear owned by the cannery will receive 30 cents per fish. Rivers Inlet, Smith's Inlet and Fitzhugh Sound users of cannery gear will be paid 35c per fish.

It is too early for prices to be set on sockeyes for the Fraser River as the fish do not begin to run there until later in the season.

Owing to unsold stocks and uncertain market conditions the cannerymen are not planning to pack any chums or pinks this season, and for this reason no prices were set on these varieties.

Spring salmon have been fairly plentiful in Northern B.C. this Spring and the prices have been 4c per pound for fishermen operating company boats and gear and 6c per pound for fishermen operating their own boats and gear.

BOATS ON LAY FROM CANADIAN FISHING CO., LTD., DOING WELL.

The several boats fishing for the Canadian Fishing Co., Ltd. from Vancouver are meeting with very satisfactory results, and some very good fares are being brought in.

NEW REFRIGERATOR CARS ARRIVE IN PRINCE RUPERT

Prince Rupert is very well supplied with Refrigerator cars now as about twenty new cars have arrived and gone into commission.

TO PROTECT SALMON INTERNATIONALLY.

Washington, June 7.—Opening of early negotiations by the United States State Department with Canada and Great Britain for treaties to protect salmon in the Pacific was forecast today by Senator McNary, Oregon. Immediate steps in this direction will follow the passage by the Senate of a resolution asking President Harding to negotiate treaties for the protection of salmon, he said.

Canadian and United States salmon fishing concerns are keenly interested in measures sought to protect salmon from rapid destruction by wasteful and needlessly destructive practices off the coast of Canada, the United States and Alaska.

TORONTO CONCERN REPRESENTS VANCOUVER FISH PRODUCERS.

The Grimsby Brokerage Company, dealers in food products, with office at 106 Bay Street, have been appointed agents for Ontario of the Canadian Fishing Company, Limited, Vancouver, B.C. The Canadian Fishing Company is one of the largest fish shipping companies on the Pacific Coast, their 'Imperial Brand' being a household word in the Canadian fishing trade. The company does a big export business in canned, frozen, smoked and salt fish. The Grimsby Brokerage Company is well equipped to represent the British Columbia firm in Ontario. It is interesting to note that Mr. A. L. Hager, President of the Canadian Fisheries Association, is the managing director of the Canadian Fishing Company, Limited.

LARGEST TRAIN OF FRESH HALIBUT LEAVES PRINCE RUPERT.

On June 7th, a full train composed of thirteen refrigerator cars loaded with fresh halibut left Prince Rupert for the eastern markets. The train was composed entirely of the magnificent new steel express refrigerator cars designed especially for the business and the departure of the train was quite an event. Consignments from all the firms in the port composed the cargo.

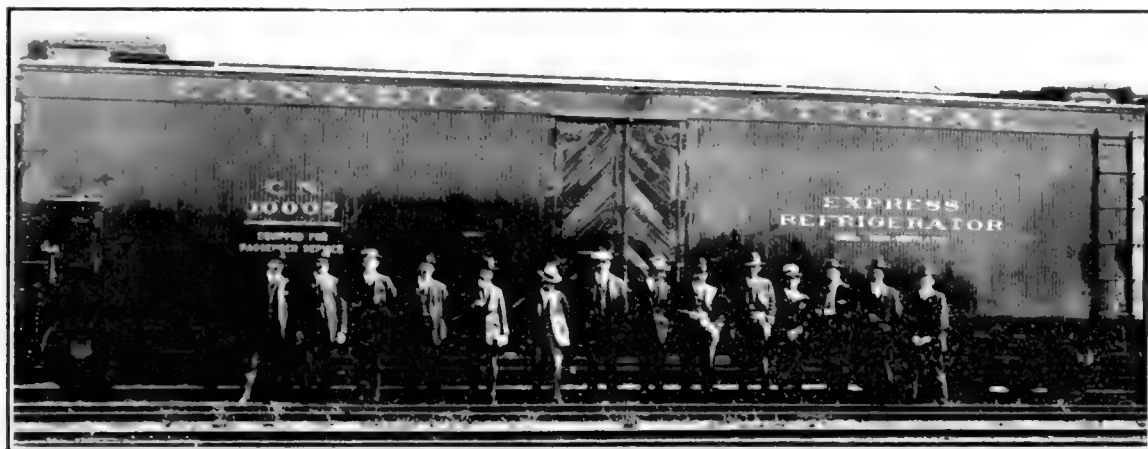
The Sunday buying of fish at the Prince Rupert Fish Exchange may be discontinued. The fish buyers are getting tired of working 365 days in every year.

The Prince Rupert fishing schooner "Teton" sunk in 60 fathoms near Deadman's Point, Banks Island, as a result of an explosion through a leakage in her fuel tanks. The skipper was blown over the side and the engineer was severely burned. There were no fatalities.

THE REMOVAL OF AN HISTORICAL LANDMARK.

Quesnel \$200,000 Dam was built by Gold Diggers.

A section of the great dam at the outlet of Quesnel Dam, built by the Golden River Quesnel Co. Limited in 1897-98 for mining purposes and long since abandoned, was removed by the Works Department of the Provincial Government in May because there was danger that it would go out at high water and flood the Fraser valley. The dam was one of the largest and most expensive ever constructed in this Province. It was built by a company of English capitalists for the purpose of mining the bed of the Quesnel River in the fall of the year. It was designed and constructed for the company by Mr. Joseph Hunter, C.E., of Victoria. It was built on the segment of a circle, having a radius of 450 feet, was 18' high, and from abutment to abutment 763 feet, and is said to have cost \$200,000 to construct. At its north end there is a raceway 124 feet wide and 430



Prince Rupert is very well supplied with Refrigerator cars now as about twenty new cars have arrived and gone into commission. Arrivals of the new equipment was photographed with the following gentlemen to welcome the cars:

T. H. Johnson, Manager, Canadian Fish and Cold Storage Co. Ltd., Chairman, Canadian Fisheries Association.

Alderman Geo. Frizzell, member Fisheries Committee, City Council.

A. D. Gillies, Agent, Canadian Express Company.

John E. Davey, Buyer, Canadian Fish and Cold Storage Co. Ltd. Member, Canadian Fisheries Association.

G. W. Nickerson, Member, Fisheries Committee, Board of Trade. Member, Canadian Fisheries Association.

Mayor Rochester.

Alderman Dybhavn, Manager, Royal Fish Co. Vice Chairman Canadian Fisheries Association.

J. W. Nicholls, Comptroller, Canadian Fish and Cold Storage Co. Ltd. Member, Canadian Fisheries Association.

W. J. Cash, Manager, Booth Fisheries Limited. Secretary Canadian Fisheries Association.

J. H. Meagher, Agent, Halibut Fishermen's Union.

J. N. Sinclair, Manager, Pacific Sea Products Association. Member, Canadian Fisheries Association.

Chas. E. Starr, Manager, Pacific Fisheries Limited. Member, Canadian Fisheries Association.

W. T. Hayes, Chief Clerk, Canadian National Railways.

ft. in length. At the head of the raceway there were nine 12-foot discharge gates. The ordinary floor of the lake was entirely carried off through the raceway. In the fall of the year the gates were closed and the river's bed exposed. Mining was conducted for two years; not proving profitable the company abandoned the dam and it reverted to the Government. When the dam was built so little provision was made for the passage of salmon from the river into the lake that the greater proportion of the salmon that reached there up to 1903 could not gain access to the lake and died in the river below the dam. In 1903 the Provincial Fisheries Department built a large fishway in the raceway of the dam and since that year the salmon have had free access. Since its construction it has afforded a reliable index of the number of salmon that enter Quesnel lake. The records there have been most interesting. In the big year, 1909, over four million of sockeye salmon were enumerated as they passed through the fishway into the lake. In the following big year, 1913, the year of the fatal salmon blockade in Hell's Gate canyon on the Fraser, but 553,000 passed through and in the last big year, 1917, less than 28,000 reached there, showing the marked decline in the sockeye run to the Fraser in the big years. In the last three years less than one thousand sockeye per year have reached the dam.

The removal of the dam was not undertaken to improve conditions for the fish. It has not obstructed their passage since 1902. It was removed as the Works Department engineers feared that, owing to the decayed

abutments, the structure might give way at high water and the consequent flood do great damage along the channel of the Fraser. Quesnel Lake is one of the largest lakes in the Fraser River basin; it has an area of 133.57 square miles. In order to be satisfied that the work of removal at the dam had been performed in such a manner as not to create an obstruction to the free passage of salmon, the Hon. Wm. Sloan, Commis-

sioner of Fisheries for the Province, sent his Assistant, Mr. Babcock there last month. Mr. Babcock's report gives full assurance that the work has been performed in a satisfactory manner, and he furnishes excellent photographs displaying present conditions at the dam which have been furnished the Salmon Cannermen Association.

Inspection Service and Association Wins Important Case for Maine Canner

An interesting case has been called to our attention by the Maine Sardine Cannermen Association and the particulars thereof furnish an incontrovertible argument in favor of inspection. Canadian cannermen undoubtedly suffer from just such rejections of goods by "slim" consignees anxious to get out from under.

This case was won by the operation of a successful Inspection Service and the co-operation of the cannermen in having an Association to protect themselves. No better example of the value of Inspection and of an Association of interests can be cited than the foregoing report of the case as published by the Eastport Sentinel.

With the arrival last week at the local office of the M. C. Holmes Canning Co. of a check for something more than a thousand dollars, there came to a final close a notable court case in which the above named concern with the aid of the National Cannermen Association, won an important victory for themselves and incidentally for the sardine canning industry as a whole.

The case dates back to 1919, when a New York grocer ordered a car of standard key sardines from the M. C. Holmes Company. The goods were duly shipped, but while they were in transit the market "eased off" a quarter or so per case, and on their arrival at New York the grocer promptly rejected them, claiming that they were not of the accepted standard grade. The carload, having thus been given a bad name, had to be sold at a price approximately one dollar per case under original sale price; and it was an interesting co-incidence that the final purchaser was a brother-in-law of the buyer who had turned them down in the first place.

The case came before the old municipal court of New York City, where the crowded docket prevented a hearing before February of the present year. The point at issue was as to what constitutes a standard for ordinary oil sardines. Original purchaser set up a standard of his own which he tried, unsuccessfully, to establish through the testimony of a number of witnesses, mainly in his own line of business and perhaps more or less interested in establishing the right of the buyer to reject unceremoniously any shipment he considers it to his advantage to reject on arrival. He tried to prove that, judged by his standard, the Holmes sardines were not of first or ordinary grade, but were "seconds", and that he was therefore justified in rejecting them.

The M. C. Holmes Co. contended, on the other hand, that the established standard is that set by the National Cannermen Association; that these goods conformed to that standard, as indicated by the inspection seal; that the buyer had therefore no valid grounds for rejecting the shipment and they demanded damages equivalent to the difference between the original and final sale prices, about a thousand dollars in amount. They were supported on the witness stand by Ernest Holmes a member

of the firm, and by Dr. F. F. Flanders and Louis Garcelon, Director and Asst. Director, respectively, of the Inspection at the time when the goods were packed. These officials were able to testify positively that the sardines in question were packed under the inspection service directed by them; that up to the time when these goods were packed that year the M. C. Holmes company had not packed a single case of poor goods,—a point they sustained by original records of the daily inspection of the plant, covering the amount and quality of the fish packed, and the cleanliness and general adequacy of the process by which they were prepared; that, through the inspection, a definite standard for sardines had been established; and that these goods satisfied in all respects the requirements of that standard. This latter point they maintained also through their records of an examination of six cans chosen at random from the carload after rejection and sent to the Eastport office for testing. This test showed that in all of the six cans only one broken fish was found, a rather remarkable fact, hardly to be paralleled by the best of imported goods.

The case was finally presented to the jury on these opposing claims, and the jury decided in favor of the plaintiff, awarding him not only the full amount of his bill, but certain court costs as well. The final settlement was delayed until last week by an unsuccessful attempt to put through an appeal to a higher court.

The case is a most interesting and to a certain degree a very decisive one, for in a general sense, it was not a contest between individual firms, but between the sardine packer as a unit against the sort of buyer who has been addicted to the dishonest and highly expensive practice of getting a carload of sardines into his home freight station and then wiring a rejection to the shipper with the purpose of securing a concession in price, which too often the latter has been forced to make in order to avoid further freight or demurrage charges, or a long-drawn out legal battle. These concessions have been made at once time or another by every concern in the business, and have totalled a tremendous loss to the industry when taken in the aggregate.

Hitherto, no one packer has been in a position to fight such cases to a successful or profitable conclusion. It is likely that this one too would have passed, like so many others, had not the National Cannermen Association backed the suit financially and with the expert, exact and incontrovertible testimony offered by its records and tests. The victory is due largely to the inspection, and is expected to have a direct and most salutary influence in discouraging unjustified rejections of sardines. This tendency was clearly shown by the defeated grocer, who, on learning the verdict remarked: "Well, iff I hat known

you would fide der case in der court, I would nefer haf recheeted der goodts."

Another case, in which the facts are quite similar, and which involves two carloads, is to be tried in the same court in the near future, and in the light of the precedent established by the case just discussed, it will be watched with interest by every factor in the producing and selling departments of the sardine industry.

GOOD MACKEREL CATCHES IN GULF.

The following despatch would disprove the allegations that the mackerel scouts were driving the fish offshore:—

St. John, N.B., June 14.—Information received last week from Captain William Milne, of Shediac, commander of the Canadian Government steamer Arleux, and from Captain Barkhouse, commander of the Government steamer Arras, that immense schools of mackerel were heading in the direction of the Gulf of St. Lawrence and Straits of Northumberland was soon verified by the Gloucester fishermen, who have made some of the largest mackerel catches ever known there.

J. G. Robichaud, M.L.A., of Shipegau, informs the Telegraph that a quarter of a million pounds of mackerel were landed at Shippegau during the week ended June 11. The greatest catch was on Friday last, when 90,000 were taken by the fishermen. The fish were all strictly fresh when they were landed and the total catch was placed in cold storage.

Good catches are reported at other points along the Eastern Canadian coast.

HAS ONE HATCHERY LESS THIS YEAR.

Fish Culture Branch, Ottawa, forced to close plant at Belleville and may not be re-opened.

Through no fault on its part, the fish cultural branch of the Fisheries Department will be obliged to operate this year with one hatchery less than last year, and for some years previous. During the winter it became necessary to close the plant at Belleville, Ontario, because of the contamination of the waters of the Moira river, apparently by waste from industrial plants. The loss in the eggs was developing at such a rate that definite action was necessary in order to save any of the valuable salmon trout and whitefish in incubation there.

Conditions as they stand offer no alternative to the department but to leave the plant closed. The situation has been under discussion for a long time between provincial officials, the town authorities and the federal department. The Dominion Government has spent a large sum of money in artificial fish propagation in Ontario waters, despite the fact that the fisheries are administered by the provincial government which also takes the entire revenue. The situation which renders the operation of the Belleville hatchery impossible is very regrettable, but until provincial authorities take steps to purify the waters of the Moira, further expenditure is not only futile, but wasteful.

The Fisheries Department laments the necessity of foregoing what appears to be a duty in maintaining the fishery of Lake Ontario. It was through the operation of the federal hatcheries that the whitefish production of the lake was increased from 1,331 cwts. in 1901 to 16,079 cwts. in 1919, but it is feared that if contaminating influences are permitted to go unchecked the work of a decade in developing the fishery will be in large

measure destroyed. Not only will the lake be without the propagating assistance of the Belleville hatchery this year, but the natural spawning grounds will become infected of which fact there is already ample evidence.

SUCCESS OF WHITEFISH HATCHERY WORK IN GREAT LAKES.

During the season just closed, upwards of 268,000,000 whitefish fry were liberated in the waters of the Great Lakes, and the Lake of the Woods, Ontario, from the hatcheries operated by the Fisheries Branch of the Federal Department of Marine and Fisheries. This is an increase of more than 50,000,000 over 1920.

Most gratifying results are apparent in the Great Lakes from the fry distributed from the hatcheries bordering thereon, and operated by the Federal, State and Provincial Governments on both sides of the international boundary.

A large proportion of the eggs are secured from the commercial catch of fish, and if it were not for the hatcheries these eggs would go into the scrap barrels, and be a total loss so far as reproduction and the maintenance of the fishery are concerned.

Notwithstanding the removal of all close seasons in the Great Lakes, the productivity of the whitefish fishery has increased remarkably in waters where hatcheries are operated. Lake Erie, from a state of partial depletion forty years ago, has improved so that during recent years the fishery has been as remunerative as it ever was. The catch of whitefish in Lake Ontario has increased tenfold in the last twenty years, and in 1920 it produced on the Canadian side more whitefish than Lake Erie, which has long been regarded as the greatest producer of whitefish in North America.

Whitefish are also appearing, and pickerel were more abundant than they have been for years in the southern part of Georgian Bay. This condition is attributed directly to the operation of the Collingwood hatchery.

Following is the whitefish distribution from the Ontario federal fish hatcheries, season 1921.

Hatchery	No. distributed
Collingwood	58,780,000
Kenora	34,800,000
Kingsville	118,411,000
Port Arthur	612,500
Sarnia	54,500,000
Thurlow	1,000,000
	268,103,500

In addition to the above distribution there were 12,825,000 whitefish eyed eggs transferred from Sarnia hatchery to British Columbia.

WHOLESALE DECIDE TO HOLD ANNUAL PICNIC JULY 1st.

The Vancouver wholesale fish dealers will hold their annual picnic on July 1st at Coquitlam. These annual affairs have become such a success that this year's affair is expected to be better than ever before and a large attendance is expected. Since the entire families join in it makes quite a social function.

Ontario Fisheries Department's Good Work

Provincial Hatcheries And Breeding Ponds Are Responsible For Huge Distribution Which Are Rapidly Changing The Fish Situation in Ontario.

By A. R. R. JONES.

The Game and Fisheries Department of the Province of Ontario is certainly doing a great and vastly beneficial work in the supply and distribution of fish from the Provincial hatcheries and breeding ponds. This is a work which has been taken in hand in earnest within the last three or four years only, but already the persistence and foresight with which it is being carried on is rapidly changing, and in another eight or nine years will have transformed, the fish situation in Ontario.

The policy of the Department, now that it has seriously taken in hand the work in question, is to build one new hatchery each year. In the year 1916 there was only one Provincial hatchery in existence, namely that at Mount Pleasant in Brant County. Today, there are six others in operation at the following places: Fort Frances, Thurlow, Port Arthur, Normandale in Norfolk County, Sault Ste. Marie, and a small one at Port Carling in Muskoka. The last-named is operated, but not owned, by the Provincial Government, as the other hatcheries are. The Port Carling hatchery turned out, last season about 8,000,000 pickerel in Muskoka waters.

Two years ago when the Department was really just commencing its intensive work, in supplying and distributing fish, just over 22,000,000 fish, in all, were planted. Last year, the total planted was 77,783,360. This year, the Department is handling 160,000,000, and it is expected that next year's total will be about double that figure. The details of the fish distributed last year are as follows: 43,985,000 whitefish fry; 31,030,000 pickerel fry; 1,134,000 trout fry; 920,000 herring fry; 286,700 speckled trout fingerlings; 427,660 black bass fingerlings; and 460 parent bass.

All the hatcheries in operation are in good shape. That at Fort Frances was completed during last year, and a successful hatch and distribution of pickerel was made therefrom. During the same year, various improvements, including the provision of a dwelling-house for the officer in charge at that point, were made at the Normandale hatchery. The capacity of the hatchery at Sault Ste. Marie, the last completed is for 75,000,000 whitefish or pickerel (according to season) and 15,000,000 trout. The hatchery at Sault Ste. Marie, it should be mentioned, has an ideal location. The collecting field is grand, the fish including speckled trout, Lake Superior salmon trout, and rainbow trout from the Rapids. The next hatchery to be built will be in the Eastern part of the Province.

It will be noticed that the distribution of whitefish is more than half the entire distribution. This year, the distribution of speckled trout and black bass will be about double what it was last year. The speckled trout are distributed mostly in streams and the black bass in lakes. The Department ships as far as the Lake of the Woods. In fact, it is now shipping a car-load of parent bass to that point. Up to the present, it may be added, the handling of bass in hatcheries was not found so satisfactory as the handling in ponds. Mention should not be omitted of the fact that about 20,000,000 pickerel have been planted in inland waters this year.

From the foregoing it will be seen that both very rapid development and progress have been made in the extension of Provincial hatcheries in Ontario during the last few years, and also that the supply and distribution of fish fry is assuming vastly greater dimensions year by year. In spite, however, of the efforts which the Department is putting forth, the field is far from covered at the present time. Very urgent demands are being constantly made on the Department by residents in every district for a much greater supply of fry and fingerlings than the Department has available for distribution. Last year, it was furnished by the Federal Government with 200,000 salmon trout and 450,000 pickerel fry to assist in meeting the demand from the public for a greater fry distribution. But it is becoming obvious that, if this demand is to be approximately satisfied, further hatcheries and breeding ponds should be provided, as opportunity offers, and as capable officials can be obtained to operate them. It would seem unlikely that the present Government in office, which has shown itself, so far, so awake to the importance of turning to good account the Province's great natural advantages as a field for fresh-water fish, will be oblivious to the necessity of increasing its beneficent operations in the directions indicated.

WARNING GIVEN TO LOBSTER FISHERMEN.

With respect to the practice of shipping undersized lobsters to Massachusetts, the Fisheries Department, Ottawa, has sent the following letter to lobster fishermen and exporters in the western counties of Nova Scotia.

"Lobster fishermen are doubtless aware of the fact that the Massachusetts law forbids the importation of these crustaceans under nine inches in length. This law is being rigorously enforced by the state authorities and it is stated that thousands of confiscated lobsters are being used to seed the shore waters of Massachusetts.

"The folly of handling baby lobsters in the Massachusetts trade should be quite obvious to Nova Scotia fishermen; but should they continue the practice of smuggling them into the crates in the hope that a few will escape the vigilance of the inspectors, let them take cognizance of these few points:

"1. Few, if any, undersized lobsters, are reaching the merchants of Massachusetts.

"2. In consequence, shippers are not receiving any money for them, and are reducing the profit on legitimate merchandise by the expense of handling and shipping contraband goods.

"3. Undersized lobsters, caught and handled at considerable expense by Canadian fishermen, are being utilized to seed American waters. While this act of conservation on the part of the Massachusetts authorities is highly commendable as they are in no way responsible for their shipment, it hardly seems rational on the part of Nova Scotia fishermen that they should devote their time and energy, but unconsciously, of course, to stock-

ing foreign waters with the potential means of future competition.

"The law does not prohibit the taking of lobsters under nine inches, but the futility of attempting to place such lobsters on the Massachusetts market should be quite plain.

"Fishermen and exporters should give heed to this matter immediately, if for no other reason than to fore-

stall action by the Department of Marine and Fisheries, Ottawa, to put an end to the practice. Such action would necessarily involve serious inconvenience and probable loss to the shippers, as it would be essential to open each package before it leaves Canada. This would cause delay in shipments and the extra handling of the lobsters would doubtless result in heavily increased mortality."

Reddening of Salt Cod

By Dr. A. G. HUNTSMAN.

One of the changes to which dried salt fish is subject is that of reddening of the surface. As cod is the fish most extensively cured in this fashion, it is very frequently affected by this change. Reddened "stock-fish" or "dried cod" has long been known and has been most frequently seen in the warmer countries, as in France and Spain. It has been observed less frequently in cooler climates, as in Scotland, New England, Canada and Newfoundland. The reddening varies in tint from pale pink to deep crimson, and is entirely superficial. It has been conclusively demonstrated that these red cod are not in any way poisonous, just as they are not unpalatable. However, the reddening usually affects the sale, the whitest fish being preferred. This is not always true, for in some markets red codfish are now or have been in the past considered the best, and called "salmon cod".

The change may take place at any time after the fish have been salted. In those districts where it occurs rarely, the loudest complaint is made when it does occur, because the dealers are not accustomed to it, and because it may reach consumers who are afraid of it. The red colour appears on surfaces exposed to the air when the temperature is high and before the fish is thoroughly dry.

The reason for the colouration has been shown to be the growth of one or more species of bacteria. These organisms differ in many respects from the ordinary bacteria that cause the decomposition or spoiling of fish. They do not give rise to an objectionable odour, nor do they render the fish unfit for food. They grow only near the surface, that is in the presence of air. They grow best at temperatures from 120 to 140 deg. F., and, therefore, develop only in very warm weather. They are not killed readily by exposure to direct sun-

light. They grow only in strong brine. In the last respect, they are most peculiar, as their growth is favoured by salting, the very thing that is used to prevent the growth of the bacteria that cause spoiling. They are found in the salt obtained by the evaporation of sea water, and apparently do not occur in that obtained by mining.

To prevent these bacteria from getting into a curing establishment the use of mined salt only would seem to be necessary, as well as the avoidance of any article that had been in contact with infected fish or salt. When an establishment has been once infected, it can be rid of the bacteria only by thorough disinfection, a somewhat costly proceeding. To prevent the growth of the bacteria, various more or less costly means can be used. The use of disinfectant powders or solutions, for example those containing borax, is scarcely to be recommended because of the possible harmful effect of that chemical. To keep the temperature low during drying and subsequently is the most desirable method, but not always feasible. The investigations that are now in progress both in the United States and in Canada will doubtless bring to light a simple and effective method of putting an end to this trouble, that has caused so much loss to our fishery interests.

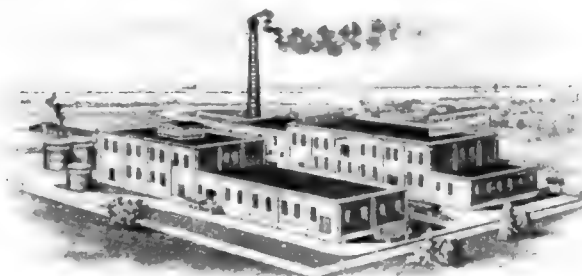
CANADIAN FISH AND COLD STORAGE CO. OPERATING FISH DEPOT NORTH ISLAND.

The plant of the Prince Rupert Fisheries Company on North Island has been purchased by The Canadian Fish and Cold Storage Co., Ltd., and will be operated as a fishing station during this Summer.

**HAVE
YOU
USED**



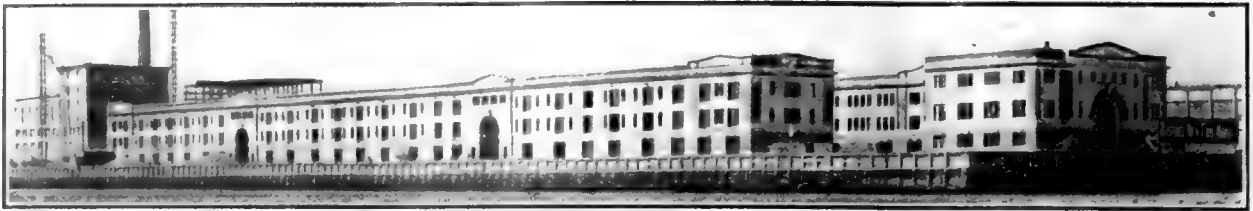
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Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., JULY, 1921

NO. 7

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WRITE FOR A CATALOG

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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

KEEP IT IN MIND.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

By the way the farmers are rushing into politics and rushing the old political parties out of their strong-holds, it looks as though the present Government was growing unpopular with the people. Certain political prophets, aware of the modest desires of the fishing industry, have consoled us with—"Wait until the Farmers get into power at Ottawa. You'll get your Fisheries Department and your Deputy Minister then."

The farmers, being engaged in work paralleling on land what the fisherman does on the water, should certainly be more sympathetic to the needs of the Industry than the polyglot mob of lawyers and manufacturers who hold the present-day sway in Ottawa, and whose interest in fishing is largely confined to the sporting variety. But, as observed before, the Ottawa atmosphere plays strange tricks with the viewpoint of the new parliamentarian, and election promises have a strange faculty of appearing as insignificant trifles when considered in the Capital. The Farmer Government, or any other Government for that matter, is not likely to advance our particular desires, unless the Industry voices them in the strongest possible manner.

A determined effort to do this will be made by the time Parliament convenes again.

THE UNITED STATES TARIFF.

The tariff on fish imported into the United States as expressed in the Fordney Bill has every likelihood of being ratified shortly. Canadian exporters may make up their minds in the following proposed tariff on Canadian fish:—

"All fish, fresh, frozen, or packed in ice, not specially provided for, one cent per pound.

"Fish, dried, salted or unsalted, $1\frac{3}{4}$ cents per pound; skinned or boned, including herring skinned, in bulk, or in immediate containers weighing with their contents more than 30 pounds each, $2\frac{1}{2}$ cents per pound, including the weight of the container and its contents.

"Herring or mackerel, pickled or salted, whether or not boned, when in bulk or in immediate containers weighing with their contents more than 30 pounds each, $1\frac{1}{2}$ cents per pound, including the weight of the immediate container and the brine, pickle and salt.

"Fish (except shellfish) by whatever name known, packed in oil or in oil and other substances, 26 per cent ad valorem; all other fish (except shellfish) pickled, salted, smoked, kippered or otherwise prepared or preserved (except in oil or in oil and other substances) in immediate containers weighing with their contents not more than 30 pounds each, 25 per centum ad valorem; in bulk or in immediate containers weighing with their contents more than 30 pounds each, $1\frac{1}{4}$ cents per pound, including the weight of the immediate container with the contents."

Lobsters, fresh, frozen, packed in ice or prepared and preserved in any manner, are free of duty.

During the fiscal year of 1920-21, Canada's exports of fresh and frozen fish to the United States were valued at \$8,578,663; salt and dried fish, \$1,028,500; lobsters, fresh, frozen, etc., \$2,230,393.

It is proposed to change the method of valuation for duty purposes. The Bill provides for establishing American valuations for duty purposes which would be the prevailing price in the United States.

Newfoundland is seriously alarmed over the new tariff and has spent much effort in trying to have the tariff modified in their favor. No changes are likely to be made, and both Newfoundland and Canada might as well prepare to do business in face of the new tariff.

CANADA—A WHITE MAN'S COUNTRY.

The vexed question of Oriental immigration into Canada has been coming to the fore of late and matters which were the subjects of casual conversations in the past are now being discussed openly and with considerable fervor. One of the most important industries affected by Oriental immigration is that of the fisheries on the Pacific Coast.

On the Atlantic coasts of Canada, one will find thousands of fishermen operating extensive fleets of vessels and fishing apparatus as well as hundreds of firms, large and small, in the shore operations of preparing fish for market. Among all these thousands of men and extensive equipment, not one single Oriental or one dollar of Oriental money is to be found engaged or invested in the fishing industry. It is truly a white man's industry and a purely Canadian industry at that.

Travelling westward one will find extensive fisheries on the inland waters with valuable equipment and employing thousands of persons—all of whom are Canadians and white men.

Still heading west, one reaches the Pacific coast and here the Orient has stretched its tentacles across five thousand miles of salt water and taken firm hold. You journey to the water-fronts, to the fish-docks, to the salmon cannery wharves, the herring salteries, looking for a native population of fishermen similar to the trawlers of the Maritime Provinces and the net fishermen of the Great Lakes, but you find their places filled by the brown-skinned Japanese. The white man is to be found among the Pacific Coast fishermen, but the Jap has a firm hold and is slowly, but surely, dominating the industry.

A recent article in the Montreal "Star" by Charles Lugin Shaw on the subject of the Oriental Problem on the Pacific Coast says the following regarding the Oriental in the fishing industry:

"The Japanese are the only Orientals that have established themselves in the fishing business to any appreciable extent. The Chinese, as far as the fish business is concerned, is seen principally in the canneries as a laborer or as a fish peddler on the streets; very seldom does he engage in actual fishing operations. In Victoria there is evidence of a Chinese monopoly in the distribution of fresh fish. The Chinese sell so much fish there that the white men's boats laden with ice-packed fish from up the coast don't stop to break open their hatches, until reaching the mainland. Consequently Victoria must depend on the Chinese, who purchase mainly from Japanese fishermen, and what doesn't get to the consumers via the Chinese peddlers goes to the white fish stores. No matter who is the ultimate vendor, nearly all the fish sold in Victoria passes through Oriental hands at one stage or another. The Indians are no longer a factor that counts.

This has been above the retail trade, which, of course, isn't nearly so important or so extensive as the main operations for the canneries and packing plants in which we again find the Japanese cutting a conspicuous figure. The Japanese fishermen first got into business in British Columbia when the best runs of Fraser River salmon were being experienced. The Japanese located on the Fraser and adjacent waters and gradually their fleets increased, most of their catch being sold to the Canadian and Puget Sound canneries.

Five years ago in Barclay Sound there was hardly a single Japanese fisherman. Today it is estimated by a

man whose business it is to know such things that there are 500 Japanese boats. During the war, when herring leapt into favor, the Japanese fishermen rapidly multiplied. In some respects they have made their operations an exclusively Japanese industry. They have caught herring, salted it and packed it in their own plants and sent it to the Orient in Japanese steamers. In this case the benefit to Canada from its fisheries resources has been small indeed.

Official figures show that of the 530 licenses issued for salmon gillnet operations in the Vancouver Island district during 1920, 203 are held by Japanese, and of the 1,268 salmon trolling licenses issued during the same period 502 are Japanese, Japanese hold 895 of the 2,291 fishing licenses of all descriptions issued in that district during the year, and it is only within the last few years that they have been active at all. All along the west coast of Vancouver Island, where commercial fish are abundant, little Japanese settlements have sprung up and one can travel for miles without seeing a boat that is not owned by Japanese.

The white fishermen claim they have suffered as a result of the encroachment of Japanese, and an agitation was started resulting in the temporary cessation of issuing new licenses to Asiatics."

The Japanese fish merchants and fishermen in British Columbia are aggressive and dangerous competitors to the white men. Numerous instances could be quoted of the manner in which they have cut into certain Pacific fisheries and attempted to control same. Their domination of the Pacific cod-fisheries is a serious problem to the Americans engaged in that business and our contemporary, the "Pacific Fisherman" has waged a determined campaign against their attempt to force the American codfisherman out of business. In British Columbia, the Japanese have made a bold bid to control the salt herring export to the Orient, and they were strong enough to resent any interference in the trade by white men. When one white company of fish merchants cut in on them and secured a share of the China trade in salt herring by superior quality and packing, the Japanese outfits combined and attempted to run the white firm out of business. They used propaganda, engineered a strike of all the Japanese employed by the white firm, and cut the prices of the herring as much as \$30 per ton from what they originally offered it at. All their efforts failed and a great many of the Japs went "broke". But Oriental philosophy makes light of such reverses. Next time, they will be more careful and ten times as aggressive. So much for the Japanese fisherman exploiting the fisheries of British Columbia. Let us see what the Japanese are doing in the markets abroad.

Figures to hand from the Customs House, London, England, showing registered imports of canned salmon into the United Kingdom for the year 1920, give some startling facts.

The total quantity of salmon imported from all countries into Great Britain amounted to 1,252,549 cases. Canada sent 230,835 cases, or 18.4 percent. United States sent 479,618 cases or 31 per cent. Japan sent 522,070 cases or 42 per cent.

With their Siberian salmon pack, the Japanese have dominated the British market, and while it may not be any great source of joy to them to have so much of the commodity on hand there at the present time, yet it is there and they are making strenuous efforts to get rid of it. The Kamchatka Salmon Packer's Association—a Japanese association—have inaugurated extensive

selling propaganda in Great Britain in the way of colored window cards for grocers, gummed advertising labels, and the issue of half-a-million salmon recipe booklets.

We have nothing against the Japanese personally. Our attitude is rather one of admiration for their adaptability and aggressive business spirit. But we know that oil and water won't mix, and we believe that Canada should be kept a white man's country and that her fisheries should be exploited by white men. The Oriental has the advantage over the white man, not as a better workman, but from the fact that he can live as no white man can. His Oriental tastes are such that he demands neither the food, housing, leisure or recreation of the white man to make life worth while. His mentality is not that of the Occidental and it never will be.

Japan now has extensive fishery possibilities right at her own doors into which her surplus population may enter and exploit. Her interests in Siberia should appeal to the Japanese Government as a strong motive for discouraging emigration to the Pacific coast of America. Neither Canada or the United States will accept the Japanese immigrant with open arms and the problem will become more acute as time goes on.

PROHIBITION AND FISH.—A CHANCE FOR CANADA.

From many angles, prohibition injures the fish trade. Since the U. S. went dry, the salt smoked herring lost a market in the saloons where same was served free to accentuate thirst. The price of fresh lobster has fallen since the Broadway cabarets and jazz-palaces no longer provide the stimulating joy-water which called for accompaniments of "broiled live" or "a la Newburg".

Spain produces wine and Spain imports fish, Spain believes in *quid pro quo*. Norway is going dry and is prohibiting the importation of wines and liquors. Iceland is also prohib and has banned Spanish wines. In retaliation, Spain has threatened to tax imports of fish from countries which bar her wines, which same has raised a row in the Viking lands.

While these merry exchanges of courtesies are going on, an opportunity exists for Canada to make a bid for the Spanish market. While none of the Maritime Provinces are giving Spain much business in the wine line, yet free and enlightened Quebec and British Columbia are doing their little bit to help Spain.

It's a poor world where we don't help one another and Spain might well look favorably upon Canadian fish. Recent quotations (June 14th) from Bilbao were:— Icelandic codfish, 90-110 pesetas; English, 65-85 pesetas; Norwegian, 70-90 pesetas per quintal. English Exchange: 29.10 pesetas to the pound sterling.

Spain and Italy, it is understood, will harpoon Newfoundland next on the prohibition question. If such happens, after the U. S. Tariff, the Island Colony will feel that virtue, in the form of prohibition, hath no reward.

DIRECT LANDING PRIVILEGE DISCONTINUED IN U. S. PORTS.

On and after July 12th, no vessel of Canadian registry will be permitted to land fares of fish direct from the grounds at United States ports. This permission, which was a war-time regulation and promulgated for the duration thereof, has now been revoked. A number of Canadian trawlers and schooners availed themselves of the privilege.

INTERNATIONAL FISHING SCHOONER RACE.

The International Fishing Schooner Race for the Halifax "Herald" Trophy emblematic of the sailing supremacy of the North Atlantic will be held off Halifax on October 1st and 3rd, and following days if necessary.

The elimination trial for the selection of the Canadian challenger will be held on Sept. 24th and 26th off Halifax. Interest in the contest will be world-wide this year as the movements of the prospective challengers and defenders have been keenly followed by the general public.

These dates have been announced by the Trustees of the Trophy.

PISCATORIAL PARAGRAPHS.

Walter Clayton, formerly of Prince Rupert, B.C. and a member of the C. F. A., who is permanently established in business and residence in St. John's, Newfoundland, has joined the ranks of the Benedicts by engaging in matrimonial partnership with one of Terra Nova's fair daughters. Our best wishes go with them.

T. H. Johnson, Manager of the Canadian Fish & Cold Storage Co., Ltd., Prince Rupert, B.C., was in Montreal during the week of July 10th and has since returned home.

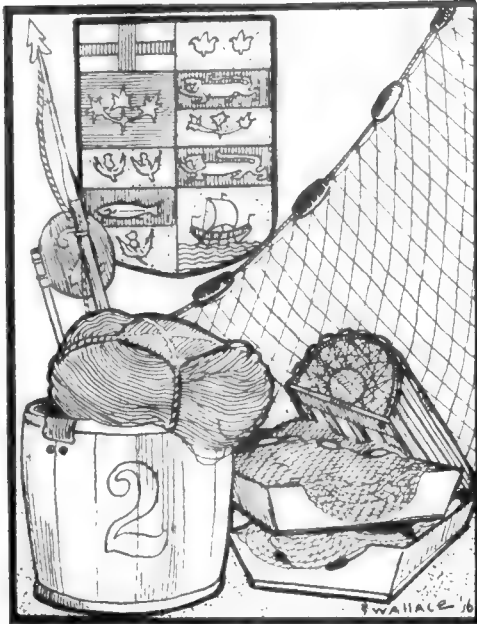
Col. L. W. Gill, Director of Technical Education, is resigning from his office to take over the chair of Mechanical and Electrical Engineering at the University of British Columbia, Vancouver, B.C. Many members in the fishing industry will recall Prof. Gill's efforts to establish Fisheries Schools on the Atlantic and Pacific coasts and will regret his relinquishing the work.

The unusually hot weather prevalent during the latter part of June and the first two weeks in July, played the devil with the fish business. Much fish was spoiled in transit; sales dropped considerably and the small fish dealer spent a fortune in ice to keep his stock fresh.

The surest evidence of depression in the fish business may be adduced from the fact that no "dog day" yarns have featured fish. The summer-time newspaper sensation this year runs to much hectic bunk about "mysterious pirates" running up and down the Atlantic Coast. There hasn't been a line about the sea-serpent or the invasion of sharks to bathing beaches which were the old stand-bys of other years.

The American schooner "Mayflower" has been in port with a trip of 195,000 lbs of salt cod fish — which same has been heralded as a "monster" trip. Capt. Larkin and crew are quite satisfied with the "Mayflower's" performance as a sailer. She made a fast run from Gloucester to Boston in a light S. W. wind making the distance in 3½ hours — an average of 13 knots per hour.

The attempt to raise the Gloucester schooner "Esperanto" which foundered off Sable Island resulted in failure owing to the hoisting cables being too light. It is possible that another try at salving the International Cup winner will be made.



“Why Canadians Should Eat More Fish”

Essays on The Subject by Canadian School Children Who Gained Fisheries Department Prizes

THE IDEAS OF YOUNG CANADA

The Dominion Prize Winner

MISS HAISMAN SHOWS CONSTRUCTIVE THOUGHT AND ORIGINALITY

By IVA HAISMAN, Age 16, Outremont, Que.

Canada is a rising young nation, and is even now taking her place in the world because of her industry and progress. It is safe to prophesy that with proper development of her resources, Canada will become one of the foremost countries of this age.

Chief among Canada's resources is the fishing industry. More variety, more perfection in each variety, more abundance of fish can be found in no other waters, or under no more available circumstances. To develop this industry, and in so doing, to develop Canada, is the duty of every Canadian,—and so, it behooves Canadians to eat more fish.

Four great advantages would result from the development of the fishing industry. It would effect a great economy, for we would be using a product, instead of wasting one. Canada's fisheries were not made rich for nothing; it is natural, and most necessary, that we should derive the greatest possible benefit from them.

Then, the increased consumption of fish would make unnecessary many foods which we now import. This would be turning our money back into Canadian channels instead of sending it to some other country already stronger financially. It would improve trade conditions, for Canada, as a small country, should export more than she imports.

To the average Canadian perhaps the most important reason for eating more fish would be the saving in money. Fish is cheaper than meat, though the quality and food value are not less. The money saved by using more fish would line Canadian pocket-books very comfortably. Now, it is an obvious fact that a well-lined pocket-book makes a happier, more contented citizen; a happier, more contented citizen is a more generous one,—one who will have higher ideals for his country, and who will back her financial standing. Thus, the direct

benefit to the citizen, and the indirect benefit to the nation, would be great, well worthy of consideration. With a little imagination, today's Canadian can see tomorrow's Canadian the citizen of an ideal country,—all through the use of fish.

The fishing industry gives work to a great part of the Canadian middle class. Greater use of fish would



MISS IVA HAISMAN,
STRATHCONA ACADEMY,
OUTREMONT, QUE.

necessitate enlargement of the canning business, thus giving a partial solution for relief to the great number of unemployed. At the same time, it would be well to support a business carried on in our own country, instead of a business carried on in a foreign country, with foreign capital.

Incidentally, eating more fish would mean eating less meat. Canada's live-stock production, since the war, has been greatly reduced. Unless some opportunity for recuperation is given, the only result will be higher cost, and greater scarcity of cattle.

Jules Verne, in his “Twenty Thousand Leagues Under the Sea” gives an attractive and quite possible picture of complete utilization of fish and fish products. In his story, all the food, even to sugar and beverages, was taken from the ocean. It was as wholesome and as

tasteful as any other. While Canadian waters do not possess all the fish mentioned by this author, they do possess ample for our use. There is no reason why the suggestions of Jules Verne could not be carried out by Canadians, to our great advantage.

Moreover, the Canadian Government protects consumers by careful inspection of all canneries' products. The standard to be passed is very high, and ensures purity.

Then, when Canadians realize the wealth and importance of the fishing industry, the advantages to themselves of its growth, and the importance to Canada, being good citizens, they will eat more fish.

British Columbia Voices Facts and Logical Suggestions.

WHY CANADIANS SHOULD EAT MORE FISH.

By JOHN CRAIG OLIVER, Age 16, Kerrisdale, B.C.

The fishing industry of Canada is still in its infancy although there are no such fishing resources to be found in the world today. The Newfoundland banks are world-famed for their mackerel, cod, halibut and herring. On the Pacific coast, salmon and halibut can be caught in enormous quantities and these fish are all of premier quality. There are two reasons why Canadians should utilize this enormous home product.

First, a large sum of money is obtained by exporting some of our fish. Statistics show that the value of exported fish products for the year 1918-19 was \$37,000,000. Though the exporting of fish may appear to be a good policy, it must be remembered that fish is highly perishable and that probably twenty per cent of the exported fish is unfit for use as human food when it reaches its destination. Again, the Government is forced to maintain a large number of inspectors to see that the fish that leaves the country is in fit condition for exportation. This points out that Canadians should eat more home-caught and marketed fish. The consumption per capita in Canada is very much smaller than that of any other country and it is only twenty-five per cent of the amount of fish landed per capita. This small consumption also includes, canned, cured, salted and smoked fish. The other seventy-five per cent of the catch must either be wasted or exported with the dangers previously alluded to.

The second reason is that fish, as a food, ranks high in value. By this, is meant the calories or energy value. At first sight, fish appears to compare very unfavorably with meat in this respect. For instance, one pound of mackerel contains 998 calories while a pound of beef contains 1700 calories, but when the price is compared, it is seen that fish is approximately twenty-five per cent of the price of meat, and so the fish is really of better value. Another saving is effected in the amount of fuel used to cook fish. Owing to its fine fibres it is much easier to cook than the coarse-fibred beef, in fact, many people over cook fish and render it unpalatable. It is easily assimilated by invalids and young children and is one of the best brain foods known. As for taste, fish is a food highly esteemed by epicures the world over and it may be prepared in countless ways. In fact, one

culinary expert states that it is possible to serve one kind of fish for a week without it becoming monotonous fare.

After reviewing these reasons, the question arises why Canadians do not eat more fish. First, it is a comparatively new food in Canada and its cooking is not properly understood by the average housewife; therefore, it is apt to be much less palatable than it should be. Second, it is not as cheap as it should be although it is cheaper than meat. For this the public is to blame, because it demands large fish, never thinking that the small fish caught must be wasted because there is no market for them. Third, it is served in butchers' shops where it is not displayed to advantage because there is not such a profit in its sale as in the sale of meat. Sometimes the fish absorbs meat taints which render it objectionable if not uneatable. To remedy these defects the Government should educate the people in some manner, and if necessary, establish a chain of proper fish stores throughout the Dominion where this home product would be sold cheaply and handled with care. When this is done the Canadian people will begin to realize that fish is a good, wholesome food, and that in eating it they are supporting a large, home industry, keeping their money in the country, building up a hardy virile race, and striking a big blow at the high cost of living.

A Little Lad in Canada's Gloucester Delivers The Wisdom of Nine Years Proximity to Fish.

WHY CANADIANS SHOULD EAT MORE FISH.

By CYRIL ANDERSON, Age 9, Lunenburg Academy.

My home is in the town of Lunenburg which is called the Gloucester of Canada. The fish caught here in 1919 were worth \$3,500,000. The catching of these fish and getting them ready for market gives employment to thousands of people. While the war was on we had no trouble to find places to sell our dried and pickled fish. The soldiers needed a lot of meat so to help our brave soldiers people had to eat more fish. Now the war is over and the principal markets, West Indies, Brazil, Spain, United States are filled with fish and the prices are very low. There are not many fish shipped to these places so more fish must be used in Canada to keep up the fishing industry.

In Canada in 1919 the revenue obtained from the fishing industry was \$56,485,579. If the fishermen who work so hard to catch the fish are not able to sell their fish they will get discouraged and will leave this country, and go to the United States, and there are too many good young men from our country there already.

The people must be taught to eat more fish in Canada. The Government must see that there are ways provided to carry the fish from our seaport towns to towns inland, so as to carry on a fresh fish industry, and then people will not have to eat dried fish which are not nearly as good as fresh fish. By making Canada a market for our fish the high cost of living would be lowered and work given to a large number of men.

Another reason why we should eat more fish is that fish is very nourishing food. There is nearly as much

nourishment in fish as in beef steak and some fish, such as herring and eels, contain a large quantity of fat.

There are thousands of fish caught every year and then not eaten. Some times they are used on the land to make the land rich when they could be used for food. In the United States noted chefs are preparing fish in different ways for the tables of hotels and they are telling the people of the food value of the fish which they once threw away.

Fish is the easiest food obtained. Vegetables must be planted and then we must wait until they grow. Cattle must be fed a long time before they are ready to eat, but fish are in the water waiting to be caught.

People only eat fish once a day in this country, while in England they eat it twice a day. In Lunenburg, where I live, there are hundreds of men who go away fishing every summer. While they are away in their vessels they have to eat a large number of fish and where will you find a healthier class of men than the Lunenburg fishermen?

If people eat more fish there will not be such a quantity of meat eaten, and so the price of meat will have to come down or they will not be able to sell their meat.

This Ottawa Miss of Twelve Betrays an Analytical Mind.

WHY CANADIANS SHOULD EAT MORE FISH.

By BERNADETTE COOPER, Age 12, Ottawa.

In comparing Canada with the different countries of the world it ranks foremost in many ways. But its fishing industry surpasses all its other industries by far. It has the most extensive sea and fresh water fisheries in the world.

This being the basic industry of Canada its people should encourage it as much as possible by catching more fish so that it would bring more money into the country and make it richer and help to pay its debts. We Canadians, to be loyal to Canada should help our country as much as we are able. We can do this by using "Canada Made Goods". The fishing industry, being so extensive in Canada, it is the duty of us Canadians to make use of it. Eating foods produced in our own country means that our money does not go abroad to foreign countries, but remains for the prosperity of our own Country.

Fish is cheaper than meat on account of its great abundance, and therefore it should hold a prominent place on our menus. We have such a choice of varieties and quality, and it is so easily obtained at any time.

The quantity of fish caught in our Canadian waters, is so enormous that millions of dollars are being wasted every year by our not using what nature provides us with. What would you say of a person who would let barrels of fruit spoil in his garden simply because he does not understand that the fruit is there to be eaten? Just as foolish is the Canadian who refuses to ask for fish when he sees it on his bill-of-fare.

It is better for the health to have a rest from purely

meat diet. Medical men have discovered that fish is not harmful to the health, but on the contrary, very nourishing — the oil contained preventing consumption and other sicknesses. Meats, when used too much become harmful to man. Fish is often given to a sick person when meat is not allowed, which proves it is more easily digested.

The more meat we use the more grain and vegetables must go to feed up animals, and thus we suffer from high prices of flour and bread. Fish get their living from the water and are no bother or expense to us.

The war has affected the fishing industry in common with the commercial life of the country generally, and its close has brought many changes to pre-war conditions. Previous to 1914 there was little or no demand for canned pink or chum salmon. But with a world-wide food scarcity these varieties jumped into prominence, and they were easily disposed of. This increased demand induced those who were in the canning business to extend their operations in canning of fish. It also induced others to participate in the industry. Consequently the whole coast line of British Columbia is licensed to fishermen, and those now desiring to take up the fishing business as a means of earning a livelihood find that a location for a fishing area is a very difficult thing to obtain.

In other parts of the world there is a great variety of fish, but not as good for food as in our Canadian waters. Canadians have the fresh water fish of the St. Lawrence river and all waters north of that river contain fish which is good for food. When we consider that we have at our disposal such fish as the world famous Fraser river salmon, the speckled trout of the east, the lobsters and oyster of Prince Edward Island, in such abundance, and how it would greatly reduce our living expenses we should try to get these high food values and give them a much more prominent place than we do when we buy for our daily use.

Nova Scotia has a wonderful herring fishery and also a marked increase in the oyster catch. It is regrettable to note that there is no fishing for bass on the northwest and southwest Miramichi river where it is abundant. The residents of these districts find it more to their advantage to engage in lumbering operations.

The weather conditions throughout Canada, especially in the west, are quite favorable for winter fishing, and as frozen fish are very easily transported, we Canadians have every advantage over any other country to obtain a food, cheap, excellent quality, rating as high in food value as any other food on the market.

Now, suppose we take a trip from coast to coast, over our wide Dominion, examine the lives of our countrymen, look with proud eyes upon our stalwart young men and our sturdy old fathers. Yes, the sight is a real cause of pride for us. But of all our people, from east to west, from north to south, there are none who can compare with our noble fishermen of the Maritime sea coast.—strong, healthy, robust and happy. Their homes may be small, but they are snug and warm, no signs of poverty or need, all is health and happiness. Need I tell you why?

The Originality and Unconscious Humor of this Essay is Distinctly Refreshing.

WHY CANADIANS SHOULD EAT MORE FISH.

By RODGER ROSS, Palmerston, Ont.

Following are several points on "Why Canadians should eat more fish."

First. Because fish is the most important of the Dominion's resources.

Second. Because, by the absorbing of more fish by the people of the Dominion, more revenue will be collected by the Government, which will greatly aid in making this Canada of ours a prosperous and better possession of the greatly beloved Mother Country.

Third. Because it is a common belief that, by eating more fish, the brain power is greatly added to. Thus, if this is true, Canadians, by eating more fish, would be more intelligent than otherwise.

Fourth. Because, by eating more fish there will be a greater demand for sea-faring men, and as the sea is one of the healthiest places in the world, Canadian men will be stronger and healthier and readier to defend their country in time of need, if such a time comes.

Fifth. Because, by buying more fish, through the medium of a middleman in the trade, more prosperous and energetic citizens will result, as all middlemen make profits.

Sixth. Because, the fishing industry, both on land and sea, provides labour for many Canadians and this will make them more prosperous.

Seventh. Because the sea provides, on whaling expeditions, a setting for stories and this will leave a history to our followers, who will likely take an example from the noble land at present.

Eighth. Because fish is about the most economical food that can be bought, as it does not cost as much as beef or pork.

Ninth. Because the oil in the fish is a good food for the body, producing body heat, and as a scholar or student can not study on meat, as it is too heavy, fish is a better food.

Tenth. Because by eating more fish it will give the transportation companies an opportunity to attain wealth, thus adding greatly to the prosperity of the nation.

As mentioned in the first point fish is a very important natural resource. Beginning at the north, seals are the most important sea animals. The furs of some kinds are very valuable, and also the oil as it is the chief food the Eskimos. In the warmer waters of Hudson Bay and neighboring waters dwells the whale. Its oil and blubber are very valuable, and also the bone. Some weigh from eight to ten tons or more.

Going southward to the shores of Labrador and Newfoundland are the Grand Banks. These have been notable for over two hundred years, having for their fruits, cod, herring, oysters, mackerel and salmon. Following the St. Lawrence river whitefish and other fresh water fish are found in the many lakes and rivers of the Interior of Canada. In the northern part salmon abounds. The Frazer and Columbia rivers in British Columbia teem with salmon, which gave rise to the great canning industry on the Pacific coast.

In the second place duty is collected on all goods, this duty being used as a revenue for the Government, so that the more fish used, the more revenue will be collected, which will help the Government to rule this young land of ours better than otherwise.

Brain power is greatly needed by Canadians to mould their country into a land worthy of our praise, and this is easily attained by looking to the great animal kingdom that inhabits the sea.

All fish are composed of a certain amount of oil or fat, which, when absorbed by the body, whips up the blood into heat, and this greatly aids in keeping us warm in the cold winter of this country. Our country needs one thing which is very essential in connection with the resisting of the scythe of time, and that is health. Health is easily attained by becoming a sailor or fisherman, and this will help our country by building up stronger men and women.

In nearly every locality there are a few men who try to get all they can out of a fellow and are agents for some company. Every trade has these men who are called middlemen. They, sooner or later, become rich and if not selfish and ignorant, help the country greatly with their wealth. In the fishing industry they are common.

Every trade needs workers but especially the fishing industry. In the first place, the fish have to be caught, taken to port, scraped, cleaned, shipped and finally canned or frozen as the buyer desires, and then shipped to market. All this cannot be done without many hands, so that the fishing industry offers large wages and those that are quick enough soon get labour and in time become worthy millionaires, if they are inclined that way, which greatly adds, also, to Canada's prosperity.

Most people like to leave an example to those that come after them, and right here is a chance. The fishing is an adventurous task and provides settings for stories, by writers of this age, to hand down to our followers, which in time, if impressed rightly, will lend them an example of their noble ancestors.

Most people do not want to spend their money quickly, so that fish gives them an opportunity to conserve, being cheaper than most things.

The oil in the fish is very necessary for the heating of our bodies, so that fish is an ideal food, in the conserving of fuel in these days of strike, strife and laziness.

Transportation has greatly advanced in Canada, but by eating more fish the people of Canada will give the transportation companies a chance to make more money, and this will enable them to carry on operations in Canada and to build up an even better system, which will not leave Canada as primitive as for example South America.

In summing up, fish is after all, a better food, as it is easily digested, costs less and provides a better chance for the citizens of this country to make money, which is very essential, and in a word makes Canada a more prosperous nation.

Master Ross's Ideas of Middlemen Shows That He Is No Bolshevist. His Remarks On The Transportation Companies Will Appeal To The Trade.

This Prince Edward Island Fisherman's Daughter Writes A Good Essay.

WHY CANADIANS SHOULD EAT MORE FISH.

MILDRED WHITE, Honey Lot 64, P. E. I.

The subject "Why Canadians Should Eat More Fish" seems to me to be one that is easily grasped and then again not so easily. One, which requires very little thought to form an opinion of, and yet again, one that is so important as to require a great deal of thought and study.

In the beginning, we may say Canada is a land of fish, as it were. The long coastline on the Atlantic and Pacific with numerous harbours equipped with every facility for handling fish, the numberless lakes and rivers in all parts of the country teeming with fish of almost every variety, show the future of Canada's fisheries unequalled by that of any other country of the world. Therefore, we should rejoice in the fact that God has placed within our reach an abundance of one of the most valuable food products. The past has taught us that any country should make the utmost use of things near at hand, and this applies to food as well as other things. Then we, as true Canadians, and true descendants of our forefathers, should eat as much fish as is consistent with our health; and in this respect we do not eat enough. In fact, fish contains very valuable ingredients necessary for the health of mind and body, one of which is phosphorus. A treatise written recently by a German doctor on diseases of the body claims that a fish diet is very essential in the treatment of various diseases, especially nervous diseases. But we have absolute proof and need no German to tell us that fish are free from diseases such as tuberculosis which makes meats such a menace to our health. Doctors tell us that too much meat, as well as hindering the proper action of the kidneys may indirectly be the cause of many of the chronic diseases such as diabetes, etc. Then if these sayings are true and we read them quite frequently in medical pamphlets, why not eat more fish with our potatoes, as a substitute for meat?

The cost of fish is less compared with meats and many of the other foods. The reason is quite clear to all. Fish cost nothing for upkeep, neither food, housing or care of any sort. That is in the hands of God. There is only the cost of taking which is relatively small. True, fish feed on other fish, but they get much of their food at the bottom of the sea, and thus taking into their bodies ingredients that are good for us, but which we cannot get any other way but by eating fish. Fish can be used as a substitute for many more expensive foods, and at this time more especially than any other, the high cost of living in Canada may be materially lessened by eating more fish. Still we waste money importing innumerable dainties from other countries because they have lots of newspaper importance, and, after all, they contain practically the same ingredients as are to be found in fish.

History tells us that our ancestors lived by hunting and fishing. They were strong and healthy. They

had no dainty cakes and pre-digested breakfast foods. There are so many different ways to serve fish as make it always an invaluable dainty even to the most delicate and fastidious. We should eat more fish than most other countries if cost is a factor worth considering, as other countries have to pay for the expense of packing and canning, etc.

The cost of meats, I believe, will remain high, if it does not advance, for a considerable time even after Europe settles down to a state of peace, for animals, we know, take some years to raise and increase. Then if meats are scarce in Europe they will be expensive here. What about fish? They are always there for people to reach out and take.

It is an undisputed fact that fish is considered the most valued dainty in some countries, but in our country probably the least valued. This ought not to be. The body craves fish. My father is a fisherman and well I know of people from inland settlements coming for fish and how they valued a good dinner of fish and potatoes. The most varieties and the most valuable fish of the world are found in our Canadian waters. Our Government is trying in many ways to teach us a realization of the great God-given luxury, the Canadian fisheries, and it is my sincere desire that all Canadians awake to its teaching.

ICED HERRINGS FOR FRANCE.

Sixty tons of Norwegian herrings, packed in ice, were recently shipped by steamer from Bergen to Havre. This is said to be the first time the Norwegian consignors have adopted this method of sending herrings in fresh condition to France, and according to the Norwegian Consul at Havre the experiment was a complete success. The herrings met with a ready sale both at the port of delivery and also in Paris.

Ottawa, June 29. — Reports from the Trade Commissioner in Liverpool, state the trade in Canadian frozen salmon is hampered by the British regarding salmon as a strictly summer fish. An advertising campaign is recommended to popularize Canadian frozen fish in Britain.

P. E. I. LOBSTER FACTORIES CLOSING.

Charlottetown Guardian. — The lobster factories are being closed along the North Shore of the Island. The season, it is reported, has been a poor one, lobsters were not plentiful and the prevailing north winds made it difficult for the fishermen.

The trawler *Fosdyke*, belonging to the Boston (Eng.) Steam Fishing and Ice Co., Ltd., went some time ago to the assistance of the trawler *Derika XVI.*, which had exhausted her coal; and the sequel was a salvage action in the Admiralty Court last month. Counsel remarked to one of the witnesses: "You say you lost two days' market when you got in. Was your fish in ice?" "Oh, I think so," replied the witness, "but it wasn't as nice on Thursday as it would have been on Tuesday." "I on Thursday as it would have been on Tuesday." "I said was it in ice?" "Oh," said the witness, "In ice! I thought you said, was it nice. Yes, it was in ice, but it was quite nice too. I mean it was nice, but it wasn't quite as nice as it would have been if it had come in on Tuesday notwithstanding the ice!" — Cold Storage.

Interesting Facts About Sea Fishes



THE MACKEREL.

Probably none of our sea fishes is more interesting than the mackerel. For the last two months, May and June, schools of these fish have been followed by fleet of American purse-seiners and Canadian netters, in the migration up the Atlantic shore of the continent to the Gulf of St. Lawrence. And just as eager as the fishermen have been to net this delicious pelagian, the public has been in its effort to procure it for the table.

The common mackerel is one of the best known food fishes. It is distinguished from other denizeus of the deep by its swift form, metallic coloration, and, technically, by the presence of a number of detached finlets between the back fins and the tail. The cut of the mouth is peculiar, the spines in the fins are feeble, the muscular system is extremely strong, and the flesh is oily. As in most swift-moving fishes and fishes of pelagic habits the bones of the spinal column are numerous and extremely small, an arrangement which makes for the flexibility of the body.

The common mackerel (*scomber scombus*) is probably confined to the Atlantic, where on both European and American shores it runs in vast schools, the movement varying greatly from year to year, the preference being for cool water. Mackerel migrate northward to spawn. The female produces approximately half a million eggs each year, according to Professor Goode. These are very minute and each is provided with an oil globule which causes it to float on the surface. All of these eggs, of course, do not mature. Both the eggs and the young are destroyed in great quantity by their natural enemies; hence the reason for producing the eggs on such a large scale. The balance of nature suffices for all ordinary exterminating influences.

During April or early May the mackerel strike our Atlantic coast off Carolina or Virginia where they are intercepted by a fleet of seiners from Massachusetts. These seiners, which are a fine class of craft-yachts of great speed and very sea-worthy follow the schools up the coast. The first mackerel caught in southern waters are usually marketed fresh and command a high price, but as the seiners proceed north their catch is mostly salted in barrels.

While our American cousins have an extensive off-

shore fishing fleet in pursuit of the mackerel, there is only one Canadian seiner operating this year; our fishermen use drag-nets or nets fixed in the bottom. The Canadian mackerel catch is thus rendered very uncertain because the schools may move thirty or forty miles off shore, which is further to sea than our small Canadian craft would care to venture. Mackerel have been known to take three different routes after striking off the southwest shore of Nova Scotia. These routes, commonly known as the shore, inner and outer, all converge at Canso. Some schools, it is stated, go through the Strait of Canso to the Gulf of St. Lawrence, but the great body reaches the gulf by way of Cape Breton. After lingering for a period in the Gulf the fish disappear into deep water, returning again in the fall on their migratory course to warmer waters for the winter.

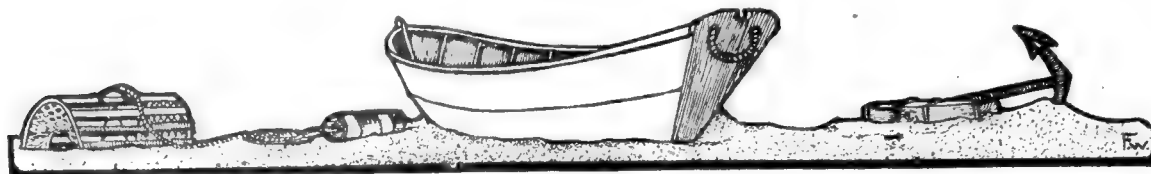
The Fisheries Branch, Department of Marine and Fisheries, in 1920 instituted a scouting service to locate the mackerel schools as they approach the Nova Scotia coast, and notify the fishermen ashore. The fisheries protection cruisers "Arras" and "Hochelega" which set out early in May, met the mackerel and accompanied them along the coast. This year a similar service was maintained, but unfortunately both in 1920 and 1921 the schools did not follow the shore course, and hence our fishermen, who are dependent largely upon a movement inshore, did not have the success of other years.

The schools of mackerel vary greatly in size. Schools estimated to contain one million barrels have been recorded on more than one occasion. A school such as this has been described as "a windrow of fish half a mile wide and twenty miles long". The bulk of mackerel taken is salted, but fresh or salt they are consumed in great abundance by Canadians and Americans whenever available. It is estimated that the Massachusetts seiners put up about 400,000 barrels each year. Our Canadian fishery in 1919 brought 230,770 cwts., valued at approximately \$1,500,000, of which 74,897 barrels were put up, valued at \$1,038,000. In 1920 only 142,347 cwts. were caught, and 26,144 barrels packed.

Professor Goode says that the mackerel when in season is one of the most delicious sea foods, ranking high in nutrition and palatability. Salt mackerel may

be boiled as well as broiled and fresh mackerel may be treated in the same manner. A well-cured autumn mackerel he considers to be the finest of all salted

fish. Generally speaking, mackerel is available on the Canadian market in the latter part of May, June, July, August, September and October.



Prospects For Canadian Frozen Fish on The British Market

J. FORSYTH SMITH, Canadian Trade Commissioner.

Liverpool, June 9, 1921. — The prospects for the sale of Canadian frozen salmon during the season from June to September, 1921, are not particularly promising, as there are much more plentiful supplies of Scotch and English salmon available than there were last year. British Columbia frozen salmon have been selling, wholesale, on this market since the first of the year, at prices ranging from 1s. 2d. to 1s. 6d. per lb., in case lots. New Brunswick salmon is now coming forward, and while the demand will be fairly good, the best that can be hoped for is the maintenance of similar prices.

The prospects for frozen halibut are very poor, as there are good supplies of English fresh halibut, supplies of other fresh fish are plentiful, and large consignments of fresh halibut have also been received at eastern ports from Norway.

Advertising Necessary.

If the export business in frozen salmon on the United Kingdom market is to be developed on an important scale, it will be necessary to undertake advertising propaganda with the object of making it clear to the British public that Canadian frozen salmon, of a quality very little inferior to the fresh fish, can be made available for sale at a reasonable price during the close season from September 1 to February 1. It is during this season, when no Scotch or English salmon is available, that the lack of competition should offer the best opportunity of disposing of considerable quantities to advantage. The obstacle is that the consumer has been educated to regard the salmon supply as depending strictly on the opening of the season for fresh fish, from February 1 to September 1, so that demand automatically ceases as soon as the close season begins. Frozen salmon as a commodity quite separate and distinct from fresh, is not generally and popularly known, and there is no doubt that much Canadian salmon finds its way into the retail market, and is sold as English or Scottish. The public are quite satisfied as they ask for salmon and get good salmon, but as soon as the salmon season is over, the demand drops, as the fishmongers can no longer sell it as British, and there is no definite consumer demand for the Canadian frozen product. If steps could be taken to keep the public informed that good Canadian salmon can be procured at attractive prices during the winter months, business would undoubtedly increase. Fishmongers also require to be convinced that it is to their interest to sell Canadian salmon on its own merits. Another point that would have to be considered, in any advertising

scheme, is the effect upon demand of the English tendency to regard salmon as essentially a summer fish, to be eaten cold. Grilled salmon, so popular in Canadian hotels and restaurants, is very seldom met with in this country, and a change of custom in this respect would make a very great difference in winter buying. It has been suggested that a fund for propaganda purposes might be raised by exporters and importers in co operation.

Existing Prejudice.

Undoubtedly there is a certain amount of natural prejudice against a frozen product. That this is by no means insuperable, however, is clearly shown by the experience of the Australian frozen meat trade, which, although heavily handicapped by this feeling at the start, has now established its products as staple lines, regularly purchased by large sections of the consuming public. One great difficulty exists. This is to secure the general use by distributors of the best methods of thawing out. If the teachings of experience in this regard could be made widely available, the difference between the quality of fresh and frozen fish would be materially decreased.

Weight of Packages.

It is the general opinion of importers that salmon would sell to better advantage if the size of the package were reduced. Cases of 250 to 370-lbs. gross weight are too large to facilitate general distribution. The trade are unanimously of opinion that cases weighing from 150 to 200 lbs. are the most desirable, and the view has also been strongly expressed that, if it were possible to put up $\frac{1}{2}$ -cwt. packages for the smaller, and 1-cwt. packages for the larger fish, selling in case lots to retailers would be greatly increased, with resulting advantage in delivery condition, and attractiveness to the consumer. At present, owing to the large sizes of the cases, the wholesalers sell the fish out in ones and twos.

Grading to Size.

The present system of packing mixed sizes is not seriously objected to, and it is recognized that it may be a difficult matter to secure a tight pack with fish of uniform size. At the same time it is pointed out that some markets call for small fish, others for medium sizes, while, for the purpose of smoking, the largest sizes are best, and it is felt that, if the packing difficulty can be overcome, grading to size would

undoubtedly be an advantage to distribution. Fish weighing 8 to 14 lbs. find the readiest sale.

The packing of Canadian salmon is considered fairly satisfactory, though some cases from British Columbia are criticized as too flimsy. The New Brunswick case, which is of good solid construction, tongued and grooved, iron-banded at the two ends, and lined with a thick absorbent paper, is very favorably commented on. The double wrapping of each fish, first in white, tough, grease-proof paper, and then in coarser brown paper, is considered very desirable.

Sealing of Fish.

A regulation of the Board of Fisheries provides that every individual salmon sold in the United Kingdom between September 1 and February 1, must be sealed by an official after inspection as proof that it has been imported. This is to render impossible the sale of British fish illegally caught during the close season. Apart from the question of cost and inconvenience, it is claimed that considerable deterioration takes place as a result of the necessary unpacking and unwrapping for inspection and sealing, and it has been suggested that arrangements might be made with the British authorities, whereby an equivalent for the

British seals, identifying the fish as Canadian, might be attached to each fish when they are being packed in Canada, thus obviating further action in this connection on this side. Interviews with the trade on the desirability of this, tend to emphasize the fact already mentioned, that much Canadian salmon is not sold on its own merits, but is offered to the public as English or Scotch. Although it is generally agreed that the opening of cases for inspection and sealing results in deterioration, and the trade would be glad to see it done away with on this account, the proposed remedy is rejected because, if any of the fish so dealt with in Canada remained unsold after the opening of the season, the marks of identification would act as a handicap in effecting sales. They could not be sold as British salmon, and would therefore be difficult to dispose of. One of the largest importers in the Liverpool territory, while advocating Canadian sealing, expresses himself in the following qualified terms: "It would be advantageous to arrange to have the seals put on at the point of production, if you could ascertain just how many would be required for the close season. I would say that fish sent across to be sold during the open season would certainly be better unsealed."



Some Notes on Mackerel Scouting

By M. H. NICKERSON, Commissioner of Fisheries
for Nova Scotia.

The new marine maps issued by the naval department enable one to trace the northern course of the mackerel in their spring migration. After passing Long Island, the direction is north easterly, broadly speaking.

A few schools, the advance guard, swing through the South Channel and skirt the New England shore more or less closely, bearing more easterly across the Bay of Fundy, from a point of departure wide off Thatcher's Island, which takes them South of Jeffrey's Bank to the Coast of Nova Scotia just above Yarmouth. (The usual trap berths.) The first provincial takes are invariably made at that place. The schools keep on down the shore, and from these the moored nets get a few; but the netters (drifters) launching out in ever increasing numbers from year to year, generally make better hauls. They have done very well this spring. The traps east of Yarmouth Cape have caught comparatively few mackerel this season; and this is declared by some to be owing to the drifters which scatter the schools. I can only say "not proven". But those netters would fare quite as well, if not better, should they choose berths wide off Cape Sable in the track of the larger bodies of fish, which steer south of George's. That is the beat very properly taken by the scout, for reasons which may be entered thus:—

In this off shore line of march the schools follow

each other, not exactly in Indian file, but never swerving very far from the usual course, until they pass Brown's Bank. The fish are then say eighty miles from Lockeport, and their road lies slightly eastward of north to that section of Nova Scotia. Two quite broad plateaus lie in the north east direction, Roseway and La Have Bank, the latter more southerly. Now mackerel, it is well known, in their great periodic movements, always shun a shoal and pass along the depressions which for the present purpose may be termed channels. Such a submarine lane leads between the two banks mentioned above. The spring mackerel, coming on soundings in great rafts, commonly diverge at this point, the left wing of them going between Roseway and the Shelburne shore, while the right wing pursues the straighter path or sea lane, described above, and make Cross Island or Sambro in their migration to the north. Reference to the marine map will make these tracks easily intelligible, and show at a glance the nature and importance of the work which the scouts are performing in the interest of the whole South Shore mackerel fishery.

Still, without a map at hand, any person of ordinary thinking powers can form a fairly accurate mental picture of the whole movement, the schooling fish in one part, and the watchful scout in the other. In a clear day, observations of the former may be made

at considerable distance from the patrol boat, the bearings noted as well as the trend of the raft, all of which is reported by radio to the nearest station and relaid by telephone to points of resort for the provincial netters, or seiners as the case may be. In this manner a perfect ambush may be arranged, and the boats in waiting at their homes along the shore, can put out and waylay the head-on schools with a certainty that would otherwise be lacking. The sportsman must thread the bush to start a hare, or beat the moors in order to flush the grouse; but here, as in the shooting of certain sea-fowl likewise in migration, you simply pay out the string of nets as the swarm of fish approaches, of which you have been notified beforehand, and in a majority of cases a good haul is the reward. Nova Scotia alone affords a broad point of vantage for native netters or seiners; while on the American shore there can be no such base of operation, for the schools there steer mostly coastwise, and the fleet of seiners is already on the cruise. Not carrying wireless they cannot get the radio news, and running to land to pick up the reports would give the fish a grand chance to go by. The situation can thus be comprehended at a glance, and it renders the Washington bureau's scouting project (on a borrowed idea) of no effect whatever.

For gauging correctly the importance of the scout service to Canadian fishermen, take a concrete instance: In the early days of May, Capt. Barkhouse reported one or two bodies of mackerel in sight north east of Brown's and moving in a direction which would carry them through the Roseway channel, or within striking distance of Lockeport. On getting the message, a few netters from that harbor made a timely start and took up the proper position for drifting. Next morning they returned with pretty good fares, and, be it noted, this was before anything had been caught or even sighted by the netters in Lobster Bay, fifty miles farther west. The plain inference is that the schools in the Lockeport offing were the pilot fish of the principal streams, making east of George's and therefore shortening the route, which brought them farther ahead than the schools which hugged the New England coast, appeared later at Yarmouth and finally joined the main migratory column off Canso or around Cape Breton . . . Anyhow the chain of observation which has been carried by an efficient lookout from George's Shoal to Cape North and farther up the Gulf has lifted the migration of mackerel from the dim domain of theory and placed it on the solid basis of scientific fact. Till this season's experiment the marine biological staff held it more than doubtful that the mackerel passing Cape Sable ever extended their journey to the North Bay. The following reports taken from the newspapers set that question at rest, and confute the lunatic stories about the scout scaring the mackerel off soundings. "Large schools of mackerel sighted off Lockeport, moving north easterly. Several schools were located off Sambro, and the nets at Dover made fair hauls. Mackerel appeared about six miles off Canso."

Schools were being closely watched to ascertain whether their course would be through Northumberland Strait, or towards the Magdalens. Moncton reports the shipment of 164 barrels of mackerel to Boston by Dominion Express. Other big shipments of mackerel went forward from New Brunswick the same week. In short, mackerel were never so plenti-

ful in eastern waters for many years past. That this is an extra good showing from a business viewpoint, few people will have the hardihood to deny.

FISHERIES OF PRINCE EDWARD ISLAND.

The lobster fishing season for greater part of Prince Edward Island, — the exception being a hundred miles of coast from West Point to Victoria where the season is from August 16th to October 16th — closed on June 25th. — It opened on April 26th. The weather during the remainder of that month and for the whole of May was finer than last year and there were few lost fishing days but June was stormy, and in most sections only 12 hauls were made.

The total pack was 25,515½ cases,—Last year for the same period is 35,000, but there were 31 fewer canneries operating this year, therefore the pack considering the number of boats and traps, was about normal.

The surplus of the Island which remained unsold at the beginning of the season has in the meantime been disposed of, thus leaving the road open in the markets, for the pack of 1921.

The fishermen received this year \$4 per cwt., where they found their own gear, and \$2 otherwise, quite a decrease from last year.

