

Canada. Parl. H.of C.
Standing Comm.on Marine
& Fisheries, 1958.
Minutes of
proceedings & evidence.

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HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958

STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 1

Estimates (1958-59)—Department of Fisheries

THURSDAY, JULY 3, 1958

FRIDAY JULY 11, 1958



WITNESSES:

Honourable J. Angus MacLean, Minister of Fisheries;
Mr. G. M. Clark, Deputy Minister.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958

STANDING COMMITTEE
ON
MARINE AND FISHERIES

Chairman: Roland L. English, Esq.

Vice-Chairman: Albert DeB. McPhillips, Esq.

Messrs:

Anderson	Keays	Phillips
Batten	Legere	Pickersgill
Belzile	Macdonald (<i>Kings</i>)	Richard
Bourget	MacLellan	(<i>Kamouraska</i>)
Browne (<i>Vancouver- Kingsway</i>)	Matthews	Robichaud
Carter	McGrath	Speakman
Crouse	McQuillan	Stefanson
Danforth	McWilliam	Stewart
Drysdale	Michaud	Tucker
Gillet	Morris	Webster (35)
Granger	Noble	
Howard	O'Leary	

(Quorum 10)

REPORT TO THE HOUSE

THURSDAY, July 3, 1958.

The Standing Committee on Marine and Fisheries has the honour to present the following as its

FIRST REPORT

Your Committee recommends that it be empowered to print, from day to day, 750 copies in English and 200 copies in French of its Minutes of Proceedings and Evidence and that Standing Order 66 be suspended in relation thereto.

Respectfully submitted,

ROLAND L. ENGLISH,
Chairman.

(Concurred in July 3, 1958)

ORDERS OF REFERENCE

HOUSE OF COMMONS

TUESDAY, June 3, 1958.

Resolved,—That the following Members do compose the Standing Committee on Marine and Fisheries:

Messrs.

Anderson,	Granger,	Morris,
Batten,	Howard, +	Noble,
Belzile,	Keays,	O'Leary,
Bourget,	Legere,	Phillips,
+ Browne (<i>Vancouver-</i> <i>Kingsway</i>),	Macdonald (<i>Kings</i>),	Pickersgill,
Carter,	MacLellan,	Richard (<i>Kamouraska</i>),
Crouse,	Matthews,	+ Robichaud, +
+ Danforth, +	McGrath,	Speakman, +
Drysdale,	McPhillips, +	Stefanson,
English,	McQuillan,	Stewart,
Gillet,	McWilliam,	Tucker,
	Michaud,	Webster—35.
	(Quorum 10)	

Ordered,—That the Standing Committee on Marine and Fisheries be empowered to examine and inquire into all such matters and things as may be referred to it by the House; and to report from time to time its observations and opinions thereon, with power to send for persons, papers and records.

Attest.

WEDNESDAY, July 2, 1958.

Ordered,—That items numbered 130 to 153 inclusive, as listed in the Main Estimates of 1958-59, and items numbered 555 to 565 inclusive, as listed in the Supplementary Estimates for the fiscal year ending March 31, 1959, relating to the Department of Fisheries, be withdrawn from the Committee of Supply and be referred to the Standing Committee on Marine and Fisheries, saving always the powers of the Committee of Supply in relation to the voting of public moneys.

Attest.

THURSDAY, July 3, 1958.

Ordered,—That the Standing Committee on Marine and Fisheries be empowered to print, from day to day, 