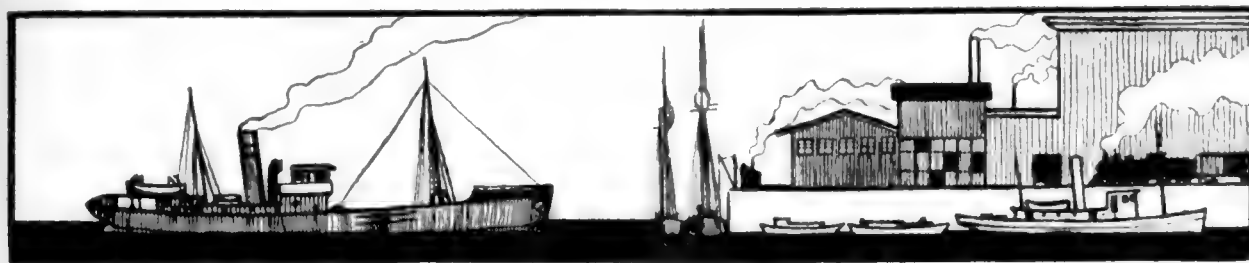
This season a great deal of educative work was carried on with a view of getting packers and fishermen to take steps to improve the quality of their pack, as there was a good deal of discoloration reported last year. "I am pleased to report," said Fisheries Officer Gallant, "that the quality of the pack has been improved to a marked degree. Some of the finest lobsters that ever left Prince Edward Island were shipped this year."

In the educational campaign referred to Inspector Gallant and W. H. Tidmarsh held meetings at various fishing centres, the former who for many years a successful packer giving a practical talk along sanitary lines, and Mr. Tidmarsh dealing with the marketing situation and impressing on packers and fishermen the need of turning out as high class an article as possible. Dr. Harrison and Dr. Hood from the Fisheries Department, Ottawa, conducted experiments at Rustico in the packing of lobsters under different conditions. For instance lobsters were held for various lengths of time before being packed. The expert arrived at the conclusion that after lobsters are held five hours after they are boiled, they are past their best for canning purposes, they should be canned as soon as possible after they are boiled.

Prof. J. B. Reid and Dr. Clarence Tidmarsh of McGill University, conducted experiments with regard to preventing the development of bacteria, and in this work, the great value of absolute cleanliness with regard to utensils and canning equipment was demonstrated.

Codfishing, for the month of June was better than for the same month in 1920, the catch being 1488 cwt. more. The season, however, has got two or three months to run. The greater part of the catch, so far, has been salted down, with the exception of what has been sold fresh locally.

About 2,000 barrels of mackerel were taken in June the bulk of these in West Prince, the largest catches being in Alverton, from 2,500 to 5,000 per boat being netted in the middle of the month. At Rustico and Louis some good catches were also made. Since then the yield has been small. Very few mackerel were exported fresh. The catch in June, was about 700 barrels better than for the same month last year.



Manufacture and Properties of Fish Glue

By DONALD K. TRESSLER, Ph. D., Industrial
Fellow of the Mellon Institute of Industrial Research
of the University of Pittsburgh.

(In *Chemical Age*.)

Many manufacturers using large quantities of glue prefer a glue prepared in such a form that it is ready for immediate use, but continue to use other glues because they are not certain of the quality of the liquid glues on the market. Comparatively few chemists are familiar with the proper methods of testing liquid glues. The method of determining the quality of hide and bone glue by viscosity tests, jelly strength determinations and water absorbing power are widely known and are considered reliable tests. Comparatively little has been written concerning the methods of testing fish glues and other liquid glues, although these glues vary more widely in quality than hide and bone glues.* In the following article the methods of manufacture and testing of fish glue, and its composition, properties, and uses have been considered. The writer hopes that this discussion may create a more general conception of the methods of testing fish glue and a broader knowledge of its properties and uses.

Fish glue is marketed usually in the form of liquid glue and it is the most important liquid glue. Dry fish glues are soluble in water at ordinary room temperatures, whereas hide and bone glue merely swell but do not dissolve under these conditions. Hide and bone glues are occasionally made into liquid glues; but in order to do this, the hard glues must be either dissolved in a solution of a gel-inhibiting substance or so treated that their chemical composition and properties are changed.

Source of Raw Materials.

The bulk of the fish glue manufactured today is made from the waste products of the cod, haddock, eusk, hake and pollock industries. These fish are the so-called "ground" fish which are caught on the banks, usually together in the same nets, and cleaned on the same wharves. Consequently, most of the fish glue stock comes to the glue factory already mixed, i. e., the waste from the various species of fish have been dumped into the same containers.

Some other species of fish than those mentioned above are used in the manufacture of glue—indeed any fish might be used for the making of glue—but

* This article will constitute the basis of a section upon fish glues which will appear in "The Chemistry and Technology of Gelatin and Glue", by Dr. R. H. Bogue and collaborators, McGraw-Hill Book Co. This book is one of the Technochemical Series, edited by the Mellon Institute of Industrial Research.

for certain practical and economical reasons only small quantities of glue are manufactured from other fish. The quality of glue prepared from these ground fish is higher and the yield greater than is the case of glue made from most other fish. Many species of fish—e. g. menhaden—yield such small quantities of glue that it is not economically practicable to use them. Other fish, e. g. herring and mackerel, contain such large quantities of fat that special procedures must be followed to remove the fat from the fish in the glue-making process. Many fish which would otherwise be used are not caught largely in any one locality and consequently the supply of fish waste at any particular point is not large enough to justify the establishment of a glue factory. Other fish are caught only for short seasons, which would cause the glue factories to be idle most of the year.

The ground fish waste ordinarily is divided into three classes, viz., (1) fish heads; (2) waste, i. e., salt fish trimmings and bones; and (3) skin from the dried salted fish. The fish heads are fresh and are hauled from the wharves where the ground fish are cleaned. With the exception of the exported salt fish, most of the dried salt fish is skinned before it is packed for shipping. The cod and eusk skins are not mixed with the skins of the haddock, hake and pollock. The cod and eusk skins which have a small amount of salt fish adhering to them constitute the skin-glue stock. Most of the salt fish sold in this country is cut into strips, trimmed of the outer yellow portion and freed from bones. The trimmings, bones, and haddock, hake and pollock skins constitute the salt-fish waste glue stock and is termed "waste".

Methods of Manufacture.

The glue stock, regardless of its source, must be freed from salt or freshened before being made into glue. The fish skin and waste stock, being a waste product of the salt-fish industry, contain a much greater percentage of salt and consequently more care must be used in freshening it than in freshening the fish-head stock. The fish skin and waste stock ordinarily are agitated in running water in large tanks for a period of 12 hours or more, or until a sample of the wash water on analysis shows a low percentage of chlorides. The stock is then thrown into false-bottomed tanks, called "cookers", which usually have a layer of excelsior on their false bottoms. The stock is covered with water and a slow flow of steam is passed into the tanks. The length of the cooking period varies with the nature of the glue stock; fish waste requiring

longer cooking than fish skin stock. Usually two runs are made; that is, the liquor formed by the cooking of the stock is drawn off when it becomes sufficiently concentrated, more water is added and the cooking is continued. The average concentration of the glue liquors is about 5 per cent. The first run of glue liquor is the better.

After from 6 to 10 hours' cooking, when nearly all the glue has been removed from the stock, the cooking is stopped and the second run of glue liquor is withdrawn. The residue in the cookers usually is put in large hydraulic presses, where most of the remaining glue liquor is pressed out. This press glue liquor is added to the second run liquor.

Preservatives are added to the glue liquor to prevent any bacterial action. Fish glue and glue liquors decompose very rapidly if any considerable amount of bacterial growth is permitted. The preservatives added by various glue makers include phenol, cresol and boric acid. The finished product contains from 2 to 4 per cent of preservatives, depending upon the nature of the preservative added.

The glue liquor, drained from the cookers, next is pumped to the evaporators. The types of evaporators used vary in different factories. Some plants use open pans heated with steam coils; others use open pans containing revolving copper coils; and still others use vacuum pan evaporators. The glue liquors usually are strained through a coarse wire screen. The liquors are evaporated to a uniform viscosity, and just before the glue is run into the storage tanks, a sufficient amount of some essential oil, as cassia, camphor, clove, wintergreen or sassafras, dissolved in ethyl alcohol, is added, to prevent the growth of moulds. These essential oils not only prevent the growth of moulds, but mask the odor. Some fish glues are also made opaque by the addition of zinc white or some other white pigment.

The process by which the fish heads are converted into glue usually are kept more or less secret. It may be stated, however, that the processes are, for the most part, similar to that outlined above, except that the glue stock is digested with dilute acids, usually hydrochloric or acetic acid, instead of cooking with steam alone. Moreover, the stock and glue liquors usually are bleached well. Sulphur dioxide and sodium bisulphite are the common bleaching agents. Fish-head glues generally are made opaque with a white pigment.

The residue, "chum", from the hydraulic presses is dried and marketed either as chicken-feed or as a fertilizer, and contains approximately 50 per cent of protein. Then, too, the fish head and waste chum contain a high percentage of calcium phosphate which supplies lime for the egg shell and phosphorus for the egg yolk.

Various fish-glue makers market their glues in different ways. Some cater to the trade buying liquid glue in bulk, others market it chiefly in small bottles and cans. The following three grades can be purchased on the market: (1) photo engraving glue which is made from the first run glue liquors from fish skin; (2) fish-skin and fish-waste glue which is usually sold in small bottles and small cans; (3) fish-head glue, which is prepared from fish heads, ordinarily is marketed in large cans and barrels.

Practical Tests to Determine the Quality of Fish Glue.

Fish glue of the ordinary viscosity contains from

50 to 55 per cent of glue and weighs from 9½ to 10 pounds to the gallon. There is a considerable quantity of fish glue on the market which is of rather doubtful quality. Consequently, if the glue-user does not test his glue, it is wise to buy only from manufacturers with well-established reputations. The best fish glues have a gel point of about 7.5 degrees C. A higher gel point is satisfactory in warm weather, but is unsuited for outdoor work in cool weather. Fish glues should not contain more than 0.2 per cent of sodium chloride, as a higher salt content indicates a poor drying, hygroscopic glue which, while affording satisfactory joints in cool dry weather, probably will weaken in humid weather. All fish glues should be slightly acid to litmus.

The drying test is carried out preferably by spreading a uniform layer of glue, about ⅛ inch in depth, on a glass plate and placing the plate in a constant-humidity and temperature room, together with a similar layer of a standard glue of known hygroscopic properties. A room having a constant temperature of 20 deg. C., and a constant humidity of 50 per cent, will be satisfactory. The time of drying and the hardness of the dried film are noted and compared with the standard. The dried films then should be placed in a room having a higher humidity and temperature. A very exacting test may be conducted by choosing a room having a temperature of 25 deg. C. and 80 per cent humidity. Under such conditions most fish and bone glues will soften slightly. If the dried glue film becomes liquid or sticky under these conditions, a poor glue is indicated. If constant temperature and humidity rooms are not available, large humidors containing sulphuric acid of the proper dilution may be used.

The joint-strength tests, as ordinarily applied, are not of much value in determining the quality of a given sample of fish glue, inasmuch as the temperature and humidity at which the tests are conducted are the controlling factors in the strength of the joints. The personal equation is also an important factor which should be considered in comparing results of joint tests. However, if the laboratory worker conducts all the joint-strength tests under the same conditions of temperature and humidity, the results of these tests become valuable. The results are particularly useful if these tests are made under humid conditions. A constant temperature and humidity room should be so regulated that the temperature is in the neighborhood of 25 deg. C., and the humidity about 60 per cent. The wooden blocks and the joints should be kept in this room or in a humidor having similar conditions of temperature and humidity. Under the conditions mentioned above, good fish skin and fish-waste glues possess about the same tensile strength as high-grade bone and low-grade high glues, whereas fish-head glues are about as strong as medium-grade bone glues.

Composition.

Until more work has been done on the composition of fish glue, a complete analysis of the fifty per cent of dry matter contained in liquid fish glue will be of little value in indicating the quality of the glue. Fish glues differ in composition from hide and bone glues, in that fish glues are composed chiefly of proteoses and peptones with a smaller proportion of proteins, whereas the higher grade of hide glues are nearly pure gelatin, and bone glues consist mainly

of gelatin and proteoses. The proteins of fish glue are higher in ammoniacal nitrogen, melanin and non-amino nitrogen than the proteins of either hide or bone glues. The composition of the proteins of fish glue resembles more closely that of the proteins of bone glues than that of the proteins of hide glues.

Dry fish skin and fish waste glues contain about one per cent of ash. The amount of ash contained in fish-head glues varies widely, depending on the method of manufacture used and the amount of pigment or other inorganic material added during the manufacture of the glue. Samples analyzed by the writer contained from 1 to 5 per cent of ash in the dry glue. A representative analysis of a sample of ash from a fish skin glue is given below:

Analysis of Ash.

Ash in dry matter	per cent	0.96
Silica (SiO ₂)		12.7
Calcium oxide (CaO)		10.5
Magnesia (MgO)	trace	
Potash and soda (K ₂ O and Na ₂ O)		13.9
Sulphur trioxide (SO ₃)		34.0
Phosphorous pentoxide (P ₂ O ₅)		24.9
Chlorine (Cl)		3.2
Ferric oxide (Fe ₂ O ₃)	trace	
Total	per cent	99.2

Properties.

The color of liquid fish glue depends upon the nature of the raw material, the method of manufacture and the clarity of the product. Fish-skin glues, as they are ordinarily produced, are the clearest. Fish waste and fish-head glues are more or less opaque. Most clear fish glues make a dark joint when used with light-colored woods, and consequently much of the liquid glue on the market contains some white pigment. This gives the glue a lighter color and also makes the joint less conspicuous.

The odor and taste of fish glues depend largely upon the nature and amount of preservatives and essential oils added. Upon heating for some time, the essential oil is driven off and the true odor of the fish glue becomes more apparent.

The "speed of set", or the time elapsing after the application of a coat of glue until the glue becomes a gel, depends upon the gel point and the viscosity of the liquid glue, the amount of glue applied, the nature of the wood, and also to some extent, upon the humidity of the atmosphere. "Setting" is caused by a partial withdrawal of the moisture in the glue, thus causing the gelling of the liquid glue. The higher the viscosity and gel point of the liquid glue, the less the amount of glue applied, the more absorbent the surface to which the glue is applied, and the lower the temperature and humidity of the atmosphere, the more rapidly does the glue "set".

At any given temperature and humidity the rate at which the fish glue dries depends upon the source of the glue, the method of manufacture and the salt content. As a rule, fish-skin and waste glues dry more rapidly than fish-head glues, although if the fish skin and waste glues contain an abnormally high salt content this may be reversed.

The viscosity of liquid fish glue depends upon the source of glue, the method of manufacture, the percentage of dry glue in the liquid glue, the temperature, and the addition of substances other than fish glue, e. g. boric acid, hard glue, phenol and cresol.

The addition of boric acid increases the viscosity of liquid fish glue to some extent; whereas the addition of phenol and cresol decreases the viscosity. Small amounts of hard glue, i. e., animal glues, sometimes are added to increase the viscosity.

Fish-head glues are usually more flexible than skin and waste glues. Glycerine and glucose often are added to increase the flexibility of glues.

Properly preserved liquid fish glues will keep indefinitely in an air-tight can or well-stoppered bottle. If the glue is stored in a cold room it will gel. This gel melts quickly as soon as the glue has been warmed above its gel point. When liquid glue containing phenol or cresol is put up in tin cans, after a time a black ring is formed around the top of the can where the phenol or cresol has attacked the iron. However, this does not injure the quality of the glue. Precipitates sometimes settle out from poorly prepared liquid glue, but this settling does not injure the strength of the glue.

Uses.

No other glue on the market has as many or as varied uses as liquid fish glue. The best grade of fish-skin glue is the only satisfactory glue which can be used for the production of half-tone plates for photo-engraving work. It is also used to some extent in the production of zinc line plates for photo-engraving work. Fish glues are used largely where flexible glues are required, e. g., in the manufacture of court plaster, labels and stamps, and in the binding of books. Where small amounts of a strong, ready-to-use, adhesive is needed, fish glues are universally used, e. g., for small repair jobs about the house, for shoe repairing and general repair work. Some fish glue is blended with hide glue and used as belt cement for leather belts. Large quantities of fish-head glue are used in various sizing operations, for the glue stiffens materials yet is somewhat flexible. Some fish glue is used in the chipping of glass in the production of translucent glass. Large quantities are used in box-making, furniture making, and for general joining work.

BENEFITS OF MACKEREL SCOUTING.

Has the Spawning Ground Been Located?

Has Captain Clement Barkhouse of the Fisheries Protection Cruiser "Arras" discovered the spawning grounds of the evasive mackerel? He has been following the schools from the time they enter our Canadian waters for two seasons and his observations are of more than usual interest.

Scientists have generally recognized the fact that the mackerel strike inshore to spawn but it had been the general belief that they deposit their eggs promiscuously along the shore waters of New England and the Maritime provinces. Captain Barkhouse, who had considerable practical experience mackerel seining before scouting for the schools on the "Arras", now asserts that the mackerel spawning grounds are about Prince Edward Island, between East Point and Malpeque.

After describing the course of the schools along the Nova Scotia shore, around Cape Breton into the Gulf of St. Lawrence, Captain Barkhouse continues:

"On June 21 the mackerel seemed to stop between East Point, P.E.I. and Malpeque, P.E.I. and this, I have found, is the spawning ground. They were from three to five miles off shore and were very sluggish. I examined mackerel on June 22 that had been taken in the locality and found that the spawn had already been

deposited, which goes to prove my contention that this is the spawning ground, observing that I had examined fish from the same locality on June 16, and they were full of spawn."

Captain Barkhouse's report sets out the course of the various schools as they struck the Nova Scotia coast, the first on May 11, and he describes their progression to the Gulf of St. Lawrence where, he says, their movement was arrested for the purpose of spawning. He also makes the following observations upon the not too great success of the Maritime mackerel fishery, in connection with which it should be borne in mind that Canadian fishermen fish with drag nets and nets fixed to the bottom inshore and consequently the schools must run close to land to come in contact with their gear. The one Canadian seiner "Nellie Banks" of Lockeport achieved considerable success by keeping in touch with the "Arras."

It is noted that the shore mackerel fishing is not as prosperous as it might be. There are several reasons why such a condition exists, especially as regards this particular year. The mackerel have long been known as the most timid fish that haunt our shores and no special effort is put forth to encourage their approach and this year several obstacles had to be contended with. Unfortunately the lobster season and the mackerel season ran concurrently, the fishermen having their full lobster equipment in use, which required daily attendance with motor boats; and the presence of a couple of hundred of these craft naturally has a tendency to frighten the fish. The oil tanker "Impoco" grounded on Blonde Rock and was subsequently released and towed to Halifax. During all this operation oil was escaping from her tanks and at times there was a body

of oil three or four miles wide which drifted along the coastline.

Despite these adverse conditions outlined by Captain Barkhouse it is encouraging to note that the mackerel fishery this year was considerably better than last, this condition applying particularly on the western coast of Nova Scotia.

IT SHOULD HAVE BEEN FISH.

A negro employed at one of the movie studios in Los Angeles was drafted by a director to do a novel comedy scene with a lion.

"You get into this bed," ordered the director, "and we'll bring the lion in and put him in bed with you. It will be a scream."

"Put a lion in bed with me!" yelled the negro. "No sah! Not a-tall. I quits right here and now."

"But," protested the director, "this lion won't hurt you. This lion was brought up on milk."

"So was I brung up on milk," wailed the negro, "but I eats meat now." — Saturday Evening Post.

CAUSE EXPLAINED.

Unable Seaman — When I come round the surgeon 'e says to me, "I'm blooming sorry, mate, I don't know what I was thinking about," he says, "but there's a sponge missin', and I believe it's inside yer." And there it is to this day.

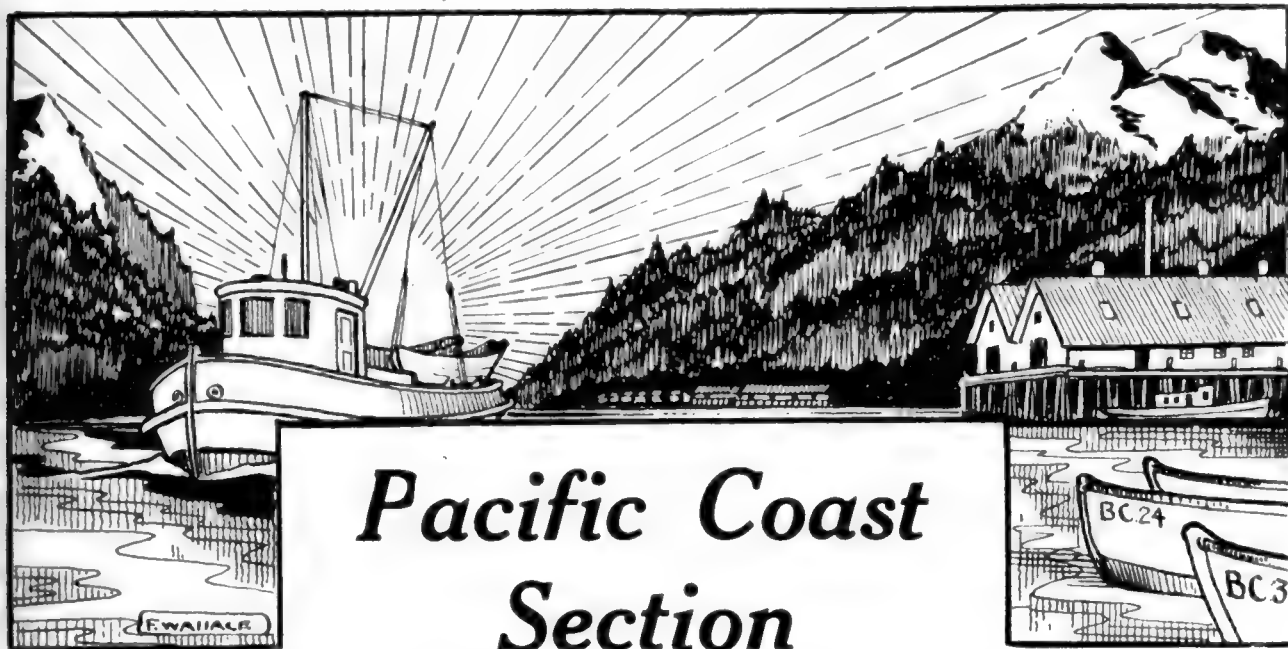
Gullible Old Gentleman — Bless my soul!

Unable Seaman — I don't feel no particular pain from it, but I do get most uncommonly thirsty.

Canadian Fish Plants--No. 3



DRYING YARD OF THE MARITIME FISH CORPORATION, LTD., AT DIGBY, N. S.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd., 528 Winch Building, Vancouver, B.C., Canada.

ARE THERE ANY QUANTITY OF CRAYFISH TO BE HAD IN BRITISH COLUMBIA?

Your correspondent was recently asked if there was any report of there being any quantity of crayfish to be had in British Columbia? If there are any of these fish to be had there is a sure revenue which should be taken advantage of by fishermen. In Southern Washington and Oregon the crayfish which is much similar was for a long time much sought after. There does not seem to be much information available as regards this particular shellfish.

MERCHANTS EXCHANGE OF VANCOUVER TO HAVE CANNERY AND FISH SECTION.

The Vancouver Merchants Exchange is to have a section devoted to the canned and fresh fish news and reports. The exchange which has only recently been organized is being operated for the benefit of the merchants and shipping trades of Vancouver. Reports of markets in different parts of the world, news regarding supplies and reports of the movements of ships are recorded daily. A wireless station of the Marconi system is located in the exchange which is in the Metropolitan building, 837 Hastings St., West. In connection with the fisheries section, news from all over the continent will be received just as soon as proper connections are arranged. This will mean reports as to catches, conditions of the canned fish markets at different points and quotations on both canned and fresh fish. The exchange is operated for the securing and furnishing of such news as will benefit the business man of Vancouver, and is in no way an exchange for the buying and selling of merchandise.

OTTAWA DECIDES IT CANNOT REDUCE CANNERY CHARGES.

The application of the B. C. canners for a reduction in license fees for canneries has been refused by the Minister of Marine and Fisheries. The reason given being that a reduction in the fees for salmon canneries and fisheries would set a precedent that would be serious as other sections of the industry are naturally after reductions. It is also pointed out that under existing financial conditions the department cannot see its way to allow any reductions.

FISH-TRAP PIRATES AGAIN AT WORK IN ALASKA.

Reports from Alaska state that the fish-trap pirates are again robbing traps this year. This applies not only to one but several districts. Several thousand fish are taken from different traps, and the aggregate number of fish taken runs up into many thousands.

AS THE BUYERS OF CANNED SALMON LOOK AT THE MARKET.

A representative of one of the largest buyers of canned salmon was talking to the correspondent of the Canadian Fisherman recently and during the conversation stated that the salmon cannery owners were entitled to every dollar they could get this season. He said that the cannery owner was up against more than one problem and it would take some time for them to solve them. Not only were they confronted with the problem of new elements in the consuming market in the way of Siberian competition, but they confronted with the problem of going out and marketing their fish which they had not been in the habit of doing, but had always relied upon the broker to come to them. Now they

would have to go out and sell their goods, and in this connection he made the statement that in very few instances were they familiar with this particular side of their problem although some of them were going out and endeavoring to create their own markets. The brokers are using every endeavor to move the balance of the pack, and the stock is gradually moving but not in any sizable quantities. Buyers of this season's pack are saying nothing as to what prevailing prices may be.

OLD MAN "SUPPLY AND DEMAND".

"Old Man "Supply and Demand" will always determine the price of canned salmon."

The above is quoted from an article written by Wm. Horsely, of Seattle, Wash., who had much to do with the recent advertising campaign of the Seattle salmon canners. Mr. Horsely goes on to say further that the supply each year is fairly well fixed, and that the problem is to secure an increased demand among the consumers of canned salmon. He is quite right in his contention that the only way to increase this demand is to get more people to eat it, and the only way to get more people to eat it is to advertise it. Keep advertising it, and keep people interested in canned salmon, if not 365 days a year then as many of those 365 days as it is possible to get them to be interested, but keep them interested as many days in the year as it can be done.

The only problem in this connection is how much money is the canner prepared to spend? It will cost something to carry on propaganda and nothing was ever gained unless some expense and effort was used in getting the results desired.

VANCOUVER WHOLESALE FISH MARKET.

Halibut.—The supply of halibut has been very plentiful for a few weeks during the last of June and the first of July. Many of the smaller independent boats have been coming into Vancouver. The wholesale price is running 9c and 14c per lb. for chicken and mediums.

Salmon.—Now that the canneries on the Fraser River have started up, the supply of sockeyes on the fresh fish market has diminished, but a few are being sold fresh at from 15 to 16 cents dressed with heads on. There is a very good supply of springs at 16c with heads off. Bluebacks are selling at 10 to 12 cents dressed with heads on. The blueback supply is not as large as it has been as the cannery at Lasqueti Island has started up.

Cod.—There is a very plentiful supply of cod for this time of the year, when there is usually a scarcity. This is partly accounted for by the fact that the number of licenses issued to Japanese has not been increased. The prices of cod is 7c per lb. This is for local caught fish.

Herring. Point Grey herring are not coming in very well and the result is that the supply of fresh kippers is very small. Fresh herring are wholesaling at 6c per lb.

Soles. The supply of soles is not very good as the fish are not as large as formerly and as a result the sale is not as good. So is the prevailing price.

The market in general for all kinds of fresh fish is not as good owing to there being so much fresh fruit, and the price of meat has had quite a drop.

WASHINGTON TO HAVE CLOSED SEASON IS THE REPORT.

It is reported, but not as yet confirmed, that the Fisheries Commission of the State of Washington are going to order a closed season dating from August 25th to September 15th; and that they will ask the Canadian authorities to co-operate.

PRINCE RUPERT ITEMS.

A Rupertonian swears he noted a new refrigerator car numbered 10040 in the yards recently. As the new cars, about which the whole world has heard, are numbered from 10000 to 10030, the crowd on the Fish Dock are wondering if the Government are going to throw in another ten or so as a sort of solatium for past worries.

Considerable salmon is being landed in Rupert from Alaska points owing to ice shortages. Prince Rupert is the only port on the coast which is not complaining of a shortage.

VANCOUVER WHOLESALE FISH DEALERS HAVE ANNUAL PICNIC

The annual picnic of the Vancouver Wholesale Fish Dealers and their families was held at Coquitlam on July 1st. This annual event is becoming very popular with the dealers and their families. The kiddies particularly have a great time. A football match, was a feature of this year's event, and then there were races, games and a dance ended up a very enjoyable days outing.

THE SEASON SO FAR IN THE DIFFERENT SALMON DISTRICTS IN BRITISH COLUMBIA.

In number two district, including, Rivers Inlet, Smith's Inlet, The Skeena, and Naas Rivers have to date (July 12th) been very poor. This has been partly owing to high winds and much rain, which has prevailed all over the district. One or two days of good weather has made a little improvement but the outlook is anything but good and unless good weather comes along the pack will be very disappointing at all the canneries in this district.

Fraser River District.—Thirteen canneries are operating in this district where there were only 10 operating last season. As the canneries only started up on the night of the 10th there is not much that can be said about the river just now. The fish that have come in so far are rather small. The price being paid to fisherman is 50c per fish. All independent gear being used this is only price being paid. Lasqueti Island cannery is being operated this season and Eagle Harbor cannery is being operated by A. E. Sherman.

MILD CURED SALMON IN BRITISH COLUMBIA. A LARGE CATCH OF HALIBUT.

During the first two weeks of May, approximately one million eight hundred thousand pounds of halibut were caught on the fishing banks of British Columbia coast. Of this catch all but two hundred thousand pounds entered Prince Rupert.

MILD CURED SALMON IN BRITISH COLUMBIA.

The West coast of Vancouver Island has always produced a considerable quantity of salmon for the mild curing market, but a great quantity of this goes into the United States, and the result is that British Colum-

bia loses on the labor and cooerage item a considerable quantity of money every year. This year it is worse than ever if anything, as practically all the large fish are going to Seattle and being mild cured there.

The fisherman are being paid 10c per lb. in the round, which makes a high priced mild cured-product. Quotations are being talked at 26 to 28 cents per pound. This is not a high price when the dress away is taken into consideration. The Canadian mild curer is however up against a high priced fish.

There have been no reports as to how North Island is getting on although at the first of the season there was a small catch.

MAJOR MOTHERWELL ON NORTHERN INSPECTION TRIP.

Major Motherwell, Chief Inspector of Fisheries for B. C. left for an inspection trip in number 2 district about the 10th of July, and will cover every cannery and fishing ground as far north as the American boundary. The trip is being made on the government patrol steamer Givenchy. This trip will comprise a most thorough inspection of the conditions prevailing in the northern district.

RESIDENT ENGINEER McHUGH RETURNED ON THE 10th OF JULY FROM SALMON ARM.

Engineer McHugh has just returned from Salmon Arm where he has been busy superintending the removal of obstructions from a number of sockeye streams. Ten men are working on Salmon River and it is expected that free access for fish will be opened some time this week.

FISHERIES PATROL BY AIR.

Practical demonstration of the use of the airplane for the purpose of patrolling the fisheries districts took

place on the night of the 9th of July when Asst. Chief Inspector of Fisheries took a flight in the Government airplane stationed at Jericho Beach piloted by Captain Fraser. This was during the weekly closed season when no fish are allowed to be caught from 6 p.m. Friday until 6 p.m. on Sunday. The flight was made on Saturday evening and extended from the North Arm of the Fraser river to New Westminster Bridge thence down the main river to the Gulf of Georgia. The patrol was successful and no boat was seen breaking the regulations.

DOES NOT REPRESENT CANADIAN FISHING COMPANY.

The statement in our last issue that the Grimsby Brokerage Company, Toronto, had been appointed agents for the Canadian Fishing Company, Ltd., Vancouver, in the Province of Ontario, is not correct. The Grimsby Brokerage Company merely received permission to sell the canned fish products of the Canadian Fishing Company. The Canadian Fishing Company have granted no exclusive agencies to any firms in Ontario for the sale of their fresh or prepared fish products.

PRINCE RUPERT CARS ARRIVED AND IN SERVICE.

All of the thirty express refrigerator cars promised by the Government Railway officials for the Prince Rupert fish trade have been placed in commission and the fish trade at the North Pacific port have voiced their thanks to the Canadian Fisheries Association for the work done in securing delivery of the cars.

The statement of car shortages for the month of June, compiled by Secretary Lee of the Prince Rupert Branch, C. F. A., record no shortages. The Secretary voices the hope that the day is not far distant when such statements will be no longer necessary.

MARKET SALMON PACK BY CO-OPERATION Pool Surplus, Grade It, and Dump Inferior Goods



By PISCATOR.

British Columbia salmon has a reputation to maintain and exporters should employ the greatest care not to besmirch it. At the present time they are in rather a tough fix. I understand there are close to three-quarters of a million cases carried over from 1920, 1919 and some from 1918. Whether or not my idea of its composition is correct, the fact that there is such a heavy surplus is true and its influence on the fishing this year is a reduction to thirty or thirty-five per cent of the normal production with the elimination of the lower grades completely.

Salmon producers in the United States, Alaska, and Siberia, as well as British Columbia, are exerting every effort to market a surplus stock, and as Great Britain is the chief buyer, that is the chief seat of operations. What devices may be employed by others to put the product on the market is a matter of no concern to British Columbia, but it is a matter of importance to British Columbia to make sure that

in the process of readjusting their business and in the prevailing financial stringency, salmon canners are not lured into some scheme of unloading, which, although it may bring them immediate financial relief, may destroy the best markets for the next decade.

Canned salmon from our Western coast is known to the world as British Columbia production; the trade label is a matter of secondary importance. Each and every packer, therefore has an interest in the marketing of the entire production, inasmuch as inferior quality in a small minority of cases reflects not only on the packers whose trade label it bears but upon all western Canadian packers.

Great Britain and France are our two best markets for canned salmon, and we should be eager to retain them as such. I have in mind at the present time a certain brand of cigar which came on the market about ten years ago. It was cheap and of good quality. A demand rapidly developed but it dropped

just as quickly when the producers put into a poorer grade of tobacco. The waning demand brought the producers to their senses, but it was too late. The damage had been done. To regain the market they must put extra quality tobacco into their cigars, maintain a standard price, advertise extensively and then wait for years until their "lapse" has been forgotten.

I am not inferring that the surplus salmon in the warehouses of British Columbia is not all up to standard. By no means. But naturally there is a portion of it which is not of a quality desired by England or France. Should this latter commodity be put into these markets to jeopardize future trade?

The British Columbia canners must extricate themselves or a good many of them may find themselves out of the game. But in so doing they must make provisions for future years or exactly the same situation must confront them later. If the entire surplus were the property of one concern and if one organization were handling the entire annual output of British Columbia there is no doubt this point would be appreciated. The stock would probably be culled; the finest grades sent to Europe; inferior grades put on the local market at bargain rates with a frank acknowledgement of inferiority so that the future trade would not be imperilled, or else worked into other markets on the same representation; and lastly, a considerable portion would probably be dumped.

As I have said, this might be feasible were only one organization operating, but there are many. Probably one company has more of the inferior grades than another and cannot afford to make the sacrifice.

A solution of the situation seems to lie in marketing the surplus on a co-operative basis. Pool the overplus and grade it as suggested above. Dispose of the grades which can be accompanied by adequate guarantees, in Europe; market inferior grades with a warning to the buyer and the public of inferior quality; and dump what must be dumped. Make disbursement of the revenue to the members not on the basis of grades but on the total amount contributed to the general pack by each concern, irrespective of whether it was first, second or third grade. Such a scheme would be the salvation of the small producer, but of course at the expense of the bigger man. But the assistance is not on a philanthropic plea, because the suggested scheme has chiefly in mind to maintain the confidence of our best markets for the future. The loss must be borne, so why not distribute it so that it will be less severe. In any case the loss will be quite heavy, but other branches of industry have absorbed a similar loss in the readjustment.

Many, no doubt, will hesitate to co-operate, knowing that a neighboring concern has a large proportion of second grade stock. Perhaps the principle does not appear sound when presented in that way. But let it be understood that the idea is not to relieve individual producers, but to extricate the entire industry of British Columbia from a situation which threatens disaster.

As far as the domestic trade is concerned the public in general does not appreciate the distinction between the various grades in a commercial way. What I mean is this: consumers do not know the relative commercial value of the different species of salmon and consequently are frequently imposed upon by tricky merchants. This condition of affairs does not improve the market and it should be to the interest

of producers to take every opportunity to educate the public on this point. The information may very well be printed on each label in tabular form, illustrating the comparative commercial and nutritive values. The grade of the contents may be printed in larger or different-colored letters than the other varieties. At the same time the informative label would keep constantly in the public mind the economy of using the less costly grades.

The theme upon which this article elaborates suggests the value of compulsory inspection of all canned fish. None appreciates the advantage of this better than the thinking salmon canner. If the members of the British Columbia Salmon Canners' Association can see its worth, why not voluntarily adopt it themselves without waiting for compulsory legislation on the part of the federal government? If it did not prove satisfactory in every particular it certainly would pave the way for a compulsory measure.

HERRING AS A FOOD.

Contains More Albumen and Fat Than Beef.

Salt herring, according to figures just published by a German investigator, contains more albumen and fat, taken together, than any other foodstuff with the exception of pork. The figures referred to have been compiled by Dr. Lucke, head of the Fishery Institute in Geestemunde, and appear in the German "Fischerei Zeitung." Their main result is to bring out the very high nutritive value of the herring in its cured state, whether smoked or salted.

Food Values of Meat and Fish.

1,000 grammes of	contain as follows in:—		
	albumen Grs.	fat Grs.	together Grs.
Meat, medium	168	44	212
Meat, lean	176	8	184
Pork, medium	130.5	180	310.5
Pork, lean	129	45	234
Mutton, medium	148	52	200
Mutton, lean	178	26	204
Haddock	94	2	98
Cod	106	1	107
Coalfish	166	2	168
Dab	88	8	96
Dogfish	80	29	109
Salt herring	163	134	297
Smoked herring	174	129	303
Smoked haddock	172	4	176

From the above table the compiler points to the advantages of consumers comparing nutritive values with retail prices. As between a fish and a meat diet it will be found that more albumen and more fat can be got from fish at a smaller cost than from meat. In fact, in essential contents, a fish diet is the cheaper of the two.

SARDINE PLANTS DARK.

Although more than two months have passed since the date fixed by law for the opening of the sardine factories in Maine, thus, for no general move has been made to start packing, only one canner being reported in operation thus far.

SALES CORPORATION FOR GOODRICH RUBBER GOODS ORGANIZED.

The announcement of the organization of The International B. F. Goodrich Corporation marks another widening of the field of activities of the big rubber manufacturing concern which recently rounded out its fiftieth year.

The B. F. Goodrich Company made its first entry into foreign markets more than twenty years ago, during the latter part of which there has been a very rapid growth. Its products have been introduced into every civilized country on the globe and indeed have been and are being used in out of the way lands which are just beginning to feel the first influences of civilization.

The new company, which has just been incorporated under the laws of New York with an authorized capital of \$10,000,000, will represent The B. F. Goodrich Company in all foreign countries except Canada. It will take over the parent company's interest in factories (with selling organizations) located in France and Japan, as well as its selling subsidiaries in Great Britain, Italy, Spain, South Africa, Straits Settlements and Porto Rico, acquiring distributors in all foreign countries. It will handle all the products of the parent company — tires for automobiles, trucks, motorcycles and bicycles; rubber footwear, conveyor and drive belts; hose and packing; water bottles and surgical rubber goods; in short, all of the thousands of different products now being made by The B. F. Goodrich Company at the Akron, Ohio factories will come within the scope of the new company which will, in addition, produce and sell products in France and Japan.

The aggressive and progressive sales methods of the parent company and its subsidiaries have established a great volume of foreign business and its steady and rapid increase has made necessary an organization like The International B. F. Goodrich Corporation, through which will be effected centralization of all these foreign activities. With the new company as the selling representative of the parent company, as well as producing in France and Japan, the entire foreign operations of the Goodrich interests will be directed from Akron.

The directors of the new company are B. G. Work, W. O. Rutherford, H. K. Raymond, L. D. Brown, H. Hough, W. C. Arthur, C. B. Raymond, F. C. Van Cleef and W. C. Geer, of whom the first six named constitute the Executive Committee. The officers are B. G. Work, President, W. C. Arthur, Vice-Pres., F. C. Van Cleef, Secretary, L. D. Brown, Treasurer, H. Hough, Comptroller, F. E. Titus, Director of Sales and W. H. Allen, Director of Manufactures. The administration of the affairs of the new company will be directed by W. C. Arthur, Vice-President, formerly Assistant Secretary of The B. F. Goodrich Company, with whom will be directly associated F. E. Titus, formerly Foreign Sales Manager of The B. F. Goodrich Rubber Company, who will have general direction of sales, and W. H. Allen, formerly Assistant Superintendent and Technical Director of The B. F. Goodrich Company, who will have general direction of manufacturing activities of the subsidiaries of the new company.

The New York offices of the new Company will be located at 1780 Broadway. The administrative and operating offices will be located at Akron, Ohio.

The value of the fish landed in England and Wales by British fishing vessels in 1920 amounted to £21,818,470.

FISH SCRAP FIRE WARNING.

Over the name of B. W. Dunn, Chief Inspector (the U. S. Bureau of Explosives, 30 Vesey street, New York, has sent out the following caution notice to manufacturers of fish scrap:

The number of fires occurring in shipments of fish scrap have increased in recent years to such an extent that some regulation of this traffic is necessary to eliminate these fires.

During the years 1918 to 1920 inclusive 19 fires occurred in such shipments, causing a property loss of over \$101,000. The rapid increase of the fires may be observed from the fact that in 1918 one fire occurred; in 1919 there were five fires, and in 1920 there were thirteen fires.

It is generally recognized that moist fish scrap will heat spontaneously, but it has been our experience that overheating or overdrying in manufacture will also cause fires in transit just in the same way as rough ammoniate tankages and dried garbage tankage.

In order to prevent fires in shipments of fish scrap we propose recommending to the Interstate Commerce Commission that in its forthcoming revision of the Regulations for the Transportation of Dangerous Articles fish scrap containing less than 8 per cent. moisture or more than 12 per cent. moisture, or which has a temperature exceeding 100 degrees Fahrenheit, shall not be permitted to be shipped by rail.

It has been the constant aim of this bureau to secure through the co-operation of interested manufacturers the results it has desired to accomplish. Your consideration of the proposed amendment is requested, and I shall be pleased to receive your comments and suggestions so that arrangements may be made to enforce uniform standards to apply to freight shipments of fish scrap. It is advisable that the proposed amendments be adhered to on this season's shipments as well as in the future, so that the costly fires similar to those that have occurred in the past will be prevented. The co-operation of all manufacturers of fish scrap is earnestly solicited to this end.

SHARK CATCHING IS NEW B. C. INDUSTRY.

Victoria, B. C., June 23. — A new industry, that of shark catching, has been started along the British Columbia coast. Some one has discovered that the shark has almost as many valuable parts as the packer has found in the hog. The shark has no squeal, but it has more variety.

Shark meat is said to be almost as toothsome as a bit of whitefish or salmon. The head is full of fine glue. The fins are a Chinese delicacy. The liver has 60 or 70 per cent of fine oil—which is usually substituted for so-called "cod-liver oil"—and some glycerine. Shark's teeth are in demand for the manufacturing of ornaments. The bones are excellent for fertilizing use. The hides are suitable for tanning, and range from sole leather to fine kid-like leather which can be called "suede".

No matter what part of the shark is brought forward, some economical use can be found for it, and there are millions of sharks along the coast.

LOTS OF FISH ON LAKE ERIE, BUT PRICES LOW.

Port Stanley, July 2. — Large quantities of fish are being brought in by the tugs, but prices are so low that some of the firms are again pulling in their nets.

Ontario Provincial Hatchery at Soo



This Latest Addition To The Ontario Government's Hatcheries Is Perhaps The Best Situated And Best Equipped Hatchery in Canada.



By A. R. R. JONES.

Last month some account was given of the good work that is being done by the Game and Fisheries Department of the Province of Ontario in the way of supplying and distributing fish from the Provincial hatcheries and breeding ponds. This month I propose to say a word or two with regard to the latest addition to the Ontario Government's hatcheries—that at Sault Ste. Marie.

In a talk I had recently with Mr. A. W. McLeod, Supervisor of Ontario Hatcheries and Breeding Ponds, he mentioned four conditions as tending to an ideal location for a hatchery. In the first place, he said, the water must be pure and cool. Secondly, the location should be such that the water can be obtained by gravity instead of by a system of pumps. Thirdly, the location should be as central as possible, not only for the collection of the eggs, but also for the distribution of the fry and fingerlings. Fourthly, the hatchery should be in the neighborhood of a good collecting ground. Fifthly, there should be adequate shipping facilities.

All these conditions are complied with in the case of the hatchery at the Soo. The water from Lake Superior is splendidly pure and cool, its temperature, from one season to the other, varying from 33 in winter to 45 or 50 in summer. In respect both of the obtaining of water by gravity and also of central situation and remarkably good shipping facilities, the location of the Soo Hatchery is excellent. The collecting field is grand. The South and East shores of Lake Superior and those around Michipicoten Island are unexcelled as spawning grounds for both salmon trout and whitefish—and particularly for the former—while the North Shore of the Georgian Bay is not only an excellent collecting ground for trout and whitefish, but is also unsurpassed as a collecting ground for pickerel.

The Soo hatchery is situated on a strip of Government ground between the power canal and the ship canal—a highly convenient location for shipping purposes. It is a frame building of two storeys in height, eighty-five feet long by forty feet wide. Its capacity is in the neighborhood of 15,000,000 salmon trout, and 50,000,000 whitefish and 150,000,000 pickerel.

The entire lower part of the building forms the hatchery proper. As one enters this by the front door at the east end, one comes to the Manager's office. The sides of this are entirely of glass, so that the Manager, sitting in his office, can see the entire length of the hatchery. The hatchery has a cement floor and the aisle down the centre is five feet wide. On either side of this aisle are the trout troughs, there being five sections on each side of the aisle and six troughs to each section. Beyond the trout troughs, and at the west end of the building, is the large whitefish tank. This tank is surrounded by the whitefish battery which con-

tains 500 jars. Each of these jars holds four quarts of eggs. It should be mentioned that 40,000 whitefish eggs go to one quart, while the pickerel eggs run 150,000 to a quart, and the salmon trout eggs 7,000 to a quart. Under normal conditions, the eggs of trout and whitefish—both which fish spawn in October and November—take only about from 18 to 21 days to hatch. However the time taken for hatching is apt to vary somewhat with the temperature of the water.

The water for the hatchery, which comes from Lake Superior, is piped from the power canal—a distance of 450 feet—in a ten inch pipe. As regards water, the hatchery is all fed by means of gravity and there is no pumping whatever. At the far west end of the hatchery is located the steam heating plant, the boiler of this being, as regards about half of it, under the floor.

Some of the hatchery's equipment runs into quite a bit of money in the aggregate. For example, the jars in which the whitefish and pickerel are hatched, in size 19 ins. by 5½ ins., cost about \$3 a piece. The shipping cans, for shipping the fry, are of galvanized iron, and are practically 16 inches square. The baskets for the trout eggs are each 17⅝ inches long by 10⅜ inches wide by 6 inches deep, and are made of galvanized wire cloth ¾ inch by 7 mesh. A double tray goes in each of these baskets. The egg cases used for shipping eggs from the spawning ground to the hatchery are of wood, and, when being shipped, the eggs are placed on cloth trays and covered with cheese cloth and moss, there being thirty trays, in layers, in each wooden case. The space around the tray, inside the wooden case, is filled with chopped ice in order to keep the eggs cool in transit.

The second storey of the building constitutes the Manager's dwelling-house. This is entered by a separate door on the north side of the building and by a separate stair-case. The Manager, who is married, has to live on the premises, as it is necessary for him to be constantly on the spot in order to look after the hatchery efficiently. The accommodation provided by the dwelling-house consists of a living-room, a dining-room, three bedrooms, a bathroom, and an extra bedroom for the use of help, if needed. The Manager's three assistants who, in addition to the Manager, constitute the regular staff, do not reside on the premises. The building, both hatchery and dwelling-house, is lighted throughout with electric light. With its equipment, it cost about \$30,000.

It is the policy of the Department to build one new hatchery each year. Mr. Donald McDonald, the Deputy Minister, and Mr. McLeod have already inspected several likely sites for the next hatchery to be built. This will be in the eastern part of the Province—and possibly in the vicinity of Peterboro,

SALMON ADVERTISING CAMPAIGN IN THE UNITED KINGDOM.

Mr. J. E. Ray, Canadian Trade Commissioner in Manchester, writes as follows under date June 20, 1921, on a salmon advertising campaign in the United Kingdom.

As the sales of canned salmon have been depressed for some months in the United Kingdom, attempts are being made to increase the demand by extensive advertising throughout the country. For the benefit of Canadian packers who may not be familiar with the said efforts, it may be stated that the propaganda, which has been inaugurated by the Kamohatka Salmon Packers' Association, takes such forms as the distribution of window cards in two colours which grocers are now displaying illustrating the product of this organization; the issue of one million gummed advertising labels furnished free to grocers; and the distribution of a booklet describing various methods of serving tinned salmon, the first issue of which has been fixed at 500,000 copies.

One effective illustration shown in the booklet is in the form of a clock face with the months of the year corresponding with the time hands, designed to bring home the impression that salmon should be eaten all the year round.

In connection with the advertising campaign, emphasis is laid on the desirability of obtaining the product in flat tins.

ALBERTA FISHERMEN EXPECT GOOD SEASON.

All material is now on the ground in readiness for the opening of the fishing season on July 15th next, according to officials of the Alberta and Great Waterways railway. It is expected that the catch in the lakes north and west of Edmonton this year will be the most successful in history by reason of the completeness of the preparations already made.

Fishermen of the north are anxiously awaiting the opening date upon which they can launch their nets. Last season saw in the neighborhood of one and a half million pounds of fish taken from the Lesser Slave Lake and about one half million pounds from the waters of Lac La Biche.

White fish, the product of Alberta, has made a great name for itself in cities of Eastern Canada and the United States, and it is expected that the present season will witness great quantities of the white fish from this province enter the markets of Chicago.

Five companies, all employing a considerable number of men are operating in the waters of Great Slave Lake and Lac La Biche. They include the firms of Messrs. McInnis and company, the Alberta Fish company. The Lakeside Fish company, the Madden Fish company and the Menzies Fish company.

PACKING FROZEN FISH FOR BRITISH MARKET.

J. F. Smith, Trade Commissioner writes as follows:—The packing of Canadian frozen fish is considered fairly satisfactory. Some of the cases from British Columbia, however, are undoubtedly too flimsy to carry safely the necessary weight. The New Brunswick case which is highly commended by the trade, is of good, solid construction, sides, bottoms and tops 7-8 inch and ends 7-8 inch to 1 inch thick, tongued and grooved, iron-banded at the two ends and lined with a thick absorbent paper, with non-heat-conducting properties. The double wrapping of each fish, first in white, tough, grease-proof paper, and then in a coarser brown paper, is considered very desirable.

The trade advocate the use of smaller packages. Cases of 250 to 370 pounds gross are considered too large for general distribution. Cases weighing from 150 to 200 pounds are unanimously considered the most desirable, and the view is also strongly expressed that, if it were possible to put up $\frac{1}{2}$ cwt. packages for the smaller, and 1 cwt. packages for the larger, fish selling in case lots to retailers would be greatly increased, with resulting advantage in delivery condition, and attractiveness to the consumer. At the present time, owing to the large sizes of the cases, the wholesalers sell the fish out in ones and twos.

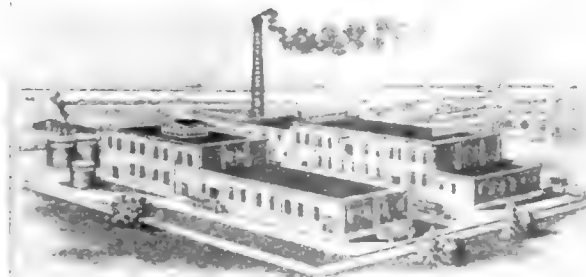
The present system of packing mixed sizes is not seriously objected to, and it is recognized that it may be a difficult matter to secure a tight pack with fish of uniform size. At the same time, it is pointed out that some markets call for small fish, others for medium sizes, while, for the purpose of smoking, the largest sizes are best, and it is felt that, if the packing difficulty can be overcome, grading to size would undoubtedly be an advantage to distribution. Fish weighting 8 to 14 pounds find the readiest sale.

Gaspe, Que., June 24. — The salmon catch in Gaspe Bay is a failure again this year. Cod in the bay are also scarce.

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THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., AUGUST, 1921

NO. 8

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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

WATCHFUL WAITING.

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

The uncertainty of affairs at Government headquarters and the talk of General Elections discourages us from the task of giving our monthly views on the above subject.

The present Cabinet are busy plucking the petals of metaphorical daisies and murmuring "They love me — they love me not"—"they" being the electors. It is to be hoped that a shake-up will come that we might be able to address our appeal to a minister and cabinet fully seized of the necessity to develop our natural resources in these critical times.

For a space we will abide by the immortal Cromwell's advice — "Trust in God and keep your powder dry."

THE AMERICAN TARIFF.

A spirit of pessimism prevails among a good many Canadian fishermen and exporters when the matter of the new U. S. Tariff is discussed. Some criticism is made of the Government for not stirring themselves to off-set the imposing of a tariff against Canadian fish by the Americans, but such a criticism, to our mind, is not justifiable and would be ridiculous when it is remembered that our producers strongly opposed the abolition of the Canadian duties on American fish when the Canadian-American Fisheries Commission held their sessions in 1918. The Canadian members of that Commission favored the free entry of fish on both sides. If such an agreement had been entered into at that time, the present proposed U. S. tariff on fish would have had less excuse for being promoted.

Mr. A. H. Brittain, a prominent Canadian fish man,

head of the Maritime Fish Corporation and a past president of the Canadian Fisheries Association, in a statement to the press recently, forecasted an agitation on the part of Canadian fishermen to induce the Canadian Government to abrogate the privileges American fishing craft enjoy in Canadian ports in retaliation for the imposition of a tariff on Canadian fish. He was also of the opinion that the operation of the Fordney Bill would open the eyes of the Canadian Government to the value of Canada's proximity to the North Atlantic and Pacific fishing grounds and spur them to a policy of development as well as a policy of retaining for Canadians the advantages which proximity gives them.

In this issue, "Piscator" in his monthly viewpoint, strikes an optimistic note, which may be justified. Mr. Nickerson, Commissioner of Fisheries for Nova Scotia, admits that his Province will be hard hit in the export of fresh, frozen and cured fish, but he is not unduly apprehensive of the future and is inclined to the belief that matters will adjust themselves to the ultimate benefit of Canadians. Mr. Babcock, Ass't Commissioner of Fisheries for British Columbia, does not feel that the export of Canadian salmon and halibut will be gravely affected as long as the U.S. market demands supplies—the consumer will have to pay the duty.

A prominent American fish dealer points out that the proposed duty on salt codfish, herring and mackerel is too high and will fall heavily on the American consumer, but Gloucester interests feel that the tariff will place them on a par with Canada and give them a distinct advantage. Impartial American critics feel that the American consumer will have to pay higher for their fish when the tariff goes into effect.

It is not possible to forecast the real effect of the Fordney tariff for past experience has shown that repressive legislation often has a stimulating effect upon the repressed and becomes something of a white elephant to the country that framed it.

THE "SAUCY ARETHUSA."

"And Hurrah for the *Arethusa*!" Thus ran the chorus of an old naval song featuring the British frigate *Arethusa* and the many glorious actions in which it took a leading part, a hundred and more years ago.

In this glorious year of grace, 1921, another *Arethusa* has loomed up in the limelight and inspired similar sentiments, but there is a considerable variation in the spheres of action of the two vessels. The *Arethusa* of old was a dashing war ship, tall-sparred, and with a great crew of fighting men eager to try conclusions with the ships of Napoleon's navy. The *Arethusa* of today is a small fishing schooner, laden with a select cargo of "hootch", which drifts outside of the three mile limit of the Massachusetts coast and purveys the oil of joy to the liberty-deprived inhabitants of the glorious U. S. A.

Arethusa has named many famous craft in the British Navy. There has always been an *Arethusa* and all of them have become famous. In the late affair with Germany an *Arethusa* did some famous work in Heligoland Bight. But the piping times of peace are on us and *Arethusa* finds her occupation gone as a fighter. However, if the present *Arethusa* cannot engage in a belligerent employment, she can stand off like the cheeky small boy and make faces at the might and majesty of United States law. If she cannot fight, she can purvey certain liquids which will cause the mildest of men to become bellicose if they imbibe enough. Alas! how have the mighty fallen!

THE BENEFITS OF AN ASSOCIATION.

Unless their organization is continually in the limelight, a good many members of societies and associations lose interest in it and drop out. To many men an association is of no value unless it makes a direct return in dollars and cents for the subscription fee. In other words, a good many people will pay a ten or a hundred dollars fee into an organization and if they do not receive those amounts back, with interest, in cold cash, they consider the organization isn't worth a cuss.

The present state of affairs in the fishing industry has militated against the program of active work outlined by the Canadian Fisheries Association in their last Convention. But while the Association's work is restricted by lack of adequate funds, it is by no means moribund. When the tide turns, the Association will emerge stronger than ever before. The record of its past work is such as to have established a reputation which will live as long as its officers continue to carry on.

Go to Prince Rupert, B.C., and you will hear fulsome praise on what the Association did to aid in clearing up the serious transportation difficulties there not so very long ago. When the Rupert members wanted real action after all other sources had failed them, they called on the Canadian Fisheries Association and got definite results.

Another matter has now come up which is the direct result of the Association activity. In British Columbia, the system of hatching sockeye salmon has been productive of much controversy—many of the canners and others asserting that the present system was ineffectual. Remedial action was instituted when Mr. R. E. Clanton of the Oregon Fish Commission, and an authority on the subject of rearing sockeyes by the retaining pond system, was invited to explain his methods before the Vancouver congress of the Canadian Fisheries Association last June. The interest evoked in Mr. Clanton's

system and the endorsement of C. F. A. officials led to an inspection of Mr. Clanton's Bonnierville hatchery by Marine and Fishery Department officers. The latest move is the securing of Mr. Clanton's services in making a survey of the Fraser River water-shed that he might report as to the feasibility of re-stocking the river with sockeyes on the lines of the system he has so successfully applied to the Columbia river. The expenses in this connection were borne by the cannerymen of Southern B.C. and Mr. Henry Doyle, B.C. Director of the C.F.A. acted as guide to Mr. Clanton in his survey. Far-reaching results will likely ensue when Mr. Clanton's report is submitted and discussed.

Many matters which were instituted by the Association are gradually coming into operation. Some of these things were instituted years ago and are only beginning to bear fruit, and most of the advances made, or being made, in the fishing industry of Canada, are directly traceable to the efforts of the C.F.A.

Nowadays, an industry must have a central organization of some kind to institute reforms and handle matters which would lack importance if handled individually. A man may be a member of an organization for years and receive no direct benefit from his membership, but the indirect good he receives is often of immense value to his business and, alas, often unappreciated because of the fact that it is indirect.

In the early days of California, lawlessness was rife in San Francisco and only ceased when a body of law-abiding citizens formed the famous Vigilance Committee and ran the desperadoes and thugs out of the city. The Vigilance Committee did its work very quietly—so quietly that a good many of the lawless element drifted back thinking that it no longer existed. Seeing no signs of the reform organization, the thugs began the old game and robberies, illegal gambling and rioting commenced. Then the Vigilantes mustered again and cleaned up the City. Whether active or inactive, the lawless element got to know that there was an organization in San Francisco that stood for law and order and they either departed or kept quiet.

It is thus with the Canadian Fisheries Association. The organization is quietly doing good work and is able to come out into the lime-light when serious questions affect the well-being of the Fishing Industry. To withhold support because the Association is not blatant of its doings and spending its resources in trivialities, is exceedingly poor policy.

THE "PACIFIC SALMON FISHERIES."

One of the finest fisheries reports ever issued by the U. S. Fisheries Bureau was that of the "Pacific Salmon Fisheries" by John N. Cobb. The demand for this report was great as it was recognized as the standard work upon the subject.

The third edition of the original 1911 report is now to hand. This is a book of 268 pages, completely revised up to date and fully illustrated. Without a doubt, it is the best work we have yet seen on the subject.

The author, Prof. John N. Cobb, knows the Pacific fishing industry as few men do. He was formerly in the fishing service of the U. S. Gov't; editor of the "Pacific Fisherman" and an official of the Alaska Packers' Association. He is at present director of the College of Fisheries, University of Seattle—a branch of technical education which he established and undertook to carry on and which has met with well-deserved success. Anything that Cobb writes is authoritative and worth while.

EXPRESS COMPANIES AMALGAMATED

The Canadian National and Canadian Express have been consolidated under the Presidency of John Pullen. The Fishing Industry will find President Pullen's remarks of interest as forecasting an effort to take better care of the fish trade requirements.

In a recent statement, Mr. Pullen says:—

"The advantage to the public of this unified express service will be found in the larger car supply of the combined railways. The cars of various types, such as ventilated cars, refrigerator cars, can be more rapidly obtained, as they can be used interchangeably throughout the national system of railways. Furthermore, the vehicle service in the cities and larger towns being consolidated, renders it possible to respond more readily to calls from the public. There is also being worked out a consolidation of local offices in the various cities under a single direction, thus making it possible to add to the public convenience and avoid duplication."

"Between the large centres such as Montreal and Toronto," continued Mr. Pullen, "exclusive special trains will continue to be operated, the arrival and departure times being so arranged as to allow of forwarding packages as late in the day as possible with delivery to consignees early on the following morning. The new company will continue to give special attention to the development of the heavy fish traffic from the Atlantic and the Pacific coast and the inland lakes.

NOT A FISHERMAN !

In a certain small fishing town, it is the custom of the fishermen attending the first evening show at the "movies" to make audible remarks concerning the jectures. During a recent run of *Aladdin and His Wonderful Lamp*, the house was particularly still while Aladdin rubbed the lamp and wished for a beautiful wife, and, this wish having been gratified again rubbed the lamp wishing this time for a magnificent home. This being granted to him, he was shown as asking his wife: "And now shall I rub the lamp and wish for a little son?" Whereupon a husky voice from the audience remarked: "I cal'late that's the laziest man on earth!"

SARDINES PLANT RESUMES.

St. John, N.B., August 18.—The Booth Fisheries, Limited, had their sardine plant, West St. John, in operation this morning for the first time this year. Only a few hands were employed, but a full crew will be engaged on Friday, as the company secured a fair supply of fish at Dipper Harbor, where the total catch was purchased this morning. The price is \$5 a hogshead at the weir.

SOCKEYE FISHING TREATY.**May Be Withdrawn from Senate by Harding.**

Olympia, Wash., August 18.—The proposed sockeye fishing treaty between the United States and Canada probably will be withdrawn from the Senate by President Harding, according to a telegram received by Governor Louis F. Hart yesterday from Senator Wesley L. Jones. Governor Hart recently went to Washington to protest the proposed treaty.

SS. BALBOA WILL TAKE SOME CANNED SALMON.

When the SS. Balboa, of the Johnson Motorship Line, leaves Vancouver about Aug. 12th she will have on board about 15,000 cases of canned salmon for the U. K.

RUNNING THE EASTING DOWN.

You can prate of yer ocean racing and swift Cunarders too,
That skip The Ditch by power of steam and the thrust of a mighty screw.
You may thrill in the "Aquitania" or ships of like renown,
But gimme a trip in a clipper ship when running her Easting down.

D'ye mind the day when we squared away and ran her East by South ?
When she trampled down the big Horn seas with a roaring bone in her mouth,
When the best hands twirled her bucking wheel and dared not look behind
At the growling grey-back in her wake... D'ye mind, old pal, d'ye mind ?

Them were the days with the life-lines strung from the poop to fo'e'sle head,
When the cook 'n stoo'ard had their work cut out to give us our daily bread,
When the dollops came thundering over the rails and and flooded the decks in a broil,
And us poor devils were plunged to the necks as we hoisted and sheeted a royal.

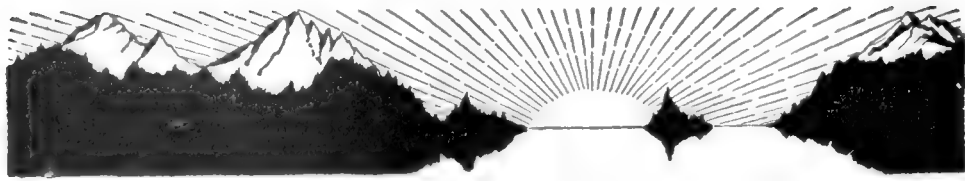
D'ye mind the smile in the Skipper's eyes when he summed her daily run ?
And the blighter would hang to his rags aloft 'til a gan's'l banged like a gun,
And the cloths of it flogged from the bolt-ropes and canvas-threads whitened the stay...
It was "Leggo that mizzen t'gallant, me sons; 'n aloft and cut it away!"

That was running yer Easting down, old son, in the grip of the Westerlies,
'N bending a sail in every watch, 'n dodging the boarding seas
Which swept us away from the lee fore-brace or down from the fife-rail pins.
And we choked like cats in a wash-deck-tub and repented our follies and sins.

It was wonderful square-yard sailing, m'lad, and glorious storming through
The watery hills of fifty south with bar-taut brace and clew
And preventer-sheets on the tops'ls, and the fores'l arched like a bow,
As she ran like a hound to the East'ard, — 'n, Lord, how the hooker did go!

Ye can have yer steam-boat racing, but gimme the run in a gale
Of a well-gear'd able clipper what is driven by snow-white sail.
For I've known the thrill of a piling sea and the sky in a cloud-flecked gown,
And fourteen knots off a wind-bag when she's running her Easting down!

FREDERIC WILLIAM WALLACE.



The Japanese in Canada

A Problem Which Calls For The Careful Consideration
Of All Canadians.

Very few people in the middle and eastern sections of Canada and the United States can appreciate the intensity of feeling which obtains on the Pacific Coasts of America upon the question of Japanese immigration. It is in the fishing industry that Canada has reason to know the aggressiveness of Japanese entry into one of the Dominion's natural resources but in the United States the Japanese is not only a factor to be reckoned with in their fisheries, but he has secured a very firm hold upon other important industries also.

There are employers and disinterested citizens in Canada who thought, some years ago, that the Japanese immigrant would offset the high cost of a white labor on the Pacific Coast, and with this thought excluding those of prophetic reasoning, they encouraged Japanese immigration. Today, these employers and disinterested citizens are beginning to realize with alarm that they have uncorked the bottle imprisoning a genie, which, as recounted in the "Arabian Nights", is likely to master them. In Canada, the problem has not yet reached the stage now obtaining in the United States, but a study of conditions over the border will help to save the situation in our country ere the matter becomes acute.

Canada must act, and act quickly. What will happen if the agitations in California, Oregon and Washington reach a point where the Japanese realize that it will pay to move out? Where will they go? Where else but Canada. They won't go back to Japan to compete with the hordes of their less cultured brothers or satisfy themselves with the squalor of Oriental existence after enjoying the freedom and delights of Occidental civilization and Government.

Presuming that such a movement starts, and, remember, such an exodus could start at the drop of a hat, how can we stop it? Frantic appeals to put up the immigration bars will bombard Ottawa. The Government machinery will require considerable moving to become even mildly interested considering that 80 p.c. of its members know little or nothing of the problem, and possibly months after the pilgrims have arrived and settled down, an Exclusion Act of some kind will be framed and passed. The Government of Japan may take umbrage at such and we will be dragged into a glorious squabble with Japan and possibly the Mother Country.

Canada must take a good many pointers from the United States though it may hurt our peculiar national pride to admit it. Immigration over there is a subject they know more about than any other country on the face of God's globe. They have imported and bred a hundred million people within a century and should be in a position to know which nationalities can or cannot be assimilated. It is fully evident that the Japanese cannot make the class of citizens desired in a white man's country.

We cannot do better than give herewith the full text of a Memorial addressed to the President of the United States by a large body of the American Legion. This memorial presents facts and arguments which are at once logical and comprehensive.

A Memorial To The President And Congress Of The United States.

We, the delegates to the Washington State Convention of the American Legion, held at Hoquiam the 14th, 15th and 16th of July, 1921, taking cognizance of the diplomatic negotiations now in course between the American and Japanese governments, and of the President's recent invitation, including the Japanese Government, to a conference on disarmament, hereby convey the assurance of our confidence in the lofty spirit of patriotism with which the President and Secretary of State are approaching the questions at issue.

Upon most of those questions we claim no special knowledge or interest justifying us in urging the adoption of any particular line of policy. But upon one phase of the matter under discussion, namely, the question of Japanese immigration, we feel ourselves qualified, and deem it our duty, to speak with all the emphasis and insistence in our power.

We are moved by a spirit of profound friendliness for the Japanese people and by an earnest desire to assure for all time the most friendly relations between their country and ours; but we feel that the maintenance of that friendship demands that we and all others who see the facts proclaim them with such force and clearness that the entire country will hear and understand what we say.

The matter of immediately stopping all further Japanese immigration to this country is one of the most pressing international questions with which our Government has to deal. This problem has become critical by reason of the neglect, due to lack of understanding, of past administrations regardless of party. It is becoming more acute with every Japanese who comes into this country. To neglect it further will be to call down upon ourselves the execrations of posterity, for our indifference will have forced upon them, to be settled in strife, a problem which we by the exhibition of foresight and by standing firmly upon our sovereign rights can settle now in peace and amity.

The awakening of the people of the Western States to a realization of the imminent and critical character of this danger is attested by the steps which they have taken to remedy the evil upon their own initiative in default of action by the Government to which they are entitled to look for protection. The States of California, Arizona, Washington, Texas, Colorado and Nebraska have, within the past few months, enacted laws aimed expressly at preventing the holding of land by Japanese. All the remaining Western States are cer-

tain within the near future to enact similar legislation.

These land laws are warnings of more vigorous measures which unquestionably will follow if the Federal Government fails to act. If compelled to resort to their own devices, the people and Governments of the Western States, unwillingly and, solely in self-preservation, will bring about an international crisis involving the entire country in its consequences. When that time comes, the Nation will have only itself to blame for failing to take heed of the warnings given it.

The experience of mankind from the beginning of History tells us that races so divergent in type as to be incapable of amalgamation through intermarriage cannot live together in harmony on a plane of social equality. Impulses which civilization has not yet learned to suppress never fail to drive such races into a conflict for supremacy. The recent Oklahoma race riot makes it unnecessary to go outside of our own boundaries for proof of the intensity of this instinct of racial self-assertion, and warns us that until we have proven our ability to settle with justice the race question bequeathed to us by our forefathers, it would be criminal for us to bequeath another and more difficult race question to our descendants.

There is in our Western States so large an element of Japanese population as already to constitute a serious economic and social problem, the solution of which will tax the self-restraint of our people and the intelligence of our statesmen. Even if no more immigrants come from Japan, the birth rate among those now here is so high as to assure a very large population of Japanese descent. The rate at which they may be expected to increase by birth is indicated by the fact that during the year 1920, out of 6,208 births registered in King County, in this State, 730 or more than one in nine) were Japanese.

These people can never become a part of our National stock, because it is unbelievable that the American people will ever consent to intermarry with them. They must remain among us a race apart, having interests opposed to ours and seeking by every stratagem to advance those interests at our expense. In self-preservation they will look to their mother country for aid, which means that their real loyalty will be to their mother country. If those born in this country acquire the vote on coming of age they will vote in a block for those political candidates who will serve their interests. The cohesion which they have shown in the world of business proves beyond conjecture what they will do in the world of politics if once permitted to exercise the right of suffrage.

The only complete solution of the problem resulting from the presence of this unassimilable element among us would be to arrange for the return to Japan of every person of Japanese birth or descent in the United States upon indemnification for resulting financial loss. No other solution can give full satisfaction or assure the elimination of interracial conflict.

If this plan be not possible of execution, then it is imperative at least to bring about the immediate cessation of all further Japanese immigration, either by Act of Congress, or by treaty, or both. Preferably this should be accomplished in the manner least likely to offend the sensibilities of the Japanese people. But, whatever form it may take, the exclusion, except as to travellers, students and a limited class of merchants, should be absolute, and its enforcement should be solely

in the hands of our Government, and not in any particular of the Japanese government, as is now the case by virtue of the so-called "Gentlemen's Agreement."

We deem it important and respectfully urge that no treaty nor Act of Congress be put into effect curtailing the force of such laws as the several States have enacted or may hereafter enact regulating the ownership or occupancy of the soil within their respective borders or granting rights of citizenship to Japanese nationals in this country; and we believe it is important and urge that Congress enact and submit to the several States for ratification an amendment to the Federal Constitution providing that no child born in the United States of foreign parentage shall be considered an American citizen unless both parents are of a race eligible to American citizenship.

In putting forth the views herein expressed, we represent the overwhelming sentiment of the conservative, patriotic people of the Pacific Coast who desires to preserve peace and friendship with Japan and yet are not blinded by fear of that country, by financial interests, or by religious sentimentalism, to the gravity of the situation. We are encouraged in the hope that this appeal will be heeded, by the words of our President, who, in discussing the question of Japanese immigration, has said:

"In spite of the honor of these Oriental peoples, and in spite of their contributions to the world's advancement, it is conceivable that they may be so different in racial characteristics or in manner of life or practice from other peoples of equal honor and achievement, that no matter whether it be upon the soil of one or upon the soil of the other, these differences, without raising the question of inferiority, superiority or inequality, may create, as I believe they have created upon our Pacific Coast, without blame on either side, a friction that must be recognized. The nation owes it to the Pacific Coast to recognize that fact. The Nation owes it to the Pacific Coast states to stand behind them in necessary measures consistent with our National honor, to relieve them of their difficulties."

A true copy:

C. D. CUNNINGHAM,

Department Commander.

There is no animosity or hatred in our viewpoint. The Japanese are a wonderful people—the most aggressive of all the world's colored races in the pursuits of peace and war—but the very radical differences in their mentality and racial characteristics decree against their assimilation into a white man's country.

Canadians and especially those in the fishing industry on the Pacific Coast who are, by reason of contact, well versed in the Japanese problem, will do well to take steps to protect themselves NOW by jamming down the lid on what might prove a veritable Pandora's Box of trouble. Easterners, to whom the Japanese problem is obscure and shadowy, might well give their Western brothers credit for sufficient horse sense to recognize a present and future menace to the peace and development of the country, and by appreciating the Westerner's view-point, join with him in finding a solution for the momentous question and thus ensure that posterity may not have to live East of the Rockies as neighbours to a Japanese colony in America immediately West of them.



Salt Water Ice Superior to Fresh for Packing Fish

French Experiment Shows Advantages.

By COLIN MCKAY.

Officials attached to the Scientific and Technical Office of the Department of Fisheries of France have been experimenting with the transport of fish packed in ice made from sea water by a process invented by M. de Saugy, chief engineer of the Refrigerator Service of the Societe des Travaux Dyle et Bacalon, and also a professor at the School of Aeronautics. Similar kinds and quantities of sea fish have been packed in ice made from fresh water in one case, and in ice made from sea water in the other; the two packages have been sent on similar trips to the interior, and their contents examined and compared at the end of their journey. And Dr. Davois conclusion is that the sea-water ice presents very important advantages over fresh water ice.

According to a report published in *La Pêche Maritime*, Paris, any factory engaged in the production of artificial ice can adopt the Saugy Method with little trouble, and turn out salt water ice at very little higher cost than fresh water ice. The original feature of the Saugy process is that it produces an ice of an homogeneous salinity. This is not the case when salt water freezes naturally, for at the moment of congelation a process of dissociation affecting the salts in sea water takes place. Navigators are familiar with the fact that ice-bergs frequently contain pockets charged with a highly concentrated brine.

Congelation of salt water requires a lower tempera-

ture than is needed to freeze fresh water; and consequently salt water ice maintains a lower temperature than does fresh water ice. In a report on the transport of fish Dr. Danois notes that in boxes containing fresh water ice the temperature of the packing was +2 degrees centigrade, while the temperature of the fish was +5 degrees. In boxes containing salt water ice the temperature of the packing was -3 degrees, and the temperature of the fish +2 degrees.

The Saugy process, it is said, forms from sea water a white, opaque ice of an extreme frailty, which can be readily crushed to provide a packing for delicate fish like sardines. The temperature of the ice made from sea water is from -4 to -6 degrees centigrade. By adding salt to sea water it is possible to obtain ice of a lower temperature, capable of producing a refrigeration more intense.

Other experiments made by French officials showed that salt water ice, used in refrigerator cars, produced a temperature of -2 to -4 degrees centigrade, and maintained fish in a better condition than did cars in which a mixture of fresh water ice and salt were used to produce a low temperature. Dr. Danois concludes that the new form of ice is destined to play an important role in the fish business, and solve the problem of transporting fish of delicate tissues like mackerel and sardines considerable distances.

Tariff not so Bad as it Appears

Piscator is not Pessimistic Regarding the Future of the Industry in the U.S. Market.

By PISCATOR.



The subject of absorbing interest in the fishing industry at the present time is the passage of the Fordney bill at Washington. Its provisions raise a serious barrier against the importation of all fish, except fresh sea herring and shellfish, from the Dominion of Canada and other countries as well; and inasmuch as the United States has been our best fish buyer the effect of the measure is a matter of serious concern.

A statement recently issued by the Fisheries Department, Ottawa, endeavors to estimate the increased cost of getting our fish products into the American market, and while there is not great inducement to optimism the statement certainly furnishes no occasion for despondency. I have little patience with those of precipitate judgment who throw up their hands and

declare "We have lost the market in the States and must bend our energies to increase local consumption and develop other fields to prevent a falling off in production." The Lord knows the process of readjusting our affairs is difficult enough without throwing in a mess of pessimism to mar our progress. Let us take a broader view of the situation, considering the pros as well as the cons.

We have made rapid strides in the U.S. market in recent years, due no doubt to the free admission of practically all classes of fish, and the exchange of port privileges to fishing vessels. True, the latter reciprocal arrangement has been revoked and severe duties have been imposed, but a fact that should not be lost sight of is that we have sold fish to the United States

with success when there was no exchange of port privileges, and when the Payne-Aldrich tariff imposed a levy on fish. Why is it impossible again? And in these days, be it remembered, the American dollar was on a par with the Canadian dollar whereas today we have the advantage of a 13 per cent premium on American money.

I have heard reports from various quarters that production, already unsteady because of abnormal conditions, is being further curtailed in view of the Fordney measure. I do not doubt the ability of these producers to size up the situation, but I certainly feel their judgment has been influenced by the school of pessimists, which is ever among us to take the joy out of life.

The facts and observations set forth in the Fisheries Department's memorandum are exceedingly interesting and illuminating. During the last calendar year it is estimated duties aggregating less than \$100,000 were paid on \$15,950,825 worth of fish and fish oils exported to the United States. It is estimated that duties on a similar movement of fish under the Fordney measure would be about \$1,762,000; and this, I presume, does not take into account that the tariff is based not on the invoice value of the goods, but on the prevailing prices of the commodity in the United States, nor that gross weights instead of net weights are in many instances the basis. However, as the statement says, calculations are sufficiently adjacent for valuable comparisons.

An interesting observation is made concerning United States exchange. The rate on July 13th—\$1.14, is taken for calculations. On the basis of the export value of last year's shipment of fish and fish products to Uncle Sam, Canadian exporters would receive an additional \$2,223,000, which is, it will be noted, about \$471,000 more than the estimated aggregate duty under the Fordney measure. I know that in each specific instance the duty will not be offset by the exchange, but the latter will reduce the toll sufficiently to destroy its ominous aspect.

For the purpose of illustration: There has been for years a duty of 15 per cent ad valorem on canned fish. The Fordney tariff increases this to 20 per cent. Is the increase not more than offset by the exchange? Of course this will not be so with most of the fresh fish on which a tax of 1 cent per pound is provided, fish skinned and boned, 2½ cents per pound, smoked fish, 1¼ cents per pound, and dried fish, 1¾ cents per pound. On a quintal of cod the duty would be \$1.92 or nearly one-third its value. On a cask of cod liver oil worth probably \$15.00, the duty would be about 50 per cent of its value. But in the aggregate the duty levied is counterbalanced by the exchange.

There is another very important consideration which is obviously overlooked, that is the effect the tariff will

have on the prices of commodities manufactured in United States and protected by it. Fish producers in the neighbouring republic have raised the complaint that they found it difficult to compete with our fish. They must, therefore, have been selling at a very close margin. Now that they have ample protection is it to be supposed for an instant that they are going to sell on the same skimpy margin? Hardly. They will take a good healthy profit and rest easy in the assurance that the tariff makes interference impossible. The consuming public will not benefit by substituting a domestic commodity. It will pay through the nose. This is not a mere theory either. You probably know of similar instances, and I could recite many of them. You know of Canadian manufacturers protected by a tariff to prevent too keen competition from abroad. Where will you find a concern thus protected that will not be lured by the temptation to boost prices, almost if not, to a par with prices of similar imported articles plus duty. This is probably a clumsy way of setting forth the truth, but I hope I have made myself clear. Prices of domestic fish are bound to rise in the United States, which fact will undoubtedly be another ameliorating influence on the apparently hard situation.

Still another vitally important point crops up. A good proportion of fish and its products shipped to United States is re-exported, although the exact proportion I am not able to ascertain. The Fordney measure makes provision for refunded duty on such transactions, but if the new order of things has the least tendency to break down the system of indirect trade, it will not be without value to the Canadian exporter. Why should we be supplying foreign markets through New York or San Francisco or any other intermediate step? We cannot finance credit business, you say? We have too little working capital? Listen. There are nearly sixty million dollars invested in our vast industry, and if this capital cannot be utilized and brought into close co-operation to finance our foreign business through Canadian institutions, then I have a false notion of the utility of invested capital.

But this is a digression. The Fordney tariff is hardly likely to become effective until the first of the year. Between now and then the situation may be more carefully studied.

In certain circles in Newfoundland the measure is viewed with considerable alarm and there is some talk of retaliatory action. Newfoundland has had very recent and impressive experience that it does not pay to force cut and dried opinion or price-fixed commodities on foreign markets. Of course the position of the Ancient Colony is infinitely more serious than ours. She is more of a specialized fisherman, while we go in for mixed fishing. When our teeter is down at one end it is up at the other.



The New United States Tariff



Because of the number of inquiries pertaining to the question, and general intense interest in the subject, it is considered advisable to thoroughly inform exporters of fish and fish products as to the provisions of the new American tariff on these commodities.

The following extracts from the Fordney measure cover all reference to fish and its products.

Par. 49; Gelatine, glue, and glue size, 20 per centum ad valorem, and 1½ cents per pound; manufactures, wholly or in chief value of gelatin, casein, glue,

isinglass, and other fish sounds, cleaned, split, or otherwise prepared and agar agar, 25 per centum ad valorem.

Par. 49; Oils, animal: soda, herring and menhaden, 8 cents per gallon; whale, seal and sperm, 10 cents per gallon; cod and codliver, 12½ cents per gallon, and all fish oils not specially provided for, 20 per centum ad valorem.

Par. 718; All fish, fresh, frozen, or packed in ice, not specially provided for, 1 cent per pound.

Par. 719; Salmon, pickled, salted, smoked, kippered or otherwise prepared or preserved, 25 per centum ad valorem; finnan haddie, 25 per centum ad valorem; fish, dried, salted or unsalted, 1¾ cents per pound; fish, skinned or boned, including herring skinned, in bulk, or in immediate containers weighing with their contents more than thirty pounds each, 2½ cents per pound, including the weight of the immediate container with the contents.

Par. 720; Herring and mackerel, pickled or salted, whether or not boned, when in bulk, or in immediate containers weighing with their contents more than thirty pounds each, 1½ cents per pound, including the weight of the immediate container and the brine, pickle and salt.

Par. 721; Fish (except shellfish) ; by whatever name known, packed in oil or in oil and other substances 26 per centum ad valorem; all other fish except shellfish) pickled, salted, smoked, kippered, or otherwise prepared or preserved (except in oil or in oil and other substances) in immediate containers weighing with their contents not more than thirty pounds each, 20 per centum ad valorem; in bulk or in immediate containers weighing with their contents more than thirty pounds each, 1¼ cents per pound, including the weight of the immediate container with the contents.

Par. 722; Crab meat, packed in ice or frozen, or prepared or preserved in any manner, 26 per centum ad valorem; fish paste and fish sauce, 28 per centum ad valorem; caviar and other fish roe for food purposes, packed in ice or frozen, prepared or preserved, by the addition of salt in any amount, or by other means, 28 per centum ad valorem.

Free List.

Par. 1524; Fish sounds, crude, dried or salted for preservation only, not especially provided for.

Par. 1564; Eggs of birds, fish and insects (except fish roe for food purposes).

Par. 1570; Fishskins, raw or salted.

Par. 1616; Moss, seaweeds and vegetable substances, crude or unmanufactured, not especially provided for.

Par. 1623; Oils, animal: Spermaceti, whale, and other fish oils of American fisheries, and all fish and other products of such fisheries.

Par. 1629; Pearl, mother of; and shells, not sawed, cut, flaked, polished, or otherwise manufactured, or advanced in value from the natural state.

Par. 1644; Sea herring and tuna, fresh, frozen, or packed in ice.

Par. 1648; Shrimps, lobsters and other shellfish, fresh, frozen, packed in ice or prepared or preserved in any manner, and not specially provided for.

Par. 1678; Whalebone, unmanufactured.

For the purpose of comparing the provisions of the new measure with those of the old, the following ex-

tracts from the latter are set forth, and they cover all references to the articles in question.

Par. 34; Prepared fish sounds, 25 per centum ad valorem.

Par. 44; Oils, rendered: cod, seal, herring and other fish oil, not specially provided for in this section, 3 cents per gallon; whale oil, 5 cents per gallon; sperm oil, 8 cents per gallon.

Par. 201; Fish paste or sauce, 25 per centum ad valorem.

Par. 216; Fish, except shellfish, by whatever name known, packed in oil or in oil and other substances, in bottles, jars, kegs, tin boxes or cans, 25 per centum ad valorem; all other fish except shellfish, in tin packages, not specially provided for in this section 5 per centum ad valorem; caviar and other preserved roe of fish, 30 per centum ad valorem; fish, skinned or boned ¾ per pound.

Free List.

Par. 472; Cuttlefish bone.

Par. 419; Fish sounds, crude, dried or salted for preservation only and unmanufactured, not specially provided for in this section.

Par. 478; Eggs of poultry, birds, fish and insects except fish roe preserved for food purposes).

Par. 483; Freshwater fish, and all other fish not otherwise specially provided for in this section.

Par. 484; Fish skins.

Par. 561; Oils: Cod, cod liver, rendered unfit for use as food or for any but mechanical or manufacturing purposes, but such means as shall be satisfactory to the Secretary of the Treasury and under regulations to be prescribed by him; and also, spermaceti, whale, and other fish oils of American fisheries, and all fish and other products of such fisheries.

Par. 598; Shrimps, lobsters and other shellfish.

It will be noted that whereas, generally speaking, only tinned fish, fish in oil, caviar and roe were taxed, the Fordney tariff affects all fish except fresh and frozen sea herring and shellfish.

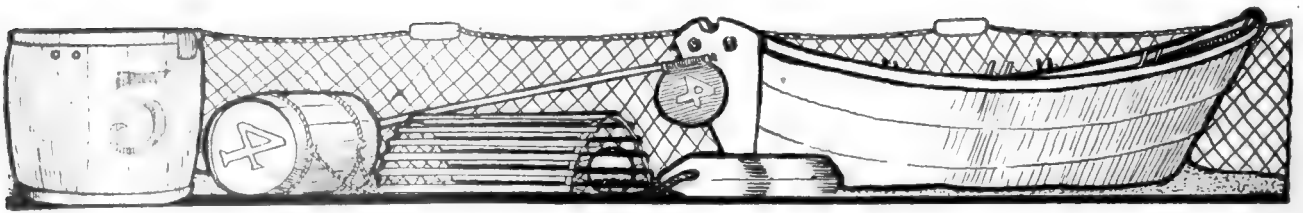
How It Will Operate.

During the calendar year 1920 Canada exported to the United States 1,682,505 cwts of fish, and 409,308 gallons of fish oil with an aggregate value of 15,950,825. It is estimated that the duty paid amounted to less than \$100,000. But on the same movement the Fordney measure would exact a toll of approximately \$1,762,000.

Exporters would do well to bear in mind that the duty is to be levied not on the invoice value of the goods, but on the prevailing market price of the particular commodity in the United States. The question of exchange should also receive attention. On July 13 the rate was 14 cents premium on the United States dollar. On that basis, \$2,233,115 additional would be received by exporters from the sale of \$15,950,825 worth of goods, which was the value last year. This, it will be noted, is \$471,000 more than the estimated aggregate duty under the Fordney Act.

The following table shows the amount and value of the various items of fish and its products sent to the United States last year and also the duty that was paid and the duty under the provisions of the Fordney measure. It must be borne in mind, however, that the calculations are not accurate, because the classification of goods makes that impossible, but the figures are close enough for valuable comparisons.

	Cwt.	Value.	Estimated Duty Collected. 1920	Fordney Duty.
Codfish, fresh and frozen	21,146	\$ 116,856	.....	\$ 21,146
Codfish, dried	94,948	1,044,812	.....	166,159
Codfish, green salted (pickled)	121,367	775,919	.....	151,709
Codfish, boneless, canned or preserved n. o. p.	14,708	207,677	\$5,632	41,535
Codfish, smoked	30	399	.....	37
Haddock, fresh and frozen	17,631	71,858	.....	17,631
Haddock, dried	5,079	35,173	.....	8,888
Haddock, smoked	12,359	129,791	.....	32,448
Haddock, canned	2,450	39,206	5,880	7,841
Pollock, hake & cusk, fresh and frozen	7,175	27,110	.....	7,175
“ “ “ , green salted	21,229	73,760	.....	26,536
“ “ “ , boneless	197	2,266	148	492
“ “ “ , dried	8,463	52,406	.....	14,810
Tongues & Sounds	972	18,098	.....	.....
Halibut, fresh and frozen	51,304	823,684	.....	51,304
Herring (sea) fresh & frozen	284,644	226,484	.....	.....
“ “ , pickled	41,512	179,821	.....	62,268
“ “ , canned	1,659	18,889	2,833	3,778
“ “ , smoked	74,194	440,567	.....	92,992
“ “ , dry salted	32,666	42,325	.....	8,465
Mackerel, fresh or frozen	50,227	8,998	1,349	1,800
“ , canned	677	8,998	1,349	1,800
“ , pickled	36,162	358,095	.....	54,243
Pilchards, canned	7,660	72,771	10,915	14,544
Alewives, fresh . . . . .	.....	.....	.....	.....
“ , salted	12,961	51,822	.....	71,619
Salmon, fresh & frozen	68,079	586,229	.....	68,079
“ , canned	18,857	305,345	45,801	76,336
“ , smoked	69	1,292	.....	323
“ , dry salted	217	241	.....	60
“ , pickled	7,795	158,843	.....	39,711
Smelts, fresh	60,663	761,725	.....	60,663
Eels, fresh	7,833	82,715	.....	7,833
Swordfish, fresh	2,824	38,362	.....	2,824
Clams, fresh	998	3,123	.....	.....
“ , canned	5,309	67,172	.....	.....
Lobsters, fresh	47,738	984,928	.....	.....
“ , canned	31,048	2,223,784	.....	.....
Oysters, fresh	653	5,976	.....	.....
Shellfish, other, fresh . . . . .	.....	41,009	.....	.....
Sea fish, other, fresh	4,249	32,277	.....	4,249
“ “ , pickled	91	774	.....	114
“ “ , preserved	729	20,064	.....	911
Whale meat, fresh	2,512	18,980	.....	2,512
Herring, lake, fresh & frozen	91,395	827,773	.....	91,395
“ “ , pickled	4,913	21,268	.....	7,270
“ “ , smoked	147	1,201	.....	184
Salmon or lake trout	29,315	360,171	.....	29,315
Tullibee, fresh	47,397	300,858	.....	47,397
Whitefish, fresh	104,579	1,287,621	.....	104,579
Fish, other, fresh & frozen	221,834	1,953,069	.....	221,834
Fish, other, pickled	6	32	.....	8
Baitfish	183,500	46,682	.....	36,700
Total	1,682,505	\$15,541,517	\$72,558	\$1,710,055
	Oils.			
Fish oil, cod liver	166,896	167,773	5,006	20,852
“ , seal	6,528	7,724	195	653
“ , whale	134,488	152,929	6,725	13,449
“ , other	107,803	80,872	3,294	16,174
Total	415,717	\$409,308	\$15,220	\$51,128
Total value fish and fish oils		\$15,950,825		
Total estimated duty (Fordney)		1,761,183		
Total estimated duty collected 1920		87,686		



Shutting The Gates

By M. H. NICKERSON, Commissioner of Fisheries for
Nova Scotia.

Fishery intercourse between the United States and Canada never did run smooth since the King George III convention was signed in 1818. That agreement, which was penned in a dictatorial tone on the part of Great Britain, excluded American fish boats from provincial harbors, except in distress or short of provisions. Even then, only enough food and water was allowed for the passage home.

The treaty, while its wording dealt solely with fishing privileges, was in reality intended to protect the furriers on the thickly wooded shoreline. Little did the Lords of the Plantation care who caught haddock in the offing, or dried cod on the rock-bound beaches, so long as the men from the Salem pinkie did not land and set traps for fox and mink in the majestic forest. For this reason the Magdalens and some barren reaches on the Newfoundland coast were left outside the pale. No pilfering of peltry could take place there.

That law, like all edicts human and divine, was often broken; and if a Province town skipper put over a line within three miles of the strand, he was guilty of poaching; and if caught, his craft was a lawful prize. . . . It was the same if one of his men bought a pair of nippers from anybody on shore, as such articles were not on the list of distress. There was continual friction; in more than one instance an actual fusillade. A few years truce, first under a reciprocity pact and again under the Washington Treaty, suspended the wrangle; for a while, but the lines were drawn tighter than ever when Sir John A. Macdonald inaugurated his national policy. The fishery narrative thereafter had many a thrilling episode, which it is not proposed to rehearse; but in order to get our present bearings accurately, as we go on, it will be necessary to take our departure from the birthday of the *modus vivendi*, so-called, a peace that was patched up at a convention in Washington, April 1888, between the two countries, represented on the Canadian side by Hon. Joseph Chamberlain, then colonial secretary, and the late Sir Charles Tupper. The draft treaty they arranged, was never ratified; but the interim agreement, named above, ran its course till 1917, being voted yearly by the Canadian parliament. Its provisions are well known, and need no explanation. Only American boats moved by sail, and paying a heavy license fee yearly were admitted to port privileges and the transshipping of fares. Auxiliary and motor craft were excluded. The bait sold by provincial net and trapmen formed a good item in the domestic calling, and the profit would have been great on that side, too, had no penalties been exacted and no distinction made. The new Pacific city, Prince Rupert, now the great fish emporium, fared better, insofar as Ottawa let the Seattle fleet resort there to land fares and buy outfits. It was a big pay deal; and I begged and pleaded for the same freedom in a legitimate trade

on our Atlantic seaboard, right up till one month of the date when the International Conference convened; but our rulers were inexorable.

That conference, which did not take Nova Scotia evidence at all, flung the doors wide and gave both sides a free pass. It was never known what sanction was behind that bold act; but it was regarded as a war measure and not to be questioned. By American customs laws then fish were not dutiable. For the rest, it was go as you please. Nova Scotia schooners could come in on the same footing as domestic tonnage. The three mile limit was winked at. The food boards of both countries were hand in glove with the big dealers to hurry off the enormous exports for which several governments were voting credits, in the most brotherly manner, or using the borrowed cash to pay the bills of the Anglo-American Fish Company; which I have reason to believe was a mythical concern with a good grip on ministerial button-holes. Boston beam-trawlers were sent down to the Cape Shore to push the business at Digby and Canso, because native craft could not meet the demand. When we contrast those piping times of war with this penurious epoch of peace, and the breach widening in commercial matters between the contiguous countries, we are apt to surmise there has been a lack of good management on both sides.

Be that as it may, the conference left, as the fruit of its labors, a document in the form of a treaty recommendation which was fated never to crystalize into a hard-and-fast act of congress and parliament. It was in fact a diplomatic abortion, and that in itself argues unskilful tendance on a live issue. But from the outset, the Canadian *modus vivendi* had lapsed in default of the annual vote, and for three years matters were allowed to drift. It required no second sight to perceive that a commercial rupture in this kind would soon or late occur. Canadian schooners used the Boston fish pier as base (some of them, including the beam-trawlers), but time was wasted and the house firms lost the outfitting. On the other hand the New England fleet took on Shelburne-built dories, and sold to the great business houses in Halifax, with none to say "why do ye so?" All that was good enough while it lasted. It should have been clinched by a solemn compact between the principals. For the said three years the neighbors under two flags came and went, without let or hindrance, yet without the recorded will of the people, in short only by a word of mouth make-shift which was at the mercy of the first capricious whim on either side. And that whim, if such it is, has already taken effect.

On July 15th notice was given that Canadian boats could no longer come direct from the Banks and unload in American ports. I do not regard this as an unmixed misfortune for the provincials. They have markets in the interior of their own vast domain, and I am daily

urging that an expeditious traffic highway from the seaboard to the consuming centres be opened up, by water from Yarmouth to Portland, thence by Grand Trunk to Montreal, and by the live distributing avenues to all accessible points. The fish duty on fresh, frozen and chilled hits the Maritimes a hard blow, unless we rely on our own resourcefulness to place our marine products where they will pay a reasonable profit. I am told by those who help run the taxing machine in the U.S. that the new fish tariff is not aimed at Canadians, but at Japanese who are flooding the Pacific coast with cargoes of cod, halibut and salmon. I am apt to believe it. At the same time if a real treaty had taken the place of the conference promise, the new schedule would have been inoperative as against Canada. Be it noted, however, in the absence of a *modus vivendi*, the King George instrument comes into force automatically, and American boats are barred out, except for the "humanities."

I understand however that it is deemed desirable to continue the privileges that are now being extended to United States vessels in Canadian ports for the present, and until the whole question can be considered by the Canadian Government. That is the wisest course under the circumstances. It will meet with general approval whatever may be the outcome.

TWO HUNDRED AND FIFTY YEARS MAKING FISHING GEAR !

Record of Old Established and Enterprising British Firm.

In the pages of the current issue our readers, particularly those who are interested in fishing whether it be in River, Lake or Ocean, will find an advertisement of one of the oldest (if not the oldest) established firms in the Line, Twine and Netting World, namely Messrs Hounsells (Bridport) Ltd. of Bridport, England, who have an unbroken trade record for the manufacture and marketing of lines, twines and nets for all fishing purposes since the year 1670.

It is safe to say that this firm exports to every corner of the Globe in which fishing is carried on. For considerably more than a century their brands have been wellknown in the Canadian and Newfoundland mar-

kets, commencing from the time when their own brig "The Mary Hounsell," loaded with the product of their Mills at the local Harbour, sailed to Newfoundland returning with a cargo of salt fish for ultimate distribution throughout the Counties forming the West of England (the Wessex of ancient Britain, immortalized in these modern days in the Works of Thomas Hardy).

With the march of progress, the method of distribution once a year by a sailing vessel was abandoned, and shipments are now made throughout the year, in many instances direct to the Port for which they are destined.

Messrs Hounsells have stood the test of time, and one of their recent ventures has been the installing of an entirely new plant of special machinery designed and manufactured under their own personal supervision, for the manufacture of Linen Gill Nets, and this is of practical interest to our readers. The flax thread yarns used in the manufacture of Messrs Hounsells linen Gill Nets is of the very best quality obtainable, whilst one of the difficulties of the past, namely the slipping of knots in gilling nets, has now been entirely overcome, and the appreciation already shown by the buyers on this side, confirms the confidence they have had in this their latest departure.

It would be comparatively easy to complete the issue of this journal with a description of the various ramifications of this firm in connection with their varied manufactures, but in addition to every possible class of fishing line, fishing twine and fishing nets, Messrs Hounsells manufacture every grade of Sports net suitable for Lawn tennis, Hockey, Ice Hockey, Lacrosse, Football and Water Polo, and these nets have secured a reputation second to none.

In their extensive Works every process in the manufacture of the goods they sell is completed; that is to say, they import every grade of raw material direct into their Works, and from the arrival of the raw material to the departure of the goods in pressed packed bales for export, every process is carried out by Messrs Hounsells.

In the event of any of our readers who are interested in the manufactures of this Firm finding themselves in the Homeland, a cordial welcome would be extended by the Directorate and a visit to the Works would be a liberal education.



The Plant of Messrs. Hounsells at Bridport, Eng.



Acadia Stands the Test of Service

President W. T. Ritcey of the Acadia Gas Engine Co., Bridgewater, N.S., has enough confidence in the engines he manufactures to risk a thousand mile cruise around the Atlantic Coast in an open motor launch. Mr. Ritcey, and a party of three, made the trip in the motor launch "Migrace" powered with a 40-60 H.P. high speed Acadia gasolene engine. The trip was made without motor trouble of any kind excepting the renewal of one spark plug.

The itinerary accomplished is herewith recorded briefly:—

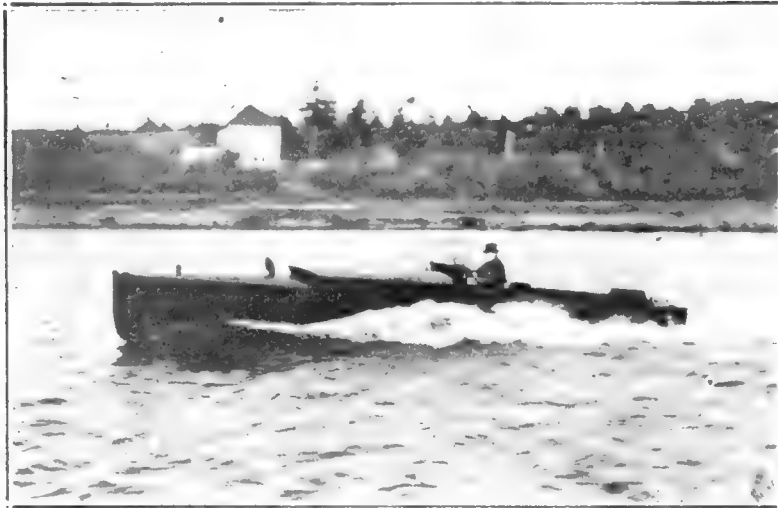
Left Bridgewater on Thursday, July 14th. and motor-ed as far as Port Mouton, Queens County. Owing to

mouth to North East Harbor, including stop at Woods Harbor, and Clarke Harbor; Sunday from North East Harbor to Lockeport, including stop at Shelburne.

Monday afternoon left Lockeport, proceeding to Bridgewater.

Some interesting particulars regarding the "Migrace" and the cruise were published in the Yarmouth "Herald"—portions of which we reproduce.


"Much stir was created along the water front late on Saturday afternoon, when the fast motor cruising yacht Migrace came swiftly up the harbor, and docked on the north side of Parker-Eakins Co's wharf. The yacht is owned by W. T. Ritcey, president and general manager

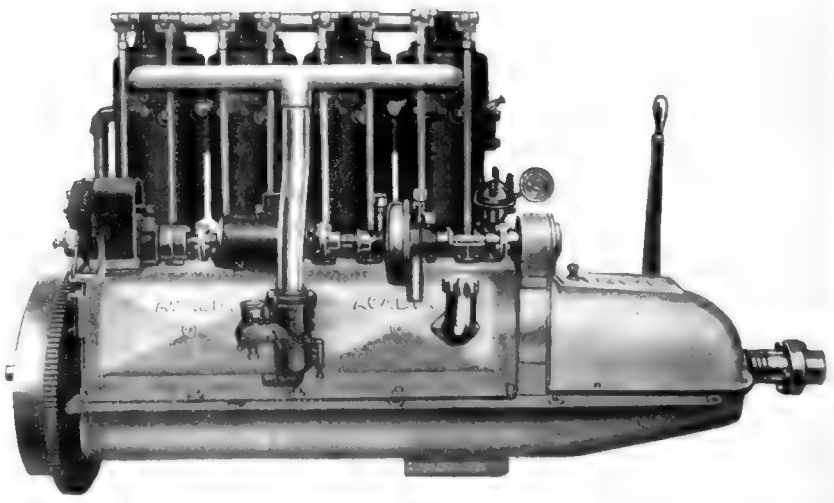




**MOTOR LAUNCH
"MIGRACE" OWNED BY
W. T. RITCEY
BRIDGEWATER, N. S.**

**"MIGRACE'S" POWER PLANT
ACADIA 40-60 H.P. HIGH
SPEED, 4 CYCLE ENGINE**





heavy easterly storm it was necessary to stay over until Saturday, when trip was made to Yarmouth, including stop at Cape Negro, Island, also Cape Sable Island.

On Sunday trip was made from Yarmouth to Westport through Briar Island Passage, thence to Tiverton, and from Tiverton across the Bay of Fundy to Beaver Harbor, New Brunswick.

On Monday the trip was made from Beaver Harbor to St. John; Tuesday from St. John to Fredericton, and on Wednesday returned to St. John.

Friday the trip of about 180 miles was made from St. John to Digby, thence to Bear River and around the Annapolis Basin, proceeding to Tiverton through Petit Passage, and thence to Yarmouth; Saturday from Yar-

of the Acadia Gas Engines, Ltd., of Bridgewater and is on a cruise from that place to Digby, St. John, and from there to Fredericton. Mr. Ritcey is accompanied by E. C. Sollows, sales manager for the above company; G. A. Hubley, J. G. A. Robertson, and A. Rafuse.

The yacht is of heavy mahogany construction, screw fastened, 32 ft. long, 6 ft. wide, V bottom. Hand design, equipped with electric lights, auto hood, wind-shield, and all modern conveniences, and has a speed of 24 miles per hour.

She is equipped with the 40-60 H.P. Acadia high-speed or medium duty engine, has a 5 in. bore, 6½ in. stroke, and will rank with any of the highest class 4-cycle engines built in any country. It is manufactured in the

Acadia factories by expert mechanics, and places this company on the highest pinnacle in the engine trade.

As will be seen by the cut, the engine is very compact and simple in construction. Combining only necessary weight with special materials, thereby adhering strongly to the conservative and the practical in engine building, it performs its work economically, with freedom from break-down, as dependability and durability have not been sacrificed for extreme light-weight or excessive high speed.

The cylinders, cylinder heads and pistons are made from a special close grained gray iron; lower crank case or tough bronze metal; upper crank case cast aluminum, being rigidly reinforced by ribs and steel tie rods, insuring strength. The crank shaft forged from solid block open hearth steel, connecting rods steel forged; cylinders and pistons ground accurately to size; cams and cam rollers hardened and ground to size; bearings lined with genuine babbitt metal.

The lubrication is entirely automatic, being of the modern pressure feed, forced by a bronze gear pump, thus eliminating troublesome oilers and grease cups. A compression relief lever is provided for holding open the exhaust valves to enable easy starting.

The Acadia is equipped with two ignition systems. Bosch and Atwater Kent.

In this model the purchaser will enjoy electric starting and lighting equipment, perfect cleanliness, absence of vibration, and all modern conveniences.

The 6½ x 8 in. heavy duty 4-cycle Acadia motors contain the same high grade material and workmanship as their high-speed motors. The upper and lower crank cases are of cast iron, instead of bronze and aluminum.

The Acadia heavy duty motor has been designed, constructed and tested to meet the many requirements of those branches of marine service where the utmost reliability, consistency of performance, ease of handling, freedom from break-down, fuel and general efficiency are positively required.

Accessibility is a special feature of all Acadia 4-cycle engines. They have removable valves in cages, removable cylinder heads, giving quick access to the cylinders

and pistons for the removal of carbon deposits. Through the combination of the removable head and easy access to the crank case, the connecting rods and pistons are readily removed through the top of the cylinder without disturbing the cylinders. A movable cam shaft through the side of the base is a special feature, in fact, every provision has been made for convenient inspection and adjustment. Large doors on the crank case and reverse gear housing afford easy access to the bearings and immediate adjustment to the reverse gear. Passovers are provided for leading the water to the cylinder head, thereby preventing water from entering the cylinders. They supply a complete electrical, water, exhaust, fuel and propeller equipment; everything necessary for installing.

The stationary engines manufactured by this Company are rapidly gaining the same position that their marine engines hold, and the company is now establishing agents in the inland towns. This will enable them to cater to the farming trade, and just recently they sold three carloads to one Quebec firm.

Acadia Gas Engines, Limited, are, and have been for a number of years, the largest manufacturers of motor engines in Canada, but until two years are confined themselves exclusively to 2-cycle engines from 3 to 24 H. P. Mr. Riteey had the manufacturing of 4-cycle engines under consideration for some time, but until two years ago could not secure a designer that he considered would come up to the Acadia standard. The gentleman he then secured has had about thirty years' experience with gasoline engines, and previous to his coming was designing engines for one of the largest, oldest and most widely known manufacturer of 4-cycle engines in America.

Acadia Gas Engines, Limited, have the finest machine shops to be found in this country, with a manufacturing capacity of over three thousand engines per year, and in offering their new valve-in-head 4-cycle engines to the public, assure them that the Acadia 4-cycle engine will satisfy the most critical and exacting customer, upholding, the enviable reputation the Company's products have won among the commercial trade and engine men."

Live-Fish Exhibits at Toronto Exhibition

By A. R. R. JONES.

The Natural History exhibit, in the Government Building is always a great attraction at the Canadian National Exhibition. The Exhibition authorities make a grant each year for this purpose. No admission fee is charged, and although this exhibit is not advertised, as many others are, it is invariably a big drawing card. And this year has proved no exception to the rule.

This exhibit is put on for the Exhibition management by Professor John Maughan, professor of Biology at Toronto University and the Canadian National Exhibitions director of biology. A distinguished naturalist himself, the Professor is also the son of a distinguished naturalist, his father, who was one of the originators of the Exhibition, having been chairman of its Natural History committee for many years. Professor Maughan himself first exhibited in the National History section in 1884, and for the past fourteen years he has been responsible for the big and interesting exhibit in the Government Building.

A feature of this section in which the public evinces considerable interest is the exhibit of live fish. In this exhibit are represented the following fish: trout, of all varieties found in Ontario waters, pickerel, bass, lake herring, dogfish, eels, ling, pike, sturgeon, carp, and other varieties. These fish are netted by the fishermen and sent, as carefully as possible, in tanks to the Exhibition where on arrival they are placed in the large tanks which are fixtures in the Government Building. A special permit is issued for the purpose of securing these fish, which came from as far as from Hamilton Bay down to Frenchman's Bay.

For a long time Professor Maughan has urged the necessity of a permanent aquarium in the Exhibition grounds, and plans for this have been passed by the Exhibition authorities. In a talk I had with him at the Exhibition, he told me that one of his reasons for advocating this was that it would mean the provision of a separate pumping plant, and thus obviate the necessity of

using—as is done at the present time—Toronto chlorinated water in the tanks. This water, it should be mentioned, has been found, very detrimental to the fish. The disease, known as saprolegnum, which occurs only among fish and other cold blooded aquatics, is produced by chlorinated water acting on a fish that has been slightly scratched, or of which the scales have been knocked off, or which has been subjected to any other like injury to its mucous membrane.

Part of the fish exhibit in the National History section consists of samples of the fish that the Ontario Government is rearing, for purposes of supply and distribution, in its Provincial hatcheries and breeding-ponds. These samples are in various stages of development.

Also in the Government Building is the Algonquin Park exhibit. This will be an annual feature. It has been inaugurated, this year, by the Hon. Beniah Bowman, Minister of Lands and Forests for Ontario. The object of his department, in installing this exhibit, is to give the people of Canada some faint ideas of the vast natural resources within Ontario's borders.

In this exhibit are represented the three great wild life sanctuaries of wild life in Ontario, namely Algonquin Park, Queatico Park and Rondeau Park, as well as the Timangani reserve of 6,000 square miles in extent, the Mississagan reserve (3,000 square miles), the Nipigon reserve (7,000 square miles) the Eastern reserve (100 square miles) and the Sibley reserve (70 square miles). Here are seen specimens of various fur-bearing animals and the traps which are used to catch them, members of Ontario's deer family various forest birds, and the different kinds of woods which that Ontario forests contain. The live fish displayer have a quite peculiar interest. For Algonquin Park, which is 74 miles in length and 54

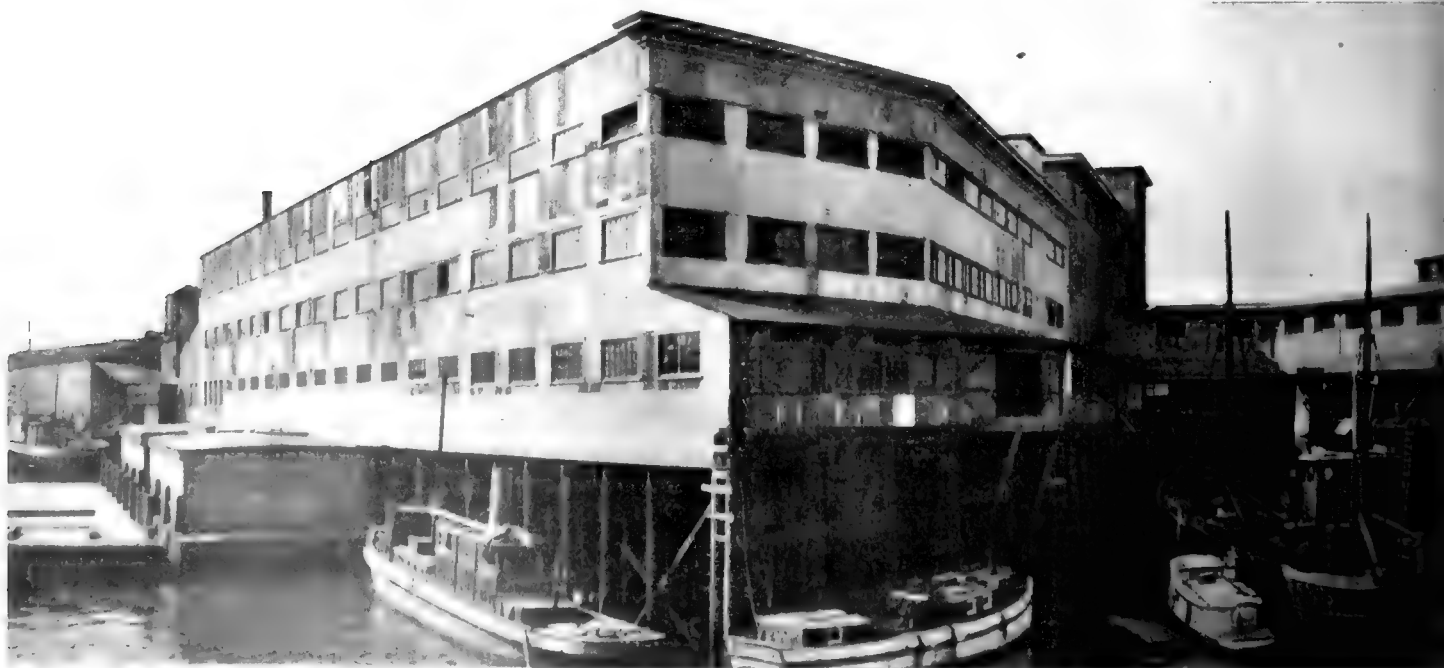
miles in width, and which contains in fewer than 1,600 lakes, is one of the great objectives of anglers from all over the world. Its lakes are full of trout and bass, and its streams, are among the finest trout streams in the world. Hence the fish displayed at the Exhibition hail from waters of high renown.

This exhibit of Ontario's Department of Lands and Forests is in charge of Mr. J. W. Millar, Inspector of Provincial Parks for Ontario. The lakes in Algonquin Park, Mr. Millar told me, are well stocked and the catches, this season, have been quite phenomenal. He told me of four men this season who, fishing one forenoon only, caught thirty-two trout averaging 4 lbs in weight, and some weighing as high as 8 lbs. The fish in this exhibit consist of trout and bass. The trout include speckled, grey, rainbow, brown, brook and salmon trout, and they are all about 4 lbs. in size, in order to give the public a fair idea of the average size. The bass are all small mouth black bass varying from 1½ lb. to 4 lbs. in weight. The fish are taken in nets and are exhibited in tanks. They take quite a lot of looking after while on exhibition, as it is necessary for attendants to stay up all night with team, to aerate the water, which is done every half hour or so, and also to regulate the temperature which is kept at about 52 degrees.

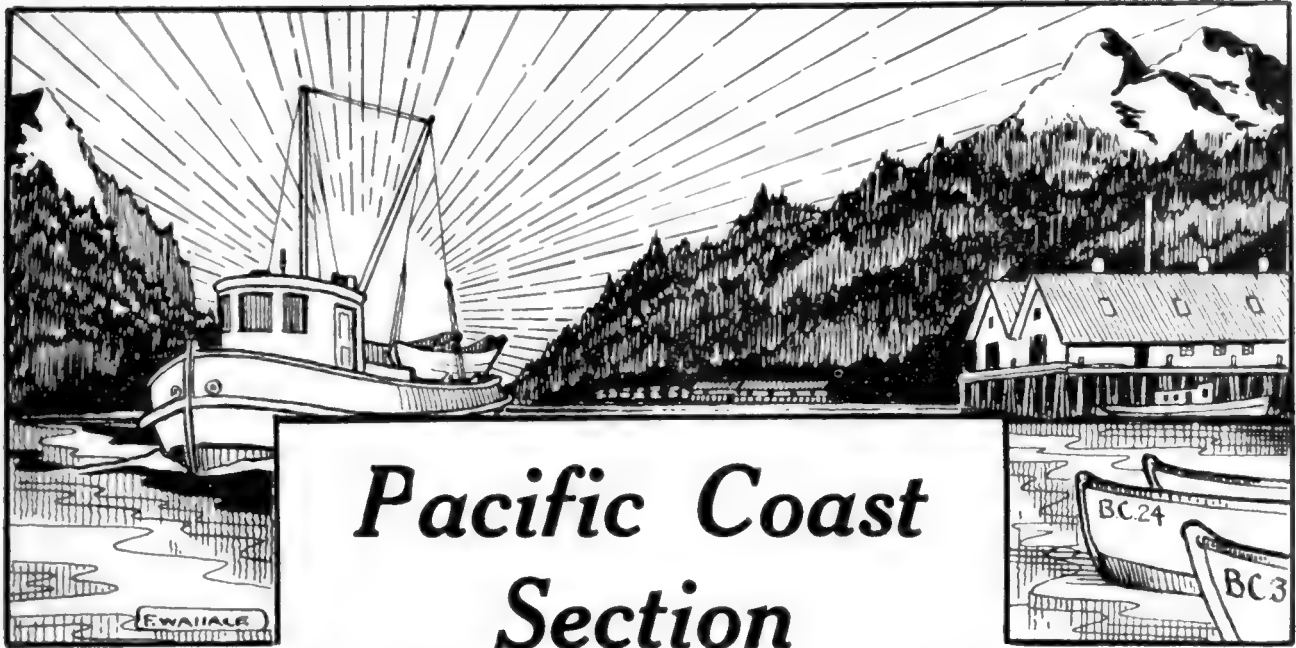
The purpose of these exhibits of fish at the Canadian National Exhibition is educational. The idea is not only to show the public something of the great wealth that the Province of Ontario possesses in its waters, but also to educate them in the conservation and the proper utilization of this important branch of their natural resources, in order that it may be kept on a continuing basis for all time.



Canadian Fish Plants--No. 4



Cannery of the Canadian Fishing Coy. Ltd. Vancouver, B.C.



"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd., 528 Winch Building, Vancouver, B.C., Canada.

British Columbia's Fisheries, 1920

Leading Fish Producer of Dominion.

The Report of the Provincial Fisheries Department for the year 1920, which the Hon. William Sloan, the Commissioner of Fisheries, presented to the legislature last March, has just been issued by the King's Printer.

The report gives the standing of the Province in the fishery products of the Dominion for 1919, the species and value of the fish taken, the salmon catch for 1920 by districts, reports from the principal salmon spawning areas, and a special report of Dr. C. H. Gilbert dealing with the appearance of grilse in the Fraser River sockeye run of 1920, showing its relation to the 1921 run of sockeye and deducing therefrom that the sockeye run this year would be a very small one. Dr. Gilbert's paper was published in the press early in the year for the benefit of those engaged in the industry. The accuracy of his forecast has been demonstrated by the very poor catches made in the Fraser this season.

The value of the fishery products of the Province for the year ending December 31st, 1919, dealt with in the report, shows a total value of \$25,301,607 or 44.7 per cent of the total for the whole Dominion. British Columbia again led all the Provinces in the value of her fishery products. Her output for 1919 exceeded that of Nova Scotia by \$10,129,678, and exceeded that of all the other Provinces combined by \$9,267,654. The salmon fisheries produced \$17,537,166; halibut \$4,617,484; herring \$1,109,870, and whales \$648,868. In all twenty-one species of food fish go to make up the total, exclusive of crabs, oysters, and clams.

The Salmon Pack of 1920.

The salmon pack of 1920 totalled 1,187,616 cases. It was 205,540 cases less than in 1919 and 428,541 cases

less than in 1918. The pack of chum salmon for the year totalled but 84,626 cases as against 372,035 in 1919 and 527,615 cases in 1918. The decrease was due to a lack of market for the grade. The catch of sockeye for the year totalled 351,405 cases in the preceding year.

The catch of sockeye in Provincial waters of the Fraser River system shows a total of 48,399 cases, as against 34,068 cases in 1919 and 19,697 cases in 1918. The season's catch of sockeye in the State of Washington waters of the Fraser system produced a pack of 111,055 cases, as against 116,783 cases in the fourth preceding year—1916,—the brood year of the 1920 run.

The catch of sockeye in the Skeena in 1920 showed a marked decline in comparison with that in the two preceding years. Conditions on the Skeena are shown to be far from satisfactory. By resorting to averages of catches for a period of six years it is ascertained with certainty that the runs of sockeye are decreasing in numbers. The average pack on the Skeena during the period 1907 to 1910 was 130,851; from 1911 to 1914, 101,664; and from 1915 to 1919 but 91,477 cases. Up to 1918 the number of canneries and the amount of gear used was relatively constant, but in 1918 and again in 1919 the amount of gear was greatly increased and the price paid for fish was greater. The records given in the report for the Skeena unmistakably indicate that fishing for sockeye should be diminished in order to conserve the run.

The catch of sockeye at Rivers Inlet in 1920 was the best made there since the high record of 1915. The catch produced a pack of 125,742 cases—but 5,000 cases less than the best made there.

The catch of sockeye at the Nass for 1920 shows a marked falling off. Conditions there are so alarming as to call for radical changes in the fishing regulations. The run cannot stand the drain that has been and is being made.

The appendix of the report contains detailed reports from the salmon spawning areas of the Fraser, Skeena and Nass rivers and from Rivers and Smith's Inlets. The report from the Fraser shows that the number of sockeye that reached the upper sections was larger than in any recent lean year and compared favorably with the run in the last big year 1917, though the numbers were not large in any section. The report from the Skeena again indicates that the spawning areas were less abundantly seeded than usual, and the report from the Nass is equally unfavorable.

The report from the Rivers Inlet spawning grounds is most satisfactory. The beds were well seeded. It is characteristic of the Inlet that in seasons when the catch is large the beds are also found to be well seeded.

Salmon data from the sockeye run to the waters of the Province was collected in 1920, as it has been for the last twelve years. It was again submitted to Dr. Gilbert but, before he could complete his examination of it, he met with a physical disability which compelled him to temporarily discontinue the work. In consequence the report does not contain his annual contribution to the life of the sockeye that has proved of such value. However, Dr. Gilbert forwarded a partial report on the sockeye run to the Fraser, dealing especially with the appearance in the 1920 run of grilse and showing its relation to the 1921 run, which is printed in the appendix. This report, as already stated, was published early this year. No other feature of Dr. Gilbert's reports to the Department has had greater significance than the present paper.

Copies of the report may be had by applying to the Department of Fisheries.

THE CANNED SALMON SITUATION.

Close to 75 per cent of the stock of pinks that was left over has moved from British Columbia and the balance is moving out very fast. The prices are firming up all along the line. All the 1921 pack of pinks is already disposed of.

The opening prices have not yet been named, and although the yearly game of guessing what the different prices will be has been going merrily on for a month past there is still a variance in estimates ranging from 50 cents to \$1.00 per case. There is no doubt that packers that sold at what were considered low prices the first of the season are sorry they made any contracts at that time. From all indications the price of sockeyes will be fairly high. The fact that there is a short pack has had a lot to do with the firming up in prices. No prices are being quoted in this report as it is too close to the date for the setting of the opening prices which will be around the 20th of the month, and again there is a difference of opinion as to what will be a fair price as the run of sockeyes is still on at this writing (Aug. 11), there is a tendency among all those who have not sold to hold off until after the opening prices have been announced.

Chums will not be packed in any quantity this year, and only enough to take care of regular orders will be packed.

Herring will be packed in a limited way. There is some movement in this variety but no extensive sales.

R. E. CLANTON, OF THE OREGON FISH & GAME COMMISSION INSPECTS THE LAKES AND RIVERS OF BRITISH COLUMBIA.

A movement, originated by Mr. Henry Doyle, Vice President of the Northern B.C. Fisheries Ltd., and ultimately endorsed by the salmon canners of British Columbia and Puget Sound, Washington, has borne fruit, and during the month of August Mr. R. E. Clanton, Master Fish Warden for the state of Oregon made a comprehensive tour of the lakes and streams of British Columbia investigating the possibilities of installing hatcheries and rearing ponds similar to those which have been in operation at Bonneville, Oregon, on the Columbia River.

The idea of installing such rearing ponds is to be able to hold the young fry until they are fifteen to eighteen months old when they are mature enough to enable them to take care of themselves with the result that a large number escape their natural enemies and grow to their normal size.

Mr. Clanton will embody the findings of his investigations in a written report addressed to the committee which arranged the tour, and of which Mr. Henry Doyle is secretary.

Seton and Anderson lakes were the lakes that seemed to impress Mr. Clanton as having the best facilities for the installation of rearing ponds. There is a narrow neck of land less than a mile in length separating the two lakes and as running streams are available the year round this would appear to be the ideal location for breeding and rearing ponds. Another important matter to be taken into consideration is that the P. G. E. Railway is only a stone's throw from the location and this insures the bringing in of all kinds of supplies.

Abattoir offal of various kinds is used to feed the fry.

The report of Mr. Clanton will certainly make interesting reading to all those interested in the propagation of salmon.

Perhaps it would not be amiss to state that the beginning of all this investigation was the result of a paper read at the last Canadian Fisheries Association convention held in Vancouver in 1920.

U. S. FISHERIES ASSOCIATION CONVENTION.

The Annual Convention of the United States Fisheries Association will be held at the Hotel Breakers, Atlantic City, N. J. on September 16th and 17th.

Representatives of the Canadian Fisheries Association have been invited and will in all likelihood attend the gathering.

AMERICAN FISHERIES SOCIETY MEETING.

The Annual Meeting of the American Fisheries Society will gather this year at Allentown, Pa., Sept. 5th, 6th and 7th. A first class program has been arranged.

A man, driving home on a very wet night, wished to give the cab driver something to keep out the cold. Finding nothing at hand but a liqueur-stand with its tiny glasses, he filled up one and handed it to the jehu, remarking, "You'll think none the worse of this Benedictine because it was made by the holy monks." "God bless the holy monks", exclaimed the driver, as he drained the glass, "it's themselves that can make good liquor, but the man that blew that glass was very short of breath." *Tattler* (London).

Thirty one canneries were visited as well as different fishing grounds all over the district.

Major Motherwell found that the weather for weeks had been cold and rainy, and for this reason the salmon swam deep and passed beneath the nets. This without doubt had been the cause of the small packs all over the northern district. In Rivers Inlet this year there were 956 gill nets operating as against 850 in 1920, but even so the pack was not up to what it should have been. The spawning ground in Smith's inlet were reported to be well seeded. At Lakelse the hatchery reported that the fish appeared to be late in reaching the spawning grounds.

To a certain extent Major Motherwell thought that this season was identical with other seasons.

IF SINCERE, AMERICAN FISHING INTERESTS ON PUGET SOUND WOULD NOT HAVE OPPOSED TREATY PROPOSED BY AMERICAN-CANADIAN COMMISSION.

Regarding the proposed closed season which the State of Washington Fisheries Commission has proposed, extending from August 25th to September 15th, Major Motherwell, Chief Inspector of Dominion Fisheries for British Columbia believes that if the American Fishing interests of Puget Sound were really sincere in their efforts to conserve the sockeye salmon they would only have to ratify the international treaty previously approved by Canada, and thus have suitable machinery right at hand. Following sessions held in several centers on the Pacific coast in 1918 by the American-Canadian Fisheries Commission a treaty was drafted which included recommendations of the commission. This treaty was ratified by Canada but was never ratified by the United States owing to opposition by the Washington state fishing interests. This treaty provided for reduction of fishing gear and equipment, longer closed seasons and intensified hatchery operations.

Recently when Ottawa was approached by the Washington State Fisheries Commission with a proposition of some mutual understanding on the question they were told the treaty was sufficient and could not be enforced on account of their opposition.

Another fact pointed out by Major Motherwell, was that 90 per cent of the American pack on Puget Sound was up by August 25th just when it was proposed to start the closed season. As it takes nearly a week for the salmon to pass from Puget Sound to the Fraser River the closed season should be one week later in Canadian waters to prove effective in working with the Puget Sound closed season.

POOR RUN HURTS PACIFIC COAST SALMON PACKERS SAYS NEW YORK DESPATCH.

New York Aug. 10.—One million and a half cases of pink and chum salmon are said to have been already pledged in the pool which has been organized in Seattle. This year's slump in the market for the cheaper grades of salmon has led the packers to organize to eliminate as much as possible the misunderstandings which have contributed to the decline.

The organization plan has been talked of by the banks and the packers for some time past. The only drawback has been the scattered stocks of the financially weak concerns. With the clearing of these weaker lots packers have been able to effect an understanding and are reported to have listed their surplus

stocks at central point with the agreement that the salmon is not to be sold until the general market has shown an improvement.

The visible supply of salmon at Seattle is estimated at 1,000,000 cases of pinks, 1,000,000 cases of chums and a comparatively unimportant stock of reds medium reds and kings. These stocks are practically all held by the banks or the three strongest packers in the field.

Despite the fact that this is the fourth year in the salmon cycle, and that a heavy run is due, the run of sockeye salmon to date has been very unsatisfactory and cannery operators are very pessimistic in their views as to the probable pack.

Bellingham Wash., advices, discussing the falling off in salmon runs in the sound, say: Where is the sockeye? The sockeye comes every four years. This is the year. The peak of the anticipated run is now overdue, but traps and purse seiners whose nets bulged with teaming thousands of this valuable salmon in early years are catching only a few hundred today. And this fact is writing the obituary of an industry that once ranked with lumbering in Washington State.

While the peak of the run is now overdue, hope is held that this year will witness a repetition of 1905, when the sockeye blasted all tradition and swarmed the upper reaches of Puget Sound lake. If this condition is not repeated this year the 1921 sockeye run will have been a failure.

DOMINION PHOTOGRAPHERS FILM THE FISHERIES OF THE PACIFIC COAST.

Messrs E. M. Finn and B. J. Bach, Dominion Government photographers have been filming the fisheries of British Columbia and have secured pictures of all branches of the fishing industry and operations in securing the raw product all along the coast as far north as Alaska.

The work of these two men should be of great value in advertising the Pacific coast fishing industry as they have secured details of the operations never before taken.

FISH TRAP PIRATES OPERATING IN THE STRAITS OF SAN JUAN DE FUCA.

Salmon trap poaching in British Columbia waters was quite common in years gone by but has not occurred recently until the night of July 30th when trap pirates visited the trap of J. H. Tood & Sons, situated off Muir Creek, beyond Sooke Harbor. It being a foggy night the thieves had little difficulty in getting a good haul and getting away. They cut gear and webbing during their operations.

HARD TO EDUCATE THE RED MAN OUT OF OLD AGE CUSTOMS.

The officials of the Dominion Fisheries Dept. have been having their own troubles in convincing the Indians of British Columbia that it is for their own benefit that they should not take salmon near the spawning grounds as has been their habit for many years. For a long time back it has been the custom of Indians from the interior of British Columbia to rendezvous at Bridge River Canyon and other points on the Fraser when the big run of salmon were on their way to the spawning beds in the upper reaches of the river.

Three years ago the department decided they would have to take away the privileges allowed the Indians of taking salmon for their own use by methods they

had used for years past, i.e. spearing, gaffing, stake nets and dip nets, as the privilege was being persistently abused and this was done. It was in the interests of the conservation of the salmon that these privileges should be cancelled. The Indians have the privilege of taking out licenses in the same way as other British subjects, and of fishing in the ordinary way with gill nets and hook and line.

The Indians have not however seen eye to eye with the government and have persisted in using their old methods. Last year education and persuasion were used but to no avail and now court proceedings have had to be instituted. In one district the Indians held the authorities off with guns, and one Indian was sent to jail. After that an adjustment was made between all parties for that district.

VANCOUVER WHOLESALE FISH MARKET.

Cod. Supply very good, selling at 8c per lb.

Salmon. Conoes beginning to show up. Selling at 10c head on 12c head off. Springs in fair supply and are bringing 15 to 16c heads off. Sockeye still on the market at same prices as springs.

Halibut. Arriving quite regularly and selling at 11c for chicken sizes and 14c per mediums.

Sable Fish. Fresh stock is on the market at 10c per lb. and smoked is selling at 15c per lb.

Herring. Are exceptionally scarce as the boats are bringing very few.

Smelts. A very good supply is being brought in and are selling at 8c.

Soles. Are much better as to size that for some time past. Selling at 8c per lb.

UNITED STATES FISHING SCHOONERS SEIZED OFF WEST COST OF VANCOUVER ISLAND.

The United States fishing vessels were seized during the latter part of July for fishing within the three mile limit off the west coast of Vancouver Island, near Carmanah. These seizures were made at different times by the Canadian fisheries cruiser Malaspina. Considerable poaching had been reported and the department took steps to apprehend the offenders with the above result. Later both vessels were brought over from Victoria and tied up at New Westminster by the fisheries patrol boat Foam. They are now being held for investigation to determine their fate. The names of the vessels are the "Grace," and "K 125."

A LARGE SHIPMENT OF CANNED SALMON.

Recently the Holland American Line Steamer "Kinderdijk" left Vancouver B.C. with one of the largest shipments of canned salmon ever sent by one steamer from that port.

The shipment consisted of 65,000 cases and was consigned to points in the U.K., Belgium and France.

RETAINING PONDS AND BARREN LAKES WELL STOCKED WITH SALMON FRY.

In British Columbia this year many retaining ponds and barren lakes have been well stocked with salmon fry.

Between 8,000,000 and 9,000,000 fry are being held and next year this will be increased to 50,000,000.

A NEW LOCAL TRAWLER FOR VANCOUVER, B.C.

Donald Watson and Sam Gurney are now operating the "Julian S" as a sole trawler out of Vancouver. The "Julian S" is a gas boat which was formerly engaged in halibut fishing.

THE BRITISH COLUMBIA SALMON PACK.

Up to August 7th the salmon pack as compiled by the Dominion Fisheries Dept. had reached the following figures.

District No. 1 (pack to August 7th)

Sockeye	25,425	Cases
Red Springs	3,055	"
White Springs	48	"
Pink Springs	16	"
Bluebacks	1,076	"
Cohoe	18	"
Pinks	150	"
	<hr/>	
	29,788	

District No. 2 Rivers Inlet and Smiths Inlet (pack to August 7th)

Sockeye	45,873	Cases
Other Varieties	2,271	"
	<hr/>	
	48,144	

District No. 2 Skeena River (pack to August 7th)

Sockeye	33,500	Cases
Spring Salmon	15,500	"
Pinks	78,000	"
Cohoe	8,200	"
Chums	80	"
	<hr/>	
	135,280	"

District No. 2 Naas River (pack to August 7th)

Sockeye	6,400	Cases
Springs	1,700	"
Cohoe	800	"
Pinks	20,300	"
Chums	1,900	"
	<hr/>	
	31,100	"

SS. NEW ENGLAND HAS HAD GOOD SEASON.

SS. New England, belonging to the New England Fish Co., Captain Scott, for some years the high-line fish catcher of the North Pacific grounds, is keeping up her record. On Saturday, Aug. 6, she discharged 170,000 pounds of halibut at the Company's docks, Ketelikan. So far this season she has exceeded the half-million mark.

HALIBUT FISHERMEN JUST AS WELL OFF WITH PRICES LOWER THAN 1920.

A Prince Rupert authority on halibut fishing states that although the halibut fishermen is receiving less for his fish this year he is as well off as in 1920 when prices were higher. The reason for this being that operations may be carried on at a lower cost. Distillate is less by about 7 cents per gallon, gear has dropped about 25 per cent and foodstuffs are way down.

The fishing industry accordingly is on a much healthier basis and the halibut fishermen should be doing very well.

“Alaska Reds” Parading as “Sockeyes.”

The following correspondence shows what efforts are being made to put *Alaska reds* on the different markets of the world as *Alaska sockeyes*. Everybody who knows anything about canned salmon knows that there is no variety that compares favorably with the British Columbia sockeye, and the efforts being made by Alaska canners to use the name “sockeye” in connection with their packs of reds should be discouraged in the strongest possible manner. If there is no regulation to cover it now in force one should be promulgated at the earliest possible moment.

As the correspondence shows Mr. D. H. Ross, Canadian Trade Commissioner to Australia has used every endeavor to correct this abuse of the name “sockeye” and he deserves much commendation for his efforts.

COPY.

CANADIAN FISHERIES ASSOCIATION.

Vancouver, B. C., July 27th, 1921.

Mr. W. D. Burdis, Secretary,
B. C. Salmon Cannery Assn.,
626 Pender Street, W.,
Vancouver, B.C.

Sockeye salmon

Herewith file of correspondence on this subject, which has just been received by me, and which I believe can best be handled by you. I offer the suggestion that you write the Canadian Trade Commissioner, Melbourne, Australia, and if you deem it advisable, supply him with copies of recent correspondence between yourself and the Deputy Minister of Marine and Fisheries, Ottawa.

Kindly return the attached file after you have dealt with it. I would also appreciate a copy of your letter to the Trade Commissioner, D. H. Ross.

CANADIAN FISHERIES ASSOCIATION.

“A. L. HAGER,”

President.

COPY.

CANADIAN FISHERIES ASSOCIATION.

Vancouver, B.C., July 23rd, 1921.

A. L. Hager, Pres.,
Canadian Fisheries Association,
Ft. Gore Avenue, City.

Alaska Sockeye.

Enclosed I am sending you a communication just received from D. H. Ross, Canadian Trade Commissioner to Australia, and my acknowledgement of same. They are self explanatory.

Perhaps it would be well to place this matter before the canners association.

Without doubt publicity would be the best way to deal with the matter.

“F. E. PAYSON,”

Secretary.

COPY.

July 23, 1921.

Mr. D. H. Ross,
Canadian Government Trade Commissioner to
Australia,
Melbourne, Australia.

Re M-20647 Alaska Sockeye.

Your valued letter of June 21st and copies of correspondence with the Acting Comptroller General, Department of Trade & Commerce, at Melbourne, just received.

In acknowledging thanks for placing this matter before our association I wish to express the appreciation of the Association for your taking such an interest in this matter and the efforts put forth to remedy the situation.

Your entire correspondence has been placed before President A. L. Hager for such action as he may think best, and you will be communicated with just as soon as action is taken.

FRANK E. PAYSON,

Secretary Vancouver Branch,
Canadian Fisheries Association.

COPY.

DEPARTMENT OF TRADE & COMMERCE.

Commercial Intelligence Service.

Melbourne, June 21st, 1921.

F. E. Payson, Esq.,
Canadian Fisheries Association,
528 Winch Building,
Vancouver, Canada.

Sockeye Salmon

For the information of your Association, we are attaching hereto copies of our correspondence of recent date, as noted below, with the Commonwealth Department of Trade and Customs, Melbourne, relative to inferior Alaska salmon being now imported into Australia under the designation of “Alaska Sockeye.”

Apparently, the old stringent regulation of the Department which only permitted the importation into Australia of sockeye salmon from British Columbia and Puget Sound waters, was relaxed by the Department of Trade and Customs without any notification being made to this office, or to the agents for the various British Columbia packers.

We had samples of the “Alaska Sockeye” forwarded to our Department at Ottawa, and these were subsequently examined by Professor Prince Dominion Fisheries Commissioner, Ottawa, whose comments are noted in our letter of May 16th. (M. 20328) to the Acting Comptroller General, Departments of Trade and Customs, Melbourne.

The careful consideration of your Association is commended to the copies sent herewith, which are self-explanatory. It would appear to us that some definite action will have to be taken by your Association to designate British Columbia Sockeye under a trade mark which will be acceptable to all the packers. It suggests itself to us that possible a “maple leaf” with the name “Canadian Sockeye” would meet the case.

For many years, retail purchasers in Australia would take nothing else but “sockeye” but now the “cutting grocer” will hand them a can of “Alaska Sockeye” and probably make an extra profit on this inferior grade, as compared with B. C. fish of the same name. We shall be glad to have your advice, and anything this office can do to facilitate the interests of B. C. packers will be a service gladly rendered.

“D. H. ROSS”,

Canadian Trade Commissioner.

COPY.
TRADE COMMISSIONER OF THE GOVERNMENT
OF CANADA.

Melbourne, May 16th, 1921.

The Acting Comptroller-General,
Department of Trade & Customs,
31 Spring Street, Melbourne.
Sockeye Salmon.

In confirming our letters of May 20th. (M. 16873), June 9th, (M. 17093) and October 6th. (M. 18210) 1920, and in further review of your acknowledgements of May 27th. (File 20A 3859) and July 10th, and August 16th. 1920 (File 20 A 5145), in which we stressed that inferior Alaska salmon was permitted to be imported into Australia under the superlative quality description of "Alaska Sockeye Salmon" we beg to refer you particularly to our communication of May 20th. 1920, which accompanied two sample cans of salmon so labelled submitted for your Departmental examination.

We were not favoured with the result of your examination of the samples of the salmon, but your letter of July 10th. apparently, was intended to convey the impression that the quality was equal to the Sockeye salmon for which British Columbia packers have an established trading reputation.

Quite a number of years, ago, from representations made by this office supported by evidence of fishery experts, your Department made a ruling that only salmon (of that species) caught in British Columbia and Puget Sound waters was entitled to the trade term of Sockeye upon which our packers had established an enviable reputation in Australia and other overseas markets.

The Canadian packers are viewing, with great apprehension the action of your Department in (quite unwittingly, we believe) permitting inferior Alaska salmon to be imported as Sockeye, and are at a loss to understand why the former ruling of your Department should have been relaxed. Buyers are also, obviously, misled as to the quality of the contents of the cans they purchase.

We forwarded a similar sample can of "Alaska Sockeye Salmon" to Professor Prince, Dominion Commissioner of Fisheries, Ottawa, and from his review we beg to quote as follows:

"Referring to the sample can of salmon which you sent for my examination, it bears the words 'choice Alaska Sockeye red salmon', and I may say that I carefully examined the contents and found the colour to be far inferior to the Fraser River and Skeena and other British Columbia sockeye. It is much paler. The contents are softer and considerably 'mashed up,' not the firm steak which you find in our British Columbia packed Sockeye."

"The colour and texture of the Alaska sockeye is not at all to compare with that of the British Columbia breeds of the same specie. Like cattle, salmon in different waters vary very much in these features, color, textures, etc. I have an article in preparation, in which I deal with the inferiority of much of the fish packed in the United States. The only real point that remains is as to whether a term which is really a British Columbia Indian word, and confined, I believe, to the Fraser River, can be transferred to the same species of fish in waters one thousand miles away, which has always been called simply 'red salmon'. Red salmon is the name used for the sockeye salmon in United States waters, but as our British Columbia packers have established a reputation for their sockeye salmon, the American packers are adopting our name."

There is no greater living authority on piscatorial matters than Professor Prince, who is frequently permitted by my Government to report on fisheries outside the Dominion. Last year, at the request of the State Government, he inspected the fisheries of the coast of Florida.

Until recently, Alaska packers were content to label their fish "Alaska Red", and now their inferior salmon, admittedly of the sockeye species, is sold in Australia as "Choice Alaska Sockeye Red Salmon" when the fish are not "choice" and are distinctly inferior in quality and color to the much superior British Columbia variety of Sockeye, to which the Australian trade had been accustomed over a long period of years.

This competition of an inferior fish sold under a superlative trade name is seriously detrimental to British Columbia packers who have never masqueraded the less valuable salmon in their waters under a misleading trade description.

In a subsequent communication Professor Prince wrote as follows:—

"It does seem an injustice to Canada that, after the United States packers have used the term 'red salmon' for so many years, they should now adopt a term which is essentially Canadian and was derived from an Indian word used only by the Fraser River Indians viz, 'Suck-kegh'. Of course, the trade term 'Fraser River' sockeye might be used, although it would not strictly apply to the Skeena and other sockeye salmon of the north.

"The matter of trade names is still under the consideration of a committee, on which the United States Fish Commissioner, a representative from the Canadian Fisheries Association, and the Biological Board and this Department are engaged. I intend having the point raised discussed at the next meeting of this committee, but it is doubtful if the United States packers will consent to Canada having the sole use of a trade term which she first used and to which she is fairly entitled."

The Alaska "red fish" of course, are of the same species as the Fraser River fish, but I have satisfied myself that they are far inferior in color and quality."

The 1921, salmon season is shortly commencing, and hence we are again taking the liberty of asking you to review the whole position, with the hope that — in the interests of a sister Dominion — your Department may be disposed to revert to your former ruling respecting the definition and designation of genuine sockeye salmon upon which British Columbia packers have built up a reputation, and as it is understood by Australian consumers.

"D. H. ROSS",

Canadian Government Trade Commissioner to Australia.

COPY.

COMMONWEALTH OF AUSTRALIA.

Department of Trade and Customs,
31 Spring Street, Melbourne.

June 10th, 1921.

The Canadian Trade Commissioner,
Box 140, G. P. O.
Melbourne.

With reference to your letter of 16th May 1921, relative to the importation into the Commonwealth of "Sockeye" salmon, I beg to inform you that your further representations have been fully considered, but it is regretted that the present practice of the Department in this connection cannot be altered.

My letter of 10th July last, referred to by you, was not intended to convey the impression that the quality of the Alaskan Sockeye Salmon contained in the sample tins which accompanied your letter of 20th May, 1920, was equal to the British Columbia Sockeye. On the contrary, it was found that the samples did not show the intense bright and deep colour of the British Columbian Sockeye, nor did either contain the average amount of oil which that variety usually exhibits.

It was on account of this difference in quality that it was decided to insist on salmon of the "Sockeye" (*Oncorhynchus nerka*) variety caught and canned outside British Columbia and Puget Sound, bearing an appropriate geographical qualification of the term "Sockeye."

"PERCY WHITTON."

Acting Comptroller General.

COPY.

CANADIAN GOVERNMENT TRADE
COMMISSIONER

Melbourne, Australia, June 21st, 1921.

Percy Whitton, Esq.,
Acting Comptroller General,
Department of Trade & Customs,
31 Spring St., Melbourne.
Sockeye Salmon.

We have your letter of June 10th, in review of the representations made in ours of May 16th. (M. 20328) on behalf of Canadian packers of sockeye salmon.

By the outgoing mail we are communicating with our Department at Ottawa, quoting from your letter, and also with Professor Prince, Dominion Commissioner of Fisheries, Ottawa, in regard to your reviews of the situation.

We much regret at the time your Department relaxed the old stringent regulation which protected British Columbia packers of high grade sockeye salmon, that this office was not advised so Canadian interests could have been promptly informed that it was imperative action should be taken by them to maintain the supremacy of their sockeye salmon on the Australian market.

The pack for 1920 and 1921 in Alaska will thus have the advantage of having been placed on the Australian market before Canadian packers could—by advertising or other methods—take steps to advise consumers of the superiority of their sockeye salmon.

British Columbia packers are being advised as to the situation, and suggestions are also being made that a distinct designation is desirable for their product which, with judicious advertising, may tend to overcome the unfortunate position in which they are now placed through inferior Alaska salmon being put on the Australian market and retailed under "the trade name" which had been carefully conserved over a long period of years for the highest grade of British Columbia and Puget Sound salmon imported into the Commonwealth.

"D. H. ROSS,"

Canadian Trade Commissioner.

COPY.

RE IMPORT OF ALASKA RED INTO CANADA.
May 20th. 1921.

Hon. S. F. Tolmie,

Minister of Agriculture, Ottawa.

Attempts are being made to import Alaska Reds into Canada under the name of Sockeye, featuring the latter

name. Stop. As you know Sockeye is a trade name applicable only to the so-called highest grade salmon of Puget Sound and British Columbia. Stop. The Alaska Red is considered the world over distinctly inferior, and realizes much lower prices. Stop. In England they are always offered and sold as Alaska Reds, and no reputable dealer would describe or label them Sockeyes. In view of these facts it would be manifestly unfair and an imposition on the public to permit them to be labelled and sold in Canada as Sockeyes. Please promptly wire me your decision in this connection, and instruct your officers accordingly, as the matter is one of vital importance.

B. C. Salmon Cannery Association,
W. D. Burdis, Secretary.

COPY.

Ottawa, May 21st. 1921.

W. D. Burdis,

Secretary B. C. Salmon Cannery Assn.,
Vancouver.

Your wire fish section meat and canned foods act administered by Marine and Fisheries Department have requested their officials to give matter prompt attention and they are wiring you.

S. F. TOLMIE.

COPY.

Ottawa, May 23rd. 1921.

(Rec'd) May 25th. 1921.

W. D. Burdis,

Secretary, B. C. Cannery Assn.
Vancouver, B. C.

Re your telegram twentieth instant to Minister of Agriculture if you mean imported canned Alaska Reds labels must show clearly where packed but use of name sockeye cannot be prevented, as Alaska Reds are sockeye species if you mean imported raw salmon for canning labels must show that fish were caught in Alaska.

A. JOHNSTON.

COPY.

November 22, 1920.

(Extract from telegram)

Lieut.-Col. F. H. Cunningham,

Chateau Laurier, Ottawa.

Libby McNeill and Libby wish import Alaska medium red salmon. They understand such salmon must be labelled Cohoe.

F. HARRISON.

COPY.

November 24th. 1920.

(Extract from Chief Inspector's Wire.)

Libby salmon subject to same regulations as Canadian packers. If Cohoe they should be labelled such.

F. H. CUNNINGHAM.

COPY.

Vancouver, B.C., May 30th. 1921.

Alex. Johnston, Esq.,

Deputy Minister of Marine & Fisheries,
Ottawa.

Your telegram of the 23rd. inst. stating that canned Alaska Red Salmon can be Imported into Canada as "Sockeyes" because they are "sockeye species" will, if permitted, be ruinous to British Columbia canning interests.

Alaska Red Salmon is no more entitled to be sold as Sockeyes than are Cohoes, which they much more nearly resemble in flesh, colour, and the oil contents.

Your Department must be cognizant of the fact that

Alaska Reds have never been classed as sockeyes in the market, but have always been sold at prices \$5 or \$6 below the prices paid for sockeyes, and the only reason that some dealers are endeavouring to import them into Canada under a *misleading* name, is to obtain a higher price for an inferior article.

Permission to do this ought not to be given by the Government, which is entrusted with the protection of such an important element in the canning industry as that represented by the sockeye packs of British Columbia.

The import of Alaska Reds under its distinctive label cannot be objected to, but it should not be permitted to be sold to the consumer as sockeyes.

A person who formerly had bought the *genuine* sockeye salmon and had a can of Alaska Reds given him *instead*, would recognise the difference and the Canadian demand for the British Columbia product would lose a customer.

Recently some of Libby's Red Alaska salmon was placed on sale in retail stores on this coast, but it was sold under its own name (vide a label off one of the cans, enclosed herewith) and described as "Red" on the label.

No person objected to that being done, but the aspect would be entirely changed, if, instead of the above standard label, a deceitful label for the same salmon was printed (as proposed) with the word "Sockeye" on the fish, and which would be used to sell it in competition with the genuine sockeye throughout Canada.

Our canners have valuable trade marks and labels, which are recognised by dealers and consumers in Canada as guarantees in respect to quality, and to allow inferior grades to be sold under the name of sockeyes would destroy their business, built up after many years of honest and systematic methods.

I am instructed to most earnestly urge your Department to refrain from granting such permission, but to protect our own people in their legitimate business in their own country.

Awaiting your favourable consideration and reply.

B. C. SALMON CANNERS ASSOCIATION.
W. D. Burdis, Secretary.

COPY.

DEPARTMENT OF MARINE AND FISHERIES.

Ottawa, B. C., June 13th. 1921.

I am in receipt of your letter of the 30th. ultimo, with further reference to the labelling of canned Alaska Red salmon, and the name under which it may be permitted to enter Canada for sale.

The Meat and Canned Foods Act requires that British Columbia salmon of the species Nerka of the genus *Oncorhynchus* shall be designated sockeye. It does not follow, however, that fish of that family and variety taken in British Columbia waters are exclusively entitled to that designation. For example, such fish taken in Puget Sound and the approaches thereto and packed in the State of Washington are designated sockeye, and rightly so.

Further, it cannot be very well denied that *O. Nerka* ranges from Oregon to Alaska on the American side of the Pacific, and that the fish known as Alaska Red is of that genus and species, a Nerka inferior, no doubt to that which annually visits the Fraser River, but still a Nerka.

As you know, salmon making for the Naas River,

which almost forms the dividing line between British Columbia and Alaska are taken by both American and Canadian fishermen just as fish making for the Fraser River are so taken. As you also know, we designate the Nerka variety taken by Canadian fishermen and canned in our Naas River canneries, sockeye. We would, therefore, find ourselves on altogether untenable ground if we argued that the name could not be used to designate Nerka taken by American fishermen and canned in Alaskan canneries simply because part of the run of fish crossed the imaginary line separating Alaska from British Columbia waters.

But, while we may not be in a position to prevent the use of the name sockeye on Alaska Red salmon we have power which of course we exercise under section 12H of the Meat and Canned Foods Act, to insist that the labels on all such canned salmon imported into Canada for sale, shall show the place of origin—in this case, Alaska.

It is, of course, realized that for trade purposes, packers of *O. Nerka* in Alaska have adopted and used the name Alaska Red for these fish and that the trade generally recognizes them by that name. From this point of view it may be that the substitution of the name sockeye — notwithstanding the right from a scientific viewpoint, to use it — constitutes a misleading mark, the use of which is prohibited by subsection 2 of section 12A of the Act.

Unfortunately, however, that subsection would appear to apply only to canned fish packed in Canada and for sale in Canada. I am therefore obtaining the advice of the Department of Justice as to whether the subsection named embraces imported canned fish and whether, from the viewpoint of trade custom we can prevent the name sockeye from being used to designate Alaska Reds sold in Canada.

"A. JOHNSTON,"

Deputy Minister of Marine and Fisheries.

W. D. Burdis, Esq., Secretary,
B. C. Salmon Canners, Assn.,
Vancouver, B.C.

COPY.

B. C. SALMON CANNERS ASSOCIATION.

Vancouver, B.C., June 25th. 1921.

Alex. Johnston, Esq.,

Deputy Minister of Marine and Fisheries,
Ottawa.

Re labelling "Alaska Reds" as "Sockeyes" for sale in Canada.

I beg to acknowledge the receipt of your favour of June 13th. which only arrived on the 20th. inst. and has been placed before the members.

We contend that though the genus "*Oncorhynchus*" may be the scientific name for the "Sockeyes" that business name of sockeye is a trade name specially belonging to British Columbia, and except in the case of Puget Sound, where the same identical salmon (the product of the Fraser River) is packed, no packers in the United States or Alaska are entitled to use that name on a label or package of red salmon packed in Alaska. Sockeyes on the Columbia River are called "Blue Backs" and the name "Sockeye" was adopted on Puget Sound to distinguish this salmon from "Alaska Reds"; and the Puget Sound packers would object as much as we could do, to having or allowing Alaska Red salmon labelled "Sockeyes" for sale in the United States.

Again, the salmon we call "Red Spring Salmon"

marketed as Tyee or King salmon from Alaska, or "Chinook" salmon from the Columbia River, is identically the same fish, but sold under the other names according to the locality in which it was packed, and is known to buyers accordingly.

The term "Sockeye" placed on a can of Alaska Red salmon is undoubtedly a *misleading brand to salmon buyers*, and should be prohibited, and cans of Alaska Reds should also be marked with the place of origin.

The principle involved in respect to the *business value* of a trade name was recently confirmed by the British Privy Council in the matter of "Sardines" wherein Alex. Watson & Co., of Newcastle-on-Tyne were denied the right to use the name "Sardines" on their cans, the same being declared to be a valuable trade asset belonging to French packers; and we contend this decision is one which covers the right of British Columbia and Puget Sound packers to the *sole use* of the word "Sockeye" on their label.

If the Act to which you refer demands that for sale in Canada salmon packed in Canada shall be correctly named on the label surely it has the power to demand that any salmon packed *outside Canada* shall not be permitted to be sold under a name to which it is not strictly entitled.

As Canadian producers we are entitled to all the protection afforded by our laws, and respectfully bespeak the further consideration of your Hon. Department, awaiting which,

"W. D. BURDIS,"

Secretary.

COPY.

DEPARTMENT OF MARINE AND FISHERIES.

Ottawa, August 6th, 1921.

Referring to previous correspondence with regard to the sale of Alaska red salmon in Canada under the name sockeye, I have to say that the Department of Justice now advises as follows:—

There is no authority to prohibit the use of the name sockeye on the ground that it would be a misleading name within section 12A(2) of the Act, as it is clear that this section applies only to fish and shell-fish prepared and packed in Canada. Section 12H(1) however, requires that all cans of fish and shell-fish imported into Canada for sale be correctly labelled, so as to indicate the kind and quality of their contents. This is held to be adequate authority to require—whether the name sockeye is used or not—that cans containing Alaska red salmon imported for sale in Canada must be marked in a way to indicate that the contents consist of the variety

or kind known as such. In other words the labels on such cans must show plainly the words Alaska red salmon.

Steps are being taken to see that this requirement is fully met.

"A. JOHNSTON,"

Deputy Minister of Marine and Fisheries.

W. D. Burdis, Esq., Secretary,

B. C. Salmon Cannery Assn.,

Vancouver, B.C.

Mermaid—How are you going to amuse yourself during the summer?

Sea Serpent—I guess I won't show up this season. I might get some poor fellow into trouble with the revenue sleuths.—*New York Sun.*

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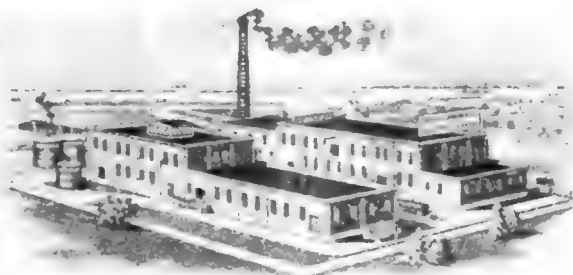
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THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., SEPT. 1921

NO. 9

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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

WAIT AND SEE!

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

These be parlous times at Ottawa. Skipper Meighen has been signing on new hands to handle the Ship of State across the baffling currents and stormy seas of a General Election. The new Cabinet crew includes nine lawyers and three doctors. With the exception of two farmers, the natural resources have no representation whatsoever.

The Hon. Mr. Ballantyne has failed to retire as rumored and is reported as still holding his portfolio of Naval and Marine. Fisheries is not even mentioned in connection with his administration—which, after all, sums up his attitude towards our particular industry. Naval and Marine constitutes the Alpha and Omega of his activities.

The time is fast approaching when the political windbags will be taking the stump and promising the electorate all sorts of good things. Fishermen would be well advised to see that the representative they favor is informed of the state of the fishing industry and pledged to take action to put the business where it ought to be. Politicians of all stripes will promise anything, but the electors in our industry should back the men who know the business and who will carry out their promises.

See that the man who aspires to your vote is fully acquainted with the fact that the Fisheries require a Deputy Minister at the head of affairs.

BARRING THE MAYFLOWER.

The Halifax Committee in charge of the International Fishing Schooner Race undoubtedly took the wisest course when they barred the Boston schooner "Mayflower" from competing in the International Sailing Race for the supremacy of the Atlantic. Had the per-

mission been granted, there would have been no race and the sport would have died a sudden death.

While, on the face of things, the "Mayflower" may have complied with all the conditions of the Deed of Gift accompanying the Halifax Herald Trophy, yet there is no doubt whatever that she was built primarily to defend the Cup. The subscriptions for her cost were collected primarily on the racing aspect; fishing was a secondary consideration and served as a means of ensuring the investors a return on their money. She was designed by a well-known yacht architect who undoubtedly drafted her lines with speed as the principal motive though a fair carrying capacity and stout construction were cleverly combined. The rejection of his product should constitute W. Starling Burgess's greatest testimonial.

Since the Boston schooner has been barred out, an impetus has been given to the fishing schooner races. Three great sailing events will be pulled off in October. First will come the American Elimination Contests on October 12th, followed by the Nova Scotia Fishermen's Races on October 15th. From these two events the challenger and defender in the International Race will be selected and the premier contest will be staged off Halifax beginning on October 22nd.

We are looking to Canada to bring back the Cup.

THE FORDNEY TARIFF.

Reliable opinion in the United States leads us to the belief that the Fordney Tariff Bill is not altogether the bogey which Canadian fish producers imagine. The Bill is quiescent for a time and is not likely to come up again until after the New Year.

From credible sources we have it that there is little likelihood of the Bill going on to the statutes in its present form and the tariff on fish is liable to considerable moderation. In fact, it is prophesied by prominent U. S. authorities that any tariff legislation enacted by the U. S. on Canadian fish will practically revert to the schedule in force prior to the present "free fish" scale.

SCHOONER RACES FIRST CLASS FISH PUBLICITY.

The fishing schooner races will constitute first class publicity for the fisheries of Canada and the United States if properly taken advantage of. There is, in the coming event, a splendid opportunity to bring our fish and fishing industry to the attention of people in the inland centers of Canada—a chance to put the business on the map. How can it be done? Here are a few suggestions:

(1) Producers and distributors in the Maritime Provinces could have a rubber stamp made with the legend. "INTERNATIONAL FISHING SCHOONER RACE, Canada vs United States, HALIFAX, N.S., OCTOBER 22nd and 24th. The greatest sporting contest in the world. Watch it!" This, or a similar announcement, should be stamped upon every letter, invoice, shipping bill, and even fish box, issued from Maritime Province office and plant.

(2) A brief circular outlining the race and details of the competing craft, with a photograph of the vessels, should be printed and sent to all retail fish dealers in Canada with the request that they display same upon their windows or prominently in their stores. This will have the effect of interesting the public in inland centers and focus attention upon the race.

(3) Fish dealers in inland centers might run an announcement in the advertising columns of their local newspapers immediately prior to the event, somewhat as follows:

"Messrs. beg to call the attention of the readers of this paper to the International Fishing Schooner Race between fishing schooners of Canada and the United States to be held off Halifax on October 22nd and 24th.

This will be the greatest sailing race in the world and merits your interest and attention."

To the above suggested announcement can be added the firms usual advertisement or a line running "Like our fishermen, we are in the race for your business!" or "The price and quality of our sea-foods leave our competitors astern." "Canadian fish and Canadian fishermen are the best in the world. Eat more fish and encourage Canadian Industry", etc.

(4) Salesmen in fish stores should lose no opportunity to discuss the event with their customers.

(5) In small towns where daily papers are not published, the local fish dealer can focus interest in himself and his business by arranging with his producer or distributor to telegraph the result of the race. The same could be pasted up on his window or written upon a bulletin board.

The above are merely intended to inspire originality and many other, and better ideas, will suggest themselves to the live business man in the industry.

If these races are not taken advantage of to develop the fish trade, their whole purpose narrows down to an ordinary sporting event localized to the Nova Scotia and New England coasts, and which will result in no benefit to the fisherman's product.

It is in the inland consuming centers of Canada that the coming contest should be aggressively proclaimed as there is a tremendously psychology in the affair which can be counted upon to bring the public to a realization that Canada possesses fish and a fishing industry which is second to none.

There is no doubt whatever but what Sir Thomas Lipton's efforts to gain the America's Cup reacted favorably in the sale of his teas and other products and we could name a dozen other sporting events instituted

by railroads, distillers, motor manufacturers, and other business concerns which drew the attention of the public, indirectly, to the products which they manufactured.

FEEDING STARVING RUSSIA. HOW ABOUT CANADIAN FISH?

In all the reports and plans for the relief of those in the Russian famine area we read much about grain and flour being sent for distribution, but what about fish? In Canada there are packs of cheap canned fish on hand which could be readily used in this case. Has anything been done in this connection by our Government representatives overseas?

A recent issue of CANADA, published in London, Eng., features an editorial on the subject of Russian relief and the British credits extended for the purpose, and brings forth the unique position of the Dominion in its ability to supply grain and transport same to Russia. In this connection, the name of Henry B. Thomson, former Canadian Food Controller, has been brought forward as being the man best fitted for handling the Russian Food situation on behalf of Canada. Mr. Thomson is at present in London engaged in private business and it is to be hoped that his presence there, and CANADA'S representations, will result in his being engaged in any work of Russian relief.

Mr. Thomson's intimate knowledge of Canada's food supplies and his specially intimate knowledge of our fishery resources and the capabilities of our producers would react to the benefit of the relief commission and the fishing industry of Canada. No cheaper flesh food than fish, canned or preserved, could be secured anywhere.

NO LOBSTER FISHING IN WESTERN, N. S. THIS FALL.

The Department of Fisheries have definitely refused to permit lobster fishing for six weeks in Shelburne and Yarmouth Counties this Fall. Fishermen in that district apprehend hard times through the Department's decision, though the consensus of opinion during a tour of the district by Ward Fisher, Chief of the Atlantic Fisheries Division, was that the prospects for next Spring should not be jeopardized by permitting a Fall fishing season.

THE ORIENTAL PROBLEM.

The Right Rev. Dr. Charles D. Schofield, Anglican Bishop of the Diocese of Columbia, stated in a recent address at St. John, that five hundred Japanese children were born in British Columbia last year.

Five hundred grown-up Orientals dumped into the Province within a year would cause some alarm to those persons aware of the future danger in Oriental immigration, but these youngsters, being born there, pass notice. At the same time they are adding to the yellow population just as surely as though they had come in from Japan and though we may class them as Canadians and educate them as such, we cannot make them white, or desirable citizens in the building up of the Dominion.

PORTUGAL TAXES NORWEGIAN CODFISH.

Owing to prohibition in Norway forbidding the importation of Portuguese wines, the Portuguese Government have retaliated by imposing heavy taxes and super-taxes against Norwegian vessels and goods, including codfish. Spain has imposed a similar retaliatory duty.

Newfoundland being prohib., some chance surely exists for Canada in supplying the Spanish and Portuguese market with Quebec and British Columbia saving us from being altogether arid.

EASTERN FISHERIES DIVISION CONFERENCE

Fishery inspectors, packers and fish dealers met in conference at Charlottetown during the week of Sept. 19th. A full report of the meetings will be published in the October issue of the "Canadian Fisherman."

ATTENDED U. S. F. A. CONVENTION.

Mr. J. A. Paulhus, Vice-President, F. W. Wallace, Secretary, and W. B. Cohen, of the Canadian Fisheries Association went from Montreal to attend the Convention of the United States Fisheries Association.

HARD YEAR FOR FISHING.*Eastern Fisheries Division in Convention.*

Charlottetown, P.E.I., September 20.—Reports of a hard year for those engaged in the fishing industry, but a growing closer co-operation between its various branches, were heard at the convention of the Eastern Fisheries Division of Canada, which opened here today. About sixty representatives were present, including practically all of the fisheries inspectors and officers of the division.

A plea was made by New Brunswick delegates that regulations governing oyster fishing be made uniform. At present the season for privately-owned beds opens a month earlier than that for public beds.

GAME FISH SWIM UP STREAM.

It's easy to drift as the current flows;
It's easy to move as the deep tide goes;
But the answer comes when the breakers crash
And strike the soul with a bitter lash—
When the goal ahead is endless fight
Through a sunless day and a starless night,
Where the far call breaks on the sleeper's dream,
"Only the game fish swims up stream."

The spirit wanes where it knows no load;
The soul turns soft down the Easy Road;
There's fun enough in the thrill and throb,
But Life in the main is an uphill job;
And it's better so, where the softer game
Leaves too much fat on a weakened frame,
Where the far call breaks on the sleeper's dream,
"Only the game fish swims up stream."

When the clouds bank in—and the soul turns blue—
When Fate holds fast, and you can't break through—
When trouble sweeps like a tidal wave,
And Hope is a ghost by an open grave,
You have reached the test in a frame of mind
Where only the quitters fall behind,
Where the far call breaks on the sleeper's dream,
"Only the game fish swims up stream."

—Author Unknown.

LESSER SLAVE LAKE FISHING WAS GOOD.

Edmonton, Sept. 24.—The fishing season in the lakes to the north of this city has been brought to a successful close. Seventy cars of whitefish from Lesser Slave Lake have entered this city since the commencement of the season and fisherman states that the allotment of the catch, aggregating one and a half million pounds from Lesser Slave Lake has been brought to the market of the east.

W. S. LOGGIE RETIRES FROM POLITICS.

The Fishing Industry loses one of its few representatives in the Dominion House of Commons with the retirement of Mr. W. S. Loggie, M.P. for Northumberland Co., N.B. Mr. Loggie and Mr. Duff of Lunenburg are the only two members in the present Government who are engaged in the fish business.

Mr. Loggie entered politics many years ago as a Liberal but allied himself with the Union Government on the question of conscription. In his valedictory letter to his constituents, Mr. Loggie urged their support of the National Liberal-Conservative candidate. The retiring member was seriously ill some months ago but happily recovered. Our best wishes go with him.

FISHERIES DEPARTMENT REPORT.

The Fifty-fourth Annual Report of the Department of Fisheries has just been received from the King's Printer. The Report covers departmental activities during the year 1920.

BRITISH COLUMBIA FISHERIES REPORT.

The Report of the Commissioner of Fisheries of the Province of British Columbia has come to hand. The Report is much smaller than those of previous years and the principal contents consist of reports as to the conditions of the salmon spawning beds of the Fraser, Smith and Rivers Inlet, Skeena and Nass Rivers. Dr. Gilbert's famous prophecy on the 1921 run of the Fraser is also incorporated along with much data regarding the salmon packs.

NEWFOUNDLAND PROTESTS AMERICAN TARIFF.

Sir Richard Squires, Premier of Newfoundland, went to Washington recently and interviewed Herbert Hoover, Secretary of Commerce on the matter of the proposed U. S. Tariff on fish. He pointed out that Newfoundland exported \$2,000,000 worth of fish annually to the U. S. and imported goods to the value of \$20,000,000 from that country. To impose heavy duties on Newfoundland's staple export would work a great hardship on the small Dominion. It is reported that Sir Richard's plea is being sympathetically considered by administrative officials.

PRESIDENT HAGER'S MESSAGE TO UNITED STATES FISHERIES ASSOCIATION.

Vancouver, B.C., September 15, 1921.

President and Members of The United States Fisheries Association, Breakers Hotel, Atlantic City, N. J.

I cannot express to you my disappointment in not being able to attend your annual meeting and convention. Our vice-president, Mr. Paulhus and our secretary, Fred Wallace will represent our Association and express to you our willingness to co-operate with you in any and all matters for the general good of our industry. May your convention be a huge success. May the United States Fisheries Association continue in its growth and influence and may the entente cordiale that has for so many years existed between the American and Canadian fish producers, manufacturers and distributors be continued indefinitely is the wish, I am sure, of every member of our Association.

A. L. HAGER,

President Canadian Fisheries Association.

Convention of the United States Fisheries Association

Atlantic City Staged Interesting Congress of American Fish Trade.

Gardner Poole of Boston, re-elected President.



The United States Fisheries Association celebrated its Third Annual Convention at Atlantic City, N.J. in a manner which justifies the existence of the organization and augurs well for its future expansion and success.

President Hager of the Canadian Fisheries Association, unable to spare the time to attend the Convention as Canada's representative, delegated the pleasure to Vice-President J. A. Paulhus and Secretary F. W. Wallace, of Montreal, and the latter C. F. A. officials were accorded a very cordial welcome by their American confreres.

The Conventions of our sister organization are limited to two days and no entertainment program is provided for the members, but it must not be supposed for a moment that "strictly business" was the order of the day. A considerable amount of territory in matters of "sordid commerce" was covered during the day-light hours and a tremendous amount of social enjoyment was encompassed between the time of sun-down and sun-rise. The Canadian visitors had an excellent opportunity of observing how the downtrodden American business-man rose superior to the restrictions of Mr. Volstead, the "Eighteen Amendment" and similar kill-joy legislation which obtains in the land of the free.

A noticeable feature of the Convention to the Canadians present was the evident desire on the part of the American Association to work in close harmony with the Canadian organization. On numerous occasions it was suggested that many of the problems common to the fisheries of both countries, disputes regarding legislation, etc., might very well be ironed out by the two Associations. "More of that," remarked one American fish man, "would result in satisfactory solutions of problems common to the U. S. and Canada, and would keep the politicians from balling-up things." All the meetings of the U.S.F.A., business or otherwise, were open to the Canadian delegates.

The Convention opened at 10 a.m. on September 16th, in the Breakers Hotel. Over two hundred members were present when President Gardner Poole called the meeting to order. The key (a real one) to Atlantic City was offered to the delegates by the Deputy-Mayor in a welcoming address, and at the conclusion of welcoming and responding speeches, President Poole read a telegram from President A. L. Hager of the Canadian Fisheries Association regretting inability to be present but wishing the Convention and the U.S. F.A. all possible prosperity and success in the name of himself and the Association he had the honor to preside over. Secretary Fred. Wallace of the C.F.A. reiterated Mr. Hager's telegraphed wishes in a few words.

Business reports of various Association Committees were then read—one of the most interesting being that of the President outlining the general activities of the Association. In a good many respects the work done paralleled that of the Canadian Fisheries Association which showed that much depends upon a trade organ-

ization for the development of an industry. The Financial statement showed a satisfactory balance on the right side of the ledger and the activities of Secretary R. H. Osborn received a well-deserved commendation from the members.

Noteworthy Matters Brought Forward.

Kenneth Fowler, of the Fowler Fisheries Co., Inc., and formerly Chief of the Fish Division, under Herbert Hoover's Food Administration during the war, brought to the attention of the industry the danger to the in-shore fisheries by pollution from industrial plants and ships. He stated emphatically that unless such pollution is stopped, the crab, lobster, oyster and other shell-fish, as well as fish which haunt the inshore waters, will disappear from the American table within a few years. The use of oil by ships constitutes a menace to fish life which only British fishermen have so far recognized by active protest. Harbors, rivers and in-shore waters are, in many cases covered with films of oil which destroy floating spawn and poison low tide beaches. The discharges of industrial refuse from mills and chemical plants into rivers and streams destroy incalculable quantities of fish and fish life and deter valuable species from frequenting such polluted areas. Mr. Fowler asked the Government action be taken at once to remedy this evil.

The National Fish Day scheme was endorsed for 1922 and it was suggested that the Committee on same co-operate with the Canadian Association in making the event international and celebrate Fish Day on the same date both sides of the line.

A most interesting address illustrated by posters and statistical charts was delivered by Walter B. Snow, Advertising Specialist. Mr. Snow pointed out the beneficial results of the advertising done by the meat packers and other food purveyors and he declared that the low consumption of fish in the United States was largely due to lack of publicity. A similar address in favor of the motion picture film as a publicity medium was given by another speaker. A valuable paper upon the necessity of advertising fish as a food was prepared by Mr. J. A. Paulhus, Vice-President of the Canadian Fisheries Association and same is published in full in this issue.

Most of the business of the U. S. F. A. is carried out by Committees appointed to look after various interests. No resolutions were presented to the Convention as a whole.

The Banquet.

The Annual Banquet was held on the opening day of the Convention and the guests at the head table with President Poole were Admiral Gleaves, Commandant of the Boston Navy Yard, Representative Bland of Virginia, J. A. Paulhus, Vice-President, Canadian Fisheries Association, F. W. Wallace, Secretary, Canadian Fisheries Association, Dr. H. F. Moore, Deputy Commissioner, U. S. Bureau of Fisheries. Mr. Geo. T. Moon of New York acted as Toast-master.

Mr. Paulhus was the first speaker and in the course of his remarks he pointed out the permanency of the fishing industry as a national asset and as a source of food supply for the people. "There is a limit to all other natural resources," he said. "The timber lands which once covered this continent are slowly being demolished and in many sections are absolutely depleted; the mines in many instances have yielded no further store of minerals; oil supplies are lessening; the grazing lands which maintained great herds of cattle are becoming limited and as a consequence the meat supplies of the future will decrease in proportion. Areas, once fruitful under the farmer's hands, are refusing to yield the crops of early days. But the fisheries as a whole are still capable of enormous development. Some species have been drained to exhaustion but there is still the sea with its countless hordes of food-fish and with a policy of careful conservation the waters of sea and lake will remain to provide food for all time."

In conclusion, Mr. Paulhus said:—

"I wish to thank most cordially the U. S. Fisheries Association on my own behalf, and in the name of the Association which I represent, for the courtesy of inviting our delegation to take part in your proceedings. I can assure you we have appreciated deeply all your friendship and generosity and are hoping that this occasion will tend to unite us more so, and if it is possible, tighten more firmly our neighboring relations."

We have had fishery disputes; we have had cause for friction in the years gone by, but both our sense of justice, love of peace and friendship and tolerance has prevailed, and we have always lived harmoniously and peacefully in the pursuit of our respective aims and objectives.

I am sure our respective organisations will help in the future to avoid all cause of friction between this great country and ours, for the welfare and happiness of our people, and also as an example, or even a lesson, to all the civilized countries of the world."

Rear Admiral Gleaves in addressing the gathering pointed out the value of the fishing fleets to the naval forces in time of war. "The fishing fleets are the nurseries of the Merchant Marine and the Navy. Development and encouragement of seafaring vocations ensured a nation's maritime greatness."

Though stimulating beverages were absent from the tables yet the spirit of forgetting business cares and depression pervaded the guests and the evening was lively with the singing of choruses and popular songs under the able leadership of George Willey of Boston.

Officers Elected.

At the Saturday morning session, the following were declared elected to office for the season 1921-22: President, Gardner Poole, Boston; 1st Vice-President, William A. Meletio, St. Louis, Miss.; 2nd Vice-President, F. Calvert, Seattle, Wash.; 3rd Vice-President, E. Leach, New York; Executive Secretary, R. H. Osborn, Boston; Treasurer, Irving Atwood, Boston. The appointment of directors and other officers, we understand, is in the hands of the Executive.

The Convention adjourned at noon on Saturday.

CONVENTIONALITIES.

Many American cities are making a bid for the next Convention of the U. S. F. A. and every delegate wants it staged in its own home town. Someone suggested Montreal and the idea was received with loud cheers.

The fame of Quebec Province as an oasis appeals to dwellers in the Great American Desert.

Tuneful renditions of Scotch and French-Canadian songs and *chansons* were given by the "string" trio—Messrs. McKenzie, Webster and Bales. Some unkind persons have remarked that the singing was inspired by certain Scottish liquid products imported via French Canada and that the trio's warbling was in the nature of a paean of praise to the toleration of the countries mentioned. This is most emphatically denied. It was merely the "net" result of the meeting of the three "twiners" from Boston, Chicago and New York.

Mr. Dante, the Italian poet who wrote of a trip to Hades, will find himself in the shade if some of the U. S. F. A. delegates should take it into their heads to make an epic poem of their visit to "Paradise." Some of the dusky beauties who performed there could break a snake's back should the reptile endeavour to imitate their contortions.

Mr. George Willey, (of Boston), the Association's choir-master, will not join the Metropolitan Opera as *basso profundo*. He says he can use his talents to better purpose in the fish business.

Was It A Deep-Laid Plot?

When the Convention broke up at Atlantic City on Saturday afternoon, Mr. Russell Palmer, Manager of the "Fishing Gazette", offered his car to transport Mr. George E. Jennings, Mr. W. Turner, Mr. E. O. Sawyer — President, Boston Representative, and Editor of the "Gazette" respectively, and Mr. F. W. Wallace, Editor of the "Canadian Fisherman," to New York. The journalists started out on their journey with Mr. Turner at the helm while Mr. Palmer remained behind.

Mr. Turner, who we believe once featured in automobile racing, livened the trip by a few bursts of speed which caused the passengers much anxiety and trepidation. Then in a lonesome and dreary section of the Barnegat district a front tire blew out and when the motorists started in to repair the mishap they found the hub cap loose and almost on the point of falling off. After recovering from the realization of what might have happened had the wheel jolted from its axle during one of Mr. Turner's "stepping on the gas" acts, the New Jersey mosquitoes got in their fine work and did it well. Two hours delay at a garage and a hotel, saw the party underway again in the dark of the night. Then Capt. Turner lost his bearings having neither chart nor compass and tracked his passengers all over the State of New Jersey. Belated rusties, returning from love trysts in flivvers, "opened her up", with visions of "hold-ups," when Capt. Turner halted his car to enquire the correct course and distance.

The weary travellers arrived at last in a village some 40 miles from New York at the witching hour of 3 a.m. and parked the car and themselves, but before retiring, one of the party alleged that the whole trip was a plot on the part of Mr. Palmer to clean out the "Fishing Gazette" staff and the Editor of a competitor journal that he might keep the reins of piscatorial journalism within his own hands. Such a design is difficult to prove but the indications all point in that direction.

Russell Palmer of the "Fishing Gazette" made a reputation for himself as a *raconteur* of extraordinary versatility. We admit this freely even though it detracts from our own small abilities in that direction. He told us a few that we hadn't heard before, or lately. We noticed, however, that Ned Sawyer, editor of the afore-mentioned journal, had his note-book out and, no doubt, "Fishing Gazette" readers will have the pleasure of smiling over Mr. Palmer's pleasantries—mildly censored. Which same is to be deplored.

Guests at The Breakers and promenaders on the Board Walk were profoundly touched by the farewell accorded one of the Canadian delegates. The departing guest was escorted to his car by a coterie of Amer-

ican friends who gave expression to their feelings by singing "Oh, what a pal was—, etc." While the pathetic wail to "Mary" hardly fitted the occasion, yet the sentiment was well meant and drew tears from the auditors.

There is no truth in the canard that the majority of the delegates deliberately left their wives at home when they heard that the Convention was to be held at Atlantic City. It is admitted that several delegates found pleasure, in giving the bathing beauties the "once over", and why shouldn't they? We only knew one man who took no interest in the free display of feminine charms as seen on the sands in swimming costume. He was blind.

Advertising and Publicity the Main-Spring of the Fish Industry

By J. A. PAULHUS.

Vice-President, Canadian Fisheries Association.
(Paper prepared for Convention of U. S. Fisheries Association.)

At the inception of the organisation of which I am now Vice-President, the Canadian Fisheries Association, we discovered that the fish industry of Canada was in a pitiable plight. I would not say that it was chaotic, but I am sure there was no coordination between the different stages of the industry; no co-operation whatever in the vested interest and the trading end of the product.

It seemed that all our energies, instead of being centralized and concentrated into a reservoir of power and efficiency, were disseminated and lost in the sands of routine, unfair competition and non-productive speculation.

It was a task to even attempt the levelling of such asperities, to straighten such tortuous paths, but we undertook it courageously, resolutely; we have braved many vicissitudes, but at the same time acquired a good deal of experience and I trust you will not deem I am too paternal in saying that, our organisation being a few years older than yours, our experiences may prove of some benefit to you. The fish industry may be comprehensively divided into three parts viz: Production, Distribution, Consumption, but above all the consumption of fish is the dominant factor of the industry. Without consumption, without a steady demand for fish, production and distribution lose their "raison d'être". Consumption is the pivotal point on which revolves and centre the very existence of the fish industry.

To stimulate consumption is to infuse new blood, new life into the organism of the fish industry. It is strengthening its back bone and making it vigorous, healthy and impervious to all the maladies of commercial stagnation and anaemia of depressed and unprofitable trade. If I was to ask you, Mr. Chairman and Gentlemen, why in this wealthy and prosperous United States, the consumption of fish per capita is less than your neighboring countries, perhaps you would answer me that it is due to the law of atavism.

The first settlers that came here were of the Anglo-Saxon race, at least a good proportion of them, and being a race of beef eaters the vast prairie lands so suitable for grazing, for raising meat, have developed to exaggeration the craving for that particular food. I may retort that the same circumstances, the same con-

ditions exist, and have existed in Canada, still our consumption of fish per capita is twice yours.

In the British Isles, the very home of the beef eaters, the consumption of fish is three times as large as ours. Now, we must find another reason to explain the anomaly. *I find it in lack of advertising and publicity.* Advertising will sell anything once, it will not sell it twice if the article is no good, but the fish in this country, like in ours, is a good article and we know it can be sold for all time once it is introduced. The trouble with the fish trade is a want of faith in advertising. We expect fish to sell itself. We don't do enough individual advertising. We ask the public to eat fish, but we don't practice ourselves what we preach to others.

How many men in the trade advertise intelligently and to the point? As a rule the very same method is applied, and originality is lacking. We don't appeal to the taste and to the imagination of the consumer, we advertise our business in a selfish manner and with a certain fear that a competitor might derive some benefit from our publicity. Individually, every man in the fish business should be saturated with the spirit of his trade; he should be able to create an atmosphere of enthusiasm and optimism, and wherever and whenever he has something to say he should always be careful that the subject of which he has the most interest is the fish interest. He should provoke discussion on fish life, fish habits, on fish trade, on the palatability of fish, on the advantages that can be derived from fish food, on the point of its nutritive properties as well as its reasonableness of price, and dilate upon the point that it is an economic and healthy food.

A good way to advertise is to use a catchy sentence as a motto, for instance when advertising some specialties, or some seasonable *primeurs*, one can adopt a motive which give a general sense to the reading matter like;—"Fish is sensible food", "Eat fish and aid in developing our best natural resources", "Fish will keep your nerves steady," "Live economically eat plenty of fish", "Fish is refreshing", "Fish keeps blood cool," "Live economically without tinting yourself, eat fish," etc.

One would think that such necessary foods as flour and meats, would require no advertising. Every-

body uses these food stuffs daily, but if you start to enquire and read the daily papers, periodicals and magazines, you will find that immense advertising is done in favor of these commodities by the millers, bakers, the meat packers, and butchers.

Experience has taught us that present generations will not eat saw dust even if it contains a wonderful percentage of healthful calories. A food to be popular must be tasty and it must be cheap. Fish I claim, combine all the elements all the qualities that will appeal to a sensible consumer.

In the meat line there are but a few varieties. In the fish you have hundreds of different species, whose flavour, whose flesh texture is different and all are appetizing and of a culinary delicacy that can satisfy the most fastidious tastes.

The trouble with a good many of us in the fish business is that we have not enough confidence and faith in the goods we sell. We want the public to patronize us, we want it to eat fish, but we don't eat enough fish ourselves. We are something like the man who owned a cheap restaurant, but always took his own meals elsewhere. If he ate one of his own meals in his own restaurant he would have made himself a living advertisement as to the quality of the food he served and his faith in it as being fit to eat, and he would have impressed his customers accordingly.

I repeat it, no man should engage in the fish business unless he has a genuine liking for fish as a food and eats it often. How can he enthuse upon the palatability and the quality of the product otherwise? No man should engage in the fish business unless he has the faith of the missionary and believes in the preaching of his own Gospel. How can he expect to make conversion if he is lukewarm and indifferent to his own religion?

So my message as an officer of a well established association and experience in selling fish is that advert-

ising and publicity is the mainspring of success in developing the fish trade. Tell the public of the many varieties of splendid food fish they can secure in American markets; tell them of the many delectable ways in which they are cured and the many tasty ways in which they may be prepared for the table. Tell them of the economy of a fish diet and dilate upon its healthful features. In doing this you will be doing your duty to the common cause; you are helping to develop one of the best assets of your country and creating wealth for the comfort and well being of your fellow citizens.

There is a point that should not be lost sight of in publicity and which is a drawing card with the public, is the dependability, the reliability of the fish industry. No other resources possess the same feature. The fact that in years to come the seas will render the same yield in fish life as they do to-day, when other assets will be, if not exhausted, at least impaired in their capacity of production, has a beneficial effect on the minds of the masses and help to increase the confidence in the future and prosperity of the fish interest.

In the matter of publicity, also, I believe that the national Fish Day is the greatest stunt ever pulled off. In this we are getting a whole nation to do something. No other industry could do this. The meat barons cannot organize a National Meat Day and get away with it. Our industry has sentiment behind it. There is the romantic flavour of the sea and rivers, the hazard and gamble of the fishing and the adventure of the fisherman's existence which appeals to the public and makes them take kindly to the idea.

We should make every use of this sentiment to build up the consumption of fish. The fishermen will benefit by the larger market for his fish and the fishery resources will develop to the benefit of the country at large. It will keep men away from crowded cities and the land and give us a seafaring population which is badly needed in both our respective countries.

Fish Imports of Jamaica

Cod.—Jamaica is a fish-eating island, where the mainstay of the food of the inhabitants are codfish and ackee (a local vegetable), rice and peas. An increasing proportion of the cod now coming into Jamaica is said to be pollock. Although pollock is a scaled fish, its flavour is much like cod and is sold as such, but at lower prices than cod. Cod has been entering the island in spruce drums of 448 pounds. But there is an increasing demand for dried fish in 100-pound spruce boxes, because the smaller rural stores find that in this package there is less liability of the fish going bad. Alewives are used as a "change-off" from a cod diet. They come packed

in brine in barrels of 200 pounds. Dried salt fish is graded into three classes,—large (1), medium (2), and small (3).

Canned Fish.—Sardines are said to be first in popular esteem, followed by canned kippered herring, and canned salmon. The sardines imported are largely American and are packed in oil 100 1/4-pound tins to a case. Sardines must be cheap to sell in Jamaica. English kippered herring in tins is in high esteem, and Jamaicans will buy no other. Canned salmon is considered a luxury, and its consumption is much less than the other two species of canned fish.

FISH IMPORTS OF JAMAICA.

Importations in 1920.

Items	U.K.	Canada	U.S.A.	Duty
Alewives . . . . .	.....	£ 19,198	£ 6,646	4s. per brl. 100 lbs.
Fish, canned	£55,490	10,539	44,052	16 2-3 per cent.
Fish, dried and salted	44	195,189	13,450	3s. 6d. per barrel.
Herrings, pickled . . . . .	.....	84,698	742	4s. 0d. per barrel.
Herrings, smoked	204	1,330	790	4s. 0d. per barrel.
Mackerel . . . . .	.....	76,677	3,039	4s. 0d. per barrel.
Salmon, pickled . . . . .	.....	1,998	554	10s. 6d. per brl. 200 lbs.
Total	£55,737	£389,629	£63,273	

Rules and Conditions Covering International Schooner Race



The following is a copy of the Deed of Gift accompanying the Fishing Schooner Trophy:—“*Be it known* that William H. Dennis, representing the proprietors of *The Halifax Herald* and *The Evening Mail* newspapers, published in the City of Halifax, in the Province of Nova Scotia, Canada, recognizing the great importance and value of the deep sea fishing industry to the inhabitants of this Province of Nova Scotia, and realizing the necessity of the best possible type of craft being employed in the pursuit of the industry and believing that this can best be obtained by engendering a spirit of friendly competition among the fishermen of this Province and also with the fishermen engaged in similar methods of fishing in the other Maritime Provinces of Canada, the Dominion of Newfoundland and the United States of America, has donated and placed under the control of Trustees to be named herein, a TROPHY, of which a photograph and description thereof shall be attached hereto, to be known as:

*The Halifax Herald
North Atlantic Fishermen's
International Trophy*

to be sailed for annually under the Rules and Conditions which follow, which may be added to, taken from or modified from time to time to meet changing conditions of the Industry by the Trustees herein appointed or their successors. The said Rules or any modification thereof being always drawn in such manner as to safeguard and continue the intention of the Donors of the Trophy, which is the development of the most practical and serviceable type of fishing schooner combined with the best sailing qualities without sacrificing utility. For the purpose of maintaining this principle the Trustees are empowered to disqualify from all or any competition any vessel which in their opinion is of such a type or dimensions as would contravert the intention of the Donors and such decisions of the Trustees shall be final; the Trustees shall, however, do nothing which will change the spirit of the intention of the Donors, that the competitors shall be confined to vessels and crews engaged in practical commercial fishing.

The Trustees in whom the control of the Trophy is vested are The Honourable The Premier of Nova Scotia, His Worship The Mayor of Halifax, Messrs. H. R. Silver, H. G. DeWolf, R. A. Corbett, H. G. Lawrence, W. J. Roue, F. W. Baldwin, Capt. V. C. Johnson, being Members of the Original Committee; any vacancies arising to be filled by a majority vote of the remaining Trustees, who, in conference with the representatives of the Gloucester Committee in charge of the races held in the year Nineteen Hundred and Twenty, have drawn the following Rules and Regulations, which shall gov-

ern all future races until and unless good and sufficient reason arises for their modification in such manner as the Trustees may consider advisable.

1. This Trophy is being presented by the proprietors of *The Halifax Herald* and *The Evening Mail*, as a perpetual International Championship Trophy, to be raced for annually.

2. All Races for this Trophy shall be under the control and management of an International Committee of Five, which shall be elected for each series of races; the Trustees will nominate the two members of the Committee to represent Nova Scotia, and the Governor of the Commonwealth of Massachusetts, in conjunction with the local United States Committee handling the Race, shall name the two members of the Committee to represent United States. The Chairman of this Committee shall be named by the two members of the Committee representing the country in which the Race is to be held.

3. The Race shall be sailed in the year 1921 off the Harbor of Halifax, Nova Scotia, and alternately thereafter off Gloucester (or a course in Massachusetts Bay to be mutually agreed upon by the International Committee in charge of the Race) and off Halifax, Nova Scotia. The dates on which the Races are to be sailed shall be decided by the International Committee, but shall be fixed so as not to unduly interfere with the business in which the craft are engaged.

4. The only vessels which can compete for the trophy shall be *bona fide* fishing vessels, which have been engaged in commercial deep sea fishing for at least one season previous to the Race. A fishing season for the purpose of these Rules is considered as extending from the month of April to September, and any vessel competing must have actually sailed from her last port of departure for the Fishing Banks not later than April thirtieth in any year and have remained on the fishing grounds in all weather as customary, until the month of September, excepting necessary returns to port for landing cargo and refitting. Fishing Banks shall mean all off-shore Banks, such as George's, Western, Grand, etc., and vessels engaged in shore fishing and making port in bad weather shall not be eligible.

5. The Captain and Crew of each competing vessel shall be *bona fide* fishermen, actively engaged in deep sea fishing, and the number of the crew shall be fixed by the International Committee. A list of the crew of each vessel and substitutes therefor shall be forwarded to the International Committee one week before the Series takes place, and each vessel competing shall be furnished with a copy of the Crew List of the opposing vessel or vessels.

6. All competing vessels shall be propelled by sails

only and must comply with the following measurements and conditions:

(a) Overall length—Not to exceed one hundred and forty-five (145) feet, from outside of stem to outside of taffrail.

(b) Water Line Length, in racing trim, not to exceed one hundred and twelve (112) feet from outside of stem at point of submersion to point of submersion at the stern.

(c) Draught of Vessel in racing trim shall not exceed sixteen (16) feet from the lowest point of the keel to the racing water line, measured vertically.

(d) No Outside Ballast shall be used.

(e) Inside Ballast shall consist of any material of a not greater specific gravity than iron.

(f) Competing Vessels shall race with the same spars, including booms and gaffs (which must all be solid), as are used in fishing.

(g) Competing Vessels must be of the usual type, both in form and construction, sail plan and rigging, as customary in the fishing industry, and any radical departure therefrom may be regarded as a freak and eliminated.

7. (a) The Sails used in racing shall be made of the ordinary commercial duck of the same weight and texture as generally used in this class of vessel and shall have been used at least one season in fishing.

(b) Sails to be used are Mainsail, Foresail, two Jibs, (including Jumbo) Jib Topsail, Fore and Main Gaff Topsails and fisherman's Staysail.

(c) The Total Sail Area, not including fisherman's Staysail, to be no greater than Eighty Per cent (80%) of the square of the water line length, in racing trim, as expressed in square feet. This stipulation not to apply to vessels built previous to the 1920 Races, but such existing vessels shall not increase their sail area to exceed 80% of the square of the water line if it does not already do so.

(d) The Combined Area of the Mainsail and Main Gaff Topsail shall not be more than Fifty Percent (50%) of the maximum total sail area, as provided in the preceding subsection "c".

8. The area of the sails shall be calculated as follows:

Mainsail—By the universal rule for mainsails, with the exception that the "B" of the formulae shall be measured from the after-side of the mainmast to the outer clew iron hole.

Main Gaff Topsail—Universal rule.

Foresail and Fore Gaff Topsail—By the universal rule for actual measurement of the sails used and not a percentage of space between the masts.

Head Sails—Universal rule for Head Sails.

If more than one Staysail or Jibtopsail are on the vessel they must be of the same area and only one can be set at a time.

9. No Ballast shall be taken on or put off the competing vessels during the Series and no ballast shall be shifted after the Fifteen Minute Preparatory Gun is fired before each Race.

10. The International Committee shall have power to arrange all details of the Races in accordance with the Deed of Gift and shall appoint such Sub-Committees as may be necessary to properly carry them out.

11. The Sailing Committee shall be a sub-committee, appointed by the International Committee, and shall be an independent body having no financial interest in the competing vessels. They will lay out the courses for each Series, decide the Course to be sailed for each Race, make the necessary sailing regulations and have them carried out.

12. The Courses laid down by the sailing committee shall not be less than thirty-five or more than forty nautical miles in length and be so arranged as to provide windward and leeward work. The time limit of each Race shall be nine hours. There shall be no handicap or time allowance, each vessel shall sail on its merits.

13. The Trophy shall be awarded to and remain in the possession for one year of the Vessel winning Two out of Three Races over Courses as laid down by the sailing committee each year, and a responsible person or corporation representing the Owners of the winning vessel shall give to the Trustees of the Trophy an official receipt therefor, together with a Bond for \$500.00, obligating them to return the Trophy to the Trustees previous to the next Race, or to replace the Trophy if it becomes lost or destroyed through accident or otherwise; and to return same to the Trustees if it has not been raced for during a period of five years.

14. The Total Cash Prizes awarded in connection with this Race in any one year shall not exceed the sum of Five Thousand Dollars (\$5,000) for each Series and the distribution of the money shall be decided by the International Committee. The money for these prizes to be provided by the Committee representing the country in which the Race is held.

If for any reason there should be no International Competition for this Trophy for any period of five consecutive years it shall be within the power of the Trustees to make such use of the Trophy as they may consider advisable in connection with the development of the Fishing Industry in the Province of Nova Scotia.

In Witness whereof we have hereunto set our hands and affixed our seals this 23rd day of March, in the year of our Lord One Thousand Nine Hundred and Twenty-One A. D.

In the presence of

(Sgd.) W. H. DENNIS,

For the Proprietors of *The Halifax Herald* and *The Evening Mail*.

(Sgd.) H. R. SILVER,

For the Trustees.

AMERICAN ENTRIES COMING FORWARD.

Since the elimination of the schooner "Mayflower", several American fishing schooners have been entered as possible defenders of the North Atlantic Fisherman's Trophy won from Canada by the "Esperanto" last Fall. Entries so far received are schooners "Elsie", "Ralph Brown", "Josephine DeCosta" and "Ellen T. Marshall".

COLD STORAGE SPORT.

The sportsman went for a day's shooting. Not being a particularly good shot, the bag was nil, and as he did not like to return empty-handed, he bought a hare in the town on his way home.

He presented it to his wife, who, after expressing her thanks, thoughtfully remarked:

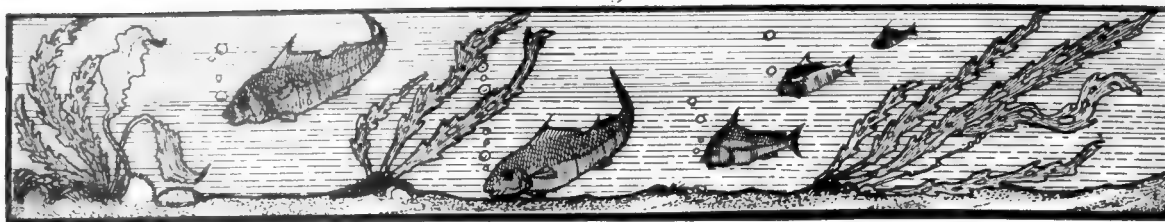
"It was a good thing that you shot that hare when you did, John; it wouldn't have kept another day."

FAINT HEART.

Doris—"I thought you were going to kiss me when you puckered up your lips just now."

Jack—"No—er—it was only a piece of grit in my mouth."

Doris—"Then for goodness sake, swallow it—you need some!"



The Need for Accurate Observation and Accurate Records in all Phases of the Fisheries Industry

By Dr. C. McLEAN FRASER.

(Paper read at 1919 meeting of Pacific Fisheries Society.)

At the present time attention is focussed more definitely on the need for scientific investigations in all branches of industry than it has been at any time previous. In the last five years, scientists throughout the world have met the demands made upon them with such far-reaching results that an appreciation and an interest have been aroused that should be permanent. Some of the industries are taking full advantage of this interest by making use of all available means to bring about co-operation to such an extent that the specially trained men will have at their disposal all the data for carrying on their investigations at hand.

That can scarcely be said of the fisheries industry. It is true that the various fishery interests seem very diverse. Among the fishermen, those who catch salmon are apt to be jealous of those that catch halibut and both of these care to have little to do with those who catch cod, the herring or the tuna fishermen. The trollers have no good will for the gill-netters or the trappers and all of these object to the purse-seiners. Individually and collectively they are not likely to have much further interest in the fish when they are delivered. The cannery man may feel that the man engaged in the fresh fish trade or the handling of cold storage fish has interests antagonistic to his interests. The wholesaler and the retailer have no time to worry over the troubles of the man who catches fish or the man who prepares it for the market. Finally the man who engages in fish culture may have little thought for any of these, provided that he is able to obtain enough fish to supply his hatchery with all the eggs he needs for propagation.

Truly, there is a wide diversity of interests but not so wide after all that a common basis for co-operation may not be found. Whether the individual realizes it or not, it is to the interest of everyone connected with the industry to do all in his power to increase the available supply of, and the demand for, food fishes, provided that increase does not go so far in the case of any species to tend towards its extermination or serious depletion. The number of stock on a stock farm can readily be kept up, increased or decreased by marketing each year, taking into consideration the loss in other ways, a number equal to, less than or greater than, the natural increase. So too, the number of fish of a certain species may be kept up, increased or decreased.

It is not possible to get as exact data on any species of fish as on the stock on a stock farm, but a fair approximation may be made if the life-history of the species is known. Unfortunately almost nothing is known of the life-history of most of the food fishes along this coast and in the case of the few that have been studied, much remains to be discovered. Why is this the case? As long as certain desirable species appeared in such numbers that the number required to fill the

demand could be caught with but little difficulty, few questioned and few cared about the ultimate result of such intensive fishing. An annual increase in the amount of gear used and improved methods of fishing may do much to postpone the day when the depletion becomes so plainly evident that notice of it must be taken. Such startling evidence has come to light only within very recent years and even as yet for very few species. When this stage is reached there is an outcry for regulation and investigation but if there is anything left to regulate, the question becomes a political matter and is bandied about until the practical extermination of the species settles it for all time. The Fraser river sockeye furnishes a case in point.

The only way, as far as I can see, to prevent such a procedure, is for all who are in any way connected with the industry to co-operate in studying the life-history of the food fishes with which they are most directly concerned, and with the knowledge thus obtained as a basis, create a public opinion in the matter of development and conservation that will insure that each species of fish will get a chance to retain normal numbers at the same time that it is furnishing the greatest supply of food consistent with this.

We are not all scientists but all can assist in collecting information concerning fish life. There is no necessity of looking askance at science as something entirely apart from everyday life. Science is simply knowledge obtained by accurate observation from every available standpoint and hence everyone can contribute to such knowledge. It is true that there is always a tendency to get impressions and draw conclusions from insufficient data and hence these conclusions may be misleading or erroneous but there is no reason that such tendency should not be overcome by taking the care necessary for accurate observation and recording only what is actually seen and not what is merely suspected. It is strange what pranks memory plays at times. For instance, almost anyone you meet will profess to be able to tell you what the weather was like a month ago, a year ago, or for a number of years, but the opinions expressed seldom agree with the weather bureau records.

If observations were thus recorded by all those engaged in any way in the industry and collected by men especially trained for collaboration, very much might be accomplished with a comparatively small staff of trained men.

It might be worth while to indicate some of the lines along which information might be accumulated by the various branches of the industry. The fishermen have a large fund of information on which they act more or less subconsciously when they are actually engaged in their work. If even a small percentage of the fisherman engaged in catching each of the commercially valuable fishes were to ac-

curately record the observations they have any chance to make, as to the date of appearance in various localities, the tide, wind, temperature and other atmosphere conditions, under which the best catches are made, the constancy, or lack of it, in size, appearance, etc., during the season as well as in successive seasons, the effect of the presence of such species as killers, sea-lions, seals, sharks, dogfish, the presence or absence of fish parasites on the skin and gills, as well as anything unusual that seems to make an impression on the individual or on the run of fish, what a large body of facts could be collected each year. Every fisherman has a definite impression on these matters but whether or not his impressions are well founded, the expression of them does not carry conviction to others unless he has records of actual dates and numbers when the basis for the impression was obtained. This application is world-wide. The opinion of no scientist is taken to be of value unless he can show the data on which the opinion is based. General statements are of little avail. What would seem a few fish to one individual might seem many to another but if the exact number can be given, comparison is possible. One individual sees a salmon jumping and concludes that the salmon are plentiful in the region. Another is not satisfied that they are plentiful until he can see them in all directions. Hence unless actual numbers are given, the same expression may mean quite different things to different individuals.

From a statistical standpoint, the cannery man, fresh fish dealer, pickled fish man or cold storage man, can keep a valuable record as to dates of various portions of the catch from different locations, nature of the catch, etc., and there is plenty of room to extend this record materially. No one else, as well as he, can obtain data to indicate if any particular area is decreasing in value, since he has, or may have, the catch from this locality for each year for comparison. This is particularly true in the case of anadromous fishes like the salmon, where the periodicity is known. It is an easy matter for him to ascertain the number of fish to the case, barrel, tierce or box, in different areas at different times during the season or in successive seasons. The quality of the fish changes during the season. These changes could be noted with the time that these changes take place.

Here again impressions are of little value unless they are backed up by actual figures that may be considered from a variety of standpoints. The number of cases packed, the number of tierces put up, the number of pounds put in cold storage or sold fresh each year, is of little use in comparison unless with this the number of men and the number of boats engaged, the nature and the efficiency of the gear, and the area fished, is known. In the case of the halibut, for instance, if one were to judge by the amount of the catch alone, there would seem to be no cause for alarm since the amount caught has been well maintained, but when it is realized that the area fished has extended from a small strip off the coast of Washington and Vancouver island until it reaches from Oregon to the Bering sea, with a corresponding increase in the size and in the number of boats and in the efficiency of the gear, while in the meantime the weight of the catch relative to the tonnage employed, has shrunk very materially, the case takes on a different aspect.

The wholesaler and the retailer have little chance to study the life-history of the fish, since he has nothing directly to do with the living fish, but he should endeavor to keep well-informed, since he can, if he will, have much to do with forming public opinion as to what

regulations are necessary to suitably control the supply consistent with proper conservation. For instance there can be no reason why consumers should not be educated as to the time when each species is most definitely in season, so that they should pay particular attention to them at that time and not ask for them when they can only be obtained with difficulty, in the same way as they use fruit or vegetables only on a large scale when they are most definitely in season.

The Fishery officers have many opportunities to obtain information on all phases of fish life and doubtless many of them make more or less use of these opportunities but here again much more use could be made of making records of particular occurrences. These officers may make observations on certain phenomena at the same time as others are doing but since their viewpoint may be quite different, the observations may still be of value. As they come in contact with others engaged in the trade, they have good opportunity to encourage observation in others and such encouragement may be very opportune.

From the fish culturist, possibly, we should expect the greatest results since it is his business to pay special attention to the fish during certain important periods of their life. Fish culture has been carried on now for many years and yet with some species there is little absolute data by which to judge definitely as to its success. Many opinions regarding this have been expressed that may or may not be correct. Many of them are capable of proof or disproof but there have not been enough data recorded to give satisfaction either way. The number of eggs obtained for each hatchery and the number of fish liberated from each hatchery is known but it is not known how many of these eggs would have been hatched out naturally if they had had the chance, nor is it known what percentage of the fry is still alive a week, a month or a year after they are liberated.

It is commonly stated that a large percentage of salmon eggs on the natural spawning beds are not fertilized and artificial spawning is therefore said to be much more satisfactory as then practically all of the eggs are fertilized. I am not aware of any actual experiments to prove this, being recorded* and there is some reason for doubting the reliability of the statement. I have watched herring spawning each year for years and have examined the eggs later and I am satisfied that under normal conditions there is not one in a million eggs that is not fertilized. There is no apparent reason that the fertilization of the salmon eggs should not be at least as efficacious as the herring except when overcrowding takes place on the spawning ground. Furthermore, it has been shown that while it is necessary to pick out unfertilized eggs from the hatching trays, no picking is needed when the eggs are hatched in gravel. It should be possible to get enough definite information to settle the question.

The other important question is concerned with the relative loss in eggs, embryos and fry, in the natural and in the artificial incubation. It is true that eggs, embryos and fry, under natural conditions, are attacked by enemies and many of them destroyed but it is possible that the number is often overestimated. Some of the eggs are eaten before they have time to sink in the gravel but once they are covered there is little danger. Similarly when the embryos are coming to the surface of the gravel, some of them may come pre-

* Since this was written Mr. A. Robertson has conducted experiments and made counts on dog salmon eggs at Harrison Lake and these show that a large proportion of the eggs hatch out naturally.

maturely, when the yolk is yet unabsorbed, and these are in danger of being lost but it is certainly true that many of them are well able to look after themselves when the danger appears. As far as virility is concerned they do not suffer in comparison with the tray hatched fish. Although there is a prevalent impression that the percentage of tray hatched fish and more particularly pond-reared fish that reach the sea is greater than the percentage of naturally hatched fish, an impression that may be a correct one, as yet there is no data definite enough to establish it without any shadow of doubt.

There is much difference of opinion as to the value of the hatcheries in connection with certain species. If their efficiency can be proved, along both of the lines referred to, there would no longer be any basis for opposition to spending time and money to keep them going. If on the other hand it can be proved that more harm than good is being done, the sooner the present methods of fish culture are done away with the better.

This will indicate in a very general way how useful information may be obtained, but unless there is some means of effectively collecting and collaborating the information it will be of little use. Everyone connected with the industry has on hand a fund of information that he considers to be not worth mentioning because it is an everyday matter with him. I have no doubt that if this information from all sources could be collected and correlated, it would go a long way towards the solution of many of our vexing problems.

Better means of publication should be adopted. Trade journals like the "Canadian Fisherman" and the "Pacific Fisherman" offer their space for notes of this nature and State and Federal departments make some allowance for such in their reports but it can scarcely be said that satisfactory encouragement has been given

to those who could readily prepare notes worth while if they were free of the diffidence natural to those entering a more or less unfamiliar field. Governments should take a much more sympathetic attitude towards such than they have done. They should give every inducement to those who can write anything worth while and every facility for publishing what is written if it is worth while. For after all, the printed article that can be examined and criticized at leisure, is more likely to attract widespread attention than the spoken word can ever do.

COLD STORAGE FOR CANADIAN PRODUCE.

The Canadian Government Merchant Marine, Ltd., has provided cold storage facilities on the ss. *Canadian Commander* and *Canadian Leader*. In these ships, each of which is 8,400 tons deadweight, the refrigeration space is situated 'tween decks, allowing a total of 11,332 cubic feet of cold storage, which is divided into four compartments, provided with doors opening outwards into the cargo hatch. The temperature of each, compartment can be separately regulated. The *Canadian Victor* will next be taken in hand. For the present these ships are employed on the run between Montreal and the United Kingdom.

CONSISTANT PERFORMANCE.

Shoeless, he climbed the stairs, opened the door of the room, entered, and closed it after him without being detected. Just as he was about to get into bed his wife, half-aroused from slumber, turned and sleepily said:

"Is that you, Fido?"

The husband, telling the rest of the story said:

"For once in my life I had real presence of mind. I licked her hand."



Canadian Fish Plants--No. 5.



Crewe Bros., Fishery,
Merlin, Ont.
A Lake Erie Plant.

St. Pierre & Miquelon

Some Facts Regarding The Administration Of The French Islands.

By COLIN McKAY.



St. Pierre and Miquelon have again been raised to the dignity of a French possession entitled to a governor. An announcement to this effect was recently made by Albert Saurrant, Colonial Minister of France.

For years prior to 1906 France sent out a governor to these islands in the Gulf of St. Lawrence; and the governor had considerable powers and invested his office with some pomp and circumstances. In February 1906 the French government decided to abolish the office of governor, and appointed a functionary called an administrator who was charged with the exercise of the powers formerly vested in the governor. This change in the French political establishment was dictated by the financial crisis which visited the islands following several years of poor fishing. It became necessary to reduce the cost of the government of the Islands, and a Governor was more expensive than an official with the title of administrator. At that time, the government of France had temporarily lost interest in the fisheries; apparently it was so pre-occupied with African adventures that it came to attach little importance to the petit archipelago in the Gulf of St. Lawrence, the last outpost of France on a continent over which she once exercised wide dominion. The metropolitan government did little to help the islanders, and the population felt off in a few years from 6,482 to 4,209.

In spite of the apparent apathy of the government of France, fishing vessels from Brittany and Normandy continued to make St. Pierre a base of operations, and the native fishing industry recovered from the depression and began to extend its proportions. In the five years from 1907 to 1912, 800 vessels a year on the average used the port of St. Pierre. These vessels, metropolitan and colonial, carried crews of about 12,000 who received in the form of bounties 500,000 francs annually on account of the cod taken. In 1912 France exported nearly 25,000,000 kilos of fish, mostly cod taken by vessels making St. Pierre a base of operations and in this exportation the government of France paid vessel owners and merchants bounties amounting to about 4,000,000 francs. In addition France imported from St. Pierre nearly 600,000 kilos of roes, on which a bounty of over 100,000 francs was paid.

Before the war the French government was showing a new interest in the fisheries, and projects to augment the usefulness of St. Pierre as a fishing station were under consideration. But when the Kaiser's legions took the path to war, France had other matters to occupy her attention.

After the war the French government faced the fact that the cattle herds had diminished, and attention was per force directed to the problem of developing the fisheries and thus assuring the alimentation of the people. The government was authorized to spend 200,000,000 francs, and some rather grandiose projects to help the fisheries were formulated on paper. But the government was unable to find the money which the Chamber of Deputies voted, and many of the projects are still in abeyance. However, St. Pierre and Miquelon have been provided with large cold storage plants,

and other equipment essential to the efficient exploitation of the fisheries, and an improved transport service between St. Pierre and France has also been in operation during the fishing season. With the improvement in the technical and economic affairs of the islands, it has been deemed advisable to add an improved political order, and appoint a functionary of high rank to take charge of the local administration. The reestablishment of a governor at St. Pierre may not of itself be of capital importance, but it is significant as an indication of the French government's interest in the development of fisheries, and of its determination to make the most of the strategic position of St. Pierre and Miquelon, which are in close proximity to St. Pierre and Quero banks and within 48 hours sail of the Grand Banks of Newfoundland. Apart from the traditional and sentimental importance which attaches to the office of governor, such a functionary brings a new dignity to the islands, and introduces a new element in the relations of St. Pierre and Miquelon to the governments of Canada and Newfoundland.

SOUTH AFRICAN IMPORTS OF PRESERVED FISH.

The Union's total import of preserved fish during 1920 reached the large amount of 12,880,249 pounds. The heaviest import of any previous year was 8,000,000 pounds, and the average annual amount was 6,000,000 pounds. Canada shared to a substantial degree in the trade, reaching her previous best record with 1,157,551 pounds; the United States more than doubled her 1919 figures, shipping 3,427,813 pounds; while the United Kingdom, which in 1919 only shipped 885,322 pounds, reached a total of 4,446,562 pounds. Norway, which is now offering strong competition in a number of lines, brought up her 1919 total of 414,860 pounds to 2,504,327 pounds in 1920. Portugal has held a steady position in this market for some years past, and last year again reached her pre-war average with 843,130 pounds. France, Spain, and Japan, in the order named, continue to share in smaller degree. Germany and Belgium which formerly shipped in fair quantities, are not yet attempting to recover their position.

At present stocks of preserved fish are very heavy, and offers are continuous from all sources of supply. The Canadian product has however established itself here in a very strong way, principally owing to the energetic representation, not only of salmon exporters, but also of exporters of haddock, herring sardines and other varieties. There can be no question as to the future of Canadian trade under this heading if Dominion exporters will remember that they are now competing with a world-wide market of supply. It may be of interest to Canadian packers and exporters to know that many Norwegian canneries are grouping together and organizing world-wide sales campaigns. Such campaigns include better facilities regarding settlements than are being offered by British, American, or Canadian houses, and "consignment stocks" have frequently been intimated. The export sales managers of three or four such groups have visited South Africa within recent months.

A small shipment of preserved fish from Canada is also recorded under the South West Africa Protectorate import returns. In dried and cured fish the Union imports for last year totalled 2,808,272 pounds, of which 2,026,167 were shipped from the United Kingdom. Both in regard to the total quantity and to the United Kingdom's share, these figures do not yet approach the average pre-war totals. With the exception that France has not shipped since 1915, the sources of supply have remained the same for some years, Holland, India and Norway following the United Kingdom as the chief countries interested. Efforts have been made by Canadian exporters year by year, but do not appear to have resulted in any definite trade. The 1920 import total was only 701 pounds. Trade inquiries from two sources recently went forward in regard to fish products under this heading.

Fresh and frozen fish imports show a total of 3,258 pounds in the year under review, the amount being divided between Canada, with 1,693 pounds, and the United Kingdom, with 1,565 pounds. It is not possible that the total under this heading will largely increase in the near future.—Trade Commerce Bulletin.

BRAZILIAN MARKET FOR CODFISH.

Codfish is one of the principal articles of food in the Bahia district of Brazil, and there is therefore an excellent demand for it in the vicinity. During the past five years the value of the codfish imports has been greater than that of any other commodity states the *U. S. Commerce Reports*. The following figures, show the quantities and values of codfish imported into Bahia during the past three years:—

	Pounds	Value
1918	15,426,422	\$2,160,303
1919	11,673,818	2,177,427
1920	15,755,298	2,500,000

PACKING FISH FOR ARGENTINA.

Dry salted codfish should be shipped in oblong boxes containing 110 pounds, tin-lined and hermetically sealed. It is possible that tin lining is not required for the trade with Brazil but for Argentina it is indispensable. The last consignment to reach Buenos Aires consisted of eight cases; it was some 60 days in transit and was found to be almost unfit for consumption five days after clearing. Codfish or any other dry salted fish must be protected from damp.



The United States Tariff

No Necessity For Canadians To Wear Grape Yet.

By PISCATOR.



While we are all naturally exercised over the prospect of the Fordney tariff measure becoming law in the United States, it is too early yet to put on mourning bands or make any funeral purchases. Judging by recent utterances in the United States it is highly improbable that any permanent tariff law will be enacted this year, and there are indications that when the new tariff law does eventually become an established fact it will be stripped of many of the ominous features which characterize the bill in its present state.

The Fordney measure as presented to Congress was reputed to be based on scientific computations. There was no guess work about it. Now it develops that it is very far from ideal and the United States Government is aware of the fact. It is absolutely impossible at the present time to construct a scientific tariff wall because the very basic conditions on which a tariff is built are uncertain as quicksand. Either it must be left until conditions settle or the process of construction must be slow and careful so that its effect may be studied.

The two basic facts entering into the creation of a tariff are, first, the cost of manufacturing in European countries as compared with United States, and second, the value of the currency of European countries in relation to the value of American money. Neither of these can be computed accurately today and fluctuations are so frequent and so violent that such a computation would be worthless.

Will Hays, Postmaster-General in the Harding cabinet, makes the official declaration that the tariff question is dead for this year. In a speech he prepared for delivery in Cleveland he states with reference to difficulties I have referred to above: "A dependable tariff built upon such a foundation is difficult, of course. It has been thought by many that we could overcome these handicaps by a device which we called American valuation, which provided that all customs duties should be estimated upon the value of goods at the time when

they arrive in the United States and in terms of American money. Looking carefully into this it has been thought that the device might not overcome the handicap and further, might have a boomerang effect on our own interests."

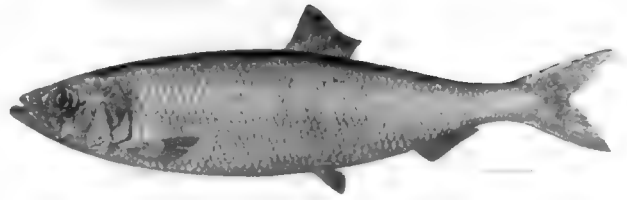
"The end of it has been that we have appropriated \$100,000 to investigate this device and otherwise determine what might be done to help us write a permanent tariff."

The United States Chamber of Commerce and the most prominent bankers and business men of the country have long before this pointed to the fallacy of America—a creditor nation—creating a tariff wall which would keep American ships from carrying return cargoes.

The meaning of Will Hays' speech is simply that the administration will write a permanent tariff bill to protect industries that need protection, but it will not commit itself to a blanket policy that will keep out imports. It will try to bring in a tariff to encourage imports that ought to be encouraged, and discourage the kind that may ruin American industries.

Since prominence has been given to the provisions of the Fordney measure affecting fish and fish products, and agitation has developed among fishing interests all over the United States to have fish exempted, or the duties greatly modified. United States needs dried fish, for example, and the imposition of a tariff means only an added burden to the consumer. Generally speaking, the United States needs all the fish she has been buying from Canada and we are not injuring any American industry. From the west coast, from Chicago and from New York and Boston comes advice that the fish duties are being strenuously opposed. In view of the administration's latest policy of protecting only industries needing protection there is reason to hope for more generous consideration of imports of fish and its products.

Interesting Facts About Sea Fishes—The Herring



The quest for the herring constitutes one of the important branches of our extremely diversified fishing industry. More than 2,056,680 cwts. of herring were landed last year on our Atlantic and Pacific coasts, with a first hand value of \$2,255,506 and a marketed value of \$3,337,738. No other fish were captured in such abundance, the cod, generally believed to be the most prolific, falling some 75,000 cwts. short of the herring catch. From the standpoint of value it gave place only to salmon, lobster, cod and halibut.

The common herring (*clupea herangus*) is beyond question, says D. S. Jordon, the most important of food fishes in the Atlantic, if not in the world. Distributed as it is throughout the whole of the north Atlantic it affords occupation to many thousands of fishermen. An estimate made by Prof. Huxley places the world's annual catch at three billion fishes or half that number of pounds, and some authorities place it even higher. But even three billion is probably no greater than the number contained in a single shoal if it covers half a dozen square miles, and shoals of much greater size are recorded. Professor Huxley says that there must be scattered through the north and north Atlantic at one and the same time scores of shoals, any of which would go a long way to supplying the whole of man's present-day consumption of herring.

The herring is found in the colder waters of the north Atlantic. It has been caught on the American shore as far south as Cape Hatteras, but it seldom prevails in abundance south of New England. It very seldom takes to brackish water, and it spawns in the open sea, the female depositing from thirty to fifty thousand eggs. Unlike most fishes the herring is regarded as particularly delicious at spawning time and the most successful herring fisheries are prosecuted when the fish are in full roe, that is, ripe in eggs and in milk.

On the American side of the Atlantic the herring fishery is entirely a shore fishery. With the exception of a few occasionally taken for bait by the line fishermen on the banks, our herring are all caught in the immediate vicinity of the shore. Although the fishery on this side of the ocean has not assumed the importance it has long held in Europe, there is no doubt that the species obtains in as great abundance immediately off our shores as in the North Sea and European Atlantic. Our fishermen, however, never found conditions sufficiently inducing to invest in special equipment to fish off shore. The Fisheries Department, Ottawa, conducted experiments in 1915 and 1916 which seemed to indicate the prolificacy of herring in the St. Lawrence and Atlantic, and of a class adapted to "Scotch" curing, which is popular in the American and other markets. Generally speaking, the inshore fish are not suited for this cure. The herring fishery on our Atlantic coast extends from Newfoundland to Cape Cod, while the stretch from the Bay of Fundy southward is practically a continuous fishing ground.

The fishery is carried on chiefly by means of brush-

weirs, gillnets and torching. The brush-weir is a wall of brush which diverts the course of the fishes, and leads them into a pound. The torching method is most primitive, and is employed only after the water has become cool. An oil torch—formerly a birch bark torch—is fixed to the bow of the boat, which is rapidly rowed through the water. The fishes rise toward the light as long as the boat is in rapid motion, and a man standing at the bow scoops them in large quantities with a dip-net.

The herring food consists of small animal organisms, chiefly two small crustaceans, known in the vernacular as "red seed" and "shrimp." It has a great host of enemies, including cod, haddock, pollock, hake, dog-fish, albacore, squid, porpoise seal and the finbacked whale, each of which is very destructive.

Approximately two-thirds of our sea herring are produced on the Atlantic coast, where they are mostly pickled and smoked. The latter are known on the market as "kippered" herring or "bloaters," if they are unsalted and half dried in the smoke-house. A comparatively small quantity is canned.

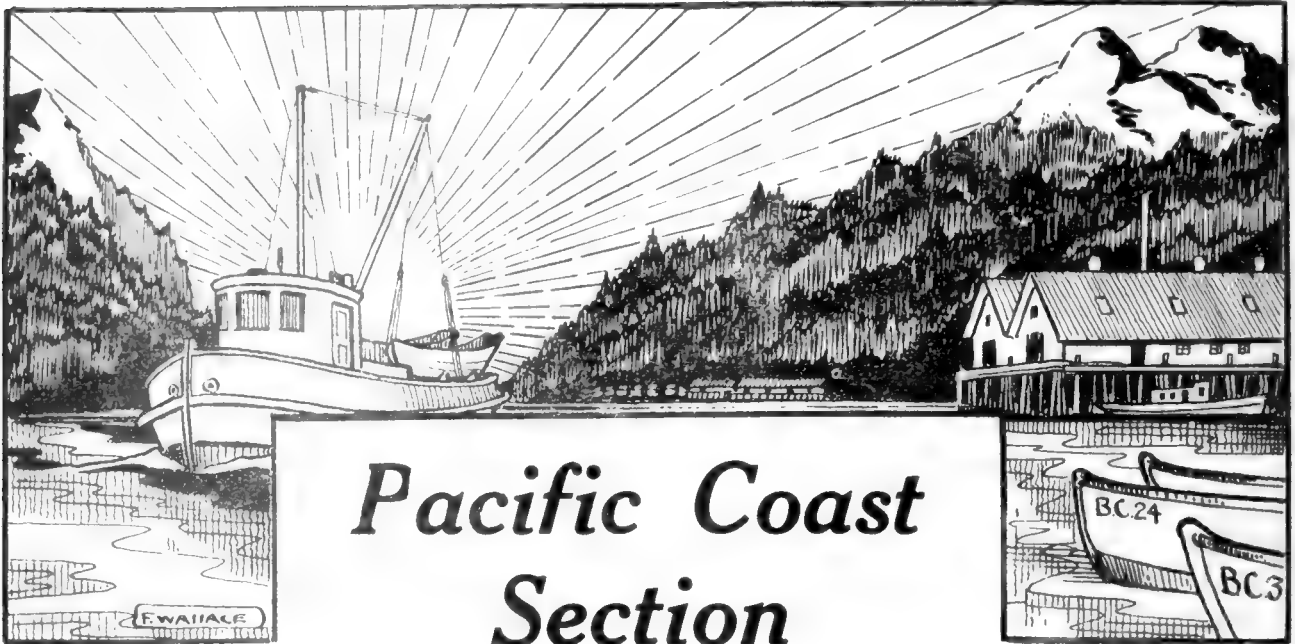
On the Pacific coast there is another herring very similar (*clupea pallasi*) which prevails in great abundance about Vancouver Island. An indication of its prolificacy in this zone was brought to light in a recent case before the Admiralty Court at Vancouver. Ira C. Epperson, master of a boat, is declared to have stated that 150 tons—300,000 pounds or a good-sized fare for a steam trawler operating on the Grand Banks—had been taken in one haul of the seine on board the craft, and that frequently the catches were so heavy that one end of the net had to be released to dump one half the catch into the sea.

Pacific herring is mostly dry-salted and shipped in boxes to the Orient where an extensive market has been developed for it. A small quantity is canned, but the proportion of the pack treated in this way is increasing each year.

It is very striking that exceedingly small amounts of the Atlantic and Pacific herrings are used fresh in this country, despite the fact that they rank high in food value and palatability. They are obtainable in abundance all the year round—from the Atlantic coast during the months of May, June, July, August and September; and from the Pacific coast during October, November, December, January, February and March.

The herring, in addition to being an important food in itself, is instrumental in the capture of other important sea fishes. It is the chief bait used for the capture of cod, haddock, lobsters and halibut on the Atlantic and halibut on the Pacific. Large quantities are put in cold storage each year to provide bait for the season when they are less readily available.

No reference has been made in this article to the young herring canned extensively along the Atlantic coast as "sardine," nor to the fresh water herring of our lakes. Each of these is of sufficient interest to be considered separately.



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd. 528 Winch Building, Vancouver, B.C., Canada.

THE CANNED SALMON MARKET.

What there are left of sockeye halves are being held at \$20 unlabelled. There are not many unsold. Other red meated varieties are being held for good prices. These vary to such an extent that there is not much use in quoting prices. The lighter colored varieties are in good demand this season. All the old pack of half pound chums are cleaned up and many sales are being made of new pack pinks and chums.

Every steamer from the U. K. and the continent are taking heavy shipments of canned salmon.

According to all reports there will be a very good clearance of all varieties during the next two months and as far as stocks on hand are concerned there will be comparatively few left by the end of November.

Although stocks will be much reduced it will be at a sacrifice to the canners as no one is making a profit this season. Many companies have been operating only a part of their plants and this means idle capital and to such an extent that the debit side of the ledger will show up heavy for the larger companies in particular. Some of the smaller companies may not show so badly but there will be no profit to the canners this season.

VERY FEW CRAYFISH ON VANCOUVER ISLAND.

Some two months ago the question was asked your correspondent if it was known whether there were commercial quantities of crayfish in the lakes on Vancouver Island. The Fisheries Department now reports that although there are crayfish in Shawinigan Lake they are not there in commercial quantities.

FISHMEAL AND OIL REFINING PLANT BURNED AT NANAIMO B.C.

The most up to date fish meal and oil refining plant in British Columbia belonging to the Nanaimo Fish

Meal and Oil Refinery Limited, at Brechin, Exit Channel, near Nanaimo, B.C., was practically totally destroyed by fire on the morning of August 30th. Only one boiler of all the machinery was saved or rather did not fall into the water. All the other machinery dropped into the water as the supports were burned away. A considerable quantity of oil was also destroyed.

The loss is estimated at about \$50,000.

DOMINION FISHERIES CRUISER "GIVENCHY" GOES AGROUND ON BRITISH COLUMBIA COAST. CHART SHOWED 30 FATHOMS.

The Dominion Fisheries cruiser "Givenchy" in charge of Capt. F. C. Laird and having on board Dominion Hatcheries Inspector C. W. Harrison, and Mr. Ralph Mereer struck an uncharted rock at the entrance to Raven Cove, Shatfield Island near Bella, B.C. on Saturday, Sept. 3rd.

The "Givenchy" struck at high tide, and when the tide receded she was resting at an angle of about 45 degrees with her stem in the air. When the tide came in she filled and at high tide only her forecabin and foremast was above water. The crew were not in danger at any time and camped on shore. When the C. P. R. steamer came along on Sunday afternoon, word was sent to Vancouver, and the Vancouver Dredging and Salvage Co. steamer "Skookum" was sent to the scene.

The diver for the Salvage Company upon arrival at the scene made an examination but found no holes and only a few dents in the bottom.

The "Givenchy" is a steel boat, having been one of the large class of mine sweepers built for service out of Halifax and other Canadian ports on the Atlantic during the war. The "Givenchy" is one of three boats

sent to the British Columbia coast in 1919 and placed in the fisheries service. The other two are the "Armentieres" and the "Thiepvall".

It is expected she will require very little if any repairing.

SMALL PACK OF CANNED SALMON IN BRITISH COLUMBIA FOR 1921.

The pack of salmon of all kinds in British Columbia this year is small. The Dominion Fisheries Department have made the following estimate and the pack of fall small fish after September 3rd will be so small that it will not affect the estimate here given to any extent:

The Fraser River and Howe Sound:—	
Sockeyes	33,819 cases.
Red spring	9,584 cases.
Pink spring	379 cases.
White spring	1,929 cases.
Bluebacks	1,422 cases.
Cohoos	1,485 cases.
Pinks	4,103 cases.
Chums	4 cases.
Total	52,725 cases.
Skeena River:—	
Sockeyes	40,100 cases.
Springs	18,540 cases.
Steelheads	300 cases.
Cohoos	21,180 cases.
Pinks	112,900 cases.
Chums	500 cases.
Total	193,520 cases.
Naas River:—	
Sockeyes	9,250 cases.
Springs	2,400 cases.
Steelheads	77 cases.
Cohoos	4,500 cases.
Pinks	28,300 cases.
Chums	2,000 cases.
Total	46,527 cases.
Rivers and Smith's Inlets:—	
Sockeyes	46,542 cases.
Other varieties	5,943 cases.
Total	52,485 cases.
Outlying districts:—	
Sockeyes	29,082 cases.
Other varieties	34,175 cases.
Total	63,257 cases.
A grand total for the province of	408,514 cases.

AMERICANS GET LARGER SHARE OF SPRING SALMON ON THE WEST COAST OF VANCOUVER ISLAND.

It is estimated that the American buyers of spring salmon secured close to 75 per cent of the catch on the West coast of Vancouver Island—being able to furnish gasoline and distillate at a lower figure than the Canadian buyer and paying prohibitive prices.

There is no doubt the American buyers were anxious to secure all they could for their mid cure pack and for that reason were able to pay more than the Canadian buyer who was buying for the fresh fish market.

VANCOUVER WHOLESALE FISH MARKET.

There is quite a plentiful supply of all kinds of fresh fish on the market at the present time.

Halibut.—Are arriving fairly plentiful and are selling at 10 to 14c.

Salmon.—The run of cohoes has just begun to help the fresh fish market, and prices are 10c per lb., heads off and 8c per lb. heads on.

Cod.—The supply of cod is increasing as the fishermen drop their salmon fishing and turn to the cod again. The price just now (Sept. 10) is 8c per lb. for local caught fish.

Herring.—Point Grey had a little increase in the catches during the past week ending Sept. 10th, but there is no large supply looked for.

Smelts.—Local caught fresh silver smelt are off the market and the supply is now coming in from Bellingham, Wash.

Soles.—With fewer salmon nets to contend with and the tides and temperature of the water getting better all the time the sole trawlers should be bringing in larger catches right along now.

The London Fish Co. report that fresh smoked Point Grey kippers are in great demand just now as the weather has cooled. They are also having a big call for smoked filleted halibut, smoked filleted cod and local boneless salt cod.

Kippers are 10c per lb., and smoked filleted halibut 15c, smoked filleted cod 15c, and local boneless salt cod 15 $\frac{3}{4}$ per lb.

Crescent Oysters and Pacific Coast native oysters are now on the market.

INDEPENDENT HALIBUT BOATS, BRING CATCHES INTO VANCOUVER.

Vancouver is having a lot of halibut brought in by independent halibut fishermen. The most of these catches are being bought by the New England Fish Co., and the Canadian Fishing Co., Ltd. A few are sold to local dealers and the Canadian Fish and Cold Storage Co., Ltd., but the last named company buy most of their fish at Prince Rupert where their headquarters are.

HALIBUT BOATS THAT WERE ON LAY NOW CARRYING SALMON.

The Canadian Fishing Co., Ltd. halibut boats that have been fishing on a lay all the summer are now carrying salmon as the fall salmon season is now on. These boats all did very well while the summer season was on.

SHORTAGE OF CANNED SALMON LOOKED FOR.

With the poorest run of sockeye that has been experienced for many years, and practically none of the poorer grades of salmon being packed there is a strong feeling amongst the trade that before the winter is over there will be a shortage in the latter named variety of canned salmon. Even with this feeling in the air the packers are not packing the fall fish except in one or two instances, and then only for orders that have been taken. This will mean that every tin of chums and pinks will in all probability be cleaned up.

Mr. James E. Eckman, Asst. Manager of the Canadian Fishing Co., Ltd., is now convalescent after a very severe attack of Flu. At one time Mr. Eckman's condition was very critical. All his friends will be glad to hear that he is now on the road to recovery.

ORIENTAL SALT HERRING.

Just at this writing there is a very poor prospect of there being any large pack of salt herring for the Oriental market. The tentative offerings of buyers is very low in comparison with the cost of production and therefore the firms that are watching the market do not see any profit in sight under present conditions. Salt is still high and the cost of lumber for boxes does not look to be much lower, rather there is a talk of higher prices. Labor is not dropping and for this reason the buyers have got to firm up some on their prices if they expect to get the firms that are in a position to start their plants when the time comes.

The writer cannot help stating again that there is only one successful way to work out a fair profit for all concerned and that this is to have same central selling agency to handle the entire output at one price and to have one uniform pack. The buyers of the oriental pack are as shrewd as any buyers in the world and only by having some system to the selling end will there be a profit for all concerned.

DOMINION FISHERIES DEPARTMENT. BRITISH COLUMBIA NOTES.

Chief Inspector Maj. J. A. Motherwell in company with Mr. John P. Babeock, Asst. Commissioner of Fisheries for British Columbia, went on an inspection trip to the Fraser River watershed during the first part of September. The spawning grounds in Quesnel district were given particular attention. Since his appointment to the position of Chief Inspector of Fisheries for British Columbia under the Dominion Department, Maj. Motherwell has made it a point to work in conjunction with the Provincial Department whenever possible and there is no doubt that the Provincial Department reciprocates as is evidenced by this joint trip of inspection.

Chief Engineer John McHugh has been a busy man all the past season and an enormous amount of clearing of streams has been done under his directions. During the first part of September a log jam was cleared on the Salmon River, and also clearing of Cowichan River has been in progress.

The government airplane has been made to do a considerable amount of week-end inspection on the Fraser the past season and one or two cases of infraction of the rules and regulations pertaining to the close season at week-ends were noted and prosecutions successfully carried out. Besides this several trips of inspection were made to Vancouver Island Hatcheries which saved a lot of time and expense. It is hoped that a more general use of the airplane service will be made during 1922.

Asst. Chief Inspector Fred Harrison is a mighty busy man when the Chief is away (that's not saying he does not keep going when the Chief is at home), and at the same time his genial smile and welcome is always there when you call on him.

Saw Deputy Halliday from New Westminster in the office when I called and by the way the same deputy has no bed of roses when the salmon are running on the Fraser. However he has had that district for some years now and has many friends.

With a few exceptions practically all the salmon canneries in the Northern part of British Columbia were closed down by the 10th of September. A few are canning a few cohoes but not to any great extent. Most of the crews are now back in Vancouver.

CUSTOMS REGULATION WILL HELP AFTER OCTOBER 1st

5 (1) The Customs Tariff, 1907, is amended by inserting the following section immediately after section twelve thereof:—

“12a That all goods imported into Canada which are capable of being marked, stamped, branded or labelled without injury, shall be marked, stamped, branded or labelled in legible English or French words, in a conspicuous place that shall not be covered or obscured by any subsequent attachments or arrangements, so as to indicate the country of origin. Said marking, stamping, branding, or labelling shall be as nearly indelible and permanent as the nature of the goods will permit.

Provided that all goods imported into Canada after the date of the coming into force of this section which do not comply with the foregoing requirements shall be subject to an additional duty of ten per centum ad valorem to be levied on the value for duty purposes and in addition such goods shall not be released from Customs possession until they have been so marked, stamped, branded or labelled under Customs supervision at the expense of the importer.

Provided further that if any person shall violate any of the provisions relating to the marking, stamping, branding or labelling of any imported goods, or shall deface, destroy, remove, alter, or obliterate any such marks, stamps, brands or labels, with intent to conceal the information given by or contained in such marks, stamps, brands, or labels, he shall be liable on summary conviction to a penalty not exceeding one thousand dollars, or to imprisonment not exceeding one year, or to both fine and imprisonment. The Minister of Customs and Inland Revenue may make such regulations as are deemed necessary for carrying out the provisions of this section and for the enforcement thereof.

(2) This section shall come into force on the 31st day of December, nineteen hundred and twenty-one.

CANNED SALMON TO BE MARKED WITH COUNTRY OF ORIGIN.

Canned salmon or other canned goods from the United States or other countries must bear the name of the country or origin after the 31st day of December. The date this act was to have gone into effect was October 1st, but owing to strong representations by leading importers the date was put ahead to December 31st. The act includes the United Kingdom, British Colonies and British Possessions.

THE VALUE OF AMMONIA IN REFRIGERATION.

A Few Words Regarding a Canadian Industry.

Mighty oaks from little acorns grow, so important business is the result of a small beginning.

We have here in Canada a business with which perhaps few people are acquainted and yet it has a large bearing on the supply of their daily food both in season and out of season, particularly out of season.

If it were not for artificial freezing and mechanical cold storage, how would the majority of people have fresh fish and meat from long distances on their table, and how many would have an egg for breakfast when the hens are not laying?

When we have had an open winter like that of 1920-21, during the following summer there would be considerable suffering for lack of ice and quantities of food stuffs would be spoiled at a heavy loss.

The artificial freezing of ice and mechanical refrigeration are made possible by the use of Ammonia and we now come to our subject.

Ammonia is a resultant product of carbonization of coal, and in Canada the principal point of manufacture is Toronto, where is manufactured an Anhydrous Ammonia which is recognized as a standard for quality and the business has been sufficiently developed to supply Canadian requirements, *eliminating the necessity of importations from other countries*. Canada also exports Ammonia to many colonies and foreign countries, which speaks well for the quality of the Canadian product. It becomes a duty to Canadian users of Ammonia to *continue patronizing home industry* for the benefit of the Country, the people, and in fact for their own benefit, and especially under present adverse trade conditions.

Ammonia was used to a considerable extent in the manufacture of explosives, which during the past few years has caused a shortage, but we learn that the manufacturers in Canada (like in no other country), were able to keep everyone supplied in a most satisfactory manner, and with almost superhuman efforts met the unusual demand, which our Ice Manufacturers, Cold Storage Plants, and Fish Freezers should appreciate and continue to use *Ammonia made in Canada from Canadian raw materials with Canadian Labor*. They should support an industry which has performed invaluable service in the past, and by doing so, they will keep alive an industry which *at its best has but a limited field of consumption* in comparison to the adjoining United States. It is therefore to your interest to patronize a reliable home industry and thereby also help yourself.

Gumming Up The Sockeye Treaty

Political Expediency the Altar Upon which Good Business and Commonsense Are Sacrificed.

By PISCATOR.



When one regards the methods adopted in the handling of public affairs, not only in this country, but outside as well, the question continually suggests itself: Are the people getting a square shake? Is it not possible to devise some progressive system of government which will call for the application of strict business principles; under which decision shall be reached solely upon the merits of each individual case and without consideration of external or "political" influences, which today are the guiding factor? Is it the fault of the system or is it the fault of our leaders that important national affairs should be hopelessly "souped" up with politics with the result that action is deferred or neglected? To obscure an issue by petty irrelevancies may be clever politics, but from the viewpoint of the public it's dammed rotten business. If a farmer government were returned at Ottawa could we hope for a business administration such as would qualify to manage the affairs of a big industrial organization—not in ability, for we expect that, but in honest, businesslike application of ability?

This lethargic arrangement which is now in vogue, this system of doing business on the basis of political expediency, is all the more galling when one's pet topic is the victim. And, incidentally, this particular case is a striking illustration of the fallacy of superfluous red tape and involved procedure. It illustrates how the system becomes unwieldy and makes commonsense administration difficult.

I believe it was shortly following the rock slide in the Fraser river in 1913 that the agitation began for the conservation of the Pacific salmon—the sockeye, of course, being the chief worry. As the fish are captured in American waters by American fishermen before they reach our waters to ascend the rivers of British Columbia to reproduce, any scheme of protection must obviously be international in character. We Canadians could not ourselves enforce effective protective or restorative measures, nor could our neighbors, because of the fear that one or the other would take advantage of the one-sided abstention. The paradox exists in that the people of the north Pacific states of the American union realize that strict and immediate measures are necessary to conserve the supply, and our

fishermen of British Columbia are equally alive to the urgency of the situation. Our authorities at Ottawa see it, and apparently those at Washington, too; but the machinery to bring about international co-operation is so involved, the vital issue so hopelessly enmeshed in red tape and the various "authorities" so bent on hair-splitting and diplomatic niceties, that no check is yet being placed on the ruinous destruction of the fish nor effort made to restore the supply.

The Sockeye Treaty of 1918, approved by Ottawa, has not been approved at Washington, and a recent press dispatch stated that President Harding would likely take it out of the hands of the Senate and pigeon-hole it. And thereby hangs a tale.

This treaty provided for the protection of the species in Pacific waters, and its provisions gave promise of revitalizing the fishery. Washington's refusal to sign the treaty is not to be interpreted as a denial that its provisions were necessary or desirable. No. It was merely a question of conflicting jurisdictions. The State of Washington maintained that Congress had no right to make legislation respecting her state fisheries. So despite the urgency of the situation, the hands of Congress were bound by the boa constrictor of public business——red tape.

That is the situation on the American side. Now on our own. Whereas the state government of Washington has control of the local fisheries, the fisheries of British Columbia are controlled by the Canadian federal government. So there we have the quandary. Ottawa cannot deal direct with Washington, nor can British Columbia settle the question locally with Washington state. Obviously our present system would not permit of any arrangement between Ottawa and Washington state. A treaty between the Dominion of Canada and a state of the American union would be just as impossible as a treaty between the Government of the United States and the province of Quebec. They are not in the same strata of international society.

As the Irish section boss would say: "Isn't that a hell of a mess?" What is to be done?

Where a satisfactory settlement is presented by in-harmonious jurisdictions, the obvious course is to make the jurisdictions on either side of the border harmonize. Fine! But how is that to be done?

If the Dominion Government and the Government of the State of Washington are adamant on the question of jurisdiction and hold to their constitutional rights, all very well. Let the sockeye salmon pay the price. Let the valuable natural resource of both countries peter out. Let us all cut off our noses to spite our faces.

Is it beyond the range of reason that the federal government at Ottawa should pass special legislation authorizing the government of British Columbia to deal directly with the state of Washington in this particular matter; or is it unreasonable that the state of Washington should concede to its federal government to legislate in this case, especially when the proposed action is deemed of vital interest to the state?

A concession of this nature may be absolutely without precedent in history. I have made no study of the law and cannot tell. But should it conflict with all recognized constitutional principles, I should still say as Patrick Henry very likely would under similar circumstances: "To hell with precedent."

The temporary transfer of jurisdiction on the Canadian side of the border would, I feel, be attended by greater difficulty and confusion than would be the case in the United States. In the latter case the concession is to a superior power, while in the former it is to a subordinate. Furthermore, a treaty between local units of different powers involves more serious departure from the order of things. On the other hand it is a regular procedure for Ottawa and Washington to arrange a treaty. It only requires the concession on the part of the state of Washington—merely a form to give effect to something she declares she desires dearly.

There are some lesser reasons why any new action should find inception in Washington state. Canada instigated the Treaty of 1918 and it was the state of Washington which worked its constitutional right to prevent United States concurrence. The western state stood very much on its dignity. Now the question is: Which does she prize more highly—her dignity or her sockeye fishery?

Washington state, also, has a heavier commercial interest in the fishery than British Columbia. Her fishermen make a heavier toll on the resource than ours do, they draw heavier financial reward, and last but not least, they have more capital invested and are in greater jeopardy in that sense than our B. C. fishermen by a threatened depletion of supply.

PRINCE RUPERT ACTIVITIES.

Under date of September 8th, the Secretary of the Prince Rupert Branch of the Canadian Fisheries Association reports of the port's fishery activities as follows:—

There was no shortage in refrigerator cars during the months of July and August—the new cars, along with the old, having filled all requirements.

During the month of July, Major Motherwell, Dominion Government Inspector for B.C., paid Prince Rupert a visit of inspection, he was chiefly interested in the salmon canning industry on the Skeena but he spent a day at the Government Dock getting insight into the halibut game and was an interested visitor to the fish exchange that morning while sales were in progress.

Two Dominion Government moving picture men spent quite a considerable time in this district during July taking pictures of the fishing industry in its various phases and no doubt these interesting pictures will be shown all over the Dominion in the near future.

During the whole of the month of August we had an ice shortage here. The Canadian Fish and Cold Storage Co. is the only concern that manufactures ice in Prince Rupert and although they had a reserve of 2,000 tons at the start of the season, besides making 80 tons every twenty-four hours, they could not supply the down town dealers during August and the fishing vessels had also to wait their turn for days in order to get their sea ice. The down town dealers namely, Booth, Pacific, Royal, Atlin and Sinclair Fish Companies had to do some rustling for ice in order to stay in business and limited supplies were received from the Canadian National Railway ice houses at Prince Rupert, Pacific and Endako, several scowloads were also towed from the Western Packers plant at Butedale and the Atlin Company received one small lot from the New England Fish Co., at Ketchikan, Alaska. At this writing there is still a shortage but not quite so acute, as the Canadian Fish and Cold Storage Co. have released about 100 tons to the down town dealers this week.

The Pacific Sea Products Company, who had a fresh fish packing plant near Seal Cove have gone into liquidation and have discontinued business for the present. J. N. Sinclair, their former manager, has started in a similar business on his own account, under the name of Sinclair Fisheries Limited. They have secured a location on the Government Dock next to the Booth Fisheries and they started doing business there this week.

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All the local fish companies, with the exception of the Canadian Fish and Cold Storage Co. are now located on the Government Dock, the fish business is now centralized there including the fish exchange and every thing is now much more convenient than formerly, when we were spread over the whole waterfront.

Billy Shrubsall, who was Prince Rupert's pioneer fish man and smoker, and who has been in California for the last two years, returned here the other day and he will resume business smoking sable fish (Black Cod) halibut, etc. He has also secured a location on the Provincial Government Dock and at this writing he is assembling material for the erection of his premises.

You will notice by our returns that prices in fresh halibut have dropped considerably since I wrote you last, however all commodities have been dropping and fish must fall in line.

Mr. J. A. Thomson, formerly Assistant Comptroller at the Canadian Fish and Cold Storage Co. and later in the smoked fish business in Portland, Oregon, was in Prince Rupert for a few days last week.

Mr. J. W. Nichols, Comptroller of the Canadian Fish and Cold Storage Co., is at present on a business trip to the big centres in the U. S. and Canada.

The Canadian Fish and Cold Storage Co's. steamer Geo. E. Foster has been tied up for about a month and the only vessels they have fishing halibut on the Company lay in the meantime are the James Carruthers and Andrew Kelly.

I have just seen a copy of McLean's magazine for September and have read with much interest the article "All aboard the fish special", it certainly gives our port and industry some fine advertising.

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THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., OCT. 1921

NO. 10



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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

SPEAK UP!

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

We have been reading the electioneering speeches of the various candidates for Federal office and notice with dismay that not one incorporates his ideas about the development of the fishery resources of Canada. All rant about the tariff, and when the development of natural resources is mentioned, the fisheries are left out. "Agriculture, mines and forests!" These three items seem to stand for all that Providence endowed our country. Fish seems to be something the political office-seeker hesitates to mention.

The ignorance of the fisheries as one of the Dominion's great natural assets is positively harmful. It indicates just where we stand among the parliamentarians. The man who forgets the fisheries and its possibilities while "on the stump" is liable to forget them when he is elected. And the industry suffers accordingly.

The remedy lies in the hands of those engaged in the fishing industry. Ask the aspiring candidate who comes before you what he or his party intend to do to develop the fisheries of Canada. If he doesn't know, then give him your suggestions and see that he gets them right. And one of the most valuable suggestions is that a Deputy Minister be appointed to look after the fisheries.

A man's political interests should be centered first in the industry he is engaged in. If he chooses that it be neglected, well, that's his own look-out, but it's poor policy for himself. The average aspirant for political honors is not intimately informed upon all phases of Canadian resources, but it is up to the electorate to see that he is informed upon the industry which interests them. The farmers, the miners and

the lumbermen lose no opportunity to place their interests forward, but the modesty of the fisherman has militated against him.

Speak up! Let the voice of the Industry be heard. Silence now means placid acquiescence to the neglect of past administrations and forms the impression that the fishermen are too apathetic to care what happens to their industry.

GOOD WORK!

During the seven years we have been in existence as a publication devoted to the development and betterment of conditions in the fishing industry of Canada, we have seen many changes for the better in Departmental administration. When we first entered the arena on behalf of the commercial fishermen we found a sort of gulf existing between the Department of Fisheries and the people engaged in the industry. The industry said hard things of the Department and felt that they were established only as a repressive influence with "Thou shalt not" as their motto and the Fishery Acts as their cudgel.

Of late years, we have seen the commercial fishermen and the Departmental officers betting together on the most friendly basis. We have seen our suggestions kindly received and, in a number of cases, adopted, and we have noted a gradual dropping of the barriers and a really sincere desire on the part of the administrators to keep close in touch with the industry. This is as it should be and indications are that such relations will become more intimate in the future.

There are many things we might mention reflecting credit upon the good sense of Departmental officials which have been adopted of late years, but one of the best is the annual conference of the fishery officers, overseers, inspectors, and the commercial fishermen. The second conference of the Eastern Fisheries Division was recently held at Charlottetown P.E.I., and, in our opinion, this was one of the momentous gather-

ings ever held in the history of the Atlantic fishing industry.

The system of divisional fishery administration is now two years old and is along the lines advocated by the Canadian Fisheries Association. It is a vast improvement upon the old plan of direct administration from Ottawa with a host of politically appointed fishery officers located at the fishery centers and only devoting part of their time to the work. While many of these men were good officials, yet a vast number knew nothing of the work they were supposed to do, and cared less. They used their offices to political and self-advantage knowing that a succeeding Government might possibly sweep them out of office. Under the new system, these political office-holders were dismissed and the appointment of officers taken out of politics. New officers were appointed after examination, their whole time was required, and they were placed under the direct control of a Divisional Inspector.

This was two years ago, and since then the Department have spared no pains to ensure the efficiency of their outside staff. The officers are being constantly trained in ichthyology, the correct administration of the laws, and the many matters which fall under the head of fishery science and the preparation and marketing of fish. Instead of acting solely as fishery police, the officers are being urged to become teachers to train the fishermen and others to catch, prepare and ship their products in the best possible manner. The old system of repression without reasoning is happily being discarded and overseers are taking pains to explain to the fishermen the why and wherefore of fishery laws and to point out that such are only framed in the best interests of the fishermen themselves and for the preservation of the Industry.

The best of systems can amount to nothing if the men working under it are not brought together to exchange views and hear explanations of obscure points. The Department is, fortunately, alive to this fact, and the Eastern Fishery Conference, at which the majority of the fishery officers were present, is sure testimony that we are getting a good Departmental administration built up on the Atlantic coast. The men who attended this gathering cannot help but return to their stations the better informed because of it, and therefore better officials, and the open nature of the convention, with many members of the commercial fishing industry permitted to participate in the discussions, is to be highly commended and along the lines we have been advocating for years past.

Rome was not built in a day, but the growing improvement in the status of fishery officers and their knowledge of their work; the more cordial relations between administrators and the men engaged in the industry, and the desire to prevent violations by education and explanation rather than haling before a magistrate and exacting a fine; the training of officers and such conventions as that held in Charlottetown, will, in time, give us a fisheries administration second to none and a genuine aid in the development of the great fishery resources with which Canada is endowed.

Contrary to the original decision, the Department of Fisheries are permitting the fishing of lobsters for the period of six weeks this Fall as urged by the fishermen of Yarmouth and Shelbourne Counties, Nova Scotia.

THE INTERNATIONAL FISHING SCHOONER RACE.

By the time this issue is in the hands of our readers, the International Fishing Schooner Race for the Halifax "Herald" Trophy will be well underway, and possibly decided. Whatever the result, it is certain that skippers and crews have done their best and that this year the finest and fastest schooners of the American and Canadian fleets have come together in a friendly contest for the sailing supremacy of the North Atlantic.

It is a splendid sporting proposition, this schooner race, and, happily a sport for working men rather than of satiating the idle hours of the leisured class. Every fisherman in the North American continent will be interested in their own "Sea Derby" and the fine points of the race will be appreciated by them.

There are other aspects too in the contest. It will help to establish what is best in fishing schooner design and create a new standard of model and construction. It will serve to cement our relationship with the United States, and, possibly most important of all, it will bring the fishing industry to the notice of people who know little or nothing about it.

The industry needs publicity. Publicity in parliament that the requirements and the development of the fisheries might not be over-looked and neglected, and publicity among the people of Canada that the products of our fishermen might be more largely consumed. The International Fishing Schooner Race will do its part towards this desirable end.

TO THE EDITOR.

A correspondent sends us the following item from an English paper:

More Oysters.

A scheme for reviving the oyster industry at Poole, Dorset, has been approved by the Ministry of Agriculture and Fisheries.

It is proposed to lay out an area of 14 ponds, each of which will be "planted" with 10,000 oysters. From this area it is hoped to take away about half a million oysters annually.

Hundreds of years ago oysters were produced in great numbers from the beds in Poole harbour, and a thriving trade was driven in pickling and exporting them. Many of the warehouses round the harbour are built on a foundation of the shells of oysters pickled and eaten in past centuries.

Referring to the above, one correspondent enquires: "Is Canada's Oyster Policy as good as Canada's Lobster Policy and what is the result of both?"

The minister met Tom, the village ne'er-do-well, and, much to the latter's surprise, shook him heartily by the hand. "I'm glad you've turned over a new leaf, Thomas," said the good man.

"Me?" returned Tom, looking at him dubiously.

"Yes, I was so pleased to see you at the prayer meeting last night."

"Oh," said Tom, a light breaking in on him, "so that's where I was, is it?"—Tit Bits.

OUR "BILL" DOUGLAS.

It is a distinct pleasure for us to see some of the younger men in the Canadian fishing industry rising to prominence and fame in or out of the trade. William Douglas of the Guest Fish Company, Winnipeg, is known to most of the industry in Canada and has long been identified with the activities of the Canadian Fisheries Association, and we were much interested to pick up a recent Winnipeg "Tribune" and read a personal sketch of "Bill" who has recently been elected an Alderman of his adopted city. The "Tribune's" article is reproduced herewith:

"William ("Bill") Douglas when he was a much younger man than he is today—and he isn't very old as yet, probably still inside the forty mark. "Bill" was elected alderman for Ward One last year because he is a young citizen generally regarded, very properly so, as being trustworthy, aggressive and has strong opinions all his own.

"Having said so much I might be accused of being predisposed in his favor. So, I am, because, for persistency



alone, he is what some users of slang might call the real thing. He comes at a subject gradually, just like the native-born Scot, by asking an innocent question or two. If you know the breed you understand what is at the back of their heads. After due season this type of Scot will come back at the question—the same question—in some other way, perhaps by the route of mild assertion. Then, if he finds himself in disagreement, or if his views seem to be falling on barren ground, he will become more assertive.

The other day I asked a fellow City Council member of "Bill's" how he ("Bill") was getting along, and the report was decidedly favorable. His associates, however, had not yet decided whether he or Alderman Fisher uses the broadest Scotch.

I have seen a good deal of him in connection with the

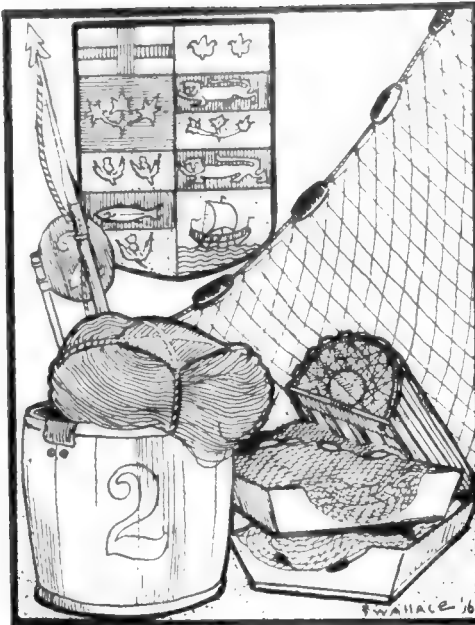
fishery interests of the West. He is an authority on the finny tribe, from a smelt to a whale—he says there is no demand on the prairies for any part of the whale save the whale-bone; not even for the blubber—and while he makes his living as associate manager of a fishing business he must be given credit for foresight, in understanding that conservation means the perpetuation of a profitable industry, whereas public laxity spells ruin. Need we look farther than the policy pursued in certain quarters on the coast with respect to the salmon fisheries.

I have observed with no little satisfaction that Alderman Douglas has posted himself on all branches of his trade. Well informed on the productivity of our lakes and rivers—and he is now gathering information on Hudson Bay and Straits and the tributary rivers—he has gone carefully into the transportation side. He is an aggressive advocate of the most up-to-date refrigerator system, and rates to make possible the maximum importation of food which is not second in nourishment to the best sirloin.

At the present moment he is laden with stories of Northern Manitoba, illustrated. This is one advantage of living in the days of the camera. One "snap" shows a party of Winnipeggers navigating the rapids at the mouth of the Big Saskatchewan, a roaring torrent miles in length. There is power enough there, in sight, once harnessed, to drive all the farm machinery in Manitoba. But more romantic is a photograph of twenty or thirty Indians from a district seldom visited by white men. They are supposed to be a mixture of the Salteaux and Cree, and the alderman's description of them is that they are "black as the ace of spades". Not understanding English, the Indians were unable to tell him if they lived near the famed stream where brook trout weighing from six to eight pounds lurk undisturbed in their lairs.

I have heard it stated that the young alderman is not trying to cultivate his bent for public life. However, that may be, he will always be heard from along lines in which he is interested. This year he is president of the Matlock Beach club, and is one of the staunch advocates of good roads and the outdoor life.

THE NOVEMBER ISSUE OF "THE CANADIAN FISHERMAN" WILL BE DEVOTED LARGELY TO A DETAILED AND ILLUSTRATED ACCOUNT OF THE INTERNATIONAL FISHING SCHOONER RACES HELD OFF HALIFAX, OCTOBER 22nd AND 25th. THIS IS ONE OF THE BIGGEST EVENTS OF ITS KIND IN THE WORLD AND IS WORTHY OF THE INTEREST OF EVERY PERSON ENGAGED IN THE FISHING INDUSTRY OF CANADA. IT IS THE FISHERMAN'S "DERBY". A SPORTING CONTEST OF THE HIGHEST TYPE WHICH IS DESTINED TO PUT OUR FISHERIES AND FISHERMEN UPON THE MAP. SEE THAT YOU GET THE NOVEMBER ISSUE.



Eastern Canadian Fishery Conference

**Important Gathering of Fishery Officers in
Charlottetown, September 20th to 23rd**

**Suggestions of Interest to Lobster Canners
and Fishermen**

Six of the seven inspectors and all the overseers but one, making in all an assembly of about sixty men from the Maritime Provinces, were present at the Fishery Conference for the Eastern Division of Canada, which opened in the Provincial Technical and Agricultural School in Charlottetown on September 20th and closed on the 23rd. Ward Fisher of Halifax, Chief Inspector for the District, presiding at all the sessions.

This was the second conference (the first being held at Truro) since the Fisheries Service was reorganized about three years ago, when Canada was divided into three districts the Pacific, the Central and Eastern, with inspectors in charge respectively at Vancouver, Winnipeg and Halifax.

Formerly officers were appointed for a brief period and they were often changed with the Government. Under the new order of things, which was instituted by the Civil Service Commission, the army of guardians was abolished and a complete set of new men were appointed, under new conditions, and on a permanent basis, safe from political interference and paid a reasonable salary, being required to give their whole time to the work.

The permanency of the service assured, the Department was in a position to go ahead with a well devised course of instruction in order that the officers should be properly trained in their duties. The Charlottetown Conference proved a great educative benefit to the officers, and will have an important bearing on the fishery industry in general. Points, hitherto obscured, regarding the interpretation of the laws and regulations were made clear, valuable suggestions, revealed by experience, were given as to how these regulations could be improved, and the discussions, skillfully directed by the chairman, were mutually profitable and instructive.

The lobster industry in its various phases— the Meat and Canned Foods Act and other legislation, received much attention at the Conference whilst addresses and demonstrations by experts were features of the four days' programme.

After an address of welcome by Major Riley of Charlottetown on the morning of the opening day, and a reply by Inspector Fisher, a Prince Edward Islander, the conference settled down to business.

Mr. Fisher led off with an address on the Relations of the Fishery Officers—(1) to the public, and (2) to the Department.

The chief point emphasized was that under the new order of things, it is desirable that the officers and all those in the industry should work together in the greatest harmony. The officers should do all in their power to encourage the fishermen to catch as great a quantity of fish as possible, and to put them in the best possible way.

The attitude of the fishery officers toward the public should be in the interests of the public. The most cordial relations should also exist between the officers and the Department, to the end that the Department may draft proper regulations and adopt the best possible methods.

During the interesting discussions which followed it was brought out that this was a particularly hard year for the fishing industry, with the market demoralized and prices low. Owing to these conditions and the lack of outside employment, many of the fishermen are in hard straits, thus making the temptations to engage in illegal fishing greater than usual. Nevertheless, the officers are endeavoring to enforce the regulations in a most reasonable manner.

It was also brought out that the attitude of the fishermen and the dealers, and particularly the lobster cannery towards each other is changing rapidly. There appears to be a better feeling all round. A more lively interest is being taken in the protection of the industry, with the result that there has been a vast improvement throughout the Maritime Provinces in the methods of the fishermen and the packers, and in the close co-operation of the officials.

At Tuesday afternoon's session there was a lively discussion on Regulations and their Enforcement, led by Inspector Calder of Campobello, N.B. It was stated that one of the hindrances to the proper enforcement of the Fisheries Act was the unfitness and incompetency of many of the local Justices of the Peace.

In dealing with the purposes of the regulations, it was also claimed that many of the fishermen and others felt that regulations were too restrictive. The reply was that all regulations are the outgrowth of the demands of the fishermen themselves for their protection,

and it is utterly impossible to have an established industry without protection and there can't be protection without regulations.

It was brought out that Nova Scotia has been very active in enforcing the regulations especially in preventing pollution of streams. In one district alone, there were twenty-eight convictions.

The excellent services of the Royal Mounted Police were recognized and the suggestion made that the scope of their activities be extended. The need of many changes, revision and consolidation of the regulations was emphasized during the discussion. There has been no revision for some years, with a great deal of resultant confusion in the minds of fishermen and others. A large number of amendments have also been made in the past few years, making consolidation imperative.

Address by Dr. Prince.

The feature of Tuesday evening's session was an address on the "Local and Restricted Migration of Fish" by Prof. E. E. Prince of Ottawa, Commissioner of Fisheries.

Many fishery questions which interest biologists do not appear to have much practical importance. The question of the extended migrations, on the one hand, or of restricted and local migrations, on the other hand,

numerous other special features. The accomplished Norse biologist Dr. Einar Lea, when studying a large series of scales taken from herring at various points along the Atlantic coast, from Gaspé to the Bay of Fundy, said "From the very first—it was strikingly evident that the material embraced several different and in some cases strikingly different 'sorts' of grown herring.—It seemed therefore natural, after the first survey to make a preliminary division of the material (that is the collection of specimens) according to locality."* Dr. Hjort, who also studied the collection, separated them into six local Canadian varieties, viz. Bay of Fundy, Western Nova Scotia, Eastern Nova Scotia, Cape Breton, Northumberland Straits, and Magdalen Islands. A seventh local variety characterises the west coast of Newfoundland, and it is possible that the large Labrador herring may form an eighth kind. What is the meaning of so many kinds of one species of fish? It means that the bodies of fish, frequenting definite areas, do not mingle to any great extent. They must segregate themselves, keep separate, and confine their movements to limited local migrations. Long migrations would destroy differences, and would involve intermingling and a general uniformity, quite in contrast to the diversity just described.



In centre with cane, Chief Inspector Ward Fisher, who presided at Conference; to his right, Dr. A. P. Knight and Prof. Prince.

of valuable species of fish in the sea, may not seem, at first glance, to be very vital to commercial fisheries, yet, when fully understood, it is really of great practical significance. Scientific study has shown that local "kinds" or restricted varieties of widely distributed species, are of common occurrence. To the untrained eye such local varieties may not be very distinguishable. Just as an ordinary observer, on seeing an assemblage of several hundreds of Japanese, or Hindus, or Chinamen, might see very little difference amongst them, yet to those familiar with their features and figure, they differ almost as much as the various types of men and women amongst white races.

A thousand herring, or cod, or lobsters, may appear all alike, yet accurate scientific study shows very marked differences. Amongst herring it has been found that different sorts or kinds differ in the nature of the scale markings, the number of dorsal and anal fin-rays, the total of the vertebrae joints in the back-bone, the number of vertebrae with closed lower (or haemal) arch, the number of "keeled scales" between the pair of ventral fins and the vent, as well as in shape, colour, proportions of head, average size at the same age, and

The origin of such differences must be far from simple. Differences of local environment, special conditions of temperature, of sea-water salinity and alkalinity, of food, etc., combined with segregation and the effects of natural selection, continued over long periods for centuries, or tens of centuries, afford adequate explanation.

In former ages the opinion was universal that the North Sea herring fishery depended upon one great army of herring, which annually descended from the Arctic Ocean, touching in successive months from March to November, a series of points from the Faroes to the South of England. After reaching Yarmouth or Lowestoft, or even some bays along the southern English coast, they then returned north again in imposing procession. The very name "herring" has been derived from "Heer," the German for army, because they moved in one immense body. The theory seemed to so fit the facts, that it remained unquestioned until science proved its fallacy. It is true that all along the British

* Can. Fishery Expedition 1914-15, Ottawa 1919, p. 115.

coast the fishery each season began in the north, and the netters moved month by month, for six months or more, from point to point from the Faroe Islands to the Shetlands, and then to Caithness, Aberdeen, Fyfe, Northumberland, Yorkshire to Norfolk, and even further south. This progressive fishing from Spring to fall seemed to be best explained as due to this great north to south migration. Yet, we know it to be false, and no Scottish fishermen now believes in it. Local schools strangely enough were always noticed by the fishermen, "Loch Fyne" herring were a special local kind, distinguished for several centuries as peculiar to one area, and there were many other local sorts or kinds known. The same theory has been in vogue to explain the reverse feature in the mackerel fishery. Yet it is an exploded theory. It is untrue, however apparent it may seem, that every year a vast school of mackerel, mustering off Cape Hatteras in the South, migrates north, progressing week by week until the Nova Scotia waters are reached, and finally the Gulf of St. Lawrence, there deposit their spawn on well-known spawning banks, and begin a return migration south—feeding voraciously and fattening up in late summer and fall, and known as "fall" or "fat" mackerel as they return to North Carolina. The mackerel fleet follow the fish and catch them all the way, and that would seem to be convincing enough. But the North Sea herring fleet were accustomed to make catches week by week all the way from North to South. Yet the theory of a vast migrating school has long been abandoned by intelligent fishermen in Europe.

For what reason would mackerel journey 1200 miles from the South to the North each year? The object it is claimed, is to spawn in the Gulf of St. Lawrence. The mackerel must mature their eggs on the way, and reach a ripe spawning condition on arriving in Canadian waters. Dr. Wakeham and Mr. Rathbun, in 1893, examined ripe mackerel off Prince Edward Island and the Magdalens, and found them to be in the act of spawning. They located mackerel spawning grounds there nearly thirty years ago: but Capt. J. W. Collins, a few years before got ripe mackerel off Cape Henry, North Carolina, which ran from 10 in. to 17½ in. in length, and many of them had already spawned early in the year. He got ripe spawners off Virginia about the last of April and early in May, and other spawners in May off Long Island. The U.S. Fisheries Bureau, year after year, obtain supplies of ripe mackerel spawn for their hatcheries in successive localities along the eastern U.S. coast. The ripe fish are not the same. They undoubtedly belong to successive schools frequenting successive localities from south to north as the season advances. The same principle applies to the mackerel as to the herring. The local differences studied in the herring have not been studied in the mackerel of our waters: but the Biological Board of Canada are to carry out a plan of mackerel investigation to settle the point.

Professor Garstang, of the University of Leeds, found quite a number of local types, or "sorts," of British mackerel. He separated them by means of at least six differences, viz.: (1) Number of dorsal finlets in front of the tail, and varying from 4 to 6; (2) Number of rays in 1st dorsal fin, varying from 9 to 16; (3) Number of rays in the 2nd dorsal fin, varying from 9 to 15; (4) varying number of round spots between the dark bars; (5) variation in the total of bars from the shoulder to the end of the last dorsal finlet, 23 to 33; and (6) vari-

ation in the number of bars which touch or pass over the lateral line.

If scientific study shows that our mackerel schools have similar distinctive differences, the migration of this species will fall in line with that of most other important kinds. It is usually a movement from deeper off-shore areas to shallow inshore spawning of feeding grounds. Even the mighty whales of polar seas, in spite of their immense powers of locomotion—some having a propelling power of 10,000 horse power—frequent definite limited areas. They have their regular "beats," as experienced whalers well know, and do not wander aimlessly over long distances, though so well able to migrate anywhere, as occasional wanderers demonstrate when they get astray.

I, long ago, maintained that salmon have this local habit too and return to their own rivers. Eminent authorities in the United States opposed this view: but recently some of them have adopted my opinion. One of the latest and best fish experts, Professor C. H. Gilbert, has concluded that Pacific salmon return not only to their own river, but even to the same streamlets, and the same gravel beds where they were hatched. I had proof of this parent-stream theory in 1895, when I examined a Sooke variety—with flesh of a deep beef colour—which was found only in one small stream, not far from the estuary of the Skeena River in northern British Columbia. Salmon fishermen in the Maritime Provinces, have repeatedly assured me that they can tell a Restigouche salmon from a Gaspe, a Miramichi, or a St. John River salmon.

The cod of various areas differ. The Norway cod is readily distinguished from the cod of the North Sea banks—the winter rings of the scales being much better marked, for example. I found off the Incheape Rock in Scotland what is called a Bell Rock variety of cod, with deep red-brown sides and perfectly black on back, and resembling some of the rock and kelp frequenting cod of the Nova Scotia shores. These are quite unlike the bank cod, or the Labrador cod.

Variation in the local schools of lobster has not been studied, but those of Labrador, of P. E. Island, and of western Nova Scotia, are said to be readily distinguished from each other.

The general trend of scientific opinion is that in the sea, as on the land, there is no confusion, no haphazard mingling, of the inhabitants of various areas. Each portion of the sea coast has its own spawning grounds, its own nurseries for the young and half-grown, and definite areas for the adults. Like bees returning to their own hive, fish are true to their own shores. But just as a hive "swarms" when the bees become too numerous, so it is certain that local schools becoming crowded may move to new localities to repopulate them with the surplus supply. One important conclusion seems unavoidable. When the local schools are harried, over-fished and seriously reduced, there is no surplus to move to other areas and repopulate them. Areas along the shore may be cleaned out and will continue barren, it may be for many years. This is the explanation of unproductive or wholly depleted fishing areas. It is difficult to restore fishing grounds if once destroyed, because local schools keep so universally to their own limits and only seek new areas when their numbers become excessive, and food is insufficient.

The Professor concluded by urging the fishery officers to make close study of the habits and movements

of fish, for there was still a great want of fuller and more detailed information to support or to modify the views he had set forth.

Inspectors McLeod, Calder, Crocker and others took part in the discussion and some supporting fact as well as difficulties were stated.

In the course of Prof. Prince's address, and during the discussion which followed, reference was made to the article which appeared in the "Canadian Fisherman" on the movements of the mackerel, the professor disagreeing with the theory that the same schools follow along the United States coast for some distance and then enter Canadian waters. Some of the speakers supported the Professor's contention, others took opposite ground. Mr. W. F. Tidmarsh was of the opinion, based on many years' of experience, that the migration of lobsters is limited. On the north side of Prince Edward Island, they move off from the shore late in the season into deep water, and lie there in holes, until the spring.

Asked if he agreed with Capt. Barkham, who as a result of his recent scouting trips, maintained that the spawning ground for mackerel is off the north shore of Prince Edward Island, Professor Prince said that this view was probably correct, and many years ago the same statement was made by an eminent fisheries scientist.

On Wednesday morning Chief Inspector Fisher led a discussion in Dual Administration, Provincial and Federal of the Fishery Laws. A question box was opened and many questions answered bearing on lobster packing, herring curing, pollution of streams, jigging of trout, renewal of fishing licenses, etc.

Joint Conference of Officers and Lobster Packers.

In the afternoon a joint meeting of officers, lobster packers buyers and fishermen was held.

W. F. Tidmarsh gave an address dealing with the economic loss, which the lobster industry is bearing, and has had to bear for some years. The loss in 1920 was appalling, due to several causes—the high price of canned lobsters; the inferiority of the output, enhanced by slow sales and the demand of the consumer for a higher grade of food products, due to education and the enactment of pure food laws; and last, but not least, the world-wide depression in business following the Great War. Under the circumstances existing no matter how good the quality had been, a loss would have been made on the late shipment of 1920, but that loss would have been greatly minimized had the pack been in good condition when it reached the market, and possessed keeping qualities.

Mr. Tidmarsh dealt at some length with the matter of discoloration about which so much has been heard during the past year, pointing out that it has been a handicap to the industry for over thirty years. He referred to the investigation conducted in 1895 by the Dominion Commission composed of Sir Andrew McPhail and Dr. Bruere of Montreal who began their work in Prince Edward Island. The report issued in 1898 was very valuable but it was not followed up by any educational propaganda and it is only recently that scientific investigations were taken up with a serious effort to solve the problems.

The future of the lobster business, said Mr. Tidmarsh, is decidedly hopeful. The Maritime Provinces have the monopoly of this industry, the output is infin-

itely small in comparison with the market, and lobsters will always appeal to the epicurean but if the industry is to hold its place in the economic world the output must be standardized and stabilized. The dealer and consumer must have a reasonable assurance that the appearance, texture and flavor of canned lobsters will hold good for a reasonable time, and that they were preserved under sanitary conditions. The slip shod methods of the past must be abolished and modern, scientific methods must supersede. The investigations now being carried on under Dr. Knight and Dr. Harrison are already bearing fruit. Demonstrators have been sent to the canneries to show the principal operators the effect of bacterial action on lobster meat. This is of great educational value and an absolutely necessary prelude to the more advanced knowledge which will accrue when the laboratory experiments which are now being carried on by Dr. Harrison at lobster canneries in this Province (where the actual conditions under which lobsters are canned have been observed) are completed and made public.

Mr. Tidmarsh based the actual loss to Canada on lobsters through deterioration, at fifty cents a case or \$75,000 per year, and the potential loss at \$300,000 making a total economic loss of \$375,000.

He further contended that scientific research should be applied not only to the lobster canning industry, but to every branch of the fishing industries of Canada as well. Highly qualified experts in Ichthyology, Bacteriology and Chemistry should be employed at a salary commensurate with the high standard of knowledge required.

A general discussion followed the reading of the paper in which the matter of illegal packing of lobsters was raised, Chief Inspector Fisher stating that there was little, if any, along the south coast of Nova Scotia.

Inspector Gallant of Prince Edward Island said that this practice in the past had been encouraged by politicians and dealers. Even clergymen had intervened on behalf of the lawbreaker who pleaded poverty as an excuse. Election years were the worst for illegal packing. Co-operation would assist the inspector. "This year," said the Inspector, amid applause, "no man will be allowed to pack lobsters illegally if I know of it."

The announcement was made by Mr. Fisher, that several more officers of the Dominion Police would be sent to the Island next year.

The matter of the quality of the lobster packing, the much discussed discoloration, was threshed out by Hon. R. N. Cox, Inspector Fisher, W. T. Riley, Capt. Wolfe; George Saville, Dundas; W. H. Tidmarsh, Charlottetown; L. J. Loggie, Chatham; Dr. A. P. Knight; J. P. McIntyre, Savage Harbour; and others.

Dr. Knight has been associated with Dr. Harrison of Montreal and others in conducting demonstrations on Bacteria which caused lobsters to go bad, gave an interesting address. After dealing with the national history of these tiny, but mightily destructive plants, he said that the one practical method of getting rid of them is the use of boiling water or steam. Investigations are not yet completed, and there are a number of problems yet unsolved with regard to discoloration, but it has been found that instead of giving the lobsters a continuous bath of three hours which has been the common practice, they should receive two baths of an hour and a half each with a cooling interval between. The exact length of that interval in order to produce the best results is what the scientists are now working on.

A Cannery School Wanted.

A resolution was passed at the meeting, moved by W. Harry Tidmarsh of Charlottetown, seconded by J. P. McIntyre of Savage Harbour, requesting the Federal Government to establish on the Island a modern canning plant where packers, foremen, and operators may receive instruction, and where scientific experiments may be carried on. It was pointed out that whilst the farmer is well looked after by the Federal Government, so far as educational institutions are concerned, the fisherman is virtually neglected.

Research Work Appreciated.

Another resolution was passed expressing appreciation of scientific researches now being carried on in Biology, Bacteriology, and Chemistry as applied to lobster industries, and asking that such work be extended.

Thursday Morning's session of the Conference was mainly taken up with a discussion on the Meat and Canned Foods Act, the officers from different sections giving their experiences with its enforcement.

The question of what latitude should be allowed packers with regard to underweight cans was dealt with, the consensus of opinion being that the onus of having the correct weight should be placed upon the packers, otherwise these cans would be confiscated.

It was shown that there was a great improvement in this respect in the pack this year over that of the preceeding year.

The matter of shrinkage was also discussed, and the general opinion was, that in order to turn out a six ounce can it was necessary to put in seven ounces before processing.

Inspector Crocker of New Brunswick told of the unsatisfactory sanitary conditions of the factories in his district. Doctor Knight also spoke emphasizing the need of every factory being properly equipped with sanitary conveniences.

On Thursday afternoon Dr. Knight gave a demonstration on standard pickling, his main conclusion being that the standard as determined by scientific analyses of leading chemists, of Canada, and by his own personal investigations in Island factories, should be between two or three per cent, made by adding four ounces of good dairy salt to one gallon of fresh water. The purpose of the pickle is to accentuate the fine lobster flavor of the meat. It is not for the purpose of preventing decay. This is done by proper bathing. He had packed lobsters without pickle, just a little fresh water and the meat turned out fresh and good. The production of discoloration had nothing to do with the blue and black tinge so much complained of in ordinary canneries. What did produce the blue and black tinge was the leaving of the intestine of the lobster (which always contains bacteria) on the meat.

C. J. Tidmarsh, B.A., medical student of McGill who has been conducting investigations gave a demonstration on Bacteria illustrating the various sources of contamination in factories, such as water troubles and bad drainage, improper sterilization, improper boiling, etc.

On Friday morning Inspector Harrison of Fredericton, N.B. led off a discussion on River Fishing, its development and protection dealing with conditions in New Brunswick, where in some large areas, with a small force of officers, difficulty existed in preventing illegal fishing of salmon. More latitude, consistent with the preservation of the fish, might be given in certain sec-

tions where people desire to catch salmon for their own use.

It was pointed out that commercial salmon fishing all along the coast of Nova Scotia and New Brunswick had been prosecuted with greater success than for many years. Whilst many salmon and trout ascended the rivers, the fishing in them was not so good as usual. Owing to the extremely dry season, the rivers were exceptionally low, and there was so little water in places that the fish were unable to get up or down. The high temperature of the water, in places from fifty-eight to sixty-eight degrees, also operated against angling.

A demonstration of curing of herring was then given by Capt. Charles Fitzgerald recently appointed Inspector for their province under the Pickled Fish Inspection Act.

A mock trial was then held to illustrate the procedure to be followed in prosecuting violations of the fishery laws.

The Conference came to a close on Friday evening.

A resolution moved by Inspector Crocker, seconded by Inspector Gallant was passed. It asked the Department to have Regulation A of the Meat and Canned Food Act, governing inspection of fish canneries, made effective for shell fish canneries. Another resolution moved by Inspector Crocker, seconded by Inspector Harrison was passed. It asked that the Fish Culture Branch notify the District Inspector of all arrangements made for the capture of fish in the district during the closed season. At present the neglect of such notice hampers the officers in the discharge of their duties.

Inspector Gallant gave the closing address declaring that under the new organization there were many more seizures, that illegal fishing had cut down 90 per cent, that the present four officers are accomplishing more than the former hundred guardians, that the regulations re spawn lobsters are being better enforced, that the pollution of streams is practically at an end, that the lobster canneries are 50 per cent better than before and that no smelt fishermen are evading payment of their licenses as heretofore.

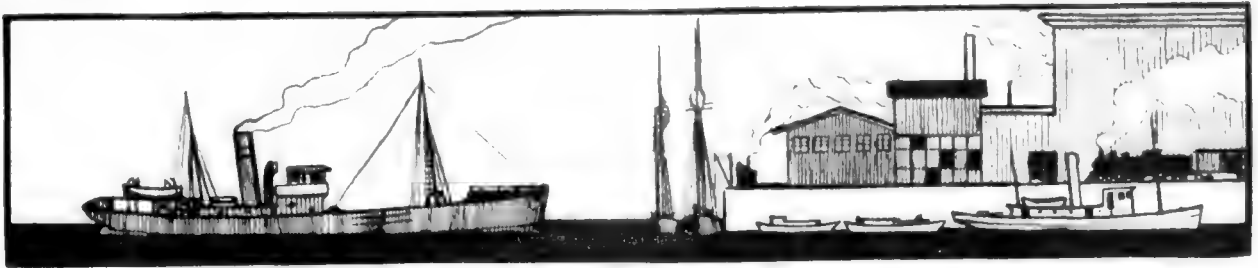
The proposed revision and consolidation of the regulations is to be taken up at a meeting of Inspectors and other general officers of the Department at a meeting in Halifax in a fortnight's time.

Among the changes which fishermen in various sections are asking for are the following:—The smelt season to open a month earlier in the three provinces; a fall season for salmon fishing to be granted; the oyster season for public and private beds to be made the same (at present the latter season opens a month earlier); a fall season to be granted lobster fishermen along the south coast of Nova Scotia. There is a possibility of at least some of these changes being made by the department. There are many other minor changes asked for, but the main desire is to have the regulations consolidated and made clearer in some provisions.

The Conference is to meet next year in either St. John or Fredericton, the former city likely to be selected.

An old Scottish lady was asked as to the whereabouts of her husband. She replied:

"If the ice is as thick as Henry thinks it is, he is skating; if it is as thin as I think it is, he is swimming."



Fish Publicity Work in France

Fish Weeks Successful in Stimulating Consumption.

By COLIN MCKAY.

Although France has not been able to carry out the ambitious programme for the development of her fisheries which was conceived after the war in the expectation of huge German indemnities, her efforts to encourage interest in the fisheries and increase the home consumption of fish merit more than passing attention. One method of achieving publicity which seems to have met with considerable success has been the holding of "The Week of Fish" or "The Fortnight of fish" at principal ports, and in some instances in inland cities. In effect "the week or fortnight of fish" is intended to do for the fisheries what our annual fall fairs or exhibitions do for the agricultural industry, and for other industries as well. In Canada the fall exhibition is a recognized institution; its value and importance are certified by the fact that Dominion, Provincial, and Municipal governments make annual grants for their support. At some of these fairs the fishing industry is represented by exhibits, but seldom adequately, and in the great majority of cases not at all. At any rate it must be admitted that the fishing industry of this country could learn something from the farming industry regarding the value of the attractive form of publicity provided by the fall fairs. This farmer today has a guide conceit of himself—and no doubt at all about his importance in the national economy. The Farmer's Party, which is causing so much worry to the old line politician, would hardly have been possible if government grants had not helped to bring the farmers together in fall fairs and agricultural societies.

So the French plan of extending the fall fairs idea to the fishing industry is worth attention and probably emulation. In Canada, probably more than in some other countries, publicity is of the essence of the contract for developing home markets for sea fish, because of the long distances from the sea. Some people in this country may have doubts as to whether Canada has a sea-coast of any importance or interest; at any rate, many from Montreal, Toronto, and other inland cities go to Old Orchard Beach for their summer vacation, while the Americans of seaboard cities, like Portland, Boston and New York, go to Digby, Chester, St. Andrews and other summer resorts of the Maritime Provinces, or to Murray's Bay and Gaspé in Quebec.

Last month's "Fish week" at Rochelle, France was under the auspices of the Minister of Public Works, the Minister of Commerce and the Minister of Marine. It was organized by the state railways, the Chamber of Commerce of Rochelle, and the fishing interests of the port. The programme of the week was of a varied nature. Technically it included lectures and demonstrations on many branches of the fishing industry, ice houses, smoke houses, drying establishments for cod, pre-

paration of various kinds of preserved fish, fish flour, fats, and fertilizers, etc. On the social side the programme was evidently designed to have advertising values; there were fish banquets at which notables were speakers, gala performances at the municipal theatre, band concerts at the Casino, illuminated nautical fêtes, a tennis tournament, and other events, all having some special feature providing desirable publicity for the fishing industries.

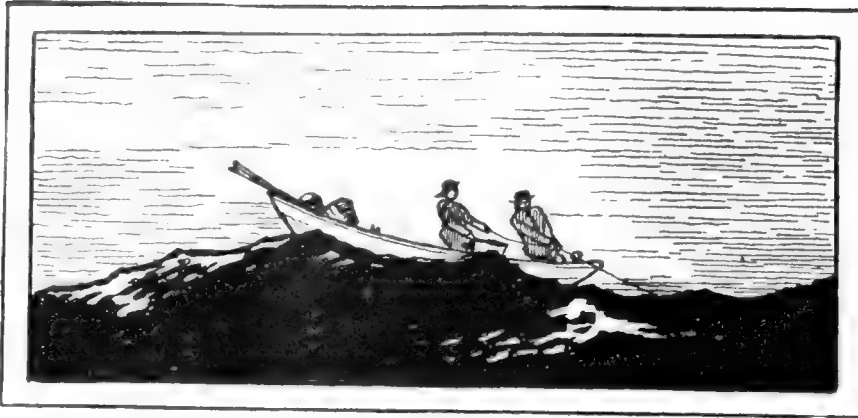
NATIONAL ASSOCIATION OF PRACTICAL REFRIGERATING ENGINEERS.

The twelfth annual convention of the National Association of Practical Refrigerating Engineers will be held at Hotel Lorraine, Philadelphia, Pa., on November 30, and December 1, 2 and 3, 1921. This is the first meeting of the Association to be held in the East, and it is confidently expected that it will eclipse any previous gathering of refrigerating engineers, even the successful convention which the Association held at Chicago last December.

The program to be provided will include papers by men of world-wide reputation, who are being chosen because of their familiarity with the particular subjects in which the membership, and refrigerating engineers in general, are interested. Also, there will be papers of interest to all groups of the refrigerating industry, including the employers and managers who will be welcome to attend as visitors. Each year is showing an increase in the number of plant owners and plant managers who attend the sessions of the convention. They are commencing to realize that during the few short days the Convention is in session they can obtain most valuable information as to plant operation. Along the same line of reasoning, many employers are making a practice of sending their engineers to these annual meetings. They have learned that it is a good investment.

The Educational and Examining Board of the National Association of Practical Refrigerating Engineers has recently had prepared under its supervision a Lecture Course on "The Principles of Refrigeration", in twenty parts, for the benefit of its members. Starting with Lecture No. 1, the Course is sent to them at intervals of two weeks. It is the most valuable work on that important subject thus far contributed, and the Board is to be highly commended upon the results of its efforts.

Refrigerating engineers who are not now members of the Association would do well to write the National Secretary, Mr. Edward H. Fox, 5707 West Lake St., Chicago, for information, with a view to joining and availing themselves of the educational work it is carrying on, including the Lecture Course.



Competition of Norwegian Codfish in Cuban Markets

Canada must produce
"WHITE NAPE" FISH



The following interesting interviews were obtained by the Halifax "Chronicle" recently:

"Norwegian competition is now at a stage where the Nova Scotia codfish industry in Cuba is seriously threatened," declared Major H. A. Chisholm, Canadian Government Trade Commissioner, who has lately returned from Havana. Mr. Chisholm has been stationed at Havana for some time past, his territory covering Mexico, Jamaica, Panama, Colombia and Venezuela.

He stated that unless efforts are made to cope with the situation and compete with the Norwegian product, the market which has been practically monopolized by Canadian exporters during the past five years is in serious danger of being lost. The Norwegians are at the present time selling chiefly to Scotland and Ireland, but this does not absorb their output, and they are looking for new markets. Fish experts from the Norwegian Board of Trade, which is, said Major Chisholm, really a Government department, have been sent out to Cuba with explicit instructions to capture the market, no matter what the cost.

Norse Fish Cleaner.

The great objection to "Halifax cod," as the Canadian product is known, Major Chisholm says, lies in the fact that they are black nape fish, while the Norwegian fish are white nape and present a much cleaner appearance, which appeals to the Cuban consumer. In addition to this, the Norwegians with a view of controlling the market, are underselling the Canadian product, so that it would appear that the danger of losing the market is by no means small. The situation, said Major Chisholm, is that the Canadian fishermen must either produce cleaner fish for export to this market, or else the exporters will have to reduce the price, and by so doing stand to lose a considerable sum in order to cope with the Norwegian prices. The shipping connections between Canada and Cuba are far superior to the Norwegian connections, but unless the Canadian fish can compete with the Norwegian product the market will ultimately be lost. The San Diego section is not so seriously menaced, as the inhabitants are not so particular about the appearance of their fish and are perfectly satisfied with the Canadian cod.

Mr. Whitman's Views.

A. H. Whitman, of the firm of Robin, Jones and Whitman, stated that the seriousness of the Norwegians competition was not unknown to local exporters. He said that even during the years of the war, when Canadian fish practically monopolized the Havana market, numerous complaints were received regarding the black nape fish, and that the exporters have been advocating for some time past the naping of the fish, but with poor results. The blame of the matter, said Mr. Whitman, rests with the captains of the fishing schooners. The

cost of naping the fish is comparatively small, he said, and had the fishermen followed the advice of the exporters, and reserved the white nape fish for the Havana trade, the trouble would not have arisen, as the Canadian product is as good in every other respect as the Norwegian. The estimated catch of the summer trip of the Lunenburg fleet is 180,000 quintals, of which 100,000 quintals are suitable for the Havana market. If this quantity, said Mr. Whitman, were white nape they would easily bring fifty cents more per box, which would mean a net gain of something in the vicinity of \$50,000. The Norwegian exporters are at present, however, underselling the Canadian exporters, and he said that it would not be surprising if the Canadian product would have to be sold at fifty cents to a dollar less than at the present time. He does not anticipate that the market will be lost entirely, but believes that a reduction in price will more than offset the gains made by the Norwegians.

NOVEMBER SELECTED AS "PERFECT PACKAGE MONTH" BY THE NATION'S CARRIERS.

All trades and industries have been asked to cooperate in the "Perfect Package Movement" inaugurated by the railroads, steamship lines and express companies in the United States and Canada, in November, which has been designated as "Perfect Package Month."

The purpose of the movement is to stimulate further public interest in good packing of shipments and to enable the carriers to improve the transportation service of the country. During November, an examination of all shipments sent by freight or express, will be conducted, to obtain information as to the best shipping methods carried on by the various trades and industries.

In every city and town, the railroad and express people will form campaign committees, to cooperate with local shippers' associations, in carrying out the plans announced for "Perfect Package Month." "Exception Reports" will be made out for all faulty shipments discovered and these reports will be sent to the shippers' association for tabulation, to ascertain how high a percentage for "Perfect Packages," the shippers of that city have attained.

Comparisons of the records made by the various cities, during November will be announced at the conclusion of the drive. The entire working forces of the railroad and express carriers, comprising some 2,000,000 men, will aid in the movement. The railroads, through the American Railway Association, composed of practically all of the railroads in the country, are pushing the campaign, as a means of raising the standard of the service, while the express agents are also getting ready to interest shippers in the undertaking.

A MISS-FIRE

THE FIRST TO GO



The Above Amusing Cartoon Is Not a Reproduction From a Red-Hot Liberal Newspaper But Was Published in the Conservative Halifax "Herald" at the Time Premier Meighen Was Re-organizing His Cabinet. Our Worthy Maritime Contemporary Evidently Agrees With the "Canadian Fisherman's" Views as to Hon. Mr. Baldwin's Value to the Canadian Fishing Industry.

SIBERIAN SALMON BEING EXTENSIVELY ADVERTISED IN THE UNITED KINGDOM.

The Kamchatka salmon, which is principally a Japanese pack is now being extensively advertised throughout the United Kingdom. The campaign which is being carried on has been well thought out and carefully placed. The progressiveness of those who are handling this pack is thus demonstrated. Without doubt a large quantity of this salmon will be disposed of. So far nothing has been done to bring to the attention of the public the fact that the best brands of canned salmon come from Canada with the exception of the efforts of Col. Cunningham to get the British public to ask for Canadian pinks.

It may be very well for those handling Canadian salmon to say that the British Columbia pack will be

handled as usual through the regular channels but it is also a good thing to bear in mind that it is what the public asks for that and demands that sells best. If they get into the habit of asking for Kamchatka salmon instead of Canadian salmon anyone can readily see what will happen. It will mean that the dealers will begin to demand the Kamchatka salmon as it is invariably the rule that the retailer works along the line of least resistance and if his customers ask for Kamchatka salmon he will also ask for it.

The quicker the British Columbia packers get busy on their selling end of the business the quicker they will increase their opportunity to increase their production, as this applies to the low grades as well as the better grades.

Advertise Canadian Canned Salmon to all your markets.

Why the Sea's Resources are Practically Inexhaustible

By Professor J. ARTHUR THOMSON.

[A correspondent in London, (Eng.) has kindly forwarded us a recent edition of the London "Evening Standard" containing the following interesting article on the unbounded fishery resources of the sea.]

To the sun we owe everything. Are we vegetarians, then we depend for our daily bread on the carbon compounds which the green leaves build up with the help of the sunlight. Are we of carnivorous habit, then we depend on animals, which in their turn feed upon plants, thus bringing us back to the sun. Do we use steam engines, then we are employing the potential energy of the coal, the captured sunlight-energy of the carboniferous era. Do we even breathe, then we are using the oxygen which green plants are continually supplying to the atmosphere, and the oxygen is, as it were, a by-product in the process by which the leaves use the power of the sunlight to break up carbonic acid gas.

As it is on land, so it is also in the sea. Fishes are consumers, as well as we ourselves; they depend on smaller animals, and these on still smaller fry; but in the long run we reach the plants—the prime producers. And they depend upon the sunlight.

Sunshine and Mackerel.

The chains of transformation binding the world together are of extraordinary interest and of great practical importance. Professor Herdman tells us how man eats the cod, which in turn may feed on the whiting, and that on the sprat; and the sprat feeds on minute crustaceans, and these on infusorians and one-celled plants. Now, these one-celled plants find their sustenance in the sea-water that bathes them, and with the help of their green colouring matter or chlorophyll they "conjure with the sunbeams" so as to build up the carbohydrates, like starch and sugar, and the still more complex proteins or albumens on which animals depend.

The naturalists at the Plymouth biological station have shown that the more sunshine there is in May, the more mackerel at Billingsgate. In fact, Dr. Allen has proven a precise correspondence between the sunshine records of the spring months and the catches of these fish.

The Circulation of Matter.

This, then, is a basal fact of science—what Liebig called "the circulation of matter," what Sir John Murray called "the never-ending cycle." The whole system of animate nature is one of continual reincarnations. The plants are the producers; the fishes are the consumers which interest us most among the tenants of the sea; and the middlemen are the bacteria. They break down the dead bodies of plants and animals, reducing them to simple things like carbon dioxide and ammonia, which the plants of the sea can use.

The idea of nutritive chains is interesting theoretically, but it is also very important practically. On the multitudinous numbers of humbler animals, which form the great mass of the marine population, the comparatively small elite of food fishes must be regarded as dependent. The higher is made possible by the prolific multiplication of the lower.

Energy in 1 lb. of Cod.

Professor Petersen tells us that to make a pound of cod requires 10 lb. of whelk or buckie; to make a pound of buckie requires 10 lb. of worms; to make a pound of worms requires 10 lb. of vegetable matter. So a pound of a carnivorous fish like a cod requires 1,000 lb. of plant. Thus we can understand that a fish would be a rather costly thing to produce if man had to do the feeding. But fishes are fed for nothing.

The work of Petersen points to the conclusion that the quantity of fish which a limited area of shallow water can support is by no means unlimited, for the fishes depend, as we have seen, on the lower links of the chain. The amount of whelk and worm that an area can support is limited, and so is the amount of marine vegetation that a restricted area can produce. When we pass to the open sea the limits are enormously extended, for the place of the fixed vegetation of sea-grass and seaweed is taken by vast "floating seaweed" of microscopic one-celled plants.

Farming the Waters.

In regard to relatively shallow inshore waters, the interesting question rises whether it will become necessary for man to "improve" them. Just as tumbling cartloads of bracken into a fresh-water loch may afford food for infusorians, water-fleas, and so on, up the living staircase, to trout; so it is possible that, if were necessary, man might farm the inshore waters of the sea. He might take steps to increase the tracts of the curious flowering plant called sea-grass, or the abundance of that primitive, perhaps ancestral, vegetation of fixed seaweeds which we see exposed at very low tide.

It is not merely that many animals feed on these marine plants and make a home amongst them; more the sea-grass and seaweeds by the waves leads to the important apparently is the fact that the battering of the sea-grass and seaweeds by the waves leads to formation of large quantities of vegetable debris, which is carried outwards and deposited on the floor of the sea, there forming the main food of many humble types of animal life.

Another possibility of farming in inshore waters would be to try to foster the useful animals, that is, those on which fishes directly or indirectly depend, and to reduce the number of so-called "useless" animals which do not help the "nutritive chain," or which may even tend to destroy some of its links. But the balance of nature is a subtle affair, and it is to be hoped that experiments in sea-farming will be cautious and well criticised. What is obviously safe, however, is to save fine areas from being spoiled by careless disposal or sewage or the like.

The kind of "farming" which has been most tried in the past is that of stocking the waters with young fish—for example, plaice—which have been reared in "hatcheries." On general grounds one would think that this was a sound thing to do in areas where the fish in question was scarce or absent; and, as a matter of fact, we know of the establishment of a profitable shad fishery on the Californian coast and of some success attending the transportation of many millions of artificially hatched young plaice from Aberdeen to Loch Fyne.

The method is likely to work best when the young

fishes are kept in artificial conditions of safety until they have got past the most critical stages of their early development. Bottom-haunting fishes, like sole and plaice, necessarily run more risk of elimination than the rovers which form the great majority, and when signs of depletion are detected in a restricted area, it seems only sense to give that area a rest.

In a short time the numbers will be restored by multiplication from within and immigration from without. The probability is that natural recuperation of an area is much more hopeful than artificial re-stocking.

The late Sir William Ramsay said that human progress consisted in the more economical utilisation of energy, and though this was too narrow a definition, it emphasised an important truth. Every waste of energy is criminal, and to acquiesce in a wasteful exploitation of the resources of nature is retrograde. In some parts of the world uncivilised men catch their fish by throwing poisonous plants into the steam—a diagrammatic illustration of extreme wastefulness.

The modern problem is to avoid all such wastefulness, and hence the efforts that are made to lessen the destruction of immature fish and to prevent the depletion of nurseries. To the outsider it seems an extraordinary confession of muddle that boatloads of dead herring should be thrown back into the sea when tens of thousands of human beings are starving, and when the reason for the rejection is some lack of regulation in the conditions of marketing. But while every right-minded man must deplore wastefulness, there is no ground for nervousness in regard to the resources of the sea when these are treated with intelligent respect.

No Need for Alarm.

The elementary facts which forbid Cassandra forebodings of rapidly approaching depletion are:—

1. Most fishes are rovers, and we are beginning to know something of their mass-movements. A much-fished area may be rapidly re-populated and one knows how the famous tile-fish, which was thought to have been mysteriously exterminated, has reappeared and is again on the market.

2. The eggs of most of our food-fishes are free-floating in the cradle of the open sea, and are therefore undisturbed by trawling. The herring is a well-known exception, for its heavy adhesive eggs stick to stones and other fixed object on the floor of the sea.

3. Most of our food-fishes are very prolific, so prolific that they hold their own in spite of terrific infantile mortality and a multitude of enemies, mostly one another.

The probability is that man is their least formidable enemy, except in restricted areas. Professor Herdman reports that the average number of eggs spawned by a single female fish in the course of one season is 18½ millions for the ling, 8½ millions for the turbot, 4½ millions for the cod, one million for the flounder, 300,000 for the plaice, and so on down to the slightly prolific herring, which has only some 32,000 eggs.

The Resources of the Sea.

He goes on to say, however, that while countless millions are produced, countless millions perish. They are devoured by their enemies or destroyed by adverse environment influences. "Probably only a very few out of each million reach maturity, and it is but of that scanty remnant that the fisherman takes his toll, and so may in some cases 'over-fish' a limited area so as to reduce the population below its power of recovery."

But while wastefulness is always wrong and carefulness always right, there is, as we have said, no basis for a nervous apprehension that we are rapidly exhausting the resources of the sea.

The final reason for optimism is to be found in the set of facts which it has been the point of this article to illustrate, that the superstructure of fishes and fisheries rests on a board basis—the almost incalculable abundance of simple marine animals and the power that all green plants have of trapping sunbeams.

ORIENTALS ON THE PACIFIC COAST.

A special correspondent of the Montreal "Gazette" writes as follows:—

Six per cent of the children born in British Columbia this year are Japanese, according to official statistics compiled in Victoria. Though these figures must be presumed to be accurate, the preponderance of Nipponese youngsters over whites in the coast cities certainly seems much greater. Small families are the exception among the Japs, while childlessness is almost considered a crime.

Indicative of the increase in the junior Japanese population, statistics show that in 1910 only twenty Japanese were born in British Columbia. In the first six months of this year, 438 little yellow boys and girls saw the light of day. Assuming that the ratio will be maintained for the balance of the year, the increase in eleven years works out at 2,200 per cent. The natural increase among the Chinese is 114 in 1910 and 167 in the first six months of 1921.

Sentiment in favor of the exclusion of Asiatics from Canada is slowly but steadily growing. The Asiatic Exclusion League is now functioning, with regular offices, staff, and a membership of about 3,000, all of whom are pledged to abstain from dealing with Chinese, Japanese or other Orientals. One of the most active members of the executive is H. Glynn-Ward, whose book, "The Writing on the Wall," has just been published. This novel is avowedly propagandic in conception, and it is not surprising that it has given offense in some quarters, particularly among the large employers of cheap Asiatic labor. Under the thin disguise of fiction, H. Glynn-Ward traces the coming of the Asiatics to British Columbia, the steady growth of that element, the gradual eclipsing of the whites, until, projecting the story a few years into the future, the whole of the province west of the Rockies is shown absolutely settled and controlled by the Chinese and Japanese.

With their usual stolidity, the Chinese are not at all concerned about the revelations of "The Writing on the Wall," but the Japanese are plainly showing some resentment. Incidentally, the Japanese Workers' Union recently sent a delegation to protest against the propaganda of the Asiatic Exclusion League, but without getting much encouragement. However, the Japanese find some comfort in the support given them by the more radical of the white labor men, who insist that the exclusionists are only tools of the capitalists class, working against the common interests of the unions. This brotherly feeling towards the Asiatics is somewhat hard to understand, as it is only a few years since the unions were the bitterest opponents of Asiatic labor, and at one time went so far as to carry Chinese and Japanese fishermen in cages through the streets of Steveston, with the drowning of the captives an imminent possibility for several hours. Steveston, by the way, is now almost entirely populated by Asiatics.



THE HADDOCK

ONE OF THE BEST SALT WATER FISHES.

By Dr. H. F. MOORE,
Deputy Commissioner, U.S. Bureau of Fisheries.

Tradition tells us that the fishermen of France knew the great fishing banks of the western Atlantic before Columbus set sail on his first voyage, and however skeptical one may feel as to that statement, it is known that not less than 50 vessels, under various flags, were fishing on the Newfoundland banks in 1517, only a quarter of a century after the great discoverer's first landing on the shores of America.

Before there was a single permanent European settlement north of the Spanish possessions, several hundred vessels were engaged in this "noble fishery," and England and France were engaged in fierce rivalry for its possession. The early attempts at settlement were induced largely or wholly by the prospect of profit which it offered, the peace of the colonists was disturbed for nearly a century and a half by the wars which this rivalry fomented between the two nations, and the participation of the English colonies in the warfare brought about the solidarity of sentiment and community of interest which enabled them a few years later successfully to establish their own claims to independence.

These fisheries, which thus dominated events of our early history, were conducted principally for cod because that species was particularly adapted to the methods of curing of that day, but many of the chronicles of the fishing voyages mention the great abundance of haddock. Hand-lines were exclusively employed, and they were used where the cod predominated, but about the middle of the last century the trawl line was introduced from Europe and haddock began to be caught in greater numbers.

Those who knew the fish appreciated its merits, but as it was used principally in the fresh state it was not known far from the coast until transportation was improved by the development of the railroads and ice came into use in preserving fish in transit.

Recently another change in the fisheries has resulted in a further heavy increase in the take of haddock which will make it possible to supply a very large part of the country east of the Rocky Mountains with this moderate-priced fish, which for many purposes is unexcelled. This change is the introduction of steam trawlers, those sturdy little vessels which were prominent in news dispatches during the great war, usually in connection with some hazardous undertaking in mine sweeping or mine laying about the British Isles.

Before the war, they were practically unknown to the American public, even by name, save in a few fishing ports on our northeastern seaboard. There were not over a dozen of them under the American flag, but

their efficiency in their own proper sphere of peaceful industry has been so clearly shown, particularly during the period when food production was a paramount war necessity, that there are now two score or more actively engaged in the fisheries of New England.

The typical trawler is a two-masted steamer, about 125 feet or more in length and very seaworthy, whose characteristic fishing apparatus is the otter trawl, a huge flattened conical bag of heavy netting, which is towed slowly over the floor of the sea taking into its capacious maw vast quantities of bottom-dwelling fishes. This bag is about 150 feet long, and its mouth is kept open when fishing by a pair of "otter boards," like great barn doors, one at each side, which operate like kites pulling away from one another, and spread the open front of the net over a horizontal distance of 75 to 90 feet. At each haul this net sweeps over 80 acres of the bottom.

Of course, all the fish of this area are not caught. Some swim above the net and others escape from its sweep, but nevertheless the catches are heavy, and as the bottom frequented by the haddock is comparatively smooth and adapted to the use of the otter trawl, the recent increase in the number of trawlers operating on our coast has resulted in a corresponding increase in the catch of that species in particular. There has occurred an overproduction of these fish and some vessels have been temporarily withdrawn from the fishery. The demand has not kept with the increase in supply, not because of any inferiority of the fish, but because most consumers outside of New England and the Middle States have not been familiar with its merits of quality and price. It presents the almost unique spectacle, in this area, of a food product in abundant supply at a price but little above that which it commanded when the purchasing power of the dollar was approximately double that of today, and for that reason, if for no other, it merits the housewife's attention and investigation.

In 1919 the take of haddock was over 30 per cent greater than in 1915, and the quantity landed in March 1920, was over 60 per cent larger than during the corresponding month of 1915. In consequence of this growth in production the price of the fish at the vessel side has increased but 27 per cent in the intervening five years, during which the much greater increase in the cost of most other foods has been notorious. Measured by the comparative purchasing power of the dollar the price of haddock is actually much less than before the war, and the benefit of this should be passed on to the consumer.

The haddock is found exclusively in the Atlantic

Ocean, ranging from the Arctic south to the Bay of Biscay in Europe, and in deep water to the Cape Hatteras in America. In the western Atlantic the principal fisheries are off the shores and on the various fishing banks from Cape Cod to Newfoundland. It appears to reach a maximum size of about 25 pounds, but the average weight of mature fish is much less than that. In the markets any haddock weighing over 2½ pounds is classed as "large", those under that weight being known as "scrod". The fish is a bottom dweller, though its eggs are lighter than the sea water and rise to the surface and are distributed in abundance over large areas of the sea during the spawning season. It occurs in enormous numbers on the great fishing banks which stretch from Cape Cod to Newfoundland, and at certain seasons frequents the shores. It is a relative of the cod, and although it never reaches the same large size it has many of the same qualities, and for some purposes the experienced cook of New England gives it preference.

The average constituents of the two fishes, based on a number of analyses, are as follows:

	<i>Haddock</i> Per cent	<i>Cod</i> Per cent
Proteins	17.10	16.00
Fats . . . . .	.26	.30
Ash	1.25	1.24
Water	81.39	82.46

It will be seen that the haddock is one of the "dry" fishes, and for this reason it is superior for some methods of cooking, and many persons prefer it generally

to the rich, oily species. It is a staple fish in good supply throughout the year, and can be taken in quantities to meet any demand. It also "carries" well if properly handled, and can be "laid down" in good condition in the great central part of the country where now the fish supply is usually deficient.

The haddock is not only obtainable in the fresh state, but also dried and salted like cod, and smoked. In the latter state it is known as finnan haddie and is one of the most delicious of smoked products.

WARNING CANNED SALMON NOT BEING PROPERLY LABELLED.

It has been brought to the attention of the Department of Marine and Fisheries that canned salmon packed in Alaska and known as "Alaska Red" has been imported and sold in Canada under the name of "sockeye" without any indication as to where the fish was packed or the particular kind of variety of fish contained in the can. This constitutes a violation of Section 12H of the Meat and Canned Foods Act.

Importers and those who deal in such fish are, therefore, advised to see to it that the label on each can shows distinctly that the fish was packed in Alaska the particular place in that territory need not be shown; and that it also shows distinctly the designation of "Alaska Red Salmon," whether the name "Sockeye" is used or not. Without such marks and designations cans of Alaska Red Salmon found to be on sale in Canada will be liable to seizure and forfeiture.



Canadian Fish Plants---No. 6.



A Fish Wharf at Lunenburg, Nova Scotia showing codfish drying.

The Courageous Fisherman of Massachusetts and Nova Scotia

A Plea for their Greater Safety.

By H. C. McLEOD.

A quarter of a century ago general interest was awakened in ocean fisheries of North America by the publication of Kipling's "Captains Courageous," a story of men and schooners that sail from Gloucester to the fishing banks, which extend from the Banks of Newfoundland to "Georges."

Through this book the world was afforded information regarding a field of strenuous industry on which even encyclopedias were silent. The magic pen makes one sense the very atmosphere of the little fishing schooner "We're Here", with its superstitions of the fo'castle and quarterdeck, convincing the reader that the author had spent weeks on the Banks collecting information about the fishing heroes of these waters.

Our purpose is not with the general features of the story; our chief interest is in the statistics of the losses, which show that of all who follow the sea the heaviest toll is taken from Bank fishermen; a fact to which Kipling attracts attention by referring with pathos to the posting of losses of men and vessels.

Some Unfit to Survive Gales.

Of too many vessels the closing record is "Lost on the Banks with all hands." While the service is so superlatively hard that some good vessels go down, there is no doubt that most of the losses arise from vessels quite unfit to survive an Atlantic hurricane. In the early days, full bodies, ample reserve buoyancy and moderate spars were the salient features of the "bankers"; these vessels being often modelled by the captains engaged in deep sea fishing. Doubtless the success of the "America" with her sharp, hollow bows, stimulated the building of faster fishing vessels, fostering a spirit of competition which led to larger sails and heavier spars. In any case, about 1885, Captain Joseph W. Collins expressed the opinion that the racing feature commenced to impair sea-worthiness at least as early as 1855. This fishing captain and designer who was called to the United States Fish Commission on account of his experience in the Bank fishery, designed the "Grampus" as a model fishing smack, some of the elements of which vessel will be mentioned in this article. Whether the opinion of Captain Collins in regard to impaired seaworthiness is correct, the losses of Gloucester fishermen in all waters for the seventeen years 1870 to 1886 inclusive, were 277 vessels and 1954 men, who left 490 widows and 961 orphans.

Displacement Disregarded.

Neither in a yacht nor in a working vessel are the elements conducive to high speed compatible with the best sea-going qualities. Amongst sailing yachts there are two classes, racing boats and cruisers, the latter being moderately canvassed and some of them as safe in a hurricane as an Atlantic liner. Length gives speed, and although length is not dangerous in itself, designers, in order to obtain speed, are apt to dispose the displacement over great length, and too often canvas their designs according to length, regardless of displacement. For instance the old yacht "Sappho" of wonderful speed in smooth water, displaced only 232 tons on a water line length of 122 feet and carried 11,033 ft. of sail. ("Yacht Designing," p. 62). With a wine glass section and her ballast fixed in what may be termed the stem of the glass

Sappho's range of stability was 95 degrees. However, excessive spars, which made her the target of all but American opinion, caused her righting forces to begin to decline at only 33 degrees angle of her keel, so that she was only moderately safe. Liberal displacement is essential where a yacht or fishing vessel is intended for hard service. Whether displacement is ample may best be decided by comparison with known good vessels and by references to the practice of the world's eminent designers. Whether stability is ample may be closely computed, or it may be definitely ascertained by somewhat simple tests after the vessel is ready for sea. One, if not both of these methods should be adopted in every case. There seems to be a dearth of particulars in reference to fishing schooners, compelling consideration of the elements of yachts in use prior to the advent of lead keels. English publications give the particulars of many yachts of half a century ago, including their curves of stability, which information is not only valuable to designers of safe fishermen, but to all who have an interest in the subject.

The Most Useful Ratio.

The most useful and important ratio in designing is that of length to the cube root of displacement. It is an all important ratio in a yacht intended for deep sea cruising; it is superlatively essential in a working vessel that tempts the North Atlantic. Colin Archer, of Laurvig, Norway, than whom, as an original investigator, no one has done more to elucidate the wave line theory and the uses of curves of displacement, read a paper before the Institution of Naval Architects, London, on April 13th, 1878, in which, inter alia, he classified the sea going qualities of yachts by ratios of length to the cube root of displacement, as given below. Parenthetically, it may be added that twelve years later "Gloriana" demonstrated the correctness of more of the theories published by Archer, in the seventies, and revolutionized yacht designing.

Class	Type	Ratio
1	Light and	6.5
2	Shallow	6.25
3	Light	6.
4	to	5.75
5	Medium	5.5
6	powerful	5.25
7	Sea-going	5.
8	Cruisers and	4.75
9	Smacks.	4.5

Let us contemplate these ratios by the aid of the three following examples, each of a vessel of 240 long tons or 8400 cubic feet displaced by a box 20.33x20.33. To speak in a less elementary way, the cube root of the displacement of each vessel is 20.33 feet. Any reasonable length of water line may be taken on which to dispose the volume of this box, as it were; a high ratio favoring speed; a low ratio producing a chubby vessel, ill adapted for trials of speed against lighter and longer vessels.

Example A. We will suppose that the designer of A. is given an order for a staunch seagoing fisherman of about 240 tons displacement. He is impressed by the hardness of the service in which the vessel is to be used

and the routine on board a fisherman is explained to him. He is informed that there is no constant condition of cargo or ballast; that the salt and other supplies taken to the Banks are in the course of the voyage replaced by fish, and that at times during the process the stability of the vessel is impaired by more than normal weights on deck. He will learn that in gales, which sometimes rise suddenly on the Banks, waves are more confused, steeper and sharper than they are on the deeper portions of the Atlantic; from which, and the reading of White's "Naval Architecture" and the many other authorities on stability of floating bodies, he will realize that these waves may throw a vessel, at anchor or otherwise, to unusual angles of heel; he may even learn that vessels occasionally capsize and founder at anchor on the Banks. In these circumstances, Archer's Class 8, with a ratio of 4.75 is likely the lightest type that would be selected, especially as the "Grampus", designed by Captain Collins aforementioned is heavier, her ratio being 4.55. The cube root of the displacement 20.33 ft. multiplied by 4.75 makes the water line length of A. 96.57 feet.

Example B—The prospective owner of B wants a fisherman of about the same displacement as A, with a form easy to drive under a small rig; a vessel not especially fast in light air, but one that will be "Cock of the Walk" in a strong breeze; a vessel that will "claw off" a lee shore or come in stays in a seaway in which oversparred competitors would be killed by the momentum and windage of excessive rigging. The designer may decide to make the water line length 104.5 ft., the ratio being 5.14. B. ought not to have a greater sail area than may safely be assigned to A. for the latter has the greater stability relatively and absolutely.

Example C.—The object of building the vessel C. is to win the Herald Trophy. She is to be of the full length allowed by the rules, 112 feet water line. The displacement will surely be kept as small as possible, say 240 tons, or a ratio of 5.5. She is to have all the sail permitted by the rules, 10,035 square feet, besides a main staysail. With ordinary construction she may carry 80 tons of ballast, a quantity so small that its needs must be built into the hull. If of yacht construction there would be considerable saving in weights which would permit of more ballast being carried. Even with 80 tons of ballast fixed at the lowest point within the hull the moments thereof will not offset the movements of the spars and rigging, with the sails stowed. The sail area including the staysail will be 5.9 per cent. more in proportion to length than Sappho had; Sappho, the defender of the America's Cup, that example of oversparing to which W. H. White and other naval writers were wont to point, to be outclassed in sail spread by a craft supposed to be intended for the most dangerous work to which small vessels are anywhere assigned! It is true that the well known racer of more recent years, Meteor III, of 120 feet water line length, carried, when using her working topsail, about the same proportion of sail to length as is permitted to the racing fishermen; but her ballast is of lead and all on the keel so that to each increase of inclination her righting forces offer increased resistance. Meteor's mainboom is one foot longer than Sappho's, but if she were sparred in proportion to the two Nova Scotia aspirants for racing honors it would be nine feet longer!

Danger of Being Overrigged.

Overrigged vessels may sail a good race; their performances in ordinary weather may even inspire confidence, but if caught in a great ocean gale their chances of surviving would not be good, and if so caught with imperfect stowage, their chances would be little better

than zero. Trading and fishing craft so sparred may reach their maximum stability when heeled to about 25 degrees, and when heeled to their maximum they are lost unless the pressure be at once relieved. Moreover, when as often happens, a wind is rising faster than sails can be handled an overrigged vessel, so overtaken, is on the broad way to the list of "missing." Some may contend that vessels rarely heel to 25 degrees, but the best authorities say otherwise; vessels do so heel in emergencies, and not infrequently. The H. M. S. "Captain" when sailing at an angle of fourteen degrees was thrown by heavy seas to twenty-two degrees, that being her maximum. There was one survivor, whose tale stimulated inquiry into the subject of stability of all vessels of importance. Sir Edward Reed in "Stability of Ships," page 128, gives the curve of stability of a 4,000 ton ship which was lost in the Indian Ocean when cotton laden. W. H. White, apparently referring to the same ship, says the cause was inability to handle the sails with sufficient rapidity in the face of a rising wind. That ship's greatest righting force was at 40 degrees of heel, and her range was 80 degrees.

Urges Revision of Rules.

Ill-advised rules have caused these races to have a pernicious effect instead of the beneficial influence sought for by the donor of the trophy, and hoped for by all interested in sailing craft. The sails and spars of the three aspirants for the cup argue for their limitation by rule, and the safety of the fisher folk pleads for revision of the rules, and for the encouragement of sanely rigged Bank fishermen.

Having been unsparring in criticism of the rules, it may be proper for me to suggest that section 7 (c) thereof be changed, as indicated by the underlined words, the suggested paragraph to be read as follows:

(c) The total sail area, not including fisherman's staysail, to be no greater than *Sixty-five* (instead of 80) per cent of the square of the water line length, in racing trim, as expressed in square feet *and, for the purpose of apportioning or of limiting sail area, the length shall not be computed to be more than five times the cube root of the displacement, as expressed in cubic feet.*

The above suggestion is closely akin to the proposal made by Mr. Ham, of Mahone Bay, that the largest immersed cross section should be taken account of in the limitations, but it is probably more simple and more flexible. Sail might be apportioned according to the under deck tonnage but it is not possible to say whether a premium in the form of increased sail area might not lead to a bulky and less graceful body above the water.

Better in Long Run.

The limitation of sail above urged would reduce speed a little in light winds, but that would be compensated for by more speed in strong winds as well as by better general performance in rough water, and when riding at anchor on the Banks hard bilges and excessive spars would act in unison less effectively to keep up incessant and dangerous rolling. Furthermore the change would tend to economy in building and in operation, as well as to the safety of the vessels and crews.

To illustrate the effect on sails of the changes proposed in these rules, we may alter the scales of vessels A and B above mentioned, so that each would be of 112 feet water line length. A's displacement would then appear as 13110 cubic feet, B's 10350 cubic feet and C's 8400 cubic feet, the sail limitations would work out as follows:

A. 8053 ft. B. 7720 ft. and C. 6714 ft. In short the rules would then seek to allot still in proportion to the bulk to be driven, within certain limitations. They

would make impracticable the introductions into the competitions of an enlarged and overrigged canoe. They would favor vessels of the type described by Colin Archer as "powerful sea-going."

Since writing the above the Trustees of the Herald

trophy have refused to permit the Mayflower to enter the race of this year, a prudent decision, yet one not conducive to good international feeling; and one that would have been rendered unnecessary by well considered conditions and rules.



What People do not know about Canned Salmon

Are not Informed as to Comparative Value of
Different Varieties.

Recently the statement was made by a salmon producer that foreign markets were more familiar with British Columbia salmon than the domestic market, and there is a large degree of truth in it.

Comparatively few Canadian householders know how to buy Canadian canned salmon, and that fact is chiefly responsible for retarded development of the local demand. Merchants, aware of their ignorance on the point, frequently impose upon customers and the latter are gradually, through ignorance and deception, discouraged from using this highly nutritious and delectable food.

The systematic purchasing of food requires that householders know something about the things they eat and what is a reasonable price for the article without putting absolute dependence in a grocery sales clerk.

With canned salmon, as with canned foods in general, the "Meat and Canned Foods Act" requires that it be indicated on the label the true and correct description of the contents of the can including the vernacular name and the minimum net weight of the fish, plainly printed in a conspicuous manner; also, the full name of the packer or the fish dealer obtaining it direct from the packer, as well as the name of the place where the fish was packed.

This information on the label of a tin of canned salmon enables one to purchase intelligently, providing one knows the different varieties of salmon and their comparative commercial values.

The "Meat and Canned Foods Act" recognizes six different varieties of British Columbia salmon. They are as follows in order of their commercial value: sockeye, blueback, redspring or whitespring, coho or silver, pink, chum or qualla. These names must appear on tins containing the respective varieties and usually it is printed in red letters against a white background. Purchasers should look for this mark.

Salmon is put up in three different styles of can, — pound tall, pound flat and half-pound flat, but the style of the container has nothing whatever to do with the grade or variety of the contents. The packer puts up the tins in standard cases containing forty-eight pound tins or ninety-six half-pound tins, and his quotation is based on the case as a unit.

An illustration of the comparative commercial values of the different species may be gained from the following packers' quotations in 1918 and 1919. It must be noted, however, that the table is not a true index of present day values, but it is used solely for the purpose of comparing values.

	Per Case.	
	1919.	1918.
Sockeye talls	\$15.00	\$14.50
Sockeye flats	15.50	15.00
Sockeye halves	16.50	16.00
Red spring talls	13.50	13.00
Red Spring flats	14.00	13.50
Red spring halves	15.00	14.00
Coho talls	12.00	11.50
Coho flats	12.50	12.00
Coho halves	13.50	13.00
Pink talls	8.50	8.50
Pink halves	10.00	10.00
Chum talls	6.75	6.75
Chum halves	7.75	7.75

It should be borne in mind by the consumer that the "commercial value" and the "nutritive value" are not synonymous. For example the chum salmon, which commands the lowest price in the market, is richer in food constituents than any of the other grades.

At the present time large stocks of pinks and chums, the cheaper grades, are being carried and these grades should be available at very reasonable prices in all quarters of the country.

SCALLOP BEDS MAY EXTEND AS FAR AS THE COAST OF GASPE.

While intense interest is being taken in a survey of the scallop beds about the shores of Nova Scotia, New Brunswick and Prince Edward Island, which is in progress this season under the direction of Andrew Halkett Naturalist of the Fisheries Department, word comes of evidence that this valuable fishery may extend to the shores of the Gaspe Peninsula.

A fishery officer who recently visited Gaspe found a considerable number of live scallops washed ashore at the Corner-of-the-Beach. He discovered that the natives of the place have often found scallops washed ashore, but had never identified them as such nor been aware of their commercial value.

It is of interest to note that the scallop catch last year, amounting to 8,131 gallons, was disposed of for \$28,848. This branch of the fishing industry is exceedingly remunerative and there is always a ready demand for the commodity. The Gaspe coast has for years been specializing largely in dried fish and the discovery of the scallop there should make it worth while for fishermen to look into the possibilities of this side line.

NEW LOBSTER FISHERY REGULATIONS.

3. No one shall fish for, catch, kill or sell lobsters from the 30th day of June in each year, to the 14th of January following, both days inclusive, on and along that portion of the coast, or waters thereof, of the provinces of New Brunswick and Nova Scotia, embraced and included within the County of Albert, New Brunswick, and that portion of Cumberland County, bordering on Bay of Fundy and tributary waters, as well as the Counties of Kings and Annapolis, including Digby Gut and Annapolis Basin, and the Bay of Fundy side of Digby County, including the Bay of Fundy side of Long and Briar Islands, Nova Scotia, nor shall any one within the above described limits fish for, catch or kill at any time, any lobster or lobsters under nine inches in length, measuring from head to tail, exclusive of claws or feelers. (Possession in close season, without lawful excuse, prohibited. See Fisheries Act, section 29.)

4. No one shall fish for, catch, kill or sell lobsters, from the 1st day of June, in each year to the last day of February following, both days inclusive, on and along that portion of the coast, or the water thereof, of the Province of Nova Scotia, embraced and included within the St. Mary's Bay side of the County of Digby, and embraced and included within the counties of Yarmouth, Shelburne, Queens, Lunenburg and that portion of the County of Halifax west of a line running S.E.E. astronomical, from St. George's Island, Halifax Harbour, coinciding with the Fairway Buoys in the entrance of the said Harbour. (Possession in close season, without lawful excuse, prohibited. See Fisheries Act, section 29.)

Whereas section 14 of the Lobster Fishery Regulations established by Order in Council of the 30th September, 1918, as amended by Orders in Council of the 1st April, 1920, and the 11th June, 1921, prohibits offering for sale, selling, bartering, supplying or purchasing any fragments of lobsters, lobsters purposely mutilated or broken up, or any broken lobster meat, as well as the boiling or partial boiling of lobsters elsewhere than in the canneries licensed for that purpose;

And whereas the Minister of Marine and Fisheries reports that recent possibilities have developed for disposing of lobster meat in a frozen condition, and also shipped on ice, and the responsible officers of the Fisheries are of the opinion that such trade would be in the interest of the industry and should be permitted;

Therefore His Excellency the Administrator in Council, on the recommendation of the Acting Minister of Marine and Fisheries, and under the authority of section 45 of the Fisheries Act, Chapter 8 of the Statutes of 1914, is pleased to order that Section 14 of the Lobster Fishery Regulations, adopted by Order in Council of 30th September, 1918, as amended, shall be and the same is hereby further amended as follows, viz:—

14. "No one shall offer for sale, sell, barter, supply or purchase any fragments of lobsters, lobsters purposely mutilated or broken up, or any broken lobsters meat, and all fragments of lobsters, lobsters purposely mutilated or broken up, or broken lobster meat, so offered for sale, sold, bartered, supplied or purchased, shall be liable to seizure or confiscation, provided that fresh lobster meat that is frozen or is packed in ice, and is intended for use in an uncanned condition may be sold, supplied or purchased; nor for canning purposes shall any lobster or lobsters be boiled or partially boiled or partially prepared elsewhere than in the cannery licensed for that purpose."

RODOLPHE BOUDREAU,

Clerk of the Privy Council.

LARGE PART OF CANADA GETS NO SUPPLY OF FISH.**Improvement In System Of Distribution Must Aim To Increase Area And Population Served.**

Canada is the best market for our sea products. United States had been second best but it is problematical whether it will figure as prominently in the future in view of the Fordney tariff measure and other equally depressing influences. Canadian fish production must find another outlet, if the handicap in the United States proves too great, and the most logical market to develop is right here at home.

During the year 1920 it is estimated that not more than 40,000,000 pounds of fresh seafood were moved to the interior. It is doubtful if the entire consumption of fresh fish, including both sea and freshwater, amounted to more than 60,000,000 pounds. When it is considered that the total catch of fish approximates 1,000,000,000 pounds each year it will be realized how comparatively small is the amount of it used in the fresh state.

Our system of fish distribution is just in process of development. It is not a great many years ago that fresh fish from the Atlantic first began to find a place on the fish dealers' slabs in Ontario, and the development of the trade from the Pacific coast has been even of more recent date. The growth of the business in fresh sea fish has been free and has followed the course of least resistance. There are three distributing centres of the first magnitude, viz., Montreal, Toronto and Winnipeg, with other less important stations such as Edmonton, Calgary and Quebec. Territory in close communication with Montreal, Toronto and Winnipeg or accessible to a supply direct from the coast are tolerably well supplied with sea fish. The rest of the country has little opportunity to benefit by our copious supplies.

Of the 60,000,000 pounds of fish consumed fresh in Canada probably four-fifths of it is available to less than a quarter of the population. An expansion of the local market, therefore, must mean an increase in the territory and population served. Of course a general readjustment of fish traffic cannot be brought about overnight, but any organized development of the future must have consideration for the whole population.

The weakness of the distributing system in the United States, which is much like our own, has led to the formation of a company to supply individual purchasers from the coast by parcel post, special containers being provided to preserve the commodity in transit. The theory of the scheme is perfect but under present conditions its practicability is doubtful. The idea is there, however,—to make a fish supply accessible to more people.

The Fisheries Department is securing a census for the purpose of ascertaining accurately the amount of fish being consumed in different centres throughout the country. This will provide definite information as to what sections are receiving inadequate supplies. It is proposed to have charts, embodying this data, furnished to the wholesale trade along with suggestions for a more systematic distribution.

WILL TARIFF DRIVE CANADIAN FISH OUT OF THE U. S. MARKET?

Attention Drawn To Fact That Prior To 1913 Our Fishermen Had To Contend With Tariff And Closed Ports, When There Was No Exchange Advantage.

While all Canadian commerce with the United States will undoubtedly be deeply affected by the stringent provisions of the Fordney measure, there is no industry more seriously hampered, apparently, than fishing. Nothing will illustrate the situation more strikingly than our statistics of exports of fish and fish products which for the year 1921, show that approximately one-half, in value, of all exported commodities in this department went to the United States, despite the fact that trade was carried on in seventy different countries.

And this alone is not the only difficulty the industry has to contend with to maintain her fish trade in the United States market. For the past three years Canadian fishing vessels have enjoyed equal rights with American vessels in United States ports and the same courtesy was accorded our neighbors in Canadian ports. Now the American Government has rescinded this privilege so that Canadian fishermen are no longer able to sail direct from the banks and dispose of their fares in the American markets.

The two crises developing at the same time confront the industry with a serious problem. There is some suggestion that privileges extended to American vessels in our ports should likewise be rescinded, but in many quarters the wisdom of this is doubted. However, that does not affect the situation as to Canada's position in the United States market in the future. There still remains the fact that last year half our foreign trade was with the United States, and the uncertainty as to whether we shall be able to hold any considerable portion of it in future.

The value of our exports of fish and fish products in 1920 was approximately \$33,600,000 of which nearly \$16,000,000 went to our southern neighbor. To put the same quantity and variety of fish into the American market, following the application of the Fordney measure, will mean an added cost of approximately \$2,350,000, and the question arises whether, with this added burden, Canadian producers can meet the competition of producers within the United States.

There is the question of exchange to be taken into consideration, which operates very favourably toward Canada. Furthermore the *modus vivendi* of 1918 has been in existence only three years, so that it does not seem an impossibility to revert to conditions prior to its inception. Nor does it seem impossible to export to the United States in the face of a tariff. The Payne-Aldrich measure, superseded in 1913 by the Underwood Act, imposed a duty on fish and its products, but still the American market was being steadily developed.

FLOATING EXHIBITION OF BRITISH INDUSTRY.

A specially designed exhibition ship, christened *British Industry*, will sail from the Thames in the summer of 1923 for the chief ports of the world, says the *Manchester Guardian Commercial*. She will proceed to the east coast of South America, calling at Bahia, Rio de Janeiro, Monte Video, and Buenos Ayres. She will then sail to South Africa, calling at Capetown and

Durban, and thence to Australia, to Fremantle, Adelaide, Hobart, Sydney and Brisbane. After calling at Wellington, Lyttelton, and Auckland, the ship will steer north by way of Fiji to Yokohama, Kobe, Shanghai, and Hong Kong. The homeward voyage will be via Manila, Saigon, Singapore, Batavia, Penang, and Rangoon. In India the ports to be visited are Calcutta, Madras, Colombo, Bombay, and Karachi, and later the vessel will make a short stay at Aden, Malta, and Gibraltar.

During a voyage of 18 months a distance of 43,000 miles will have been covered and 34 important trade centres visited, a stay of from a week to a fortnight being made at each place. Every detail of the equipment of this British trade ship, from the engines to the fittings and furniture, will be an exhibit of British workmanship at its best. She will have a gross tonnage of 20,000, and her internal arrangements will differ from any ship that has ever been floated. There will be eight decks, four of which will be devoted to the exhibition proper. Arrangements will be made for forwarding fresh samples to meet the ship at particular spots. At each port reception committees will be to make known the advent of the seaborne exhibition and to prepare lists of important firms and individuals.

A company called the British Trade Ship, Limited, has been formed with registered offices at 12, Grosvenor Gardens, London, S. W. 1, and a strong board assembled under the chairmanship of Earl Grey.

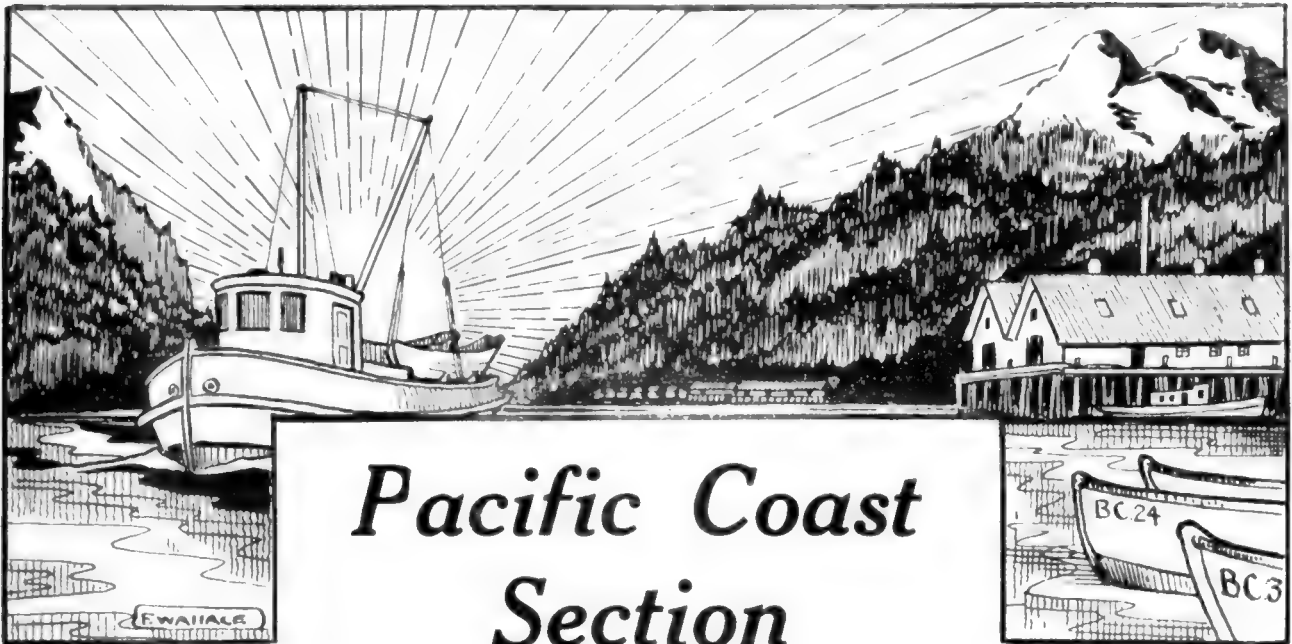
AMERICAN PACKERS RESENT FRENCH TARIFF ON SALMON.

Development of American export trade in canned salmon with France is being seriously hampered by a discriminatory tariff on the part of France according to Charles H. Black, Jr., of the Association of Pacific Fisheries, in an open letter to all salmon packers.

"You, as an American packer of salmon," declares President Black, "are being seriously discriminated against in the French market. The French Government has tariffs containing maximum and minimum rates. The maximum rate, namely that which is assessed on canned salmon from the United States, is 50 francs per 100 kilos, while more favored nations like Canada and Japan are permitted to import salmon into France under a duty one-half as great, viz.: 25 francs per 100 kilos. It seems that special tariff agreements have been made by France with Canada and Japan which entitle these countries to preferential rates. It has come to our attention from several sources that this unjust discrimination against American canned salmon in France is restricting our sales, greatly to the benefit of Canadian and Japanese canners.

"The association has made strong representations to the State Department in Washington, but have told that the Department does not consider at the present time it is in position to open this question with France. We feel, however, that it is dangerous to permit this condition to go on unchallenged. At the present time Congress is enacting a new tariff law, and it seems to us that steps should be taken at once to acquaint our Senators and Representatives with this discrimination against American canned salmon and request them to see that the situation is remedied.

"We understand that the maximum French tariff rate on American canned salmon was adopted to meet the retaliatory provisions of the United States Tariff Act of 1909."



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltd., 528 Winch Building, Vancouver, B.C., Canada.

ANOTHER COMPANY LAUNCHED IN BRITISH COLUMBIA TO DEVELOPE THE SHARK INDUSTRY.

Mr. Sidney Ruck, formerly head of the Consolidated Whaling Co. of Victoria has resigned to head the new company being formed to develop a new company for handling sharks. The plant of the new company will be located on the Alberni Canal.

Sun sharks will be given particular attention as there is an enormous amount of oil in the livers of this species. Some of the livers producing as high as 60 to 65 per cent. of oil or about 20 gallons of the finest shark oil. These shark are reported to abound in large numbers off the west coast of Vancouver Island. Recently one of the coast steamers reported running into a large school of them.

The teeth of the sharks are now worth considerable owing to a new fad which has developed in necklaces.

Membranes and intestines are turned into gloves, glue and gut and the blood and flesh into poultry food and fertilizer. The head is a solid mass of cartilage glue.

The outer skin is reported to be the most valuable part of the fish. It has the toughness of vulcanized rubber. The outer surface is rough as sandpaper and this is taken off by acid treatment and the skin tanned.

Without doubt such a company as this is planned to be will prove to be a successful business venture providing the management is familiar with the operation of such a plant and has plentiful supply of capital to carry it over the experimental stage. As time goes on British Columbia will be producing large quantities of oil from different species of fish which abound in the waters of the province. Up to now practically no by products have and hard work success awaits some one who will stick to it.

COL. CUNNINGHAM'S TRIP TO ENGLAND HAS PROVEN OF GREAT VALUE TO THE DEVELOPMENT OF THE CANNED PINK TRADE.

Recent reports from England demonstrate that great good will result from Col. Cunningham's trip to the U. K. and the continent.

The wholesalers and retailers have received first hand information direct from a Canadian source which will go a long way toward creating a favorable impression for the canned pink salmon. The demand for this variety is steadily increasing and with the dealers looking for the can with "CANADA" stamped in the top of the tin there is sure to be a large trade in pinks as a direct result.

Col. Cunningham has also had some attractive booklets issued which will do much to interest the householder in canned pinks. The press has also been most kind in give a great deal of publicity to Col. Cunningham's endeavors to popularize pinks.

FRED GOSSE NOW OWNER OF HARRY HALL COMPANY LIMITED.

Mr. Fred A. Gosse, formerly Vice-President and General Manager of Harry Hall Co. Ltd., Vancouver, B.C., has recently purchased the interest of Harry Hall Incorporated, of San Francisco, in the former company. For the present the firm name will be continued. There is no change in the organization and the business will continue under the active management of Mr. Gosse, who is well and favorably known in the trade.

Recently this firm made a shipment of canned salmon on the S.S. Mongolian Prince, of the Furness, Withy Line, which was the largest individual shipment included in the record cargo which the steamer took from Vancouver.

SOCKEYE FISHING SEASON EXTENDED ON THE FRASER.

The Department of Marine and Fisheries had made a ruling that the season for fishing sockeye on the Fraser was too close on the night of September 20th, but owing to protests lodged by the fishermen, who claimed that they would be put to considerable expense by having the season close so soon and also protested it would mean a further shortening of the already small pack of this variety, the department decided to extend the season to November 10th and instructions were received in New Westminster on October 1st, to allow fishing for sockeyes to this effect.

Reports from the canneries show that this new order will mean a considerable addition to their pack. As soon as the fish show that they are unfit to can however the season will close automatically.

CLOSED SEASON FOR ONE WEEK DURING SEPTEMBER ON THE FRASER RIVER.

With the idea of allowing a sufficient number of fall fish to reach the spawning beds, the Fraser River was closed to salmon fishing during the week from September 13th to September 29th. While the Canadian authorities were doing their part to assist in keeping up the supply of fall salmon, the Americans were fishing their traps which extend across the gulf and their leads extend to the Canadian line. It is estimated they took 50,000 fish during this closed period on the Fraser and the purse seiners captured nearly as many more.

S.S. MONGOLIAN PRINCE TAKES RECORD CARGO OF CANNED SALMON FROM VANCOUVER, B.C.

A record shipment of 110,000 cases of canned salmon or about one quarter of the seasons pack is what the S.S. Mongolian Prince took aboard at Vancouver during the latter part of September. This steamer belongs to the Furness, Withy Line, and Frank Waterhouse & Co. agents secured this splendid shipment of canned salmon for their boat, which sailed direct for Havre via the Panama Canal.

VANCOUVER WHOLESALE FRESH FISH MARKET.

Halibut. At this writing the quotation is Mediums 16c and Chickens 15c per lb., but there is every indication of the price advancing.

Cod. Fairly plentiful and selling at 6 to 8c per lb.

Salmon. Cohoes are selling at 8c per lb. head off, steelheads 12c per lb. head on. Pink meated fish 6c head off.

Herring. Pender Harbor herring are on the market and selling at 5c per lb. Not too plentiful but the supply should increase.

Soles. This popular variety of fish are beginning to come from the local trawlers.

Kippers. Nice fresh stock now selling at 10c per lb.

Smoked Halibut Fillets. This fine smoked fish is being sold at 15c per lb.

Smoked Cod Fillets. Selling at 15c per lb.

Smoked Whole Sable Fish. Selling at 15c per lb. while the chunks of the same variety are selling at 17c the lb.

PROHIBITION OF SOCKEYE FISHING ON PUGET SOUND AND THE FRASER RIVER.

The British Columbia Cannery Assn. and the B. C. Fishermen's Protective Assn. have been sent the following letter by Maj. J. A. Motherwell, Chief Inspector of Fisheries for British Columbia:

The Letter.

"You are aware of the present unfortunate condition of the sockeye fisheries of the Fraser River. It will be remembered that as the result of an investigation by the international commission of 1918 a treaty was drafted which, if ratified by the authorities of both countries, would result in such measures being taken as it was hoped would restore the sockeye run to the Fraser River. Although this department has not been officially advised as to the rejection by the American Senate of the treaty, the information available points to the fact that there is no hope of the American authorities taking the desired action. This being the case it is imperative that some action be taken before next season to ensure the proper protection, and efforts in the line of conservation which will obviate the possibility of another season being lost. The suggestion has been made that sockeye fishing on the Fraser River and Puget Sound should be completely prohibited during a period of years, and I would like to obtain the carefully considered views of your association on the following points, and only on the understanding that the prohibition on both sides would be absolutely efficacious, and that every variety of fishing appliance would take sockeye in Puget Sound, Juan de Fuca Straits and the Fraser River would be surely eliminated during the closed season:

"1. Would you favor a closed period during which no sockeye fishing would be permitted?

"2. In the event of a closed season being considered advisable, would you consider a four-year or an eight-year period most desirable?

"3. Between what dates would you consider a closed period the most efficacious for the purpose in view?

"It is the understanding that, should sockeye fishing be prohibited, those nets with a larger sized mesh would be permitted for the purpose of taking other varieties of fish for the fresh fish markets."

Major Motherwell has sent this letter to these organizations to secure some indication of the ideas of those who are vitally interested in the fishing for sockeyes in this area for a period of years.

It is too early to comment on the feeling of either organization toward such a proposition, your correspondent feels that it is best to wait for the reply that is made by each in an official way.

BRITISH COLUMBIA SCOTCH CURED HERRING AGAIN TO THE FRONT.

Owing to a scarcity of a scotch cure pack in the U. K. there is some chance of a revival of this industry in British Columbia this year. Nothing definite is assured but from what your correspondent could find out the New York market is being watched carefully and New York buyers are looking toward British Columbia.

ORIENTAL SALT SALMON.

With the price of rice extremely high and the Japanese farmer making big money and the public in the orient looking for cheap food the market for salt chum salmon is looking very bright this year. Another factor is the smaller than usual catch on the Siberian coast of this variety. The result is that there is every indication of a heavy pack of this variety of salt fish. With the price low it should prove a profitable market.

Just here let us say that this is another chance where the white man should control the market for his own product but as it stands today it looks as though the little brown man was getting his innings. Why is it that the white packer cannot get this business in his own name? Is it for want of progressiveness or is he willing the Japanese should have the business? Surely the white man can compete when he is in a position to control the production. The white packer today is getting a big share of the oriental salt herring pack and is on the way to get more but it took years to get it.

SALT HERRING PACK FOR THE ORIENT.

There is every indication of the oriental salt herring pack being fairly profitable this season. Without doubt there will be a close watch kept on the quantity packed so that there will not be too much of a surplus. The buyer in China has always kept close watch on the pack in British Columbia and when there was a large quantity shipped at one time or when several shipments were allowed to pile up at the other end it was a case of pound the price. If the shipper will handle the sealing and shipping end as it should be handled there is no doubt that the profit will be well worth while. There is no reason why this should be otherwise than profitable if there is some unity in respect to the different firms who are packing.

The minister was trying to teach the significance of white to the Sunday class.

"Why," said he, "does a bride invariably desire to be clothed in white at her marriage?"

As no one answered, he explained.

"White," he said, "stands for joy, and the wedding day is the most joyous occasion of a woman's life."

A small boy queried:

"Why do the men wear black?"

Wife—How many fish was it you caught on Saturday, George?

Husband—Six darling. All beauties.

Wife—I thought so. That fisherman has made a mistake again. He's charged us for eight.

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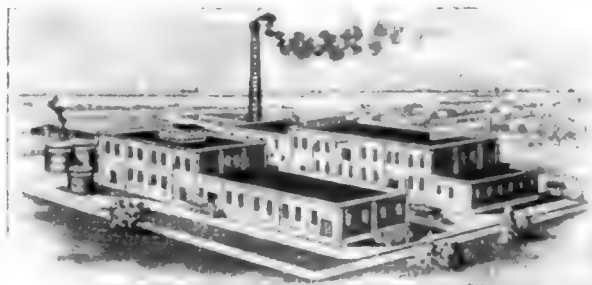
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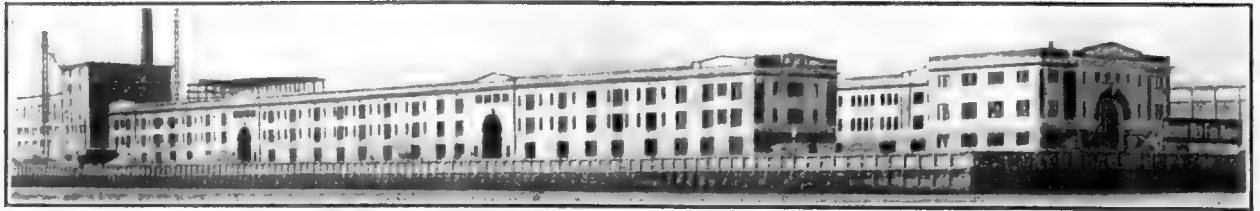
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Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., NOV. 1921

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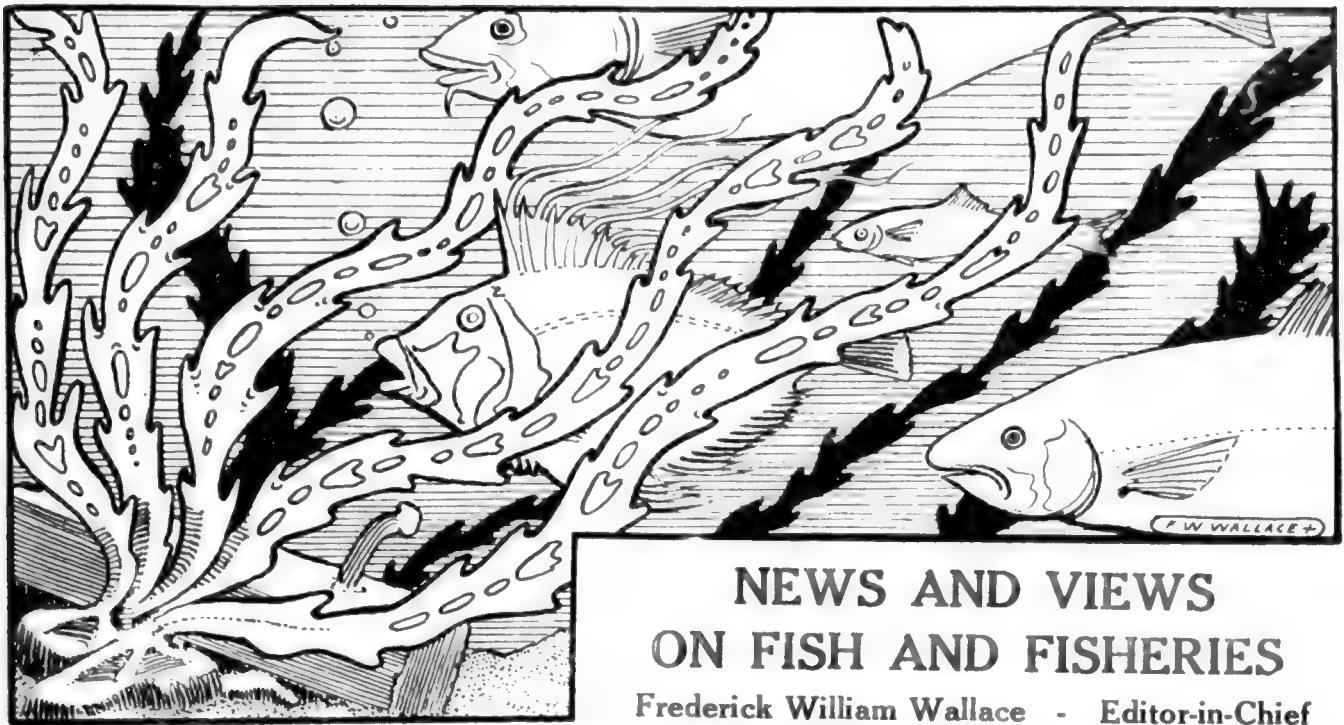
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NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

"BOY! PAGE THE DEPUTY MINISTER OF FISHERIES!"

Wanted by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

Columns of political policies, prophecies, promises, perorations and platitudinous piffle are filling the newspapers these days. Reams of valuable white paper spoiled with the plans of the various candidates as to what they will do with the tariff, the railways and the Merchant Marine, but scarce a paragraph as to any constructive policy for the development of the Canadian natural resources.

The agricultural lands, the mines, forests and fisheries constitute the whole basis of Canada's future. They are important—so important—that they might well form the main policy of a Government in the greater development thereof.

Hon. Mr. Ballantyne, on the stump in Quebec Province, has made many speeches regarding his own future policy and that of the party he represents. He has enlarged on the Merchant Marine, but of the most potentially valuable department which he administers, he has not a word to say. Once, and once only, has he mentioned the fisheries, and that was in a speech, where to placate certain local parties, he promised to open Missisquoi Bay to Canadian fishermen at a certain season that they might compete with the Americans. Compared with the fisheries of the Dominion as a whole, the Missisquoi Bay problem is as insignificant as the gnawing of a flea on the stern quarters of a pachyderm.

We have no personal animus against Hon. Mr. Ballantyne. We give him due credit for being a strong personality, aggressive, successful in business, socially agreeable, but we claim that he has **not** done equal justice to the departments which he administers. Had he put one-half the effort into developing the fisheries that he has given to the promotion of the Merchant

Marine, he would have left a permanent memorial to his term of office that would remain to his credit for all time. As it is, the devotion of his ability and energies to the Merchant Marine scheme will result in his creating a species of nautical Frankenstein that will ultimately devour him.

Whatever party is returned to power in December will do well to listen to the voice of the workers in natural resources. The fishermen call their attention to the little "WANT AD." which has headed our leading editorial for the past ten months. It represents the foundation stone of progress and development. Let's have it!

THE INTERNATIONAL SCHOONER RACE.

The honors have come back to Canada and our claim to the Blue Ribbon of the Atlantic sailing fleets are sure until the next meeting of the clippers of the Canadian and American fleets.

But what we liked best about the whole thing was the good sportsmanship of all concerned. There was fuel for acrimonious argument had anyone been small-minded enough to rake it up. But it wasn't raked up. The "Elsie's" backers allowed it was a fair and square race. She was the pick of the American fleet and she went up against the best of the Canadian flotilla and lost. The Americans proved they were good losers and left Halifax with the pleasantest recollections surrounding their visit.

The American papers reported the races fairly and editorial comment was unbiassed and square. The attitude of the "Mayflower" supporters in accepting the decision of the committees for this year without acrimony commands our admiration and respect. It is a pretty hard blow to have worked on an ideal and to have it thrown out for reasons with which one does not altogether agree, but the "Mayflower" associates took the decision without rancor and will have another

year to prove that their fleet clipper is all that she is supposed to be, viz:—a fishing schooner that can pay her way and prove herself such a distinct advance on previous models that owners will be anxious to duplicate her for the skippers and fishermen anxious to fish in such a type. Time alone can determine this, and should she stand the test, we will be the first to hail her as the latest and best.

The International Race for fishing schooners is away to a good start as a permanent institution. Here's to it as a means of cementing still further the entente cordiale which exists between the two countries.

HIGH JINKS AT ST. PIERRE.

St. Pierre et Miquelon, or the French Islands as fishermen usually call them, are very much in the limelight at present. These bleak rocks lying a few miles off the southern Newfoundland coast are the only possessions of France in the North American continent and have been used by the Republic for many years as a base for the French fishermen engaged on the Grand Banks. A small resident population with a local fleet produce some fish for export, but the bulk of St. Pierre fish is caught by the fleet which comes out from France. The season's catch, prepared at the St. Pierre base, is shipped in bulk to France and there prepared and packed for market.

The after-war reconstruction period in France led to certain developments for ensuring cheaper food supplies. To that end, something like \$1,200,000 was spent in erecting a cold storage and freezing plant at St. Pierre for the purpose of freezing fish for export to France. Two refrigerator steamers have been built to transport the fish to the continent.

The French fishermen frequenting St. Pierre are assisted in their labors by a Government bounty of \$1.60 per quintal on their salt fish exported to France—the bounty being granted presumably to ensure adequate supplies of cheap fish for the French people and to encourage the fishermen to produce it.

But reports to hand inform us that the French people are paying from \$16 to \$17 per quintal for this bounty-fed codfish and at the same time, codfish from St. Pierre is being sold on the Italian market in competition with that of other countries at the ridiculously disproportionate price of \$6 and \$7 per quintal. The wherefore of this is somewhat difficult to solve.

The Newfoundland fishermen have bucked up against this French codfish in the Italian market and it has ruffled them considerably. To find themselves in competition with a bounty-fed product taken from practically their own waters, and to know that the French consumer is not getting the benefit of their Government assistance, is, in the former case, distinctly annoying, while in the latter, it would seem to call for an investigation by the French authorities.

But still more aggravating to the three prohibition countries surrounding St. Pierre is the increasing use of the islands as a base of supplies for smugglers. French trawlers, loaded scupper deep with "hooch" of the choicest brands, sail from Europe to the islands, land their "ballast" and engage in fishing. Coasters and fishing schooners of Canada, Newfoundland and the United States, in increasing numbers, find the fish biting good around St. Peter's Bank or the weather so bad that they must run into St. Pierre for shelter. As a result, the liquid ballast of the French trawler is trans-

ported surreptitiously into numerous quiet coves of the three countries aforesaid.

The Newfoundlanders assert that the French authorities connive at the smuggling and that they juggle their statistics to prove their moderation in liquor imports. It is also asserted that no British or Newfoundland official is allowed to reside on St. Pierre. The Newfoundland people wonder if the authorities in France are aware of these "high jinks" in the fish exporting and liquor smuggling which is making the Island objectionable to its law-abiding neighbours?

LUNENBURG SALT BANK FLEET FARES.

The total catch is placed at 269,830 quintals. The big schooner "Independence," Capt. Albert Himmelman, was high-line with 4,750 quintals—a record. Prices for the Spring trip was \$6.75. A part of the summer trip sold at \$6.25. Much of the summer catch remains unsold—owners holding out for higher prices.

SCHR. "SHEPHERD KING" LOSES TWO MEN.

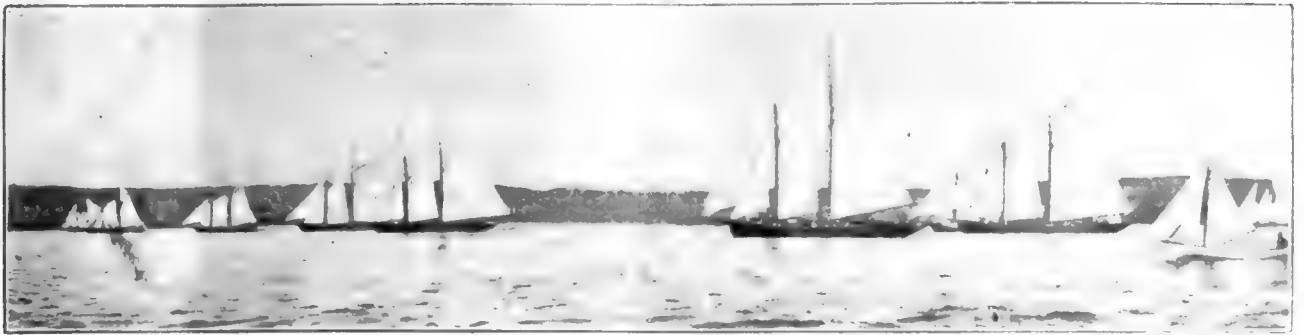
While lying to an anchor on Western Bank on Oct. 29th, the Lunenburg fishing schr. "Shepherd King," Capt. Geo. Himmelman, parted her cable in a heavy gale and was forced to run before the blow. A heavy sea boarded the craft and swept two of her gang, Henry Knickle and Stan Conrad, over the side, besides parting 100 fathoms of cable, an 800 lb anchor, and smashing up dories and other gear. While running, another sea came aboard which carried away the wheel and filled the cabin. Norman Whynacht, who was steering, was washed overboard and only saved by the lashing which he had put around his body, but which was nearly the cause of his death by strangling as it slipped over his arms and got around his neck.

BLUENOSE MAKES GOOD FISHING SEASON.

The Lunenburg schr. "Bluenose," Capt. Angus Walters, hailed for a fare of 3,200 quintals of salt fish for her season's fishing. She is now en route to Porto Rico with dried fish.

The Canadian fishing industry showed a lamentable lack of enterprise in not making more use of the publicity afforded by the races to put fish on the map of the home markets. So far as we know, only one Atlantic coast fishing concern brought the race to the attention of their customers throughout Canada. An occasion such as the fisherman's race could have been used to splendid advantage to boost the fisherman's product had some little effort with a small outlay of money been devoted to it along snappy advertising lines.

A syndicate of Gloucester skippers who came to Halifax for the races have kept their eyes open and learnt a thing or two about vessel design. They are back in Gloucester with a pretty definite idea of the type of craft that can meet the "Bluenose" and an order has been placed for a new fishing schooner to be built in Essex and called the "Puritan". But it is emphasized by them that they are building a fishing schooner to make money as a first consideration. Next year's contest off Gloucester promises to be a real battle of modern designs.



Nova Scotia Fishing Schooner Regatta



The Nova Scotia Fishing Schooner Regatta held on Saturday and Monday, October 15th and 17th, ushered in a series of ocean races between commercial sailing craft that will live in sporting and nautical annals for many years.

The Nova Scotia race, inaugurated last year, is not intended to be a mere preliminary to the International contest for the purpose of selecting a vessel to compete with the American aspirant. It is the Nova Scotia Banksman's holiday, when, at the conclusion of the fishing season, he can enter his schooner in a friendly hook-up with other clippers of the fleet. It is the annual clearing-house for nautical presumptions and assumptions. The skipper who fancies his schooner as a clipper will have a chance to find out conclusively if his vessel has the heels he thinks she has. He will also find out if he is the real McKay when it comes to pitting his skill as a vessel handler against other skippers.

Apart from the sporting aspect of the regatta much of technical value to the fishing industry can be learned. By comparison with other types of vessels it is possible, in such a contest, to see the model most suitable for working to windward, for standing up to her

canvas, for manoeuvring quickly. Skippers and crews can see the virtues and faults of the various types of craft and there is nothing better than a competitive test of this kind to settle arguments as to whether this or that class of schooner is better than the other.

The Nova Scotia Regatta proved conclusively that the "Bluenose" is a distinct advance upon all the other models of the Canadian Bank fleet. But it also proved that the "Delawana," built ten years ago, is nowise behind in general all-round ability for her size. The performance of the new schooner "Canadia" was a distinct disappointment, but her trying-out against the others revealed her failings and should be the means of having them corrected.

As a result of the races, the new Lunenburg schooner "Bluenose," won the Trophy for the Provincial event and was selected by the Committee to challenge the Americans for the International Trophy won last year by the Gloucester Schooner "Esperanto."

The races are herewith reported by the "Canadian Fisherman" representative, who sailed on the schooner "Bluenose" during the events.



THE GRAND BANK CLIPPERS.

"Bluenose" leading the fleet with "Canadia" on weather quarter and "Alcala" astern.

Schooners Entered in Nova Scotia Regatta.

No.	Vessel	Capt.	Ent. by	Lgh.	Beam	Dept.	Gross Net		Year
							Ton	Ton	Blt.
1.	Uda R.	Corkum,	Acadia Supplies Ltd., Lunenburg	112.8	26.3	10.4	130	100	1918
2.	Bluenose,	A. Walters,	Zwicker & Co., Lunenburg	141	27	11.6	168	98	1921
3.	J. Duffy,	Spindler,	Fraser Gray, Lahave	115	26.9	10.6	115		1919
4.	Donald J. Cook,	Cook,	Ritcey Bros., Riverport	112.9	26.3	10.4	130	100	1918
5.	Independence,	Himmelman,	Zwicker & Co., Lunenburg	130.5	27.4	10.6	201	147	1920
6.	Canada	J. Conrad,	J. Conrad, La Have	*127.4	25.2	12.3	183	130	1921
7.	Alcala,	R. Knickle,	Lunenburg Outfitting Co.	125.6	27	10.6	174	112	1919
8.	Delawana,	D. Backman,	W. C. Smith & Co., Lun.	106.8	26.3	10.4		95.25	1913

*At time of building Canadian length was given out as 138.6 feet. Her length as registered in Lloyd's is 127.4.

First Race, Saturday, October 15.

COURSE:—From starting line off Halifax Breakwater to Inner Automatic buoy. From thence to Outer Automatic, thence to Sambro Light-ship buoy, and from there back to Inner Automatic and the finish line off the Breakwater. Total distance between buoys, 39.50 sea miles.

Light airs with intermittent calms and waves of fog threatening "no race," cleared away with the rising sun after a postponed start of an hour and a half. On board the "Bluenose" we jockeyed around in the light puffs until the five minute gun boomed. On the heels of the report came action. Topsails, balloons and stays'ls went aloft and the eight beautiful schooners threaded among one another seeking a weather berth and a clear chance for the starting line in the freshening wind.

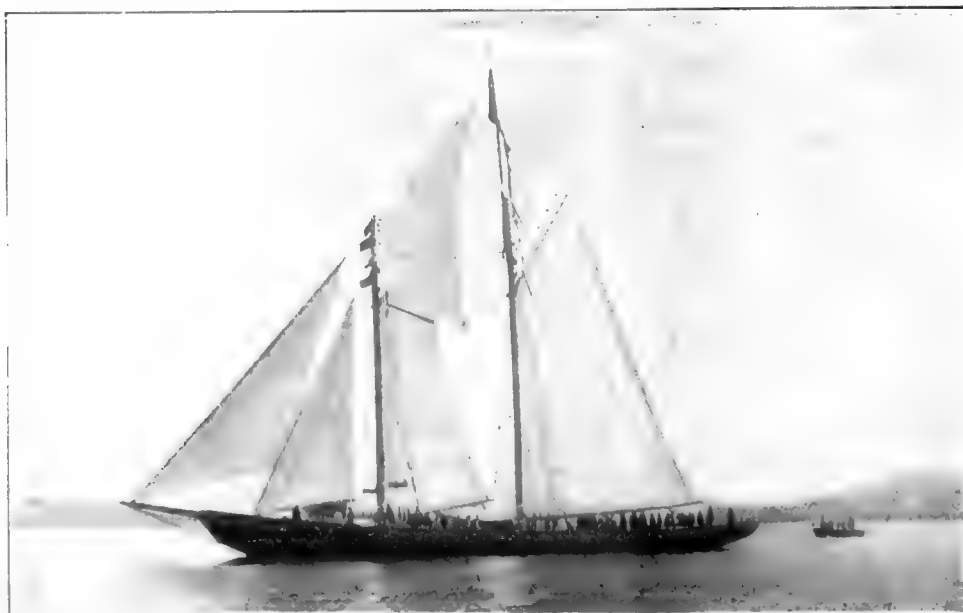
Skipper Angus Walters at the wheel of the "Bluenose" had his big hooker timed to the dot and working to weather of the fleet he shot away for the line with all the muslin drawing and crossed it thirty seconds after the signal amidst the roaring of syrens, hooting

of horns and the cheers of the thousands on the Breakwater. In our wake came seven tall schooners, close hauled and heading for the Inner Automatic buoy six and a half miles away, and astern of them came the excursion steamers and other floating craft.

At eleven thirteen we rounded the first buoy and swung off for the Outer Automatic six miles to the S.E., with the "Canada" five minutes behind. A wave of vapor crept over the sea and blotted everything from sight as we forged through the mist with our fog-horn blowing and the whistles of the steamers bellowing around. Straining ears picked up the hooter of the buoy after thirty minutes plunging through the pall and in a lift of the fog we sighted it ahead and turned for the long thrash to windward towards the Sambro Bank Light buoy nine miles to weather. The "Canada" poked her tall spars out of the fog and rolled around the buoy four and a half minutes in our wake with the others strung out for a mile or more behind her.

The run for the Sambro buoy was the real test. In a fifteen to twenty knot breeze the whole fleet with sheets flat aft and everything bar taut raced over the sun-lit waters with their skippers coaxing them to windward by every trick they knew. "The "Bluenose" tacked to the N.W. after making three miles and stood in towards Chebucto Head and Angie Walters, with many pilots giving him advice, held on too long and lost the stiffer breeze off-shore. Coming about at twelve fifty on the starboard tack, we saw "Alcala," "Canada" and "Delawana" to windward of us and the language was sulphurous.

Romping along to the south'ard with the breeze stiffening with every minute and the vessel plunging in the short chop and heaving the whitewater away to loo'ard in clouds and all hands lying down on the decks, the "Bluenose" hauled up on her rivals until after ten miles of a glorious thrash to windward with seuppers under, she tacked for the Sambro buoy with the "Canada" on the lee bow. In a three mile hitch for the buoy we overhauled our rival, dropped him astern and rounded the buoy with everything cracking with the strain as the wheel was rolled up and the stays'l went aloft. Captain Conrad's clipper swung around



"BLUENOSE"
IN HER
WORKING
CLOTHES
AS SHE
APPEARED
EN ROUTE TO
THE BANKS
THIS SPRING.



the mark one minute after us and on the heels of "Canadia" came the "Alcala" and the three of us eased sheets on the eleven mile run for the Inner Automatic.

Skipper Walters felt that in the "Bluenose" he had a vessel that couldn't be touched in going to windward in a breeze and rough water. Would she prove as good in running as in beating? The run home told a story. "Canadia" developed no extraordinary powers of speed in running, but "Bluenose" did, and sped for the Inner buoy like a scared dog and gradually dropped her rivals astern. At three thirty we hauled up around the Inner buoy and rolled scuppers under as the sheets were sweated flat aft for the closehailed reach to the finish line. Four and a half minutes later, "Canadia" rounded and rolled down so far in the squally puffs that her skipper had to shake her up in wind. The big knockabout "Alcala" followed "Canadia" a minute later.

The last six and a half mile hitch to the Breakwater was in the nature of a triumphal procession for "Bluenose." Fog-horns blared from the lighthouses, whistles roared from the following steamers and everything afloat and ashore made a noise of some kind. Some of our hands were for sending up the flags of victory but Skipper Walters checked such premature rejoicing with a "None of that now! Time enough when we cross the line. There's a chance of losing even yet!" But we had it cinched this trip and nobody checked the enthusiastic young trawler who clambered up the hoops of the main-gaff-topsail and rove off a flag halliard through the topmast truck, one hundred and forty feet aloft.

At six minutes past four, we stormed across the finish line a veritable pillar of swiftly moving cloud and the flags of triumph streamed from our halliards as the light sails billowed down and the spectators roared their approval. Four minutes later "Canadia" crossed and we started in to "cheer ship" as she came towards us. The knockabout "Alcala" romped home three minutes in "Canadia's" wake.

The total distance sailed by "Bluenose" was fifty-one miles, which was sailed in five hours and thirty-five minutes—an average of nine and a quarter knots per hour.

Result of First Race.

The "Bluenose" crossed the finish line at 4.06, official time.

1st, Bluenose	4. 6.55
2nd, Canadia	4.10.20
3rd, Alcala	4.15. 5

Second Race, Monday, October 17th.

COURSE:—Reverse of Saturday.

In a smashing twenty knot Northeaster today, eight clipper Banksmen hooked up with each other in a sailing contest which was an ocean classic and gave the spectators something to write home about. Saturday's race was a tame affair to a deep-sea fisherman, though, to be sure, there were puffs that rolled 'em down a bit at times. But today it was a scupper breeze with the schooners down to their rails in the thrashes to windward and plunging and rearing in the shoal water chop with the whitewater shearing away from their leaping

stems and the spray flying over their bows in steam-like clouds.

It was a spectacular race in more ways than one for all the opinions of the old-timers and race sharps were knocked "galley west". Only the "Bluenose" ran true to form and she proved herself the smartest schooner of the whole Canadian fleet, while "Canadia" made such a mess of it that her backers were looking forty ways for Sunday. And the "Delawana," whom we all thought was out of it put up a game fight for the Cup she held that it almost seemed as if the grand old-timer was going to show the "Bluenose" a stern wake.

The writer was again favored by the Sea Gods in sailing on the "Bluenose" during her momentous run, and this account will be confined to what we saw from the swinging deck of the flying Nova Scotian. To begin with, I think that neither the vessel or Skipper Angus Walters were fully awake when the starting gun boomed, for we swashed across the starting line with the knockabout "Alcala" and the "Donald Cook" to windward of us and the "Delawana" and the "J. Duffy" to loo'ard and all four of them ahead. The wind was fresh and the schooners were forging along close-hauled on the port tack—listing in the breeze with their canvas full and everything drawing and skating along in the smooth water as steady as church spires. It was too fine for "Bluenose" and she snored lazily along while the "Delawana" leaped out well ahead and the "Alcala" and the big "Independence" showed us their taff-rails. All the others were crowding on our heels. After fifteen minutes of this sort of thing, Angus Walters began to wake up and spit on his hands. "What th' devil is the matter with us this morning?" he growled as he anxiously noted the "Delawana" increasing her lead and the "Alcala" saucily crossing our bows and that big whale the "Independence" snoring ahead of us. A glance astern showed the "Canadia" gradually dropping back and our Skipper felt a mite happier. With the Conrad clipper showing no particular aggressiveness just then, Angus began to clear for action.

As we reached for the Inner Automatic buoy the wind began to pipe up and the sea to roughen in the urge of it. The shaking seemed to arouse the "Bluenose" and she began to step out. In five minutes we edged up to the "Alcala's" weather quarter, took her back-wash slopping over our lee rails, and three minutes later had her abeam a biscuit toss to loo'ard. Inside another five minutes she was trailing along in our wake. Then we hoofed it after "Independence" and "Delawana" with the decks sloping and the scuppers broiling and our canvas hard and rounded as though carved from marble.

The cup holder "Delawana" led us to the first mark by a clear two minutes but we disposed of the "Independence" at the buoy and dropped her when we eased off sheets for the broad reach to Sambro buoy eleven miles away. Our rival "Canadia" was footing it very poorly and we could see her well astern and rolling down heavily in the wind. We no longer feared her, but there was the "Delawana" a quarter of a mile ahead and forging along like a steam-boat. Was the old-timer going to trim us after all?

"Give us some more wind and a good rough chop!" says Angus hopefully squinting to windward and under the booms ahead. And Boreas must have heard him and opened up his bellows for we started to smoke

along with the lee bow wave flying up in a grand drench of chilly spray and the water boiling over the starboard rails and everything bar taut with the strain aloft. A stiff breeze and a cresting sea was "Bluenose" weather and she started to chase "Delawana" with sheets flat aft, rail down and the spray flying over the bows like steam in the good old fisherman fashion.

We ran the eleven miles in an hour and rounded the Sambro hooter one minute after the "Delawana." Then began a thrash to windward in a stiff breeze and nasty chop which the "Bluenose" seemed to greet with the joy of combat. Down came our staysail thunderously flogging; into the mastheads came the elewed up topsails, down came the balloon jib while oil-skinned fishermen on the bowsprit footropes clawed it under the gaskets as the high flung sprays roared about them. The "Bluenose" was down to "four lowers"—the Banksmen's fighting trim—and with nothing to carry away aloft, Angie Walters socked it to her and pawed the wheel with the schooner plunging and wallowing and trying to look at her wake in wild yaws to weather and lee.

Our long clipper seemed as a hound unleashed and hauled to windward of the "Delawana" in the rough water until that gallant craft was snoring along on our lee beam and showing us a great space of copper painted under-body. She hung in our lee for a while and made a glorious picture as she sheared through the tumbling water with the foam broiling under her bows and her tall spars swinging and her handsome body curtseying and lifting the whitecapped undulations. Then she dropped astern and we gave her a cheer for a brave and gallant opponent.

In four hitches of seventeen miles sailing we came smoking up to the Outer buoy and skited around it with the lee rail under as the sheet was eased off and the big eighty foot main-boom ranged over the quarter. "Away ye go on yer stays'l and balloon jib! Give her the fore-tops'l and watch her travel!" bawled Skipper Angus trying to steady her in her wild swoops. Eager hands hoisted and spread the muslin aloft and with the tremendous urge of it the "Bluenose" started to run for the Inner buoy like a scared dog. The good old

"Delawana" was nowhere when the "Bluenose" began to smell the home plate for she rounded the buoy a matter of twelve minutes after us.

The thirteen mile stretch to the finish line was made in practically an hour and there were occasions when we were bowling along at a fourteen knot clip. At half past one we raced over the line with everything flying, our pennants and ensign aloft and all hands yelling their heads off. Then, and then only, did Angus Walters release the wheel of the wonderful schooner he steered to the victory of the Nova Scotia Championship, a prize of a thousand dollars and the honor of meeting the American schooner "Elsie" for the blue ribbon of the North Atlantic. For four and a half hours of strenuous sailing he steered her and forty-eight miles of course she left behind in that time. Can the "Elsie" trim her? Angie Walters does not think so, we do not think so, nor does any other man in Nova Scotia who saw the "Bluenose" sail.

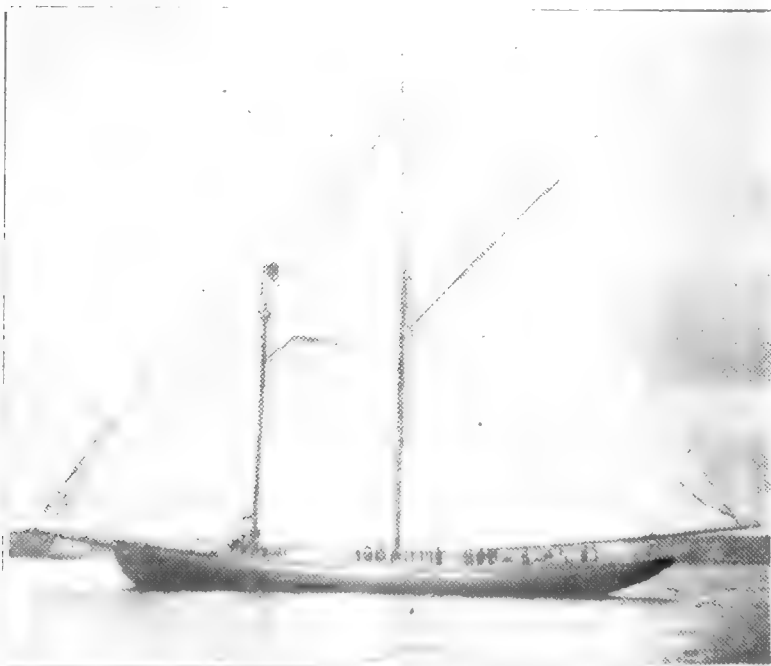
Finish, Results and Times.

Bluenose	1.30.50
Delawana	1.47.10
Independence	1.50.43
Corkum	1.51.34
Alcala	1.54.51
Cook	2.04.21
Canadia	2.13.52
Duffy	2.18.15

Points Awarded for Both Races.

	Sat.	Mon.	Ttl.
Bluenose	8	8	16
Delawana	5	7	12
Alcala	6	4	10*
Independence	4	6	10*
Canadia	7	2	9
Corkum	2	5	7
Cook	3	3	6
Duffy	1	1	2

(*Alcala and Independence tied for third place in series and divided the prize money.)



**THE "DELAWANA"—
DEFEATED NOVA
SCOTIA CHAMPION
BUT SECOND ONLY
TO "BLUENOSE".**

**AN ABLE CRAFT
AND WELL
HANDLED**





The International Fishing Schooner Race

Canada and United States

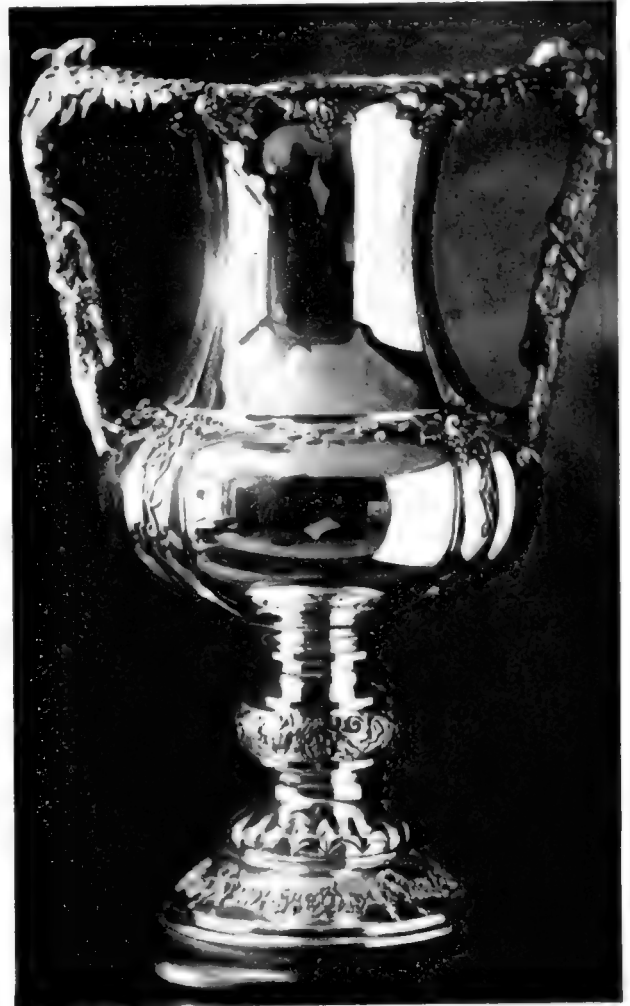


International racing between commercial sailing craft died out with the passing of the square-rigged clipper ships. In the old days, American and Britisher vied with each other in clipping down the passage times between China and Australia and American and European ports. Tea clipper and emigrant packet passed away with the advent of steam and racing with sailing craft became a contest of yachts. International competition between Britisher and American narrowed down to the America's Cup contest—a racing event which latterly became so hedged with rules and regulations as to evolve a type of sailing craft, extreme in design, expensive in construction, and absolutely unfit to endure the varying conditions of weather at sea.

A genuine revival of sailing races with capable craft began in 1920 when the fishermen of Canada challenged the fishermen of the United States to a race between fishing schooners. An International Trophy was donated by William Dennis of Halifax and the leading members of the fishing industry in both countries pledged themselves to finance the races. The first contest took place in October 1920 when the Cup was won by the Gloucester fishing schooner "Esperanto" which defeated the Lunenburg schooner "Delawana."

In 1921, Canada planned to come back at the Americans with a schooner embodying more speedy qualities than the usual type employed in her deep-sea fisheries. Two new vessels were built but only one—the Lunenburg schooner "Bluenose"—qualified as a challenger capable of meeting the best out of Gloucester or Boston.

The story of the International Race is herewith given as written on the spot by the "Canadian Fisherman" representative.



The Halifax Herald Trophy for International Fishing Schooner Racing—Emblematic of the Blue Ribbon of the North Atlantic Fishing Fleets.

The Contesting Vessels

UNITED STATES:—The fishing schooner "Elsie" of Gloucester. Winner of the New England Fishing Schooner Race, October 1921. Selected by the American Committee to defend the Trophy won by the ill-fated "Esperanto".

CANADA:—The fishing schooner "Bluenose" of Lunenburg. Winner of the Nova Scotia Fisherman's Regatta, October, 1921. Selected by the Canadian Committee to challenge for the Trophy won by the American schooner "Esperanto" in 1920.

Details and Dimensions of the Challenger and Defender.

	"BLUENOSE"	"ELSIE"	"BLUENOSE"	"ELSIE"
Built	1921	1910		
	at Lunenburg	Essex, Mass.		
Depth	15.4	14.4	Foremast	73
Water-line	110.5	102.4	Maintopmast	51
Overall length	143	124	Foretopmast	46
Beam	27	25	Main-boom	81
Sail Area (approx.)	9,742	8,590	Bowsprit	17.6
Main-mast	96	89		

Captain of "Elsie", — Marty Welch
 Captain of "Bluenose", — Angus Walters.

The First Race, Saturday, October 22nd, 1921.

COURSE:—From Breakwater, Halifax, to Inner Automatic buoy, thence to Outer Automatic buoy, thence to Shut In Island bell-buoy, thence back to Inner Automatic, and from there to finish line off the Breakwater. Total distance measured between buoys, 39.3 sea miles.

All the old windjammer men around Halifax were up before the dawn on Saturday morning to squint at the rising sun. The weather man and the barometer had promised wind, and plenty of it, but the men who love sailing craft wanted to satisfy themselves that the prophecy was being fulfilled and if it wasn't, to sort of flog it along by a species of mental supplication. The day came away in sunshine and clouds—a genuine October morning with the wind from the north-west blowing fresh with a frosty tang in it and a hint of stiffening into a moderate gale as the day advanced.

The signs being good so early in the morning, all Halifax realized that the stage was set for a glorious sea battle between the flying fishermen. The "Elsie," pride of Gloucester and the United States, would have a chance to show the aspiring "Bluenose" of Lunenburg the manner in which the Yankee Banksmen trim the Nova Scotiamen when both swing canvas against one another. Mind you, we are not intimating that the Gloucestermen came to Halifax confident of victory for the performance of the Lunenburg schooner in the Elimination races had opened their eyes; but Gloucester skippers and Gloucester vessels were always

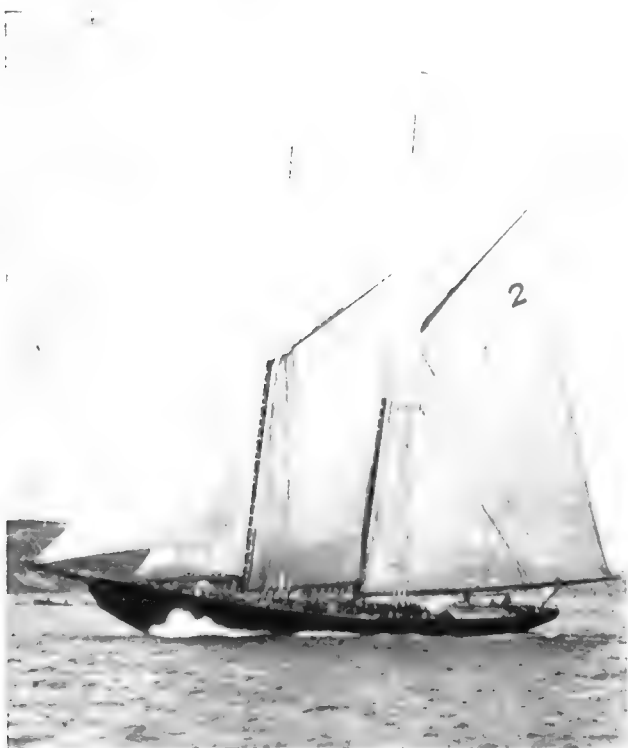
the smartest of the smart in both men and craft, and were rather of the opinion that the Lunenburg fleet were comfortable sea-going arks. "Great vessels to pack a cargo of fish, ye know, but not much for travelling," they would say patronizingly, and the Nova Scotiamen, being keener on catching all the fish they could in summer and taking the same fish in the same vessels to the West Indies in Winter, let it go at that. But that was before the North Atlantic Fishermen's Trophy came on the scene and definite challenges were hurled between the fishermen of one country and the other.

When the "Elsie" came tearing into Halifax prior to the race, and the experts, the old salts, the yachtmen and the water-front oracles looked up her record and gave her the once-over, there was much speculation in the Canadian camp and a good deal of nervousness. The "Bluenose" backers feared that Angus Walters would be out-matched in skill by Marty Welch; they feared Marty's well-drilled crew. They were apprehensive of the "Elsie's" ability in light winds, and a goodly crowd were scared of the Gloucesterman's speed in heavy winds. One veracious member of the Boston news-gathering fraternity asserted boldly that the "Elsie" logged seventeen and a quarter knots in an hour on the run to Halifax, but, unsophisticated as we Canadians are, we could not swallow that, but it was talk that gave the American schooner a high rating as a sailer.

So it was with some high tension keenness that the thousands of Canadian race fans journeyed to the water-front this sharp October morning to view the best in vessels and seamen of Canada and the United

The Clipper Banksmen

Not the kind of craft that have to make for port when it's blowing 25 knots.



COMMERCIAL PHOTO

"Bluenose" with all the muslin on her.



COMMERCIAL PHOTO

"Elsie" skating along with two of the gang bending a balloon jib tack.

States engaged in the first round of the contest for the Championship of the North Atlantic. Everything that could float around Halifax was on the water. The "Delawana," be-flagged from seupper to truck and crowded with sight-seers, was towed out to the course; the cable ships and Government steamers were crammed with spectators; tugs, schooners, fishing boats and yachts had their quota, the Dartmouth ferry steamers wallowed ponderously to the starting line and even the handsome but unlucky "Canadia" could not resist getting out and haunting the arena she longed to sail as the challenger.

Nine o'clock came, the starting gun boomed, and the pair of jockeying schooners with the red ensign and the stars and stripes at their respective peak halliards, shot for the starting line with all their canvas aloft and pulling strongly in the fresh nor'-wester. Almost on the flash of the gun, the "Elsie" crossed the line and the "Bluenose," to windward, raced on her heels forty seconds later—both with sheets eased. It was a splendid shove-off and the "Elsie" seemed to skate ahead of her rival as though she had an engine in her.

Eight minutes after the start, the American crossed the Canadian's bows and gained the weather berth, and in the first two miles of the ocean speed-away, the "Elsie" had a lead of one hundred and fifty yards. Following in the steamer "Lady Laurier," a little crowd of us, retired deep-water sailors and skippers of the Merchant Service and the fisheries, began to experience that "all gone" sensation. The "Elsie" was slipping along like a toboggan while the "Bluenose" seemed to be still slumbering. But, recalling her lethargic behavior in the start of the last race, we still had hopes.

Then Old Boreas took a hand and dealt the "Bluenose" a good solid swipe as much as to say "Get a move on or the Yankee'll trim you!" She careened in the heft of it and shot up on the "Elsie" until that one hundred and fifty yards lead vanished and both schooners were neck and neck and snoring along for the Inner Automatic buoy.

Round the buoy went both clippers—the "Bluenose" leading by a mere thirty seconds—and with sheets broad off both ran for the Outer Automatic, six and a quarter miles away. The nor'-wester began piping up to twenty-five knots and the blue waters of Halifax Bay was ruffled with short foam-flecked crests in the drive of it, but the racers had every kite aloft and were hanging to each other's flanks and stubbornly contesting every inch of advantage. One time "Bluenose" would haul ahead for a spell, then up would come "Elsie" again on her weather quarter, and thus it went until the Outer buoy was neared.

Down came the big staysails; the foretopsails were clewed in to the mast heads and the schooners prepared for a gybe. Up to the buoy they snored, the wheels were rolled over by the respective skippers and the great booms swung across the decks and fetched up on the patent gybers with staggering shocks as the crews roused the sheets in for the reach to Shut In Island bell-buoy. "The "Bluenose" was now to windward and led the "Elsie" by half-a-minute. When they got the staysail up, she commenced running away from the defender. The story could be ended right here by tersely stating that the "Bluenose" kept on running, but that wouldn't be a story but a bald statement of fact. The coterie of shell-backs on the "Lady Laurier" had no fears now and some were already

figuring out the profits accruing to them from the exchange on American bets.

The Nova Scotiaman led the Gloucesterman by two minutes at the Shut In Island buoy and both settled down for the long thrash to windward which tries out the skill of skippers and tests the qualities of vessels. It was blowing stiff now—creeping up to the thirty knots—and a breeze which would have sent the "Shamrocks" and the "Resolutes" back to their anchorages long before. Angus Walters wisely kept his staysail and fore-topsail off his vessel and under the four lowers, the main-topsail and the balloon jib the "Bluenose" was slugging along with her lee rail down and a roaring bone in her teeth, while the spiteful wind was whirling the sprays away from the bows in white smoke. She was, what sailormen call "smoking along" and her tall spars were listed over to an angle which bespoke hard driving while the whole of her



COMMERCIAL PHOTO

"Elsie" carries away her foretopmast and her balloon and foretopsail come down.

decks were visible to the watchers to leeward. The crews had good use for their oilskins and rubber boots to-day with the water flying over them in clouds of spray and I'll bet a few extra pairs of hands would have come in handy to keep them right side up on deck when Angie Walters and Marty Welch were putting their hookers through their paces.

The "Bluenose" a mile and a half ahead and to windward must have given Marty a mild jolt. "Try a little more muslin!" Marty must have said and his stays'l and balloon went up. We watched the gallant Gloucesterman washing along after the "Bluenose" under this press of sail and then we saw the foretopsail and the balloon jib crumple up into flogging canvas as the "Elsie's" foretopmast snapped off just above the mast-head and the kites came tumbling down. But a little matter of carrying away a topmast or blowing a sail to rags does not worry a fisherman when he is in a hurry and Marty didn't stop but clawed his canvas aboard—incidentally running six of his gang under green water while out on the bowsprit—and left his broken topmast hanging and kept hot-foot after the Nova Scotiaman.

Angie Walters had his vessel streaking for home like a kerosened cat through Hades. He wasn't looking behind, nor was the "Bluenose." The bow-wave looked to us as though she were trying to push the Atlantic up into Halifax harbor and there were times when her rail was down in the lee wash that we reckoned a man could drown in her lee scuppers. It was a sailing race, all right. One of the kind you read about but seldom see.

Captain Marty on the "Elsie" seemed to sail better after the wind shortened sail for him, but he couldn't reduce the big lead the "Bluenose" had gained in the beat to windward in the rough water and strong breeze. The big Lunenburger, listed at an angle which had her rail down and all her gang hanging to windward to keep from sliding off her decks and into the pickle, was ploughing a furrow for the finish line, which left a white-water wake a man could follow a mile astern on a dark night.

At 1.33.05 p.m. the "Bluenose" crossed the line with the syrens and fog-horns roaring a welcome. Twelve and a half minutes later, the gallant little "Elsie" romped over the finish mark. The first race of the series went to Canada.

Official Time—First Race.

START	
Elsie	9.00.10
Bluenose	9.00.49
Inner Automatic	
Bluenose	9.32.58
Elsie	9.34.20
Outer Automatic.	
Bluenose	10.10.29
Elsie	10.11.03
Shut In Island Bell Buoy.	
Bluenose	10.52.18
Elsie	10.54.17
Inner Automatic	
Bluenose	1.02.20
Elsie	1.12.10
Finish.	
Bluenose	1.23.05
Elsie	1.45.35

The Second Race, Monday, October 24th, 1921.

COURSE:—Breakwater, Halifax, to Inner Automatic, thence to Sambro Lightship Buoy, thence to Outer Automatic, back to Inner Automatic and finish line off Breakwater. Distance measured between buoys, 39.85 sea miles.

It's an old story now but, for all that, it'll be something to recount, to argue over, and a never failing topic for conversation for'ard of the pawl-post when the fish are dressed down, or when the vessel is lying hove-to in a breeze of wind on the Banks. The trawlers of two nations will wax hot upon the merits of "Bluenose" and "Elsie" down to the Nth dimension and the seamanship of Angus Walters and Marty Welch will be cursed, praised, judged and dissected to the last decimal of technique. One can picture a moment when conversation flags in the forecabin of a night and some wag remarks, "I call'te Marty Welch should

have doused his balloon on that beat to wind'ard with the 'Bluenose'. Visions of tousled heads leaning over the bunk sides are conjured up and one can almost hear the storm of comment, pro and con, which is volleyed across the reeling apartment. It must needs be a bold man who would dare express radical convictions in a partizan forecabin, but our sincerest sympathies go with Marty Welch, for Marty's every action in the International Fishing Schooner Race will come under the spotlight of searching nautical criticism.

But Captain Marty need not worry too much over losing the Championship of the North Atlantic fishing fleets to the clipper "Bluenose" and her clever little skipper. Saturday's race in a stiff breeze and rough water was a walkaway for the Lunenburg flyer which simply revelled in such weather, but today's hook-up was run in smooth water and in a mere twenty knot wind which suited "Elsie" and gave "Bluenose" a tough session in beating the Gloucesterman. However, she did beat her and beat her badly, but there



Angie Walters swinging her off.

were many anxious hours during the race which can be chalked up to the redoubtable Marty and his gallant vessel.

The coterie of shell-backs and old-time salt-watermen once more foregathered on the Committee steamer "Lady Laurier" and, shivering in the bitter north-west wind, peered anxiously over the bridge dodgers when the starting gun boomed. The Gloucesterman, with the "Delawana's" foretopmast replacing the broken spar and every kite full and drawing, forged across the line thirty-two seconds in the wake of the gun-fire, but the "Bluenose" moved lethargically along and did not cross until almost two minutes elapsed. "Angie must have stayed up late last night," growled the Bluenose supporters, and as the American Banker picked up her gait and streaked along for the first buoy with the distance widening between her and her aspiring rival, the comment became caustic.

The day was clear as a bell but bitter with the chill of a northerly wind which ruffled the blue water and flecked it with short snappy foam crests out from the lee of the land. It was a grand day for sailing—a day when all the rags could be carried nicely and the spectators were treated to a glorious marine picture as the tall sparred schooners sped along to the urge of the crisp breeze. Not the sort of day that a fisherman would pick, maybe, for a roaring forty knot snorter when a vessel could carry her four lowers comfortably would suit him better, still it was a variation from Saturday's weather and would give the schooners a chance to show their qualities under new conditions.

With sheets eased off and their main-booms over the port quarter, both vessels streaked along for the Inner Automatic six and a half miles away—"Elsie" to windward and several lengths ahead of the Lunenburg craft. Up to the buoy they glided and around went the American with "Bluenose" still in her wake but only forty seconds behind. About this time, a rakish looking fishing schooner in winter rig was discerned in the offing and a glance through the glasses at her sharp stem and heavy squat stern identified her as the debarred Boston fishing schooner "Mayflower." Speculation became rife as to her motives. Was she out to pace the "Bluenose"? The news-hounds got busy and the wireless began buzzing out all manner of sensational reports.

For the nonce, the racers were forgotten and we watched the "Mayflower" swing off and parallel the courses of the contenders. But when the "Lady Laurier" came abreast of the Boston schooner we could



"Mayflower" shows up—carrying a heavy bone in her teeth.

see that she was merely an interested spectator drawn to the scene much as an aspiring pugilist, denied his desires, might haunt the arena of the champions. With her tall topmasts and light sails stored away in Boston her decks crowded with twenty dories and fishing gear and her hold full of ice or salt, the "Mayflower" was in no racing trim. However, in her plain workaday garb she sheared through the short chop, her sharp stem heaving down into the brine and throwing a heavy cloud of spray over her bows. But she could sail—no doubt of that, and in smooth water no regular fisherman could touch her. But in a hefty breeze with a lumpy sea, we think her chances would be poor.

When the "Mayflower" faded from the stage, our attention was again centered on the racing fishermen. Down the Chebucto shore for the Sambro buoy they were speeding and the Yankee still maintained her lead. Moments there were when a sharp gust would career the Canadian to the heft of it and she would haul up on her rival, but a minute later the "Elsie" would snore ahead and increase the distance gained.

A stern chase is a long chase! So it seemed to us who had our hopes on the Lunenburger. For almost three anxious hours the Gloucesterman had the "Bluenose" trailing in her wake and it began to look as though the defender was going to sneak home with the Canadian vainly striving to head her. At Sambro buoy "Bluenose" was a mere twenty-five seconds astern of the American in rounding, but twenty-five seconds is still a lead, and hot-footing it for the Outer Automatic

nine and a half miles away the "Elsie" increased her advantage considerably.

So far, the racers had been laying their courses fair for the mark with sheets eased save when they engaged in occasional luffing matches. But it was in the long thrash to windward that we felt the challenger would prove her worth providing that Angie Walters made no mistakes, and we had a good hunch that the little Lunenburg skipper would make none. His good judgment and seamanship and the qualities of the "Bluenose" would be put to the test at the Outer Automatic buoy.

It was a thrilling moment when the two vessels, with staysails and foretopsails doused, stormed for the mark. Round the buoy went the "Elsie" with her gang trimming everything down for the beat on the port tack. Crowding on her heels came the "Bluenose" ten seconds after and almost skinning the seaweed off the buoy she sheeted in and daringly shot through the narrow space to the windward of her American rival. Up went the staysail, the topsail was hoisted and the tack hove down, and with sheets flat aft, though the leach of her big mainsail slatted in an ugly manner, the "Bluenose" began to get into her stride and started eating to windward of the Gloucesterman in a style which caused her backers to chuckle.

The hopes of designers and builders, the skill of skipper and crew, and the qualities of a vessel can only be proved in a beat to windward. Any old plug can sail before the wind, but the hooker that can be jammed down on a dead lee shore and pull herself off by clawing to windward is the right kind of a craft for a fisherman. Many a time on a black winter's night with a gale blowing, these Bankers sight the breakers to leeward in a lift of the rain or snow, and it is then that a vessel's ability to haul off almost in the teeth of the breeze becomes the salvation of herself and the hands who sail her. And should the "Bluenose" ever find herself in a like fix, her skipper can slap her wheel-box, while the gang rouse the sheets aft, and murmur, "To windward, old girl, and I know you'll never fail me!"

The "Bluenose" was on the home stretch and the Lunenburg girls had tallied on to the tow-rope and were hauling her home. The hopes of all the sailing enthusiasts in Canada were pinned on her and praying that this lean fisherman would flaunt the old Red Duster once again as a champion of the salt and windy waters. And the "Bluenose" was worthy of the faith implanted in her. Leaning over in the freshening breeze with her canvas full and pulling like a blooded horse and the feather of foam at her bows increasing to a gleaming welter of white-water, she stretched for the finish line with her wake aboiling and her rival vainly trying to out-point her.

About an hour later, both vessels came about on the starboard tack and it was seen that the "Bluenose" had gained a lead of half a mile on the "Elsie". At the Inner Automatic, the Canadian led the American by eight minutes, and standing close in to the beach off Camperdown, tacked under the land and skirted the weather shore in smooth water and with the wind coming strong. The "Elsie" tacked offshore more than a mile to leeward. Her chance to hold the Cup was gone.

The Challenger had to make one more hitch to give her a clear course for the finish line. To accomplish this, she stood in to the shoal waters of the Lighthouse Bank and came about with her skeg a few feet from

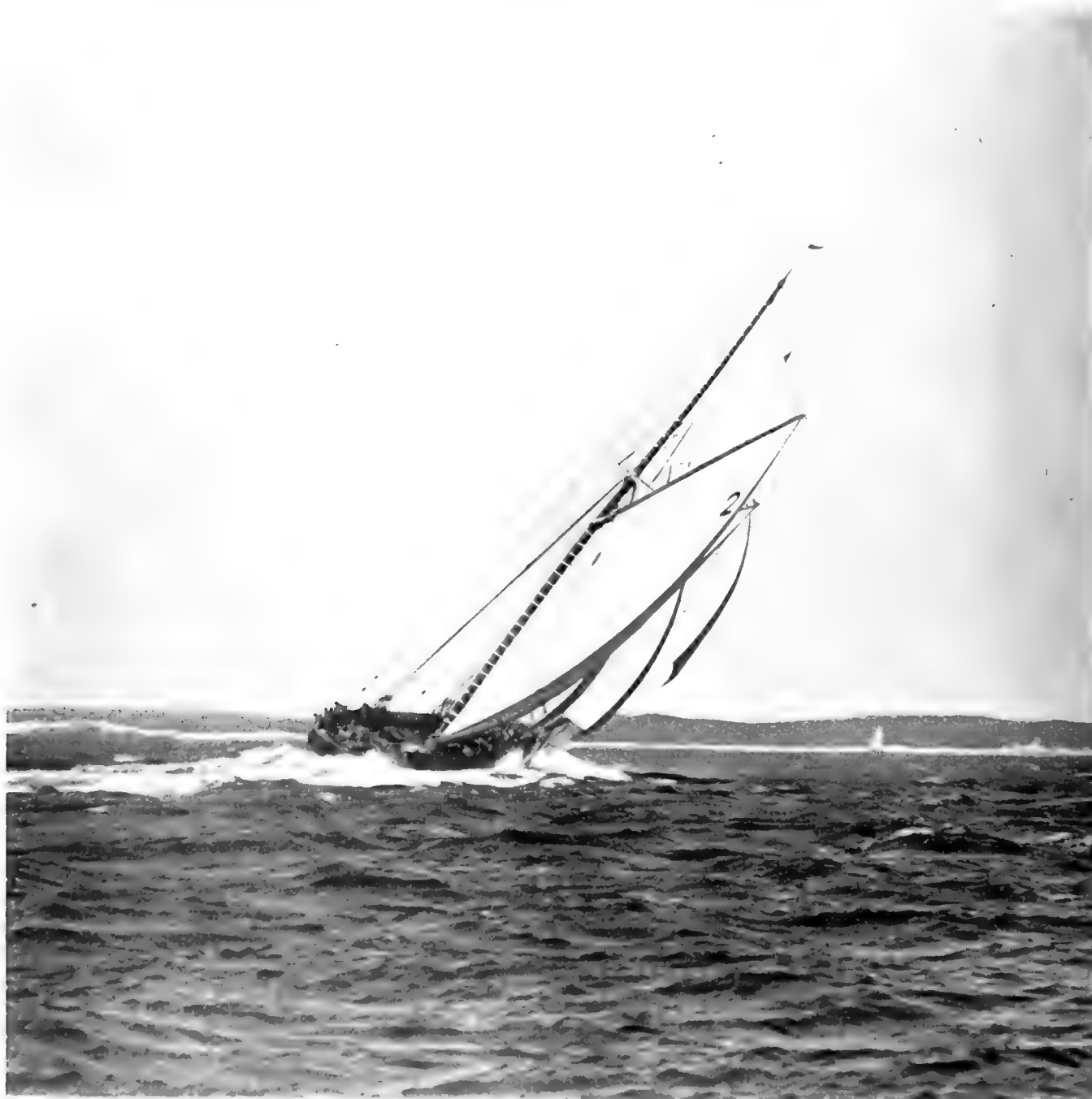
the bottom. Then came the romp up to the line and as the gallant vessel howled along, black figures could be seen clambering up her slender topmasts to reeve off signal halliards—a job for nerry men in that bitter wind and with the sticks cracking to the strain of the canvas and inclined to leeward with the pressure of the breeze. But there are a few sailormen left even in even in these days of steamboatmen and hoboes and when the flying Nova Scotian forged past the breakwater, a gorgeous string of bunting fluttered from scupper to truck and the Red Ensign streamed in the breeze from the peak halliards of the Champion of the North Atlantic.

The brave and plucky Gloucesterman shot in some

twelve minutes later and the cheers she received were just as hearty and sincere as those accorded her adversary. Marty Welch and his crew had done their best and did it well and all the honors are due to them for the gallant fight they put up.

The "Bluenose" brought the Cup back to Canada and gained for the owners, skipper and crew the prize of four thousand dollars accorded to the winner. Was it easily won? When they tied up to the dock, Angus Walters was, as someone graphically remarked, like a piece of chewed string after almost five and a half hours of constant strain and anxiety; his crew were body-tired and weary with tugging and hauling on sheets and halliards and lying prone on wet and chilly

"LUNENBURG ON HER STERN, AND BOUND TO GO!"



Commercial Photo.

A GRAND STAND FINISH TO A GRAND RACE!

"Bluenose", with lee rail down, on the tack for the finish line which gave her the victory.

decks, and the mast head men? I guess after the long spell they had perched a hundred feet above the deck on the swaying masts in all that bitter wind and clawing at the flogging topsails every now and again for a bit of diversion, why, the whole four thousand green-backs would just about be a day's pay for such work.

"And the 'Bluenose'?" Her little fling in the lime-light is over and one of these chill Fall mornings she will be sliding out of the dock freighted with dried fish and bound away south to the West Indies. But as freighter or fisherman, racing for port or lying-to in a breeze or jogging to dories on the ground, she can exult in the fact that it took a fisherman and a gang of Bluenose trawlers to accomplish for her flag what millionaires spent fortunes to attain with freakish and useless toys.

Official Time—Second Race.

Start.

Elsie	9.00.32
Bluenose	9.01.52

First Mark, Inner Automatic, 6.3 Miles.

Elsie	9.45.20
Bluenose	9.46.00

Second Mark, Sambro Light Buoy, 11.25 Miles.

Elsie	0.46.49
Bluenose	10.47.15

Third Mark, South East Automatic Buoy, 9.6 Miles.

Elsie	11.49.28
Bluenose	11.49.45

Fourth Mark, Inner Automatic, 6.4 Miles.

Bluenose	1.23.00
Elsie	1.31.35

To Finish Line. 6.3 Miles.

Bluenose	2.21.41
Elsie	2.31.12

INTERNATIONAL RACE PERSONALITIES.

H. R. Silver of Halifax had very little time to devote to his business while the races were on. As Chairman of the Canadian Committee he was something of a nautical Czar, but his tact, good humor and courtesy made of him an ideal official. Much of the success attending the event may be ascribed to his enthusiasm and the time he gave up to get things going.

Lunenburg produced a nice fleet of able vessels in the N.S. regatta. They weren't all clippers, but for handsome craft well-stayed, well kept, and well sailed, one would go a long way before seeing such a sight. The Lunenburgers have a good eye for a vessel and know how to treat them.

In Angus Walters and Marty Welch one finds the ideal type of Bank fishing skipper. Both are modest and unassuming men, not given to talking about themselves or their craft. The newspapermen got very little out of them, and both could qualify as diplomats if one were to analyze all they did say before and after the race.

The "Elsie" looked just as smart as the day, when almost new in 1912, we hooked up with her in Canso Straits in a race to the Magdalens. For a ten year old craft, she is not a back number by any means. Her sails fitted her like a glove and she made less of a fuss in the water than did her rival the "Bluenose."

Commander Beard of H.M.C.S. "Patriot" evinced a keen interest in the races and thought nothing of getting down aboard the "Bluenose" before sunrise that he might form one of her crew in the Nova Scotia races. It was some time before the "gang" found out that they had a "pukka" naval officer tailing on to the sheets and halliards. His seamanlike ability was made use of by Skipper Walters when practice manoeuvres were carried out prior to meeting the "Elsie". We liked friend Beard and his willingness to do anything to help in making the race a success convinced us that the naval officer and the fisherman can pull together amicably when the representative of the "senior service" is a good fellow and free from swank. Good luck and quick promotion to him!

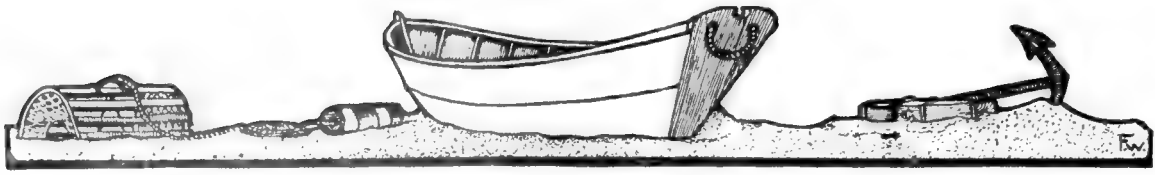
A GOOD SPORT!



President P. R. Duffy, of the Colonial Fisheries, Boston, and the cup which he presented to the skipper of the winning vessel.

The International Races are destined to live on canvas if the artistic delineations of C. R. Patterson are given the place they deserve. Patterson is one of the best marine artists we know and possesses both the technique and the nice appreciation of color values to be found in the true artist. He sailed on several of the racing schooners and made numerous paintings and sketches. The fishing industry has made a distinct gain in securing the interest of such a capable portray-er of its manysided and colorful life.

A most retiring personality is Arthur H. Zwickler of Lunenburg, managing owner of the "Bluenose". Though keeping himself in the background, he put a great deal of time, energy and money into making the races a success and was one of the real organizers of the event.



Wake Up, Canada!

Need of Co-operation and Publicity in Gaining Foreign Trade. Norwegians Putting it Over on Us.

BY PISCATOR.

What particular effort are our fish producers making to establish themselves in foreign markets? With the exception of the salmon packers of British Columbia who last year sent Lieut.-Col. F. H. Cunningham on a boosting campaign in Great Britain and the continent, what money have we been spending to cultivate a demand for Canadian fish? Is it not a fact that individual firms are relying solely upon chance orders from abroad and depending entirely on the quality and price of commodity to develop the trade? While quality and price are undoubtedly infinitely important in meeting competition, publicity is just as essential. There you have the trinity of foreign trade—quality, price and publicity.

Let me give you a practical illustration: Our canned fish has become well established in South Africa and we have gained a fair hold on the market supply because we have met competition in price and quality in years gone by and individual firms have established good selling connections. But beyond the agents and dealers there is a consuming public and naturally the wants and whims of the people must be catered to. Recently, Norwegian firms have launched an extensive campaign to drive a wedge into the market and eventually take our place. Such a campaign would be too much for an individual firm to tackle, and it would be unfair to expect it of one house when several stood a chance to share in the results. So several firms co-operated and at latest reports their publicity work was taking effect. What arrangements these firms have made for the allocation of orders I cannot say, but there are many ways of settling this question which immediately suggest themselves to practical business men.

Another story. Some years ago Australia had an insatiable appetite for Portuguese sardines. The people knew no other. A few years ago the Norwegians jumped in and by a systematic and active publicity campaign succeeded in taking the business entirely away from the Portuguese.

But we do not have to go as far as Australia or South Africa for an object lesson. Right here at home we see daily on bill boards across the continent Norwegian fish advertisements. I have been trying to approximate the amount of money these people have spent in their Canadian campaign alone and would place it conservatively at \$20,000.

Now what Canadian firm, or group of firms, goes to anything like this extent in getting after foreign business? Still there is the story of sardines in Australia. In years to come do you doubt that this activity on the part of other fish-exporting countries is going to tell?

The difficulty with our fish distributors seems to be that they have not learned fully the value of co-operation. There are few, if any, Canadian exporting houses that can afford to lavish such propaganda on our thirty or forty markets as our competitors seem to be doing. It is impossible. But it must be done if we are to hold a hand in the game at all. Co-operative campaigning is the only solution. As a result of such co-operation last year in sending an agent to Europe, British Columbia salmon canners seem to have disposed of the worrisome surplus they were holding in their warehouses. As a result of co-operation, western American salmon canners have developed appreciably the local demand for the cheaper grades although I believe much better results could have been obtained in this instance from the amount of money reported to have been spent.

Our Canadian firms seem to be jealous of their own business secrets to expose even in a general way their successes or troubles, for fear of assisting a competitor or leaving themselves open to ridicule. That's all poppycock. You will find that each firm has about the same experiences. Just the same as in your domestic life. You will think of some trifling incidents in your home and in a very confidential way you relate them to a close friend, only to find that he has had similar experiences, and finally you learn that they are the general rule. I would go to the length of making this statement. If in a very short order our exporting fish firms do not organize in groups for co-operative publicity campaigning and financing in a general way, our individual effort is going to fall before the force of joint effort on the part of exporters in competing countries.

I should each year appropriate an amount for this class of work and proportion it to foreign and domestic markets in direct ratio to the allocation of my business. I should make the appropriation as religiously as I would for rent, fuel, salaries, etc., and no temporary reverse would cause me to leave it unspent. If I found this appropriation insufficient to adequately advertise my brands in foreign markets, I should seek co-operation with others exporting a similar article and boost the **Canadian** commodity and let my trade mark come as a secondary consideration. But if it were impossible to interest my neighbors I should do my bit just the same. If I owned a piece of land in an unbuild district, do you suppose I would hesitate to put up a house I desired, simply because by so doing I might enhance the value of vacant property adjoining? Hardly. Well it's just the same in this case. Why should I hesitate to boost my foreign business for fear of giving my competitor an odd order?

And just one thing more. When it comes to spending money on publicity, there is a proper way to do it. In our own country, for example, there are advertising agencies established, having experts on their staff. These agencies make no charge on the advertiser for the work they do—at least, no agency that I know of. They give you expert service and spend your money to the very best advantage, but the newspapers who publish your advertising pay for it in the form of commission to the advertising agency. Do not attempt to undertake the job yourself. Every man to his business and that is not yours. Leave it to one who knows how.

And the same applies in foreign countries. Advertising schemes which would be extremely effective in Canada would fall flat in China or some other market. You must cater to the tastes of the particular market.

When in Rome, do as the Romans do. It doesn't pay to force our ideas on others. Meet the prospective buyer in every way. Now China has superstitions about certain colors and if you attempted to prepare literature or labels without being aware of this idiosyncrasy, you would straightway find yourself in difficulty. In advertising, as well as in every other department of export trade, know your market, and do not make a move until you are certain that you are acting in a way that is conventional or popular. It is always advisable to leave the work to those who know all about it. It is risky for amateurs to tamper with it.

I should like before long to see the idea of co-operative campaigning extended. In union there is strength, and we must be united to meet the united forces of other producing countries.

Memoirs of a Gentleman with a Dust-Bin

“OUR OWN CHARLEY.”



The “Canadian Fisherman” has been highly edified by the character sketches of great, and near-great, politicians as outlined by certain anonymous writers in the three recent books entitled: “The Mirrors of Downing Street—by the Gentleman with the Duster”; “The Mirrors of Washington”; and the “Masques of Ottawa — by Domino”. Following our usual aggressive and up-to-date policy we have secured, at small expense, a character sketch of our own particular pet cabinet minister by an obscure writer who signs himself as “The Gentleman with the Dust Bin.”



He began life as a bare-foot boy and without a stitch to his back—which the most of us did. The spot blessed by his nativity, to wit, Colquhoun, Ont., was honored by having our subject named after it and as Charles Colquhoun Ballantyne grew too big for the town, the latter modestly retired and is no longer to be found in the Post Office Directory. But there was nothing retiring about Charles.

In the days when young Charley scampered around the cedar swamps and sailed shingle boats in the creek the germ of an ideal became implanted in his youthful brain. It was a great ideal and as he split cord-wood behind the barn, his solitary labors were rendered companionable by the greatness of his thoughts. It is the imaginative youth of our glorious Dominion who make us the mighty nation that we are.

As he swung the axe or browsed thoughtfully under the old butter-nut, Charles visioned a great stretch of blue ocean twinkling in the sun. It was a lonesome waste of water and too suggestive of the present-day Province of Ontario. Charles had a fancy that he would people it with ships. Ships! Ah, that was the word—a Canadian ship in every port, on every sea and with a few on the bottom for good measure. It was merely a boyish fancy but when such a fancy gets going on a single track mind, God knows where it will stop.

Charles Colquhoun was a lad of purpose. He wanted to be an Admiral of the type of Drake or Nelson, but, alas, in our subject's younger days there was no naval fleet in Canada pandering to such ambitions. Failing to enter a seafaring career, he went into the paint business.

As the years progressed and our subject prospered and “got on” in the world, he commenced realizing a part of his ambition by accepting the political office of Harbor Commissioner for the Port of Montreal. This was in 1907 and C. C. mentally marked the date as his entry into the sphere of his childhood dreams. In this office he busied himself preparing the port of Montreal for his dream fleet.

A staunch Liberal in politics, he strongly favored the Laurier Navy and was much chagrined when the Conservative party ditched the scheme on their taking over the reins of Government in 1911. However, time works wonders. The Great War came along and our hero changed with the times. In 1917 we find him a Cabinet Minister in the ranks of the Conservatives and holding in his hands the powers he had long dreamed of—the Rule and Jurisdiction of the High Seas, the Middle and the Low, Lord High Admiral of Canada, Commodore of the Marine and to complete the tally, the administration of the Fisheries was thrown in. As Minister of the Naval Service, Marine and Fisheries, Charles C. Ballantyne began to clear the decks for action.

A lot of things were slipped over during the hurly-burly of war and “our Charley” busied himself slipping over his pet hobby. There was nothing cheap about our Honorable Gentleman's ideal. A fleet he was going to create and a fleet he created. Sixty-three ships, with but little excuse for existence, were thrust on to that twinkling expanse of blue ocean to disorganize legitimately established trade lines and render conditions still worse. Sixty-three ships built in Canada—causing the establishment of ship-yards that are not likely

to build anything else for many a year to come. Sixty-three ships to eat their heads off with insurance premiums, tonnage dues and maintenance during a period when the world is glutted with idle tonnage and when even a Clyde tramp can't make expenses. Sixty-three ships to be painted — Ah, let us pause! The thought makes us weep for the luckless Canadian citizen who must pay for Charley's ideals.

Of the Navy, we won't say much. Happily he has not included this branch in his idealistic developments. Of the Fisheries — alas! a pathetic tragedy of neglect stands to be revealed.

With the creation of his dream argosy blocking all other demands, the idea of developing a natural resource like the Canadian fisheries never entered his head or caused him one single moment of thought. There was no great honor to be gained in improving the cure of codfish or pickled herring, or in enlarging the market for the fisherman's product at home or abroad. The petty details of administration bored him; the fishermen's pleas for assistance annoyed him — the potentialities of the 57 varieties of fish to be found in Can-

adian waters were as nought to the 63 varieties of ships he was launching into the said waters.

In his administration of Marine, Naval Service and Fisheries, the Honorable Ballantyne has shown himself to be a true statesman. He has utilized his hobby to make himself remembered by for all time just as have Mackenzie and Mann with their railroads. His singleness of purpose is to be commended; his ministerial dignity and absolute lack of interest in fishery matters bespeaks the Canadian Cabinet Minister running true to form.

Next month, if the stars in their courses tell me aright, my dust bin will be ready to receive him. To the oblivion of private life he may retire as one who hath accomplished a boyhood's ideal. And by the gas-log o' nights he can visualize the argosy of sixty-three blunt-stemmed tramps — threads of the warp and woof of his dream fabric — squeelching along the sea lanes and carrying concrete (and unprofitable) evidences of his ambition to many ports. Ah, that we all could accomplish thus the proud fancies of youth!

The Gentleman with the Dust Bin.

Migration of Mackerel

The Commissioner of Fisheries for Nova Scotia Takes
issue with Prof. Prince.

By M. H. NICKERSON.



I was greatly surprised last summer when told by a member of the biological board that the yearly long distance migration of mackerel was still an open question! We afterwards debated the point in sundry rapid firing notes, which may have gone wide of the mark on either side. At last I suggested bringing the case before the indisputable authorities, the professionals, not the professors. My opponent dissented on the ground that such an appeal would settle nothing and might lead to endless wrangling. So I agreed to drop it.

Now I encounter a new surprise of the same nature in a recent address by Dr. E. E. Prince, my esteemed friend and messmate once on a lobster commission cruise by sea, an occasion still pleasantly remembered. He assured a large gathering of his outside staff at Charlottetown that the belief in a northerly coastwise movement of mackerel in the spring, and their return in the fall, was wholly groundless. In fact he declared the story was untrue; those fish only came landward from deeper soundings, and went back again in due season! At that same time Dr. Prince admits that neither he nor any member of the board had personally investigated the subject. They propose beginning the study next year!

This notion could only be entertained by those who, never having seen mackerel schooling, are not aware that such fish in their long journey swim on the surface, and therefore their course can be followed by sight, which is everywhere customary with the seiners. In order to avoid the slightest approach to personal allusion, I shall call that idea the bookish theory, for it has no place in actual practice. It is on a par with the assertion that one vast school of mackerel line up in the spring off Hatteras and begin the northward move. That is a pure invention. Hundreds of schools are in motion at the same time, scattered widely over the water, but always maintaining the common coastwise trend. Stationed at a given point off Barnegat, Fire Island, Nantucket or George's shoal, the observer in

clear weather might watch numerous bodies of mackerel passing by during more than a month, none of them heading for the land, but at varying distances apart, some making in the direction of Race Point, as sighted from Nantucket, while others strike across the gully between the above shoal and Brown's Bank, where Capt. Barkhouse reported their first appearance last spring, thus enabling the Lockeport drifters to go out the next day and ambush the advance guard. This is no hazy conjecture, no lesson from the library shelves. I have helped to trail those schools for purse-seining, and to lay off a drag-seine from some projecting Nova Scotia ledge, where the same raft of fish could be watched for hours from a high lookout steadily trimming the coastline down the South Shore to reach the North Bay haunts. The trailing seiner may keep the quarry in sight for hours, a whole tide in fact, without a good chance to make a set. The rafts, schools and pods (terms to denote respectively the bulk of the volume) are plainly marked in all their progress, the ruffle of their wake resembling a tide-rip, or a puff of wind called a cat's-paw on a calm sea. They all tend in one general direction, as accurately ascertained as is the flight of birds of passage, there being a striking similarity between the two swarmings.

Be it noted we are now discussing the habits of mackerel, not their anatomy or their scales as compared with those of other species. To correlate the movement or habitats of mackerel and herring is to commit an egregious blunder. The latter never go so far south, and in the summer months immense shoals of sea herring lurk lazily off the Cape Shore, just shifting their position with ebb and flood, while the regular run of adult mackerel pass by in May and June, to appear no more in that locality till four months afterwards, when they take the back track to Pimlico Sound. Where are they in the interval? We should not hazard an opinion un-

less founded on observation. I could never tell how a partridge would act in the bush if I only knew that bird by sampling and dissecting it at the dinner table. When I am asked the reason mackerel should journey 1,200 miles northward every year, I might reply that those fish act, not by reason but by instinct; and that mysterious attribute of the lower animals, including mackerel, is not under review at present. A fairer way of meeting such query would be to ask in turn for what reason robins or swallows should come from the Everglades of Florida for a spring and summer vacation in Acadia, and go back in the autumn. Or better still, why should sea-fowl make an annual pilgrimage from Delaware Bay to the Labrador bluffs? This trekking both by sky and sea is equally obvious and undeniable, always leaving a few laggards behind, like that solitary find by Capt. Collins, — stragglers that fall out of the ranks from some cause and breed in odd places along the route; but it is extremely rash to conclude thence that there is no special rendezvous for nesting and spawning.

The bookish theory takes no cognizance of the return swarming in the fall. Last month a fleet of hookers and seiners were working among the schools of number ones just making up in the "bend" of Prince Edward Island. Weeks later those fish occur, on the back track, at various points in succession on the Nova Scotia shore, the progress being always westerly. Traps at Canso,

Sambro, Tanecook, Hubbards, Liverpool and Cape Negro get their takes in regular turn, one after the other. Last of all Barnstable Bay enjoys the fall run. All this amounts to a demonstration, but there is substantial proof beside. Some of the above traps are kept setting all summer for other kind of bait. In most places the water is shoal enough to see bottom. Where are the spawners and milters then, and how can we account for their appearance on the verge of cold weather? Here is an unbroken chain of observation carried all the way around the configuration of the coast by such renowned mackerel kings as Capt. Sol Jacobs and Capt. Reuben Cameron. Is it possible their views are mere moonshine?

I am glad the board intends to sail in quest of first hand knowledge next year. The situation has in it a spice of humor. Here is the department writing into its records the findings of two of its paid agencies of research, which differ by whole diameters, — as opposite to each other as the poles. A final decision must be reached and accepted before long. I am firmly of opinion that it would sustain Capt. Barkhouse's reports in every particular. If the academicians are correct, the mackerel scout should be withdrawn as a useless appendage. If on the contrary, the seamen on watch can be trusted to know a thing when they see it, the log-book must be our guide rather than the lecture.

THE PRODUCT OF PROGRESS.

When Prehistoric Man, squatting before his crude fire some eight thousand years ago, first noticed that some queer stones used in lining his rough oven melted in the heat of the flame, and could be moulded into new shapes, he achieved the first step in the product of the steam engine, the skyscraper, the automobile, artificial freezing and refrigeration.

Every age since has added its share to human progress, and every era there has been, accomplished forces of work, whose efforts have hardly survived their own time. Only those with the proper solid foundation of fact, past experience and foresight have endured.

This is equally as true of the Ammonia Industry—itsself no small force in the building of civilization—as all other lines of industry.

A number of years ago, pioneers of the Ammonia Industry dreamed of great opportunities for Canada, but like most pioneers, they realized only the work and the heartache without ever realizing the goal for which their efforts had been directed.

At that time the principal industries of Canada were throughout the East and Central part, and Toronto was chosen as their place of endeavour. The efforts of these men met with varying success for a short time, and finally resulted in failure. The Company was re-organized but again the time was not ripe, and failure was the result.

Some thirty years ago, the present management, believing with their knowledge of this business and their past experience, that they could safely guide this industry through the Rocks or Commerce, fell heir to a plant and machinery, which was none too good. Considerable money was spent with a view of improving both the product and the service.

For many years there was an uphill struggle, but eventually as Canada and her industries grew, likewise

did the Ammonia Industry progress, and at Toronto was built a most modern plant for the manufacture of Anhydrous and Aqua Ammonia.

This plant, the largest exclusively Ammonia Proving Plant in the British possessions, equipped complete with new and most improved machinery, guided by men of experience and knowledge of the business, is now classed among the important industries.

It is to be remembered, of course, that this success has been achieved only at heavy expenditure of money, energy, and knowledge, but the business is firmly established and consumers of Anhydrous Ammonia know well that they can buy at home a product which excels in quality.

"Service," a word often used, is not always fully appreciated. For the convenience of their customers the Canadian Ammonia Co., Limited, has established resident distributors of "Excelsior" Anhydrous Ammonia and Aqua Ammonia, in all the large cities of Canada and Newfoundland, extending to the consumers a privilege and service, which are not frequently equaled.

Canadian Ammonia Co., Limited, chartered by the Dominion Government, operates its plant in Toronto, and manufactures its products from Canadian raw materials with Canadian labor, and should therefore have the hearty support of every consumer of Ammonia, both large and small. Its business connections are not only limited to the Dominion, but through unceasing efforts its products as "Made in Canada" are exported to many foreign countries, thereby helping to build up our foreign trade, for which Canadian Manufacturers are striving.

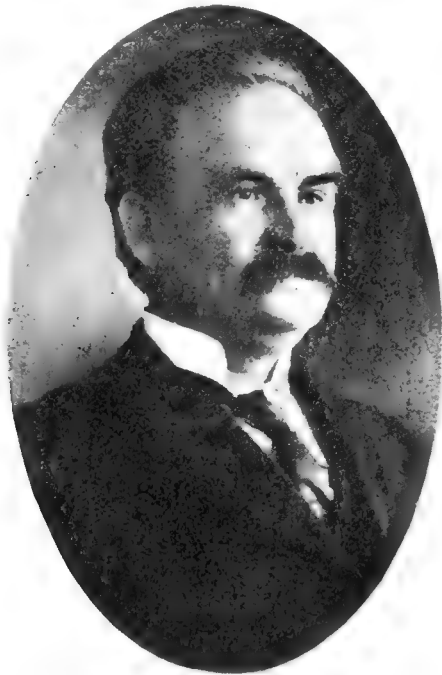
By using "MADE IN CANADA" Ammonia, you will eventually boost your own business and increase the value of your dollar.

A Greater Industrial Canada—Let's pull together, and use "MADE IN CANADA" goods when possible.

WHO'S WHO IN THE FISHING WORLD.

MOSES H. NICKERSON,
Commissioner of Fisheries for Nova Scotia.

One of the outstanding personalities in the Fishing Industry of Nova Scotia is Moses H. Nickerson, at present holding the office of Commissioner of Fisheries for the Province. Mr. Nickerson is not only a personality of unusual ability, but he is something of an institution in the Bluenose province fisheries—an originator of ideas, an organizer, a caustic critic and an aggressive promoter of what he deems is best for the industry of his native shores. There are many persons who do not agree with Mr. Nickerson's theories; they characterize them as being too radical, but the same is said of most men who are bold enough to advance their ideas without regard to whose corns they may be tramping on in the advancement. Nevertheless we know enough of Mr. Nickerson to believe that he is sincere in his ideals and his tremendous energy throughout the years in the promotion of his



theories, deserve respect from all who know him, personally or otherwise.

Moses Nickerson, however, is not a theorist when fishery matters are concerned. He knows the industry from the ground up, having toiled with hand-line, net, lobster-trap and trawl to earn the wherewithal to live. The son of a fisherman who came of Puritan New England stock and whose forbears migrated from Massachusetts to Barrington, N.S., in 1765. Mr. Nickerson first saw the light in the little Cape Island village of Neweltown in 1847. His father was an educated man and taught school between fishing seasons; his mother possessed qualities of culture which commanded the respect of the pioneers in the little settlement in which they lived.

It is interesting to note that our subject's maternal grandfather was a first cousin of John Howard Payne, author of "Home, Sweet Home" and that his family

are the nearest known relatives to that famous songster.

When young Nickerson was eight, the family moved to an outlying island beyond reach of schooling. The Family Bible, The Pilgrim's Progress, Fox's Book of Martyrs—an orthodox Puritan library—and Uncle Tom's Cabin constituted his sole intellectual resources and the perusal of these four volumes exercised a considerable influence upon his manner of thought and feeling. The training of his mind was solely parental but by the time he had reached the age of fourteen he had become an omnivorous reader, a lover of good poetry and a student of foreign languages. At that age he could converse fluently in French; two years later he was reading the Odes of Horace and the Georgics of Virgil, and by the time he had reached man's estate he was corresponding in Italian with a friend in Palermo, and had an intimate acquaintance with verse and prose in the original German, Latin and Greek besides being able to enjoy Hebrew transcripts of Biblical history.

In a little fishing village, a man with such intellectual attainments gravitated naturally into the profession of teaching school. But young Nickerson loved books more for the pleasure to be found within their covers than for the purpose of imparting knowledge to the juvenile brain, and he loved the sea with its fascination for the cultured mind. Teaching held him only in spells; at other times he went mackerel seining, halibuting, shore fishing, and occasionally shipped on freighting schooners to Boston and other Atlantic coast ports. When twenty-one, he married and settled in Clark's Harbor, N.S.

There is a fifty year stretch from then until the present time and for Mr. Nickerson it was fifty years of ceaseless activity in many directions. From teaching school and fishing, and a year spent in West Virginia stringing telegraph wires, he became a reporter for the Halifax "Chronicle." Then he entered the employ of the Portland Packing Company at Clark's Harbor as book-keeper and pay-master and recalls that they put up 15,000 cases of 1-lb talls of lobster in one year at that factory. For seven years he remained with the Packing Company and left to enter journalism again with a good grounding in the business of lobster packing and the science of the lobster. As editor of the Cape Sable Advertiser, Mr. Nickerson steered its fortunes until, after four years of strenuous existence, it gained nothing but a reputation for plain dealing and pointed remark—a reputation, by the way, which does not pay with country newspapers. Our subject then established "The Coastguard" at Yarmouth—a paper designed to uphold the interests of the fisheries—and among the many matters which it advocated were cold storages and bait-freezers and the barring of Norwegian vessels from the Canadian coasting trade. While on "The Coastguard," Mr. Nickerson became a member of the Shellfish Commission of 1898 investigating the conditions of the lobster fishery and some of his recommendations were put into effect.

In 1902, Mr. Nickerson was elected to the Nova Scotia Legislature as a member for Shelburne and about the same time he organized the Fishermen's Union of Nova Scotia—a co-operative organization of boat-owning fishermen enrolled for the purpose of securing gear and supplies at the lowest prices and marketing their products to the best advantage. The Union remained active for a considerable period but latterly became inactive through causes, economic and

human, which obtain in organizations of all kinds, and which possibly the world is not yet ready to accept. After a second term in the Legislature, Mr. Nickerson was appointed Dominion Inspector of Atlantic Coast Life Saving Stations—a post which he held until the office was abolished in 1915. His interest in "The Coastguard" was disposed of and the paper was absorbed by the Shelburne "Gazette," and Mr. Nickerson went to reside with members of his family in Boston. His last public office came in his appointment as Commissioner of Fisheries for Nova Scotia in 1920.

All his life, Mr. Nickerson has been a prolific correspondent and writer upon matters pertaining to the fisheries—scientific, legislative or otherwise. Though well past man's allotted span in years "his eyes are not dim, nor his natural strength abated." He rises early and works late and thinks nothing of a five hour's trick at the typewriter, and should he be crossing verbal swords with a correspondent of divergent views, he will spare neither time or effort to sustain his argument and prove that of his opponent to be fallacious. Brought up as a fisherman, Mr. Nickerson's view-point

is naturally that of the worker on the waters, and though possessed of extraordinary powers in the ability to digest the best in the world's varied literature and with a taste for the exotic, also the ability to meet and converse with great men upon problems social and economic, yet he has devoted most of his time and talents to solving the difficulties and standing champion for the fishermen of Nova Scotia. Many biographers would deplore his provincialism in this respect, but a man's work is where his heart dictates.

Our subject's ability with the pen; his clarity of memory; his energy and aggressive style lead us into the hope that he will find time and opportunity to record something of permanent literary value in the history of Nova Scotia, touching not only upon fishery developments, but upon other matters within the long span of his memory. Moses Nickerson is too well known and has been too much of an institution in his native province to permit of his passing without leaving to future generations a permanent record of the events of his time. Though seventy-four years young, we wish him good health, many friends, and continued ability to wield a trenchant pen.

"Acadia" Valve-in-Head Four-Cylinder--Four-Cycle 40 H.P. Marine Engine

The latest addition to the engine family of Acadia Gas Engines, Limited, Bridgewater, N.S., is the "Acadia" Valve-in-Head, 4-cylinder, 4-cycle, 40 H.P. Marine Engine, illustration of which is shown on the next page.

This "Acadia" Four-cylinder Heavy Duty Motor has been designed, constructed and tested to meet the many requirements of those branches of marine service where the utmost reliability—consistency of performance—ease of handling—freedom from breakdown—fuel and general efficiency are positively demanded. The very best tried and proven engineering principles have been closely followed, and the large bore and stroke, with a relatively low rotative speed, and the large, slow-turning propeller are distinctive of the Acadia Heavy Duty Power Plant. Durability, Accessibility and Efficiency are the features which satisfy the most exacting customer, as a glance must prove.

The special feature of accessibility are removable Valves in Cages; removable Cylinder Heads, giving quick access to the Cylinders and Pistons for the removal of carbon deposits. Through the combination of the removable head and easy access to the Crank Case, the Connecting Rods and Pistons are readily removed through the top of the cylinder without disturbing the Cylinders. A removable Cam Shaft through the side of the Base is a special feature, and every provision has been made for convenient inspection and adjustment. Large doors on the Crank Case and Reverse Gear Housing afford easy access to the Bearings, and immediate adjustments to the Reverse Gear Passovers are provided for leading the water to the Cylinder Heads, thereby preventing water from entering the Cylinders.

The efficiency of this design has undergone the most rigid tests which showed at least ten per cent more power than the rating, and economy in fuel consumption reduced to a minimum.

The lubrication is mechanical and positive. A Compression Relief Lever is provided for holding open the Exhaust Valves to enable easy starting. A Slow-



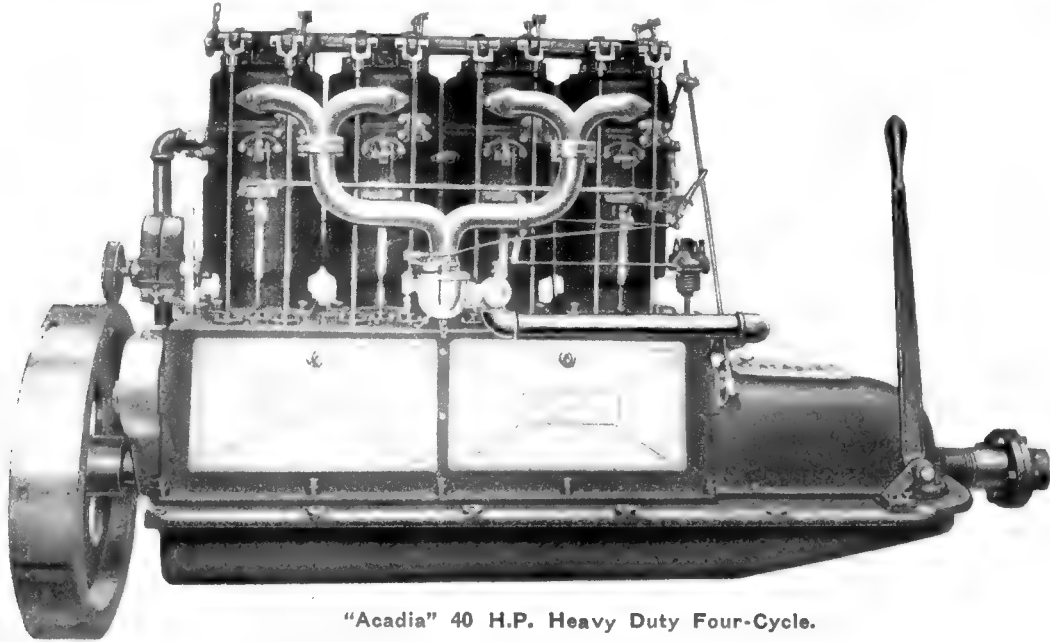
Mr. W. T. Ritcey, President and General Manager Acadia Gas Engines, Limited.

down Device operating the Intake Valves is a special feature of this engine.

Since Acadia Gas Engines, Ltd., was first organized in 1908 by the present General Manager and Presi-

dent of the company, Mr. W. T. Ritcey, they have speedily increased and advanced from a small local concern to the largest manufacturers of marine engines

in Canada, and, we believe, are the only manufacturers in this country who are building an engine of the size illustrated in Canada.



"Acadia" 40 H.P. Heavy Duty Four-Cycle.



Canadian Fish Plants--No. 7



Cooling Room of a British Columbia Salmon Cannery.



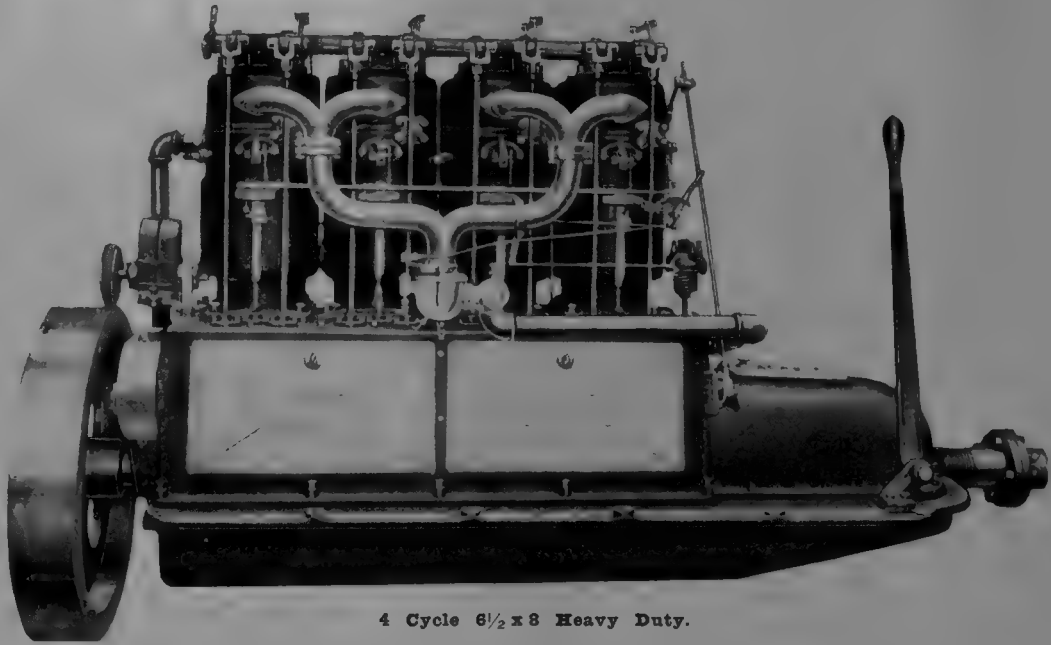
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Quality Counts

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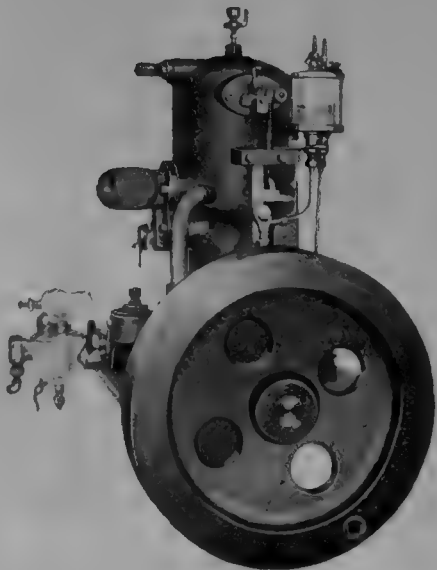
4 Cycle 6½ x 8 Heavy Duty.

Four-cycle Engines built in following sizes.

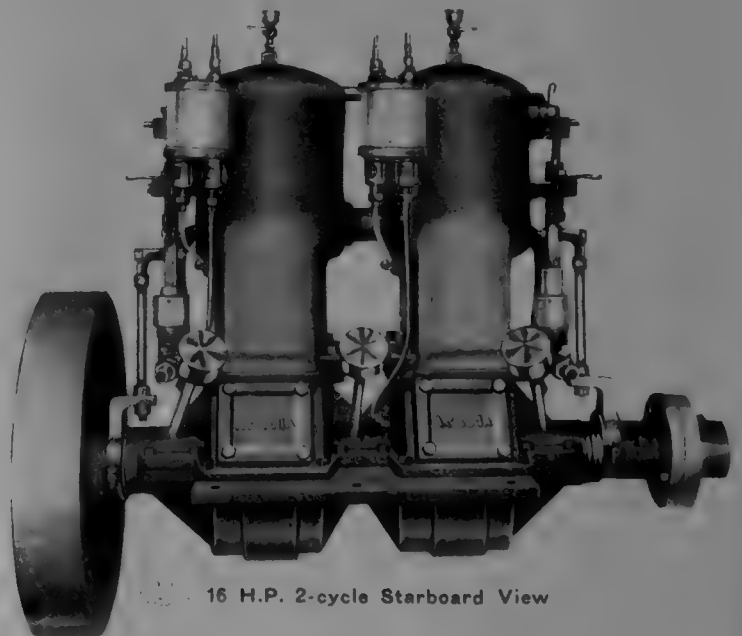
2 cyl. 12-16 H.P.; 4 cyl. 40-60 H.P.; 1 cyl. 8-10 H.P.;

2 cyl. 18-20 H.P.; 3 cyl. 30 H.P.; 4 cyl. 40 H.P.

Heavy duty Engines built for Port and Starboard use.



6½ H.P. 2-cycle Front View



16 H.P. 2-cycle Starboard View

Two-cycle Engines built in sizes 3 to 24 H.P.

ACADIA GAS ENGINES, LIMITED,
BRIDGEWATER, Nova Scotia.

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Largest manufacturers of Marine Engines in Canada.

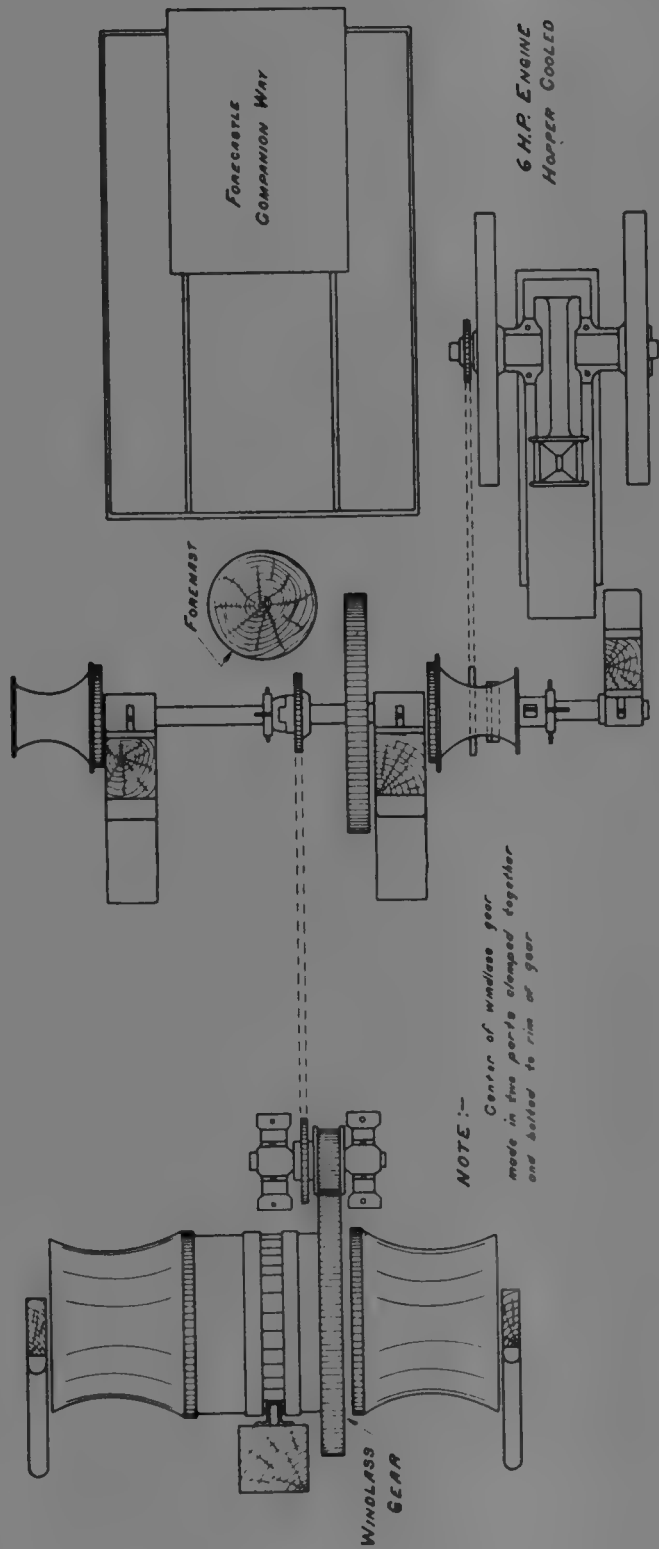


DIAGRAM OF COMPLETE POWER HEAVING AND HOISTING OUTFIT FOR FISHING SCHOONERS
 BUILT SUITABLE FOR ALL SIZES FISHING AND COASTING SCHOONERS.

Manufactured by ACADIA GAS ENGINES LIMITED
 BRIDGEWATER, NOVA SCOTIA, CANADA

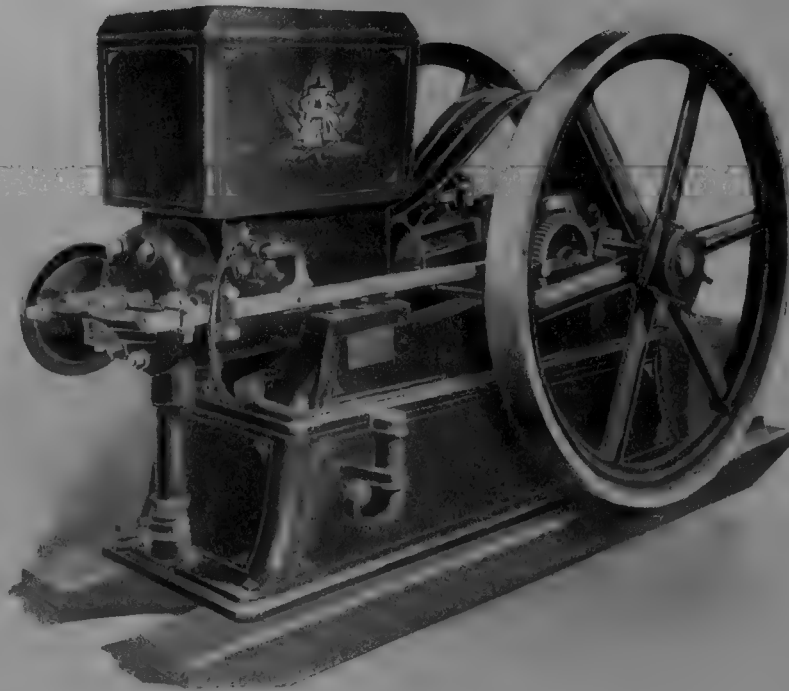
(SEE NEXT PAGE FOR POWER)

Acadia Stationary Engines

Simple
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100% Service



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100% Value

7½ H.P., Mounted on Skids, 6" Bore, 10" Stroke

Adaptable for use on Land or Sea

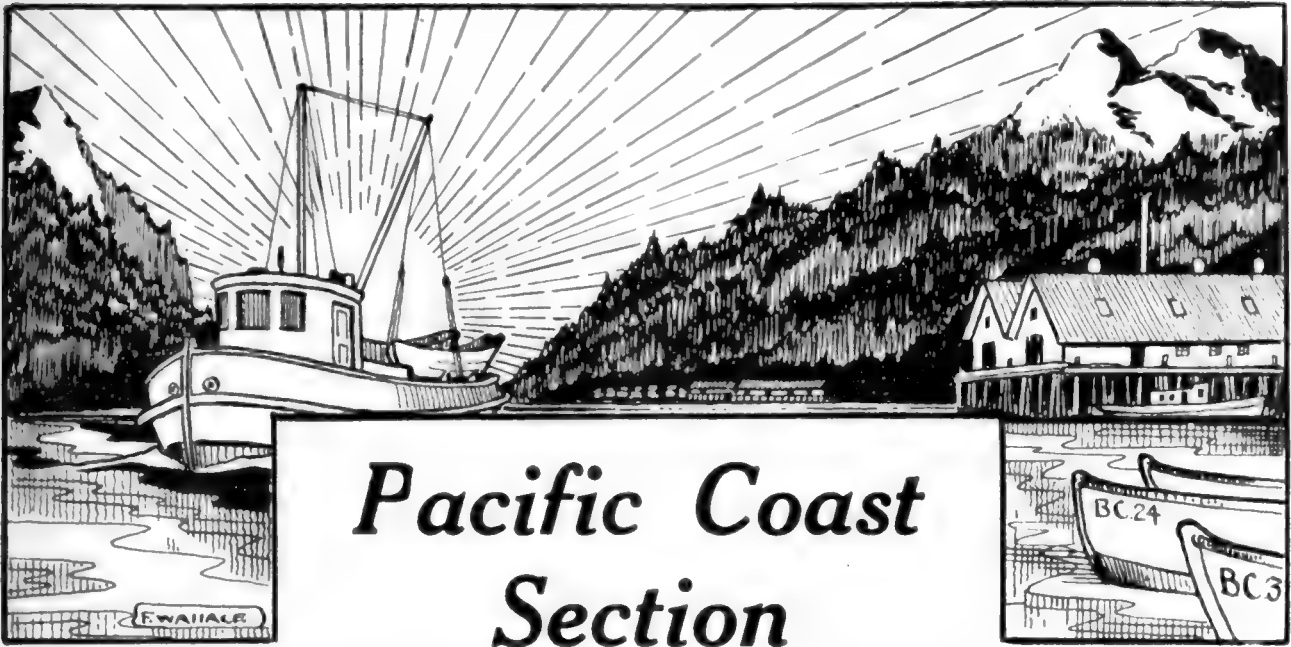
Sizes 2, 3, 4, 5, 7½, 9 and 12 H.P.
Battery or Magneto Ignition

This design of Engine is most famous and universally used along the Atlantic sea board and the Island of Newfoundland for use on board schooners, sawing lumber, etc.

For smooth, steady, reliable power and for economical service, the "ACADIA" is without a rival. It will save time and money, and is ready to run as soon as uncrated and supplied with fuel.

ACADIA GAS ENGINES, LIMITED

Bridgewater, Nova Scotia



Pacific Coast Section

"The Canadian Fisherman," Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltds 528 Winch Building, Vancouver, B.C., Canada.

SHOWING APPROXIMATE SALMON PACK—BRITISH COLUMBIA—SEASON 1921. (Computed up to November 18th, 1921).

District	Soockeye	All Varieties Springs	Blue-backs	Cohoos	Pinks	Chums	Steelhead	Total
District No. 1	34,911	16,615	1,432	23,384	8,052	5,857	6	90,257
District No. 2								
Naas River	9,365	2,102	—	8,236	29,488	2,176	400	51,767
Skeena River	40,981	20,890	—	45,033	124,455	1,993	480	233,832
Smith's Inlet and Rivers Inlet	49,711	408	—	4,784	5,336	171	97	60,507
Outlying districts ..	14,914	4,258	—	14,439	13,494	21,192	166	68,463
District No. 3	12,956	3,656	5,482	10,542	10,303	31,391	—	74,330
TOTALS	162,838	47,929	6,914	106,418	191,128	62,780	1,149	579,156

B. C. RATE-CASE OF INTEREST TO PACKERS OF CANNED SALMON AND FROZEN FISH.

The hearings held by the Board of Railway Commissioners throughout the western provinces recently was participated in by a representative of the salmon canners when the commissioners sat in Vancouver. What is known as the B. C. Rate case was handled by the British Columbia government solicitor who was appointed some time ago to appear at all sittings of the Commissioners in British Columbia, Alberta, Saskatchewan and Manitoba.

It is hoped that lower rates to the east may result from the representations made to the Commissioners on all varieties of fish handled by freight.

FIRST ARRIVAL OF EAST COAST SALT FISH IN VANCOUVER FOR 1921.

The first distribution of a mixed car of salt fish from the Atlantic coast started Thursday, November 10. This car contained two-pound bricks of salt cod, 50 lb. boxes of whole salt cod and salt herring in barrels.

ROUGH TIMES ON THE PACIFIC.

Some of the fishermen contend that the past few weeks has been the roughest on the Pacific for some years. Many of the smaller fishing boats had tough trips and got more or less smashed up. Some of them were caught in sudden gales and had a hard time making shelter. But most of these two fished men say it is just reasonable weather and what is to be expected at this time of the year.

CLOSED SEASON IN No. 1 DISTRICT, BRITISH COLUMBIA.

Beginning Friday night, at midnight, November 11, number one fishing district in British Columbia will be closed until next spring. This district includes the Fraser River and Howe Sound.

Knowing that the closed season was due the buyers were out in full force and were bidding strongly for the fish that were being offered.

WEST COAST SALT FISH PLANTS GETTING IMPROVED FERRY SERVICE THIS YEAR.

Packers of salt fish on the West Coast of Vancouver Island report a much improved steamer service between their plants and Vancouver this year. This is of great help to this branch of the fishing industry and enables the firms to plan their shipments to a much better advantage.

PRINCE RUPERT ITEMS.

The car supply is still keeping up with the demand.

During the first few days of October, the weather in this district was exceptionally stormy and the natural result was a short supply of fresh halibut and very high prices prevailing. Although the weather has kept on being bad in this vicinity during the whole month, the weather on the Western banks of Alaska has been reasonably good and the large Seattle schooners have been filling the bill pretty well with fresh halibut during the last three weeks and the prices now ruling are more normal. Prices for prime halibut to fishermen ranged from 10 to 20.6 cents early in October.

Mr. W. J. Cash, Resident Manager for Booth Fisheries Company of Canada, Limited, along with his family, took a three weeks vacation, visiting Vancouver, Seattle, and returned by rail via Calgary and Edmonton. During his absence, Mr. Kirkendal, of Booth's Seattle office carried on the manager's work at this port.

Sinclair Fisheries, Limited, have secured the contract to handle the catches of the Seattle schooner "Seandia," this schooner is owned by the National Independent Fisheries Co. of Seattle, and is fishing on the Company's lay. It is expected that she will land most of her trips in Prince Rupert during the Winter months and they will be packed and loaded by the Sinclair Co.

The New England Fish Company's Motor Ship Washington, arrived from Ketchikan during the month with a shipment of boxed fresh halibut for Eastern shipment. The shipment was handled through the plant of Atlin Fisheries, Limited. The Washington is used primarily for the transportation of frozen fish from the New England plant at Ketchikan for shipment East through the ports of Prince Rupert and Vancouver and this is the first time a cargo of fresh fish has been brought to Prince Rupert on this vessel.

All of the Canadian Fish and Cold Storage Company's steamers are now temporarily tied up, and they have no vessels working on the Company lay. Their gas schooner "Chief Skugaid" went out during the month to fish on the Independent lay, Capt. D. Candow is master on this vessel.

The small Prince Rupert schooner "St. Eloi" was wrecked on the 27th and became a total loss, but fortunately her crew were all able to get ashore and there were no lives lost.

Mr. H. C. Nunan, formerly Manager for Atlin Fisheries, Limited, here and now Manager for the New England Fish Company, Ketchikan, passed through this port on a vacation visit to his old home town in Massachusetts, this is Mr. Nunan's first visit to his home town in ten years.

On Oct. 6th, the second vessel for the Canadian Government Merchant Marine, was launched from the Wallace yards in this port, she was in a far advanced stage of completion when launched and it is expected she will be ready for sea some time next week. She was named the "Canadian Britisher" and is the last vessel to be built at the local yards for the present building program of the Canadian Government.

At St. John, N.B., the Booth Fisheries Canadian Company closed its cannery for the season on account of the lack of sardines. The company has sent its boats all along the coast as far as Grand Manan, but it has not been successful in securing any fish recently. The company did not succeed in securing so large a quantity of fish as was anticipated but its average was well up to that of the other factories of the same kind along the Atlantic coast. It is not expected that the factory will be reopened until early next summer. The closing of this factory throws approximately 150 employees out of work.

PHOTOGRAPHS OF ALL THE SCHOONERS

Which took part in the Nova Scotia and International Fishing Schooner Races are on sale at the following prices forwarded by mail to any address:--

5x7 Mounted 50c.

8x10 Mounted \$1.25.

11x14 Mounted \$1.75.

COMMERCIAL PHOTO SERVICE

37 Sackville Street

HALIFAX, N.S.

A. Hanna

THE CANADIAN FISHERMAN

Official Organ of the Canadian Fisheries Association

VOL. VIII

GARDENVALE, P.Q., DEC. 1921

NO. 12

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DEPARTMENT OF ZOOLOGY, U.T.P.
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For over half a century has been supplying the
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Nautical Instruments,
Lamps of all types,
Life Boat Equipment to
Board of Trade regulations,
Life Jackets, Ring Buoys,
Blocks of all kinds,
Wire and Manila Rope,
Anchors, Oars, Pumps,

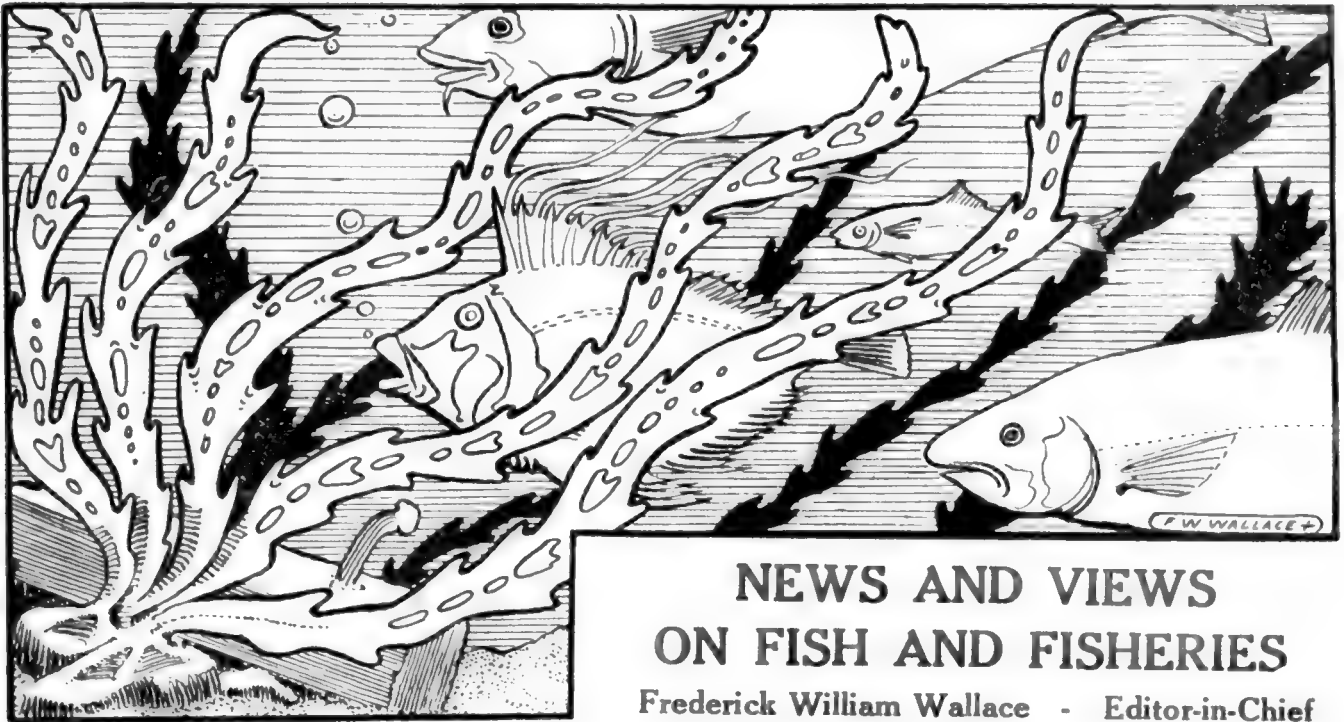
Linen Gilling Nets, Gilling Twines,
Sea Island Cotton Gilling Nets,
Side Line and Seaming Twine,
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Minnow Seines, Trammel Nets,
Hoop Nets, Fishing Rope,
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WRITE FOR A CATALOG

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TORONTO, Ont.



NEWS AND VIEWS ON FISH AND FISHERIES

Frederick William Wallace - Editor-in-Chief

NOW IS THE TIME TO ACT!

WANTED by the Canadian Fishing Industry, a Department of Fisheries distinct from Marine, Naval or other affiliation. Also a Deputy Minister in charge who will have direct access to the Minister.

For a whole year we have inserted the above "Want Ad." and made it the subject of our leading editorial.

We feel that the time has now arrived when our desires can be granted.

The old administration that has been swept away opened the flood-gates of the deluge themselves by their autocratic methods and utter disregard of the needs of the people and the country.

Canada is a land of certain great natural resources. By these must we grow to nationhood and wealth.

Government administrations pertaining to natural resources must be regarded as important portfolios backed to the limit by the Government.

We regard the fisheries as one of the most important.

Therefore we feel that all arguments are on our side when we ask for an able and well-versed Minister of Marine and Fisheries, a Fisheries Department distinct from any other departmental affiliation, and a Deputy Minister in charge of same.

Our demands are reasonable.

SEE THAT YOU GET IT!

The Canadian Fisheries Association and the CANADIAN FISHERMAN have done all they can to secure an efficient and responsible Fisheries Administration

at Ottawa. It is now up to you, Mr. Reader, to do your share.

The Canadian Fisheries Association, some three or four years ago, made a survey of conditions in the Canadian fishing industry and decided unanimously that the fisheries of the Dominion required a Department of Fisheries under the administration of a Deputy Minister of Fisheries.

At that time, the Fisheries was administered by the Deputy Minister of Naval Service and the department was merely a branch of his department. Later on, as a stop-gap to our requests, it was taken from Naval Service and placed under the jurisdiction of the Marine Department with the Deputy Minister of Marine as officer in charge. Our highest administrative official is the Superintendent of Fisheries, who is denied access to the Minister, but must comport himself according to the wishes of the Naval or Marine Deputy. This will explain why the Canadian treasury can pour millions into the Marine and Naval Departments, and provide the Fisheries Department with just enough to keep it alive.

The recently defeated Minister of Marine and Fisheries was well aware of our desires, and at one time we pinned our hopes on his making the necessary change. But, allured by other affairs, he dropped any proposed activity in fishery matters, and refused to do anything. His lack of interest in his Department of Fisheries has been suitably rewarded.

At a recent meeting, the Directors of the Canadian Fisheries Association, again passed the following resolution:—

WHEREAS the requirements of the Fishing Industry of Canada and the future of our great fishery resources demand that the Fisheries Department be separated from that of Marine, and a Deputy Minister of Fisheries should be appointed to administer the Fisheries and devote all his time and energy to its promotion and development;

BE IT THEREFORE RESOLVED that the Canadian Fisheries Association respectfully requests the new Government to make the necessary change that a new era in fisheries administration and development be established.

Copies of this resolution have been forwarded to the Premier-elect, to Boards of Trade in fishery districts and to Association branches.

You, Mr. Reader, if you are interested in the Fishing Industry of Canada, can help it and yourself by wiring or writing the Premier-elect, Hon. W. L. Mackenzie King, and the local member for your constituency, asking them for their consideration and endorsement of the above resolution—a resolution which embodies the wishes of the whole Canadian Fishing Industry.

NATIONAL FISH DAY

WEDNESDAY, FEBRUARY 1st, 1922

The Publicity Committee of the Canadian Fisheries Association have set **Wednesday, February 1st, 1922**, as National Fish Day.

The trade are urged to bring this day before the public as prominently as possible. The following are the means suggested:—

- (1) Circulars to customers.
- (2) Advertising in the local papers.
- (3) Special window displays.
- (4) Posters.

The Association will enlist the aid of the Publicity Department of the Marine and Fisheries Department at Ottawa and will see that hotels, restaurants and railway dining car services feature the event.

Wholesale distributors should begin now by having a rubber stamp made:—

NATIONAL FISH DAY,
WEDNESDAY, FEBRUARY 1st, 1922.
EAT MORE FISH AND HELP
DEVELOP CANADA'S FISHERIES.

This should be stamped upon all outgoing mail, invoices, price lists, envelopes, etc.

In all publicity, it will be well to avoid the phrase that fish is cheaper than meat. Fish should be eaten for itself alone and not from either economy or as a charitable duty to aid the fisheries. Good fish, well cooked, will hold its own with any food. Reliability, digestive properties, reasonable price, and great range of varieties should be emphasized.

**GO TO IT AND
MAKE THE DAY A SUCCESS !**

THE SEINE-NET BOOM IN THE BRITISH FISHERIES

Something of a revolution in fishing methods has taken place in the British fisheries by the adoption of the seine-net gear. Boats are being fitted up to use the seine and the manufacturers and outfitters are being swamped with orders; good stocks have been made by craft employing the new gear, and it is reported that the future of the steam trawler is seriously affected by the new innovation.

Successful application of the seine by Danish fishermen in catching flatfish, cod and other ground-fish, the low cost of operation by using smaller boats and

fewer men, opened the eyes of British fishermen to its possibilities.

The following article on the subject of seine net fishing taken from the British "Fishing News" describes the gear and the method of operation:—

"Seine net fishing is quite different from trawling. The net is not pulled after the vessel as is the otter trawl. The net consists of two arms, provided with a bag in the middle, and the method of working it can best be likened to that practised by the salmon fishermen on a river like the Dee. One end of the warp (or rope) is held by a salmon fisherman on the bank of the river, while another member of the crew rows into the middle of the stream and drops the net, which spreads out lengthwise, the warp attached being paid out all the time. He then rows back to the bank again, paying out the warp attached to the other end of the dropped net. When the bank is reached, both warps are steadily hauled in by the crew, who are now on the river bank, and who walk towards each other. By this means the net is gradually closed, and when both parties meet, and the net is brought ashore, it is absolutely closed.

Curve Round a Buoy.

The same method is adopted in seine net fishing, the difference being that instead of the warp being held by a man on the river bank, which, of course, is impossible at sea, it is attached to a buoy. This buoy is kept in position by an anchor. The vessel then steams ahead in a great curve, paying out 960 fathoms of the warp. The net, which is 202 feet in length, is then dropped. The vessel proceeds to steam back, paying out the other 960 fathoms of the warp towards the buoy, where the two ends of the warp meet. They are then taken aboard the vessel through the rope rollers on to the winch, and thence to the coiler, which automatically coils the whole length of the rope on board the vessel.

The same pressure, or pull, is maintained on both ends of the warp so that the net is being steadily drawn together, and when it arrives at the side of the vessel it is closed.

During the hauling aboard of the net, the vessel is lying stationary. After the net is hauled aboard, and the catch emptied into the vessel's hold, the same procedure is again gone through, the length of time occupied in doing so being one hour. It is essential in laying the gear to place it so that the net is hauled in dead against the tide.

Three Kinds of Net.

The net used is a light cotton one. There are three kinds of nets—plaice, haddock and cod. One of the greatest disadvantages of the seine net fishing is that it requires to be prosecuted in rather fine weather. Up till now it has not been practised in the dark, owing to the fact that collisions might ensue, as the vessels are so frequently sailing in such a big sweep when laying the net. Another disadvantage of this method of fishing is that it cannot be prosecuted with success in waters where the sea has a rough bottom.

Gear Required.

This particular method of fishing has been largely used by the Danes for a good number of years on the Dogger Bank with tremendous success. Motor boats and steam drifters can be easily adapted for the seine net fishing. Drifters do not require to be changed in any shape or form. All that is needed is a special winch, a rope-coiler, rope rollers, and the laying of a

steam pipe from the engines to the winch. The whole gear can be either laid aft, amidship, or just at the back of the foremast if there is the necessary room. The cost of installing the gear, including net, etc., is about £350, as against about £700 in converting a drifter into a trawler. Less power is required for the seine net fishing than for trawling, and it is much less expensive. It is these facts that have commended its adoption by the Scottish fishermen, some of whom are at present agitating for permission to be allowed to fish within the three-mile limit.

The Net.

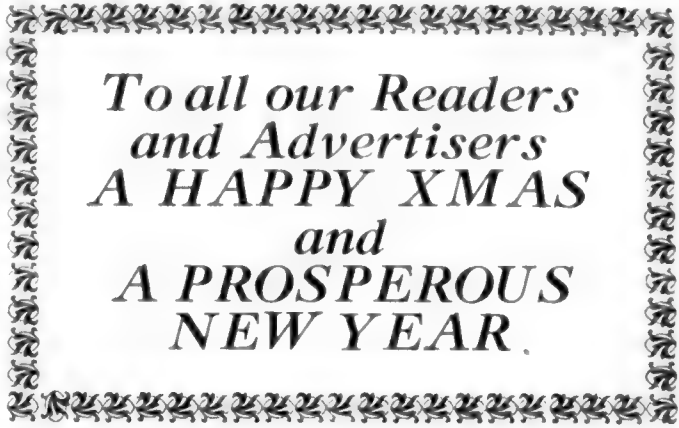
The meshes of the net measure from 3½ inches down to 2 inches. For flat fish, plaice, etc., it measures 40 fathoms in width between the arms, with the bag 5½ fathoms in depth. For round fish, such as haddocks, etc., the measurements are 30 fathoms and 8 fathoms respectively.

FAMOUS NOVA SCOTIA SHIP-YARD.

Smith & Rhuland, builders of the famous schooner "Bluenose", have been established in Lunenburg since 1900. Since then they have built and launched 120 vessels. They are now preparing the ways for a new schooner to be called "Clintonia" for Capt. E. C. Maek.

THANKS.

Mr. Paul J. Garin, representing the CANADIAN FISHERMAN, desires to thank Messrs. Silver, Gardner, Zwiaker, Corkum, and other managers of large fishing firms in Lunenburg for the courtesies extended to him while on his recent visit to the Gloucester of Canada in the interests of this magazine.

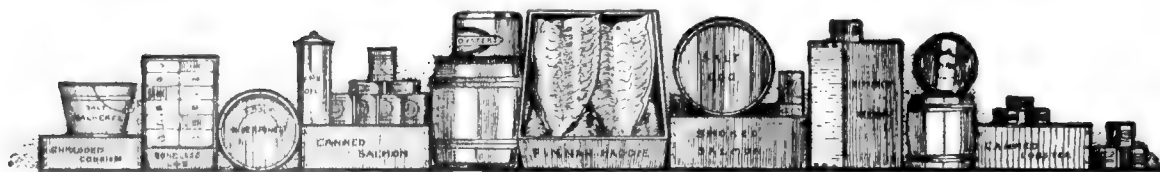


*To all our Readers
and Advertisers
A HAPPY XMAS
and
A PROSPEROUS
NEW YEAR.*

Hon. Mr. KING---Please Note!



The Canadian Fisherman Knows what He Wants.



Norwegian Competition in the Cuban Codfish Market

Major Hugh Chisholm, Late Trade Commissioner in Havana, voices a warning and suggests a remedy.

On more than one occasion during recent months, the Weekly Bulletin of the Dept. of Trade and Commerce has drawn to the attention of the Canadian fishing interests the immediate danger confronting the Nova Scotian codfish trade in Cuba owing to Norwegian competition. It was pointed out by the writer in a July issue of the Weekly Bulletin that, driven out of Spain by retaliatory tariff legislation, the codfish industry of Norway was now looking to Latin America for an outlet for export trade, that trade emissaries had been despatched to Havana with instructions to capture the Cuban market at all costs, and that already they had been successful in making serious inroads on the Havana market. The fish importers of Havana assured the writer that, unless Canadian curing and cleaning methods were changed so as to produce an article equal in appearance to the white nape Norwegian cod, in order to keep the Havana market, Nova Scotian fish would have to sell for at least \$1.00 per hundred pounds below Norwegian. Is the Nova Scotian codfish industry going to lie down and let this splendid Havana market—worth from a million to two million dollars annually—disappear?

The writer's investigations in Cuba have been followed up this fall in Halifax and Lunenburg, where he met both merchants and skippers. It was found that the merchants were fully conversant with the seriousness of the situation, and had tried to impress upon the skippers the necessity of whitenaping and cleaning carefully cod for the Havana market. Their appeals, however, appear to have met with comparatively little response from the fishermen themselves. The writer would therefore like to take this opportunity so kindly afforded by the Editor of the Canadian Fisherman to appeal to all Canadians interested in the prosperity of one of our greatest industries for co-operation and organization within the codfish industry of Nova Scotia so that the appearance as well as the quality of our fish will equal the best in any market. We must either organize this industry to whitenape and clean our cod or sell our fish at such low prices in markets like Havana that our fishermen may find other callings more profitable, resulting in damage to our fishery resources. Proper grading and packing have made our apples famous in the world's markets and similar methods in the codfish industry should soon remove the bogey of Norwegian competition.

SCHOONER DONALD J. COOK, OF LUNENBURG, AFIRE AND ABANDONED AT SEA.

Halifax, N.S., December 19. — The schooner Donald J. Cook, 99 tons register, of Lunenburg, was abandoned burning, in latitude 32.59, longitude 58, and her complement of nine persons, including Mrs. Oxner, wife of Captain Percy Oxner, and Mrs. Ben Peeler, wife of the vessel's cook, are on the steamer San Eduardo, bound for Puerto, Mexico.

This information was contained in a message received at Lunenburg today from the Eduardo.

The Cook was built at Lunenburg in 1918, and was owned by Ritchie Bros., of Riverport. She was a contestant in the recent Nova Scotia Fishermen's Race.

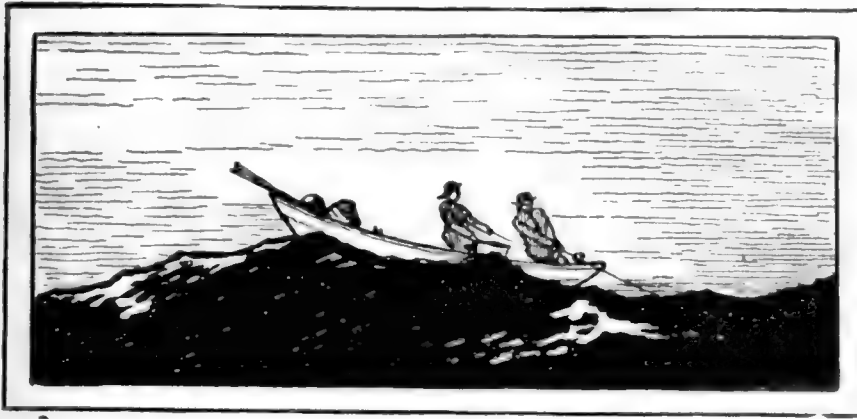
IMPROVEMENT IN LOBSTER PACKING NOTED.

Demonstrators who went about the lobster canneries of Prince Edward Island this year, and by means of a miniature laboratory showed the prevalence of bacteria, how it multiplied under unsanitary conditions and why the germ caused discoloration and inferior flavor of lobster meat, have convinced the cannerymen of the seriousness of the situation. So effective has

the educational campaign been that the quality of the lobster output of this district in the fall is declared to have improved seventy-five per cent.

Similar demonstrations are badly needed in the lobster canneries of New Brunswick and Nova Scotia, and Dr. A. P. Knight, Chairman of the Biological Board, urges that the campaign be extended in scope next season to take in the whole of the Maritime Provinces. The valuable work, rendered necessary because of unsatisfactory quality being turned out, was conducted conjointly by the fisheries authorities at Ottawa and the Biological Board of Canada.

The draft treaty of 1918 providing international regulations for the protection of the sockeye fishery on the Pacific coast has been definitely discarded. W. A. Found, Assistant Deputy Minister of Fisheries has left for the Pacific coast to endeavor to negotiate with the Fishery Advisory Board of the State of Washington, an understanding that will insure joint protection for this fishery. It is possible as a result of the partial failure of the fishery this year that the regulations to rehabilitate it may be even more drastic than those provided in the draft treaty of 1918.



North American Codfish In France

By COLIN McKAY.

The Trade Review of St. John's, Newfoundland, stated in a recent issue that by reason of a prohibitive tariff people in France had to pay from \$16.00 to \$17.00 per quintal for cod fish at home, while French fishermen were selling the Italians this very same cod-fish for \$6.00 to \$7.00 per quintal. The Review, referring to the bounties paid by France to the fishing industry, suggests that "the time is opportune for British diplomatists to take up this matter of the unfair bounty fed competition with British trade from a friend and ally in the late war."

It may be true that France is selling cod-fish to Italy at less than half the prices charged her own people, but it may be doubted that the fish is of the Canadian grade. In a report of the Commissioner in Spain the quotation on French salt cod on the Spanish market during the first week of September is given as 75 shillings per 50 kilogs, while the quotation on Newfoundland small shore cod is given as 70 shillings, on medium shore cod 75 shillings, and on Newfoundland Labrador cod as 50 to 52 shillings. If the Trade Commissioner has not made an exceedingly unlikely mistake French fish, which, he says, are mostly soft cured and therefore competing with Labrador fish, must, in this case, have been selling on their merits and not because they are bounty fed, and the discrepancy in prices might suggest that Newfoundland might learn something from the French in the way of preparing fish for the Spanish market. The Trade Review has some such idea, for in the same issue it says: "The art of curing fish like it was cured 30 or 40 years ago is fast being forgotten or neglected in Newfoundland. Those who do not know how to cure for the high paying Spanish market are now largely in the majority, but when they see others getting \$1.00 more per quintal for their fish they think they have just ground for grumbling and will not admit that it is their own fault." The Spanish market offers a considerable variation of prices, for at the time Labrador cod were quoted at 50 to 52 shillings per 50 kilos, Norwegian and Scottish cod were quoted at 85 to 90 shillings, according to the Canadian Trade Commissioner.

As to prices of salt cod paid in France. In October salt cod was selling in the Central Market, Paris, at 2 francs per kilo. That on the basis of exchange then prevailing would figure out at about \$16.50 (Canadian) per metric quintal of 220.5 pounds, or \$7.55 per cwt. At the same time in Versailles, not far from Paris, salt cod was quoted at from 3 to 4 francs per kilo, or from \$11.30 to nearly \$16 per cwt. These differences in prices can hardly be attributed to the tariff France imposes on fish, whether or not the tariff is prohibitive.

There are the differences in the quality of the fish

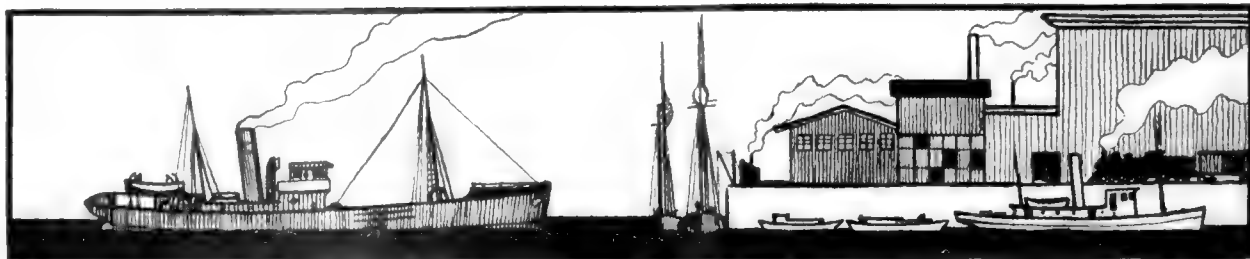
and the character of the trade catered to, and there are municipal regulations which impose charges on business which are reflected in prices.

The Trade Review suggests that the "British Government should bring pressure to bear financially upon the French Government to induce them to abandon the insane bounty which gives foreigners cheaper food than they can get any other way." To this, the Italian Government might object, if, as the Review says, France is selling Italy cod at less than half the price charged French people. And how about asking the British Government to bring pressure upon Canada to induce it to abandon its present practice of paying bounties to fishing vessel owners and fishermen?

The bounty paid Canadian fishermen is really more of a bonus than that received by the French fishermen. In fact, the French Government looks upon the fishermen's bounty, which is insignificant, as more in the nature of a naval retainer; the fishermen receiving it are obliged to put in a certain amount of training in the naval reserve, receiving during their training a few sous per day.

The greater part of the French bounties is paid to vessel owners on the basis of the export of fish from France or St. Pierre to foreign countries or French colonies. The amount paid on this account has varied from 6,200,000 to 1,300,000 francs a year. Over the ten-year period just previous to the war the average was about 3,000,000 francs per year, or equal to approximately ten per cent. of the value of the fish exported. The basis of payment is ten francs per metric quintal on fish exported to countries where a customs' duties up to ten per cent. is levied. If the exporter sends fish to a country where the customs duty is over ten per cent., his export bounty is correspondingly reduced, this provision of the regulations, apparently being founded on the belief that while the importer may pay a low duty the exporter pays a high duty; at any rate it is designed to discourage trade with countries imposing a high duty on French products.

With slight modifications the bounty regulations have been renewed at periods of ten or fifteen years, and on the last occasion the matter was before the Chamber of Deputies it was provided that there should be a successive scaling down of the bounties. Under this provision the bounties payable in 1922 would be twenty per cent. less than those payable before the war, or a bonus of eight per cent. on exports. In 1922 the bounty system is due for another overhauling, and there will likely be considerable opposition to their continuance, as France is evidently trying to work out a fishing policy independent of naval consideration.



Brine Freezing of Fish

By HARDEN F. TAYLOR, Chief Technologist, U. S. Bureau of Fisheries.
(Contribution from the Fishery Products Laboratory, Washington, D. C.)

The idea of freezing fish by immersing them directly in cold brine is not at all new. Patents covering the principle have lived their lives and expired in both Europe and America. Nothing came of the early attempts to freeze in brine; perhaps it was because the development of machinery for producing refrigeration naturally took precedence over methods of applying refrigeration, and the simplest possible method of freezing—that of cold rooms—was used. Most thoughtful people who are interested in refrigeration of fish are now of opinion that the time has come when the emphasis, attention, and effort may profitably be shifted from refrigerating machinery, now so perfectly developed, to better methods of getting fish frozen and holding them in that condition until required for use. That is to say, we may shift our interest for the time from the production of cold to the application of the cold to the preservation of fish. It is almost certain that effort in this field will be well rewarded, for refrigeration promises to afford the only solution of the great problem of distributing fish from the sea to distant consumers in first-class condition.

It is within the past 10 years that interest in brine freezing has been revived. Within that time several methods of procedures, more or less alike, all designed to freeze fish in brine, have been put forth for exploitation. These methods or procedures, most originating in Europe, have been investigated by various boards and commissions whose findings have been published. There is evidence on all sides of the widespread interest in brine freezing and, unfortunately, considerable misunderstanding of its purposes and application. The present article is an attempt to give some account of the present status of brine freezing as applied to fish. The writer has been identified, from the beginning of the revival of interest in brine freezing, with the various experiments, trials, and demonstrations and has recently visited most of the brine-freezing plants in various parts of the United States.

A convenient approach to the subject will be through a consideration of the present method of freezing in "sharp" freezers, or cold rooms.

Small fish are packed in pans, with or without lids, and the pans are placed on the shelves of refrigerated pipes in the cold rooms. Larger fish are laid on pipes, floor, or are suspended in the sharp freezers. The temperature for sharp freezers in America may be anywhere up to 32° F. when the freezer is loaded, but is drawn down usually to between 0° and 20° F. before the fish are considered frozen. In Europe, according

to various reports, the customary temperatures are often much higher. The fish are removed after various periods and glazed by dipping in cold water once or a number of times and in a number of ways. The small panned fish will be stuck together into a solid cake which is glazed as such. They are then boxed and stored or shipped.

The time of freezing in sharp freezers varies from less than a day of 24 hours for small fish to two or three days for large salmon and halibut. During this time the fish may dry out considerably. The reason for drying is that the vapor pressure (which is merely another name for the tendency of moisture to evaporate from moist bodies) is higher when temperature is higher and lower when temperature is lower. Now when the fish are introduced into cold rooms they are the warmest bodies in the room and have consequently the highest vapor pressure. The pipes are the coldest part of the room, and have, in consequence, the lowest vapor pressure. The moisture of vapor travels from the point of high pressure (the fish) to the point of low pressure (the pipes). This evaporation of water from the fish, while usually not a very serious matter for short periods of freezing, nevertheless constitutes one of the objections to freezing in air, because even the slightly dried skin shrinks and loses its lustre and, if the drying is extreme, the fins, tails, and jaws become brittle and break easily in handling.

The brine-freezing process consists in immersing the fish directly in, or otherwise treating the fish with salt brine which has been chilled to a temperature below the freezing point of the fish. Ice and salt or ice and strong brine will produce temperatures around 0° F., and as used thus as a source of refrigeration have been proposed for small-scale operations, but generally an ammonia compressor or absorption plant would be used to chill the brine, the engine-room part of such a plant being the same as is now used. In a brine bath at about 0° F., fish freeze in 30 minutes to 4 hours, instead of 12 to 48 hours as in sharp freezers.

If the fish are frozen in brine there is no evaporation of moisture from the fish during the freezing process. The fish come from the freezing bath with bright lustre and with fins and tails pliable.

When fish are frozen slowly, as in sharp freezers, ice crystals form within the tissues. Formation of ice crystals is accompanied by a destruction of the cells and muscle fibrils. A fish so frozen is found to be somewhat soft after it is defrosted. If consumed at once it is acceptable as food, but if held for any considerable time after having been defrosted, it rapidly

deteriorates. There is some evidence that brine-frozen fish, after having been defrosted, are firmer than air-frozen fish and may be held satisfactorily for a considerable time. The practical value of this difference, which is explained by the failure of crystals to form during very rapid freezing, appears, for example, when brine-frozen fish are shipped for long distances without ice. Fish frozen in brine and packed with no special precautions have been shipped without ice between various points in the United States for distances ranging up to 2,200 miles. They were, of course, defrosted on arrival, but were reported, in every case, as having been in excellent condition. One lot of fish, brine-frozen and packed in a wooden box without ice or insulation, was shipped by express for 2,200 miles. The fish were four days en route and were reported to have arrived in first-class condition. This would scarcely be possible with fish frozen in sharp freezers. The writer shipped by parcel post a package of brine-frozen fish for a distance of about a thousand miles, and arriving at the destination in North Carolina the fish were sent out on a rural-delivery line. They were packed in an ordinary corrugated-paper carton and were three days enroute. They arrived in excellent condition. Experiments of this kind have been made repeatedly by the writer and by others. Shipments from Washington to New York, from Chicago to New York, and between other points were uniformly successful, and shipments made from San Diego, Calif., to points in Texas are reported as having been quite satisfactory.

One firm which does a wholesale fish business shipped brine-frozen fish to one of its customers and continued doing so for some time. The fish were defrosted and iced before shipment, however, the retailer not being informed that the fish had been frozen. On one occasion when there were no brine-frozen fish, the retailer's order was filled with fresh fish on ice. A protest was immediately made against the shipment of "frozen" fish when "fresh" fish had been ordered. In this case, the brine-frozen fish had been quite satisfactorily passed for fresh fish, and fish that were really "fresh" and on ice were received under protest.

So far as present information goes, it appears that after brine-frozen fish have been defrosted they may be frozen again without serious injury. If this should prove to be true and practicable on a commercial scale, the importance of the fact would be great, for fish could be frozen and shipped without refrigeration and again frozen at destination; or an unsold lot of defrosted fish could again be put in store.

So much for some of the advantages to be gained by brine freezing. It is only fair to present the disadvantages also. If most of the desirable characteristics of brine freezing are traceable to the speed of freezing, most of the difficulties arise from the brine that penetrates into or adheres on the surface of the frozen fish.

Air-frozen fish, after having been frozen, are dipped in ice water for glazing. Before being dipped the fish are dry and hard and readily take on a clear, hard, firm glaze, which breaks only with difficulty. One dip in cold water may be sufficient, but many freezers give the fish only two, three, or four short dips in cold water in a cold room in order to get a better glaze; by this procedure the glaze amounts to from 3 to 6 per cent of the weight of the fish. Brine-frozen fish are wet with brine before dipping, and, treated by a single dip as above described, do not take a glaze.

It has been found by the writer in experiments, and by others in practical application, that brine-frozen fish can be glazed, if the adhering film of brine is first removed. This can be done by immersing the fish under the cold water and moving it briskly to cause the water to wash off the brine as it moves by the surface of the fish. The fish is then taken out and drained for, say, half a minute, then dipped twice more. The glaze will be from 4 to 6½ per cent of the weight of glazed fish. If the conditions are all correct, the glaze will be clear and firm but perhaps not quite so strongly adherent as that on the air-frozen fish. After a few hours in the cold store the glaze soon sets and becomes quite as substantial as that on air-frozen fish. Another method of accomplishing the same result practically and satisfactorily, based on the same general principle, has been in use by one fish company for two seasons (1920 and 1921). The procedure is as follows: The fish, after having been frozen in brine, are washed with cold water to remove adhering brine. They are then transferred to the sharp freezer or other cold room, where they remain over night, during which time the surfaces of the fish become hard and dry, the most appropriate conditions for a good glaze. Next morning the fish are glazed by dipping in ice water in the same way as air-frozen fish are dipped for freezing. The essential condition of glazing brine-frozen fish is to remove the adhering brine. The small amount of brine that penetrates the fish does not appear to do any particular harm to the glaze. The fish must be frozen hard all the way through. An incompletely frozen fish will not glaze satisfactorily. To get the best results, it is desirable to freeze the fish at the lowest possible temperature which, with salt brine, is from 0° to about 6° F.

Brine-frozen fish can, therefore, be glazed, but with more trouble than air-frozen fish. A mechanical method of doing this work can, of course, be devised.

Other differences between brine-frozen and air-frozen fish may now be noted. During immersion in brine, some of the salt penetrates the fish. The amount that penetrates varies with the conditions of operation, yet there is always some penetration. As stated above, a small amount does not interfere with glazing and does not materially alter the taste of the fish. It does cause a change in the appearance of the parts of the fish that are red with blood. After storage for some days the gills are blanched as are also the vent and any cut surfaces. The effect is the same as that produced by salt in the salting or corning of fish, only to a lesser degree. In round fish, the only surfaces seriously affected are the gills and vent. It does not seem unlikely that some scientific study of the question may bring forth methods of entirely preventing the penetration of salt. Just now, it is safe to say that round fish are much better suited to brine freezing than are dressed fish, though with white fish, such as halibut, there does not seem to be much difference. It is also fair to say that the discoloration of bloody tissues noted above does no material harm to the fish—it affects only the appearance. For bacteriological reasons, however, there is a real superiority in the fish frozen round—to say nothing of the smaller damage caused by rusting of round fish.

The eyes of any frozen fish are white, but return nearly to normal transparency and lustre on defrosting. Comparison in this respect shows little or no difference between brine-frozen and air-frozen fish. On defrosting, the eyes of the fish frozen by either me-

thod show a slight cloudiness or opalescence of the crystalline lens (the spherical body down in the midst of the eyeball) as compared with perfectly fresh fish of the same lot.

A British bacteriologist, Ione H. Green, has shown, in her published results, that brine-frozen fish are infected by a much smaller growth of bacteria than are air-frozen fish. It may be presumed that the strong brine, moving past the fish rapidly, has a combined effect of washing away many bacteria and directly destroying others. We do not yet know what the practical consequences of this difference are, but we may readily imagine the advantage, both for prolonged storage and for immediate shipment.

The foregoing is a brief statement of the chief characteristics of fish frozen in contact with brine. Some other differences between brine-frozen and air-frozen fish may arise from the mode of handling fish as adapted to brine freezing. For example, fish may be iced and frozen in brine; but if this is done, the cake must be packed tight in the pans and pressed down with a cover, else the buoyancy of the brine will float the fish apart. Therefore, fish pan-frozen in brine will appear more compressed and misshaped. Also if full advantage is taken of the most rapid freezing, the pans must be perforated. In that case the perforations in the pans will leave their impression on the fish.

We are not confined to brine as a refrigerating liquid. Glycerin, alcohol, and the like have been proposed. Glycerin is promising as a refrigerating bath but is expensive. The probability is that glycerin would affect the blood much less than salt does but would, on the contrary, be more difficult to remove from the fish.

Among the questions touching on brine freezing which have not received definite answer is the difference, on prolonged storage, between brine-frozen and air-frozen fish. It is possible that brine freezing may reduce the tendency of the fish to rust in storage. One English authority holds that a fungus or mold is concerned in the rusting of fish. If so, it is quite possible that its harmful effects might be reduced by strong brine. On the other hand we do not know whether or not the superior quality of the flesh, free from large crystals, survives long periods of storage. We do not know positively that the formation of crystals, which is avoided by quick freezing, does not take place slowly during prolonged storage.

There is much to be said in favor of developing a method of freezing by which the fish should be individually frozen in brine, glazed, and packed, each fish being separate, trim, and straight. The great bulk of the smaller fish frozen are now iced; and while there are obvious advantages in the matter of handling cakes as compared with individual fish, there are also many attractive features of fish singly frozen and glazed. A box that holds 150 to 160 pounds of well-formed cakes, will hold, according to trials made with the same fish individually frozen, 125 to 130 pounds—not a bad showing. The individual fish are available for sale in any amount without the necessity of defrosting whole cakes or prying them loose and damaging them in doing so. The fish defrost much more rapidly when singly frozen than when frozen in cakes and make a better appearance on the counter, not being compressed or distorted. By freezing individually before packing, advantage could be taken of the entire surface of the fish for exposure to the brine to

secure the most rapid freezing and to get the excess brine removed and the glaze applied without interference.

What is probably the most important aspect of brine freezing now awaiting development is the practical application on a large scale. If we concede all the advantages in brine-frozen fish, as stated, how are we to get fish frozen, washed, glazed, and packed in the most expeditious and economical manner, at the rate, say, of 30 tons, or two carloads, per day? A method, to be regarded as quite successful for freezing and storage, should include washing, freezing, rinsing free of brine, applying a perfect glaze, and packing the fish in the shortest time, with the minimum of labor and refrigeration. If for consumption as fresh fish, say within two weeks, the glazing is probably unnecessary, but the washing should be done.

The lowest temperature to which pure salt brine can be reduced is -6.16° F. or -21.2° C. Brine of 22.42 per cent salt and 77.56 per cent water by weight can be reduced to this temperature before the separation of either ice or salt begins. A somewhat less concentrated brine may be used, but if it is used ice will surround the expansion coils before this temperature is reached. More than 22.42 per cent salt should not be used; it can not make it possible to lower the temperature beyond -6.16° F. and can only cause a stronger penetration of salt into the fish. The presence of calcium and magnesium chlorides in the salt (as they usually are present in small quantities) may serve to lower the temperatures slightly and correspondingly increase the permissible concentrations. Experiments are yet to be made on the question, but it seems likely that small percentages of calcium and magnesium salts would be desirable as reducing penetration.

Salt brine attacks iron, particularly wrought iron; if the brine is held alkaline the corrosion will be greatly reduced. There are, on the contrary, theoretical reasons for expecting that in a slightly acid condition (at the iso-electric point of fish protein, a hydrogen-ion concentration of about $\text{pH}=4.7$, to be exact) the brine would penetrate the fish least and do the minimum damage. These questions concerning the best possible composition of the brine await further investigation.

The machinery used for the refrigeration of the brine should be capable of control at the working temperature, in order to avoid formation of ice on the coils, with consequent loss of efficiency, and should be so operated. If the suggested concentration of brine is used (22.4 per cent), the machinery should be operated for a temperature of -5 to -6° F. (suction pressure in ammonia machines 12.22 to 12.57 pounds). It might be supposed that as long as the temperature does not fall below the freezing point of the brine it may be held at any convenient figure. It should be remembered, however, that for every degree that brine is allowed to rise above its freezing point the penetration of salt into the fish will increase by just so much and the rate of freezing will be reduced by just so much. Regulation of temperature is important for the best results.

It is further to be noted that brine freezing may require a larger plant than air freezing. The actual refrigeration required to freeze a ton of fish in brine is probably somewhat less than it is in sharp freezers. But the sharp freezer takes, let us say, 24 hours to freeze the fish, and in brine they will freeze in $1\frac{1}{2}$ hours if sufficient refrigeration is supplied. Let us

say we have 5 tons of fish, a sharp freezer of 5 tons capacity in 24 hours, and a brine freezer of such proportions that it will treat 5 tons in a working day of 12 hours, each fish or batch remaining in the brine $1\frac{1}{2}$ hrs.. In the sharp freezer a refrigerating machine that will freeze 5 tons of fish in 24 hours is necessary. In the brine freezer refrigeration must be supplied at a rate sufficient to freeze 5 tons of fish in 12 hours, or 10 tons in 24 hours. Thus a machine twice the size required for a sharp freezer is necessary for a brine freezer for the conditions assumed, and it would stand idle at night.

This objection may be met in any one of several ways. The plant may operate day and night, with two or three shifts; it may operate by day for freezing fish, and by night for freezing ice, the ice to be used for packing the bunkers of cars for shipment of the fish frozen; the excess nightly refrigeration could also be accumulated, by mushing dilute calcium brine, for refrigerating the cold stores. Or, if the smallest possible machine is desired, it may run the entire 24 hours and during the night accumulate cold in a brine tank (by mushing or partially freezing the brine), the reserve being consumed during the day's operation of freezing fish. Suppose we wish to freeze one carload or 15 tons, of fish per day of eight hours, and assume, for a safe margin, that a ton of fish is equal to a ton of water. We might find it advisable to provide a 45-ton refrigerating machine. Working to capacity, it would freeze 15 tons of fish in eight hours. We could use, of the 30 tons available during the remaining 16 hours, 6 tons of ice to pack one car (12,000 pounds ice, 6,000 in each bunker), the remaining refrigeration, 24 tons, for cold store rooms and precooling the car. These are among the many problems of brine freezing.

The fish are to be treated directly in the brine. The greatest possible surface should be exposed to the brine, and the latter should flow as rapidly as practicable past these surfaces. Operation should be such that while one batch is freezing another batch is being made ready for freezing, so that the operatives' time is conserved. In general, fish of the same size should be grouped together. Ample allowance should be made for freezing time. Small fish, like herring, yellow perch, saugers, and butterfish, may be frozen in about 30 minutes. The same fish require about two hours, if frozen in perforated pans. In solid pans a longer time is required. Shad, whitefish, and pikes freeze in about one and a half hours; salmon and halibut in two to four hours, according to size.

There is at present much interest in the possibilities of precooling fish when they are taken from warm water, for when piled deep in boats fish may overheat and become damaged. If treated a few minutes in brine at 0°F., the exterior of the fish is frozen. If taken out the unfrozen interior is cooled off at the expense of the cold in the frozen exterior, and the whole fish becomes rather stiff and cold; at 28° it will remain in this stiffened condition for days without apparent deterioration. The objection to employing such a method of chilling is the usual objection to installing machinery aboard a fishing boat.

In summary, it appears that brine freezing promises to contribute much of value to improvements in the distribution of fish; that it produces an unquestionably superior product; that such difficulties as are encountered are such as might be expected in a new

process and are not insuperable; and that the proper design of suitable plants is the principal problem ahead. It presents many new and interesting problems for the fisheries technologist and the refrigerating engineer.

NORTH BAY

By M. H. NICKERSON.

'Twas a relic, that wee mackerel hook
In the captain's old ditty box hid;
And much like a saint's was his look
As he piously lifted the lid.—

That keepsake of bended barbed wire,—
Oh brighter than silver it shone!
Like a spark from the smoldering fire
Of days that were over and gone.

He said: I'm the last o' the batch
That salted fall fares in the Bay;
But till I go down the main hatch
I'll always remember one day.

Then every man fished all the lines
As both hands could cleverly tend;
An' one o' our greatest gold mines
We spotted midway o' the 'Bend'.

On Prince Edward Island's east side
Where all o' the fleet used to fish;
That's a reach most uncommonly wide
From Rustico clean to Tignish.

The bait was for tollin' the school;
The hookin' was nothin' but sport;
An' twice every week as a rule
We'd reel up an' run into port.

The weather down there is superb
Along in the fust days o' fall,
Nothin' wuss ever come to disturb
Our work'n a little land-squall.

But one mornin' in drizzle an' mist
We riz a big raft off Malpeque;
Then we hauled 'em in hand over fist,
An' purty nigh covered the deck:

When we all was too busy for thought,
The whole o' the sixty-two sail
Without the least warnin' was caught
In the grip of a terrible gale!

All hands then to quarters was called
For buckin' the mountainous sea—
We got her reefed down and close-hauled,
But the breakers was under our lee!

Our single slim chance was to fetch
Past one o' the p'int in the Bay;
We might weather East Cape on a stretch
If nothin' should part or give way.

She was lookin' up well when it ripped
The mains'l away from the boom,
Then in a wide swing-off she shipped
A comber...an' headed for doom!

No hope! There was no time to pray,
You don't feel like makin' a vow
With your loved ones so far far away,
An' the surf roarin' under your bow!

All was over the minute she struck,....
My watch stopped a quarter to five;
But thanks to the Lord an' good luck
I was washed up more dead'n alive!

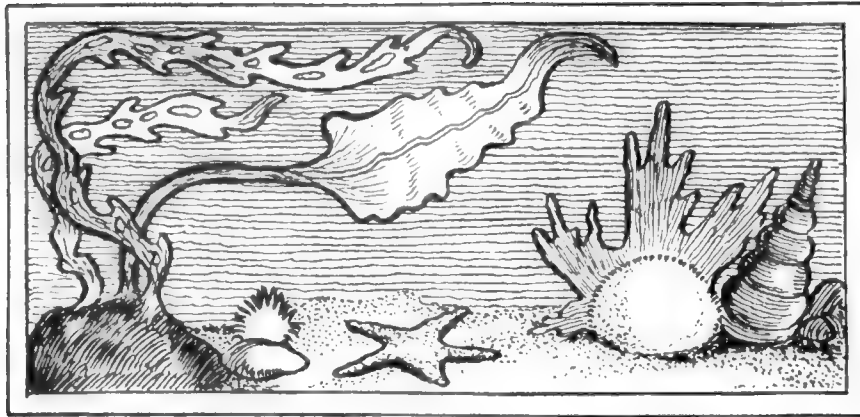
It seemed jest like fallin' asleep;
But it rended my soul to come to,
Where the dead laid in many a heap,
An' among them was all o' my crew!

Was I dreamin'? They said seventy-one
That September tempest had grav'd,....
What could this poor sinner ha' done
To be one o' the few dozen saved?

All but me who escaped the wild waves
Have long ago passed out o' sight;
I wander some times to their graves—
Perhaps I may join 'em tonight.

I've been thinkin' a good many years
When autumn brought in that sad day,
I should like to shed a few tears,
An' scatter some flowers on that Bay.

The children in school, like as not,
Will never be to'd o' that time—
When I'm gone it'll soon be forgot
Unless you should put it in rhyme.



The Periwinkle, Its Life-History and Market Possibilities

By PROFESSOR E. E. PRINCE, M.A.,
LL.D., Etc., Dominion Commissioner
of Fisheries, Ottawa.

Though the periwinkle is one of the most excellent and dainty of shell-fishes, it has been little appreciated by our people. It is the commonest of the edible molluscs of our Atlantic coast, and is scattered over seaweed and rocks everywhere from Labrador to Grand Manan. Curiously enough its claim to be considered a native Canadian shell-fish has been disputed by many eminent naturalists, and still more strange, though so familiar and widespread, its habits and life-history have been unknown until recently.

Large Demand in European Countries.

In most countries, where the periwinkle is found, it is extensively used as food. In the streets of London and most English cities the vendor of "whelks and winkles" trundling his piled up hand-barrow along is a common sight. The poorer classes in France and the Netherlands, and in other countries, consume great quantities annually. Reference is made to its very limited use as food in St. John, N. B., and Halifax, Nova Scotia, in Professor W. F. Ganong's valuable little book called "Economic Canadian Molluscs," and there has been a demand for them in Montreal and Toronto. Wherever there is an English population there is the possibility of a periwinkle market. English people, especially Londoners, are aware of the excellence of this well-flavored shell-fish. London, it is recorded, has consumed two thousand to three thousand tons in a year, and Professor Ganong, in his book just mentioned, claims that "as the periwinkle becomes better known, it will come to be extensively used, and a time will come when the demand will press hard on the supply."*

Abundant Supply if a Fishery Developed.

In my address to the Conservation Commission, Ottawa, in November, 1915, I said that "certain shell-fish, like the mussel and periwinkle, have not been used to any great extent, although periwinkles are in demand in our larger cities, and one firm in Digby, Nova Scotia, has been sending car-load shipments of them to Chicago, and realizing a very good price." The market for these tasty little shell-fish has been neglected. The supply available is enormous, for hardly a square yard of rocky shore in the Maritime Provinces is not crowded with periwinkles. At times of unem-

*That this is not an imaginary danger is proved by the scarcity of the abundant limpet in Berwickshire twenty years ago. One writer said: "Our fishermen collected for bait twelve millions of limpets, until their number became so decreased that collecting them is very tedious."

ployment, such as the present, and with high prices prevailing for most food products, the periwinkle industry might be encouraged at many points along our Atlantic shores. A number of summer visitors from Ontario have, on Prince Edward Island, during recent seasons, tried some of these unutilized shell-fish, and I have been personally assured that none proved more palatable and welcome than steamed periwinkles.

In the United States the large whelk, the small purple whelk or purple shell, which are coarser but equally well flavored, are a familiar article of diet, more familiar than the periwinkle. A little enterprise would certainly create a demand for the last-named excellent shell-fish.

Possibly Introduced and Not Indigenous.

During recent years Marine Biological investigations into the habits and life-history of the inhabitants of the sea have created widespread interest, and it may be appropriate to refer to some curious points relating to the periwinkle. There is, in the first place, evidence to show that our most familiar species of periwinkle did not exist in Canada at all sixty or seventy years ago. It is a newcomer. Just as the house sparrow has spread everywhere, on land, so this shell-fish, believed to have been brought from Europe at a comparatively recent date, and spreading north and south, has become the commonest shell-fish on our Atlantic seashore. Authorities think that there are several species, one a smaller thin-shelled kind called by scientists *Littorina palliata*, whereas the species, to which reference is here chiefly made, is *Littorina litorea*, in which the shell is large, coarse and dark, with numerous transverse or revolving lines upon the surface, and a top or spire somewhat pointed. (Figs. 1 and 2). The shell opening or mouth is oval or pear-shaped, not a round opening, and scientists have determined it to be identical with the British periwinkle. The opinion is held that it must have been brought across the Atlantic, possibly about the middle of the last century, 1850, or thereabout. Specimens are said to have been first found near Bathurst, N. B. in 1885; at Halifax, N. S., in 1857; and at St. John, N. B., in 1861 or 1862. It was unknown along the shore further south, Maine to Maryland, prior to 1868. North of the Labrador coast it does not appear to occur, though in Polar waters at least three Arctic species are known, all of which were found by the Canadian (Stefansson) Arctic Expedition, 1913-1918. Of course there is still division of opinion about the matter, and the veteran marine zoologist of this continent, Dr. A. E. Veerrill, still happily alive and active, has expressed the view

that this periwinkle may have occurred on our shores before the advent of Europeans, but probably was local, and in must in that case have been diffused in recent times by commerce, unless observers actually overlooked it. It is an interesting question as to whether this shell-fish is native or has been transplanted, like the Scotch thistle and the European dandelion. Professor Ganong (In the "American Naturalist," Nov. 1886) declared that it was "hardly possible that the common periwinkle could be aboriginal both in Europe and America—"If such were the case, it would be necessary to suppose that two independent lines of descent, either being from a common near or remote ancestor and culminating in the existing species, had followed precisely identical courses of development on two continents." There is a fossil periwinkle in the rather recent Post-Pliocene formation, viz: *Littorina palliata*, occurring in Europe, Greenland and America and apparently carried by natural agencies, via Greenland and Iceland, from its original habitat. The common existing species may, it is generally thought, have been accidentally introduced with gravel or ballast brought by vessels to this continent.

Eggs and Life-History Long Unknown.

One of the most surprising things about this small shell-fish is the absolute ignorance, as to its eggs and breeding, which prevails. Of the oyster, mussel, clam, and cockle, naturalists knew much, but no one knew anything of the eggs and growth of the periwinkle in spite of its abundance and wide distribution. It is viviparous, and producing living young, as Professor Percival Wright declared of the small species, *Littorina rudis*, which lives near high-water mark, and amongst damp stones hardly reached by the tide. All the various kinds can survive exposure to the air for considerable periods, and when they cannot breathe by the odd comb-like gill which they possess, instead of two gills which so many shell-fish have, they breathe by a kind of lung or bag, which is a fold of the mantle membrane, richly supplied with blood-vessels. They are very hardy, and can survive exposure also to fresh water, indeed they live in some parts of the Baltic under non-marine conditions, but the lack of sea-water seems to distort the shell; and similar distorted periwinkle shells have been found as fossils in the Norwich Crag rocks. One existing species, called *obtusata* is a globular, smooth, lemon colored variety which live on sea-weeds, and it is well protected, for it resembles the yellow ends of the Bladder Weed, and lacking a pointed spire on its shell, it cannot be broken off or damaged when the weeds are violently dashed on the rocks or gravel, during rough weather. Some of the shells are purplish brown, or drab, and are thus hardly visible when clinging to dark weeds or stones, for they are a favorite food of fish, being swallowed whole most greedily.

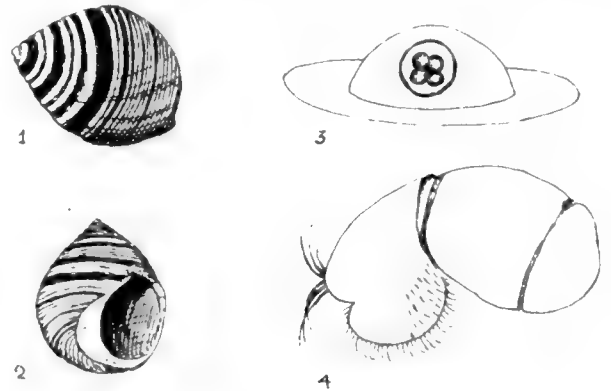
As already stated, nothing was known of the eggs or life-history of the periwinkle. It was known, however that the two sexes were separate—that their anatomy showed that, and the species called *rudis*, so often contained minute young, with hard shells like seeds, that they were gritty and objectionable for eating purposes. This species is known to be viviparous, and it has almost become a land shell for it can stand exposure to the sunlight, until it is nearly baked, and yet flourishes. The larger common kind was described as also producing living young, and its supposed eggs

were described and pictured by some authorities. We now know that these authorities were all wrong.

Discovery of Its Eggs by Canadian Biologist.

The first scientist to correctly describe the egg was the eminent Canadian zoologist, Professor Ramsay Wright, of Toronto University, now living in Oxford, England. While at the Dominion Biological Station, then at Canso, Dr. Wright found early in July, 1904, some curious little objects amongst the floating microscopic food of young fishes, widespread at the surface of the sea.

The objects in question attracted attention under the microscope because they resembled the soldier's metal hats, so familiar during the war, or perhaps recalled the "cow-boy hat" of the west. (Fig. 3). Only one twentieth of an inch across, they were as transparent as glass. Twenty years before, Hensen, a German, found a still smaller object, of similar shape, in European seas, and hazarded the opinion that it might be the floating egg of a marine mollusc. Later, two French naturalists found similar eggs abundant off the French coast, and thought that they might be periwinkle eggs. It was only a guess, but proved to be correct, for Dr.



1. Shell of Periwinkle (*L. Littorea*), Natural Size.
2. do. do. do. do.
3. Floating egg of Periwinkle (*L. Littorea*), Magnified 90 times.
4. Newly hatched Larva of Periwinkle, Magnified 90 times.

Tattersall, of Manchester, found female periwinkles kept under observation depositing precisely this kind of egg. He found the eggs to be very buoyant in ordinary sea-water, but they sink to the bottom when the specific gravity is low. Dr. Ramsay Wright obtained his in a fine-meshed tow-net near the surface, and Dr. Tattersall got his "more Hibernice" near the bottom, not the top, in Irish waters, and he hatched them out in an ingenious way. He placed some in a glass jar filled with sea-water, tied bolting silk over the mouth, and submerged it in the sea. Development proceeded, and by the third day the little shell-fish was well formed and actively moving inside the curious shell. On the sixth day it burst out through the lower or flat side of the shell, and escaped. Dr. Wright hatched his out in the Biological Station, and figured it in one of his fine plates published in the "Contributions to Canadian Biology, 1909." He got some of the active larvae swimming in the inshore waters in Nova Scotia, in June and July (Fig. 4). Soon their spiral shell is complete, and they settle like little dark seeds on rocks and sea-weeds. They devour the delicate root-hairs of sea-weeds such as *Fucus*. Diatoms, and other small objects, are swallowed, and most authorities state that they are strictly vegetarian all through life. This does not appear to be so, if a Danish observer is correct, for he

claims that they will devour other shell-fish. The very young are cannibals. Within each egg shell there are usually two or more eggs, in some instances four eggs. Often one baby periwinkle will eat all his brethren in the same shell, so that finally only one will hatch out! The little globular eggs, inside the tin-hat capsule, are very small—only about one-eighteenth of an inch across, and of a delicate pink color. The egg-laying period lasts from March until July, and each female may take a month or more to deposit all her eggs.

Periwinkle Farms Suggested.

Some periwinkles seem to creep about under water most of the time, but a great many have the climbing habit very marked. It would seem as if "periwinkle farms" might be established, for they could easily be picked off stakes or other collectors, if exposed after the tide has gone down. It would be interesting to know what proportion, over a large area, have the climbing habit, and for what periods. If the larger specimens had the habit most strongly developed it would be a valuable point in favor of farming these

shell-fish. The largest are found to average about eighty to a pint, and experiment shows that a sieve, of a mesh of three-quarters to five-eighths of an inch, allows the smaller periwinkles to pass through. Marketable sizes can in this way be easily sorted out, and small under-sized ones returned to the water.

Why Not Create a Market for these Shell-fish?

Many points in connection with the periwinkle are still to be determined, but the abundance on our coast suggests the possibility of a periwinkle industry. There should be quite a market for them were a regular supply made available. The large population in our cities who have come from Europe, have been accustomed to purchase these shell-fish, which are readily prepared by boiling in water with a little salt, or by steaming. They are easily picked out of the shell with a pointed nut-fork, and the horny valve being removed, they are succulent and delicious morsels to eat. They are certainly far more delicate and delicious than many of the larger whelks and clams which now reach our fish markets, and are in such widespread request.

Home Market a Vital Factor in Development Canadian Fisheries

By J. A. PAULHUS.



Canadian fisheries are likely to suffer from the application of the Fordney tariff act in the United States, said Mr. J. A. Paulhus, director of the D. Hatton Company and vice-president of the Canadian Fisheries Association, in a short address before the Chambre de Commerce, Montreal, recently. "The Fordney bill is the dark point on the horizon of our Canadian fishing industry," said Mr. Paulhus. "It destroys in one blow one of the more considerable markets for Canadian fish."

In outlining the present situation of the Canadian fishing industry, Mr. Paulhus reviewed the rise of the industry to a new high level of prosperity during the war and immediately after, and the sudden collapse in the exportation field. "Few of our fish exporters can have forgotten the Patras incident," said the speaker. "One fine morning towards the end of the Great War a big fleet of sail boats with heavy cargoes of dried fish anchored in the harbor of Patras, in Greece. Up till then Patras had been a centre of marvellous activity, cargo after cargo obtaining most advantageous prices. However, that morning the fish market was flooded, demand no longer existed, and supply suffered one of the worst shocks in the history of the fisheries industry.

"This incident," continued Mr. Paulhus, "was the sign for confusion in Newfoundland and the Maritime Provinces. Fortunes accumulated in the space of a few months were suddenly seriously threatened, many being sadly wrecked.

"At the opening of hostilities in 1914 a fever of speculation caused many of the speculators to lose their heads and put aside the elementary rules of prudence and mercantile wisdom. The first shipments to Mediterranean ports brought such fancy prices that the shippers soon acquired the illusion that this trade was permanent. Fleet after fleet left Newfoundland and Canada for Mediterranean ports and the Levant. At a given moment the congestion became so great that the consignees refused even to pay the costs of transportation. It was the coup de grace to

the industry; the cause of general disorganization, liquidations and bankruptcies."

Pivotal Point.

Mr. Paulhus similarly reviewed the fate of Canadian frozen fish in England, which when offered to the consumers gratis found hardly an acceptance. The over-equipping of fleets and plants, under the delusion that wartime prosperity would last, was also discussed. The speaker gave it as his opinion that the local market was the pivotal point, on which the success of the industry must swing. Until now this local market had been neglected. "I believe that the systematic exploitation of our fisheries would obtain more practical results in further concentration and in conforming to the needs of the country, rather than in seeking foreign markets.

"To further this end it will be necessary to stimulate the local consumption of fish. Nothing, or almost nothing, has been done until now along these lines. If the consumption of fish is not greater among us, it is not the fault of the producer, and even less of the consumer. The indifference of the first and the ignorance of the second are solely responsible. It devolves upon us to educate the fisherman and the consumer, and to advertise the products of our fisheries to the consumers. Nothing of a stable nature has established itself without publicity. It seems at first sight that it is not necessary to advertise tea, sugar, coffee, etc., yet millions are spent annually for the advertising of these commodities. The princes of the meat trade sacrifice fortunes to advertise their products.

"As the consumption of fish in Canada implies the development of one of the most prolific and permanent of our natural "resources," said he, "it is the duty, as it is to the interest of every public body and every government to favor the expansion of fish consumption. No natural resource of the Dominion merits more attention than our fisheries. None possess such riches so easily exploited and so profitable."



"The Canadian Fisherman." Pacific Coast Branch, will be glad to have inquiries from any one who wishes information in any way connected with the fishing industry. We would also appreciate items of fishing news suitable for publication.

Address communications to F. E. Payson, Pacific Coast Representative, Industrial & Educational Press, Ltds 528 Winch Building, Vancouver, B.C., Canada.

Fisheries Conference Held in Vancouver Dec. 12 & 13

Mr. W. A. Found, Asst. Deputy Minister of Fisheries, arrived in Vancouver on Dec. 6th to take part in the fisheries conference which was held on Dec. 12th and 13th. Those taking part in the conference and representing the Dominion Government and Province of British Columbia, were Mr. Found, Major J. A. Motherwell, Chief Inspector of Fisheries for the Dominion Government in British Columbia; J. P. Babcock, Assistant Commissioner of Fisheries for British Columbia, and Dr. C. McLean Fraser, of the University of British Columbia, with Mr. Fred Harrison, Assistant to Major Motherwell, acting as secretary to the Dominion officials.

Those representing the State of Washington were E. A. Sims, Chairman; Captain H. Ramwell and E. P. Blake, of the State of Washington Fisheries Commission; E. A. Seaborg, Director of Fisheries and Game of the State of Washington, and L. H. Darwin, state supervisor of fisheries and secretary of the board.

The question under discussion and which the conference undertook to settle was the preservation of the sockeye fisheries of the Fraser River. This very question has been of international importance for the past 25 years. The last international treaty was repudiated by the United States after pressure had been brought to bear by the State of Washington. This was after a long and expensive investigation, held by an international commission. The present conference was brought about largely through the efforts of Major

Motherwell, who has worked in close conjunction with Mr. J. P. Babcock, Asst. Commissioner of Fisheries for British Columbia.

It will be remarked in comparing the list of members of the two boards that on the State of Washington board there are three practical canners and operators of traps and purse seines, while on the Dominion Board there are none.

Before the conference, Mr. Found held conferences with the British Columbia canners and fishermen, but it was decided that there should be no representative of the canners or fishermen present.

Press reports were given out each day, but as Mr. Found stated it would be impossible to divulge the entire proceedings, as his department could make no decision or ruling; the entire matter would have to be placed before the cabinet and an order-in-council passed. On the other hand, the Washington State officials, according to Capt. Ramwell, could enact and promulgate, within 24 hours, whatever regulations were necessary to make effective any agreement that might be reached with Mr. Found.

At the first morning session, on Dec. 12th, it developed that the Washington Fisheries Board had formulated a program and the conference was adjourned to permit them to submit it in writing. This was done, and adjournment was then made, so that the matter might be discussed at an evening session.

After a night session on Monday, the 12th, and an

all-day session on Tuesday, the 13th. tentative agreements were reached on several questions, among them being the following:

1. Protection which may be afforded immature salmon in the coastal waters off the West Coast of Vancouver Island and the Washington shore.
2. Investigations to ascertain the desirability of prohibiting fishing inside the three-mile limit off Vancouver Island, as is being done off the Coast of Washington.
3. Proposals to establish humpback runs during the even numbered years in Puget Sound and Fraser River waters like those which now exist in the odd numbered years, and the bringing of eggs from other points in British Columbia and Alaska to effect this.
4. An agreement to, if possible, bring sockeye eggs from other British Columbia waters and from Alaska to augment the Fraser River run of this species.
5. An agreement for a general biological survey of the waters to the Fraser River and adjacent Washington areas, to ascertain the possible extent of salmon propagation in that system.
6. An agreement to hold another conference later on for the purpose of regulating humpback fishing to permit of sufficient escapement of this variety of fish to the hatchery streams and natural spawning grounds. The humpback or pink is the second most valuable salmon run common to both Puget Sound and the Fraser River, and with the diminution of the sockeye run has been fished for intensively in late years—to the extent that the run has been perceptibly diminished.

No agreement was reached on measures to be taken for the rehabilitation of the sockeye salmon run of Puget Sound and Fraser River.

The question as to the manner of fishing for sockeyes on the Washington side five years hence in the event fishing for them should be prohibited for that length of time, was the stumbling block in the way of an agreement of this predominating question.

Both sides were in agreement that if the sockeye run is to be preserved and rehabilitated there must be a complete cessation of fishing. They further agreed that sockeye fishing should cease for at least five years. The Canadian authorities were willing to agree to this only on the condition that the agreement made at this time must go further and provide that if fishing is resumed at the end of the five-year close season then it must be without the use of purse seines in the sockeye waters and with regulation in the matter of fish traps and gill nets.

The Canadian officials expressed the opinion that the sacrifices involved in the total cessation of sockeye fishing would not be worth enduring if at the end of five years these appliances were permitted to resume operations under the same conditions that now exist.

The members of the Washington State fisheries board took the position that it would be improper to make an agreement that would bind the hands of those who may be in authority with regard to fishing matters five years hence; that the situation is one calling for immediate cessation of fishing and that no after consideration should be permitted to interfere with taking steps, which are at this time necessary to preserve and rehabilitate the run. The matter of partial stopping of sockeye fishing was considered but for similar reasons it was not found satisfactory.

The Washington State officials invited the Canadian authorities to join with them in the stopping of the taking of immature salmon within the three-mile limit in their western coastal waters. The Canadian authorities stated that their information was to the effect that only a very small percentage of the salmon catch in their coastal waters was immature, estimates ranging from 2% to 5%. They promised, however, to make a survey of the situation during the coming year, and if they found the same conditions existing in their waters as exist along the coasts of Washington and Oregon they will then consider the matter of taking action similar to that taken by these two states in stopping the immature salmon fishing.

The Canadian authorities stated they were prepared to accept a proposition looking to financial aid in the operation of those hatcheries belonging to, or which may be established by the Canadian Government in the matured output, of which the Washington people have a common interest. In this connection it was agreed that sockeye eggs will be brought from other waters for the purpose of augmenting the Fraser River run, if it is found feasible to secure the eggs elsewhere.

The Washington State authorities advanced the proposition of establishing humpback runs in the even numbered years in the waters of Puget Sound and Fraser system such as now exist in the odd numbered years by securing eggs of this variety from Alaska and from other parts of British Columbia. The Canadian officials promised their co-operation in this. The matter of securing scientists to investigate the situation as existing in the waters in question, the expense to be borne by the Canadian authorities and the Washington State officials was approved in principle.

Next to the question of prohibiting sockeye fishing, that of limited humpback or pink fishing, was pressed for solution. Both sides agreed this is desirable, and an understanding was reached that the Canadian authorities are to have further time for investigation as to the dates which will most effectively accomplish this.

Conferences along this line are to be had later on between the Chief Inspector of Fisheries for the Province of British Columbia, and the Washington Fisheries authorities for the purpose of arriving at a specific agreement.

While there has been nothing definite accomplished by this conference at the same time the fact that the State of Washington officials and the Dominion authorities have gathered round the conference table will no doubt accomplish something ultimately. It is a good sign when those representing the two sides of the line get together with the idea of trying to arrange matters for the best interests of all and it is to be sincerely hoped that from this conference results will come that will benefit the entire industry.

DIRECT REPRESENTATION AS AGAINST REPRESENTATION 3,000 MILES AWAY.

The recent conference held in Vancouver between the Dominion Fisheries Department and the State board of fisheries of the State of Washington was a good practical illustration of what benefit an advisory board would have been in a conference of this nature. With at least three practical fish men, men who are operating large plants in the fishing business of the State of Washington, as representatives of the fishing industry from there and not one practical man to represent the Dominion or British Columbia interests at the conference it may well be seen to what disadvan-

rage the fishing industry of British Columbia was under at such an important gathering.

This instance alone is the strongest possible argument for the appointment of an advisory board for British Columbia, and it is to be hoped that this matter may be taken under serious consideration by the new minister.

Washington can enact and put into effect inside of 24 hours, regulations which will take several weeks to act upon for the British Columbia interests.

CANNED SALMON MARKET

The usual holiday season dullness pervades the canned salmon market and there is practically nothing doing. It has been predicted that by the first of next April the canned salmon now on hand will be entirely disposed of and there will be clean floors in the canned salmon warehouses.

SALMON CANNERS NEED TO ADVERTISE THEIR GOODS

Colonel Cunningham is Having a Busy Time

From reports that are being received from England, Colonel Cunningham is having a busy time. He is having heavy competition and although he is making progress at the same time the salmon canners of British Columbia need to do everything possible to spread the gospel of "EAT CANADIAN CANNED SALMON." One report published in a Vancouver paper says: "I have been in a grocer's shop in London to examine labels on salmon cans when I could get near enough to the shelves to see them, and I have invariably been disappointed in finding that those from Alaska or Puget Sound greatly outnumbered those bearing the names of British Columbia Packers." In one instance this same party tells of the grocer that insisted to a customer that Alaska was a part of Canada when his customer asked for some Canadian canned salmon. Colonel Cunningham has done much to educate the buying public and the retailer to the use of Canadian canned salmon and is doing everything possible to spread the gospel of "EAT CANADIAN CANNED SALMON."

At the recent Grocer's Exhibition, held at Islington, the British Columbia canners' exhibit attracted a lot of attention, and people were there from all over the world. The Colonel also gave moving picture displays which were of unusual interest.

It is a fact, however, that although the work of Colonel Cunningham has accomplished much, no great results will obtain until the British Columbia canners advertise their goods in a big way. It will cost more money but it will bring big results.

THE ORIENTAL SALT HERRING MARKET

With average prices around \$40.00 per ton c.i.f. for the Oriental pack of dry salt herring, the market is in much better condition than it was last year at this time. There has been no big run of fish on the West Coast of Vancouver, but a fair pack has been put up and the White firms, who have been packing this year, are feeling satisfied with results so far.

There has been good steamer service from the West Coast and good service to the Orient, which is instrumental in the marketing of the pack satisfactorily.

At Nanaimo there has not been as many herring as it was hoped there would be in December, but January is looked forward to as having very good prospects.

QUALITY NOT COLOR

For years the salmon canners have been talking color (red) in selling their product. Today this very talking point is working against them in the marketing of the lighter colored varieties. Quality is the big talking point today and color should be forgotten to a great extent as the majority of salmon to be sold in the future will be of the lighter colored varieties. Quality and taste should be impressed on all who handle the canned salmon. Whatever the packer impresses on the broker and jobber will be in turn handed on to the retailer, and this feature in the marketing of canned salmon should never be lost sight of.

Now is the time when every one concerned in the marketing of canned salmon should be educated to the fact that quality is the big talking point whether he is selling chums, pinks, white springs or sockeyes. This fall, cohoes were moving very slowly and the writer heard the remark several times that the color was against them.

At the same time those concerned in the marketing of canned salmon are being educated the general public should also have the fact placed before them that they can secure good quality canned salmon that are not red meated. In fact, the wording of the appeal to the public should not bring in the color question. If the canners will start the right kind of publicity campaign at the beginning of the summer and carry this right into the fall; by the time the 1922 pack is ready the public will be in the market for more canned salmon than has ever been sold in Canada, and if the campaign is handled properly, with the right kind of organization back of it, the selling price may be such that there will be the right kind of returns for all.

The writer is not inferring that quality has never been talked in marketing canned salmon but this has to a great extent been overshadowed by the color appeal.

FROZEN QUALLA SALMON SCARCE

The run of qualla salmon on the British Columbia coast was a great disappointment to the packers of frozen fish this season. This also applied to cohoes with the result that eastern houses will not have the regular supply of these varieties of frozen fish for the coming Lenten season. Although the salmon canners did not plan to pack any of this variety this season at the same time the frozen fish packers had a strong competition in the buying field as the Japanese were salting as many qualla as they could secure and paid high prices for the raw fish. The rice crop in Japan was not up to the usual mark this season and with several other conditions entering into the food supply question the market for the salt salmon in Japan was extremely lively. Thus, with a small run and strong competition in the field the frozen pack was bound to be curtailed. Frozen qualla will probably bring good prices this winter.

BLUENOSE SKIPPER RECEIVES PRESENTATION IN PORTO RICO.

Captain Angus Walters of the Lunenburg schooner "Bluenose", winner of the International Fisherman's Cup, received a gold wrist watch, suitably engraved, from the merchants of Porto Rico. The presentation was made while the schooner was in Ponce recently with a cargo of dried fish from Halifax.

FISH RETAILERS SHOULD USE THE NEWSPAPERS

The writer has never figured out the percentage of meat advertisements in daily newspapers as compared with fish advertisements by retail dealers in these two varieties of edibles, but there is a great disparity in the advertising by the fish stores.

The public are influenced in their buying by the daily notices of merchandise offered by the merchants through the medium of the daily newspapers. A retail fish merchant may say that he cannot spend the money that a meat dealer does. This may be true, but if he will spend a percentage of the amount a meat dealer spends and have his advertisements worded properly; with the right kind of appeal to the buying public it will not be long when he will see that he can afford to spend more money for advertising. His trade is bound to grow. Let him give it a fair trial and watch the results.

SMOKED FISH HAVE BEEN IN DEMAND THIS SEASON IN BRITISH COLUMBIA

Kippered herring, bloaters, smoked cod fillets, smoked sable fish, smoked filleted halibut and different varieties of smoked salmon have all been in heavy demand this season and the supply has been exceptionally good. The cured fish business of British Columbia should develop rapidly as the varieties to be secured here for curing purposes are the best in the world.

REPORTED TRIAL OF COAST TO COAST SHIP- MENT OF FROZEN FISH VIA COLD STORAGE STEAMER

It is reported that one of the large wholesale fish houses of Seattle has sent a trial shipment of frozen fish via cold storage steamer through the Panama Canal to the Atlantic coast. Should this prove successful the all-water route will certainly be in great demand by the shippers of frozen fish from the Pacific coast, both in the United States and British Columbia.

CROSS LINES TO BE USED IN CATCHING HAIR SEALS IN BRITISH COLUMBIA

After stealing the salmon fishermen's catch right from his nets for many years the hair seal is going to run into something they know nothing about. They have survived a warfare waged against them by bullets and mines, but now the Fraser River fishermen have received permission from the Dominion Fisheries Department to use cross lines. These are lines consisting of a main line and many short lines with sharp hooks attached, which hang from the main line. They are illegal to be used for other kinds of fishing, but in the old days the Chinese used them to catch sturgeon. The fish or seal runs into the line and if one hook catches others are bound to in the frantic endeavor of the fish or seal to get away.

License will be issued and accurate information will be kept of the results of the new scheme to do away with the pirates of the salmon fleet. Each license will have noted thereon the location of the areas in which the cross lines are to be used by the licensee; he will be expected to report the results of the use of the lines in his area and the department officials will also keep sharp watch that the privilege is not abused.

FISH AND OIL PLANT TO OPERATE RIGHT THROUGH THE WINTER

The Rendezvous Fisheries, Ltd., Victor Johncox, General Manager, will operate the company's rendering plant at Rendezvous Island right through the winter, producing oil and meal from dogfish. The outlook for the marketing of the company's oil is brighter than it has been for some time owing to conditions of the fish oil market.

HARRY NUNAN HAS RETURNED TO KETCHIKAN

Harry Nunan, Manager of the New England Fish Company's plant at Ketchikan, Alaska, passed through Vancouver the latter part of November on his way back to Ketchikan, after spending a holiday back in his old home in Boston, Mass. Harry states that there have been many changes both in Gloucester and Boston. Some of the old familiar faces are no more and there have been many changes in the firms on the fish dock.

At Ketchikan he states that the New England Fish Co. have handled a record amount of fish for the past season and today there is quite a little settlement at the Company's plant.

THE UNITED KINGDOM TO FURNISH BRITISH COLUMBIA WITH TIN PLATE FOR 1922 SALMON PACK.

The American Can Company in Canada has purchased their supply of tin plate for Canadian use in 1922 from the United Kingdom.

This is the first time in eight years that the supply of tin plate has been purchased from the United Kingdom.

Prices of the tin plate laid down in Canada are lower than if the tin plate was purchased in the United States. This accounts for the purchase being made in the United Kingdom. No doubt ocean freight rates have had considerable to do with the purchase of British tin plate for the 1922 season. This plate is coming from Wales.

The reduction in the price of tin plate for the 1922 season will help materially in lessening the cost of canned salmon. It is gratifying, however, to see this purchase made in the United Kingdom, as it will all help the industrial situation there.

SCOTCH CURE SALT HERRING IN BRITISH COLUMBIA.

Owing to the shortage of the supply of Scotch cure pack in the Old Country and Alaska the British Columbia salt fish firms are having a chance to put up a few barrels of Scotch cured herring this year.

The run of herring on the west coast of Vancouver Island has been poor, too, and for this reason there will not be as many herring salted in barrel as might have been if the fish had been there.

There are about five firms salting but it is doubtful if there are over 4,000 barrels salted, if there are that many.

It is understood that most of the sales are being made f.o.b. Vancouver.

With one exception the firms packing the Scotch cured herring are white firms, there being one Japanese firm that is packing.

JAPANESE STEAMER WITH SALT FROM JAPAN FOUNDERS OFF CAPE FLATTERY.

The Japanese steamer, Koun Maru, 700 tons gross, with a full cargo of Japanese salt, foundered when 200 miles off Cape Flattery, November 29th. Five lives

were lost, but the balance of the crew were picked up by the Japanese steamer Tosan Maru, which was bound from Tacoma to the Orient. The Koun Maru was under charter to K. Ito & Co., of Vancouver, and was to have discharged her salt and loaded salt herring for the Orient.

The Koun Maru was just sinking when she was sighted by the Tosan Maru. Rescue was carried on in a raging southeast storm which rendered the work most difficult.

The Koun Maru was a new wooden vessel just built in Japan, and was on her maiden voyage.

A GOOD EXAMPLE OF WHAT THE ORIENTAL QUESTION MEANS TO BRITISH COLUMBIA FISHERIES.

The recent loss of the Japanese steamer Koun Maru, loaded with salt, bound from Japan to the west coast of Vancouver demonstrates how the Japanese operating in British Columbia fisheries divert everything possible to their own country, and countrymen. This was a Japanese built steamer, loaded with Japanese salt which was to be used in salting herring to be shipped to Japan and China. The fish are caught by Japanese, using Japanese made nets; in boats built by Japanese, and the curing is all done by Japanese. The boxes the fish are shipped in are made by Japanese, and they live to a great extent upon rice (grown in Japan) and fish.

About the only goods that are used is the wood grown in British Columbia, and clothes manufactured here, and these are purchased in most cases from Japanese stores. It is known that the larger part of the money earned here is sent to Japan.

Whenever possible the salt herring cured for shipment to the Orient is shipped there by the Japanese shippers in Japanese steamers.

Where does Canada benefit from such workers in her great natural industry?

UNSATISFACTORY ENDING TO FISHERIES CONFERENCE AT VANCOUVER.

After the smoke had cleared away and the general idea of what took place at the conference of the State of Washington officials and the Dominion Fisheries Authorities had been finally sifted there was a keen sense of disappointment among members of the industry. The fact that the Washington delegates came to the conference with a concrete proposition and the Dominion authorities could not see eye to eye with them should not have allowed the conference to end without something being done to help the situation that exists to-day and possibly leave the matter in such a position that matters could be re-opened on a short notice.

Without doubt matters would have been nearer a solution if at least one practical representative had been a member of the Dominion delegation. It emphasizes that need of an advisory commission more than ever and there is no reason why such a commission should not be appointed for British Columbia. Such a commission should have at least one member who is of the legal profession.

As it stands to-day every matter that was under discussion at the conference is dead until revived again; that is nothing was done to help out the situation, as regards sockeye protection.

The original proposed treaty should have been allowed to come into force and the American cannerymen will ultimately find this out. They opposed something that would have been as much real assistance

to them as to the Canadians but apparently they could not see it.

On the other hand the Dominion authorities should not have allowed the conference to end without attempting to accomplish something along the lines of co-operative endeavor for the restoration of the sock eye salmon meantime. This phase of the conference is much regretted.

MR. FOUND VISITS VANCOUVER.

Mr. W. A. Found, Asst. Deputy Minister of Fisheries, arrived in Vancouver Dec. 6th to attend the Fisheries Conference between the authorities and the State of Washington officials. This conference was held on Dec. 12th and 13th and it may be said that between the time Mr. Found arrived in Vancouver and the night when he left for Ottawa, Dec. 15th, he did not have any idle moments.

What with listening to members of the fishing industry, conferences with the salmon canners and fishermen and affairs of the department which he is called upon to assist in administering at a distance of 3,000 miles away, it may well be imagined that his time was well engaged.

Naturally Mr. Found is not in a position to say much regarding official business at the present time and for that reason we are not in a position to quote him.

Regarding the conference, Mr. Found stated that everything had been given to the press that was agreed upon between the members of the two delegations and for the present there was nothing more to be said (this is printed elsewhere in this number).

CANADIAN SALMON TRADE.

Canners Affected by Japanese Competition.

American and British Columbia salmon canners are feeling the result of Japanese competition, according to the figures recently published on imports by Great Britain in 1920:—Sweden, 81 cwt.; Norway, 102 cwt.; Germany, 87 cwt.; Belgium, 1,675 cwt.; France, 8,473 cwt.; Portugal, 498 cwt.; Spain, 24 cwt.; Italy, 1,484 cwt.; China, 873 cwt.; Japan, 354,248 cwt.; United States of America, 325,455 cwt.; Channel Islands, 1 cwt.; Malta and Gozo, 50 cwt.; Dominion of Canada, 156,638 cwt.; Newfoundland and Labrador, 255 cwt. Total, 849,944 cwt.

There were 849,944 cwt. at 112 pounds, or 95,193,728 pounds; an average of 76 pounds per case equals 1,252,549 cases. Canadian imports were 156,638 cwt., or 17,543,456 pounds or 230,835 cases, which equals 18.4 per cent of the total imports.

Imports of canned fish from Japan, on a basis of 76 pounds to the case, would be 322,070 cases, or 42 per cent.

Imports from the United States were on a basis of 76 pounds to the case, being equal to 479,618 cases, or 31 per cent.

Low cost of production in the Japanese fishery industry made it possible for Japan to underquote all competitors on canned red fish.

F. E. DAVIS CO. ACQUIRES NOVA SCOTIA PLANT.

Thistle Canning and Curing Company's plant at New Edinburgh, Digby County, was purchased at auction by Mr. Thurber for the Frank E. Davis Co., Ltd., of Gloucester, who will use it principally for the canning of fish.

BETWEEN FRIENDS.

"I understand you said I didn't have enough sense to come in out of the rain."

"I did not."

"What did you say, then?"

"Merely remarked to a friend of ours that if there

was a tax on brains the government would owe you money."

A pessimist is a poor fish who thinks every worm hides a hook.

Canadian Fish Plants No. 8

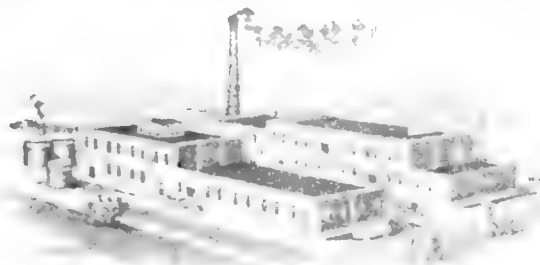


Herring at Watson Etes. Curing Plant. Alberni, B C

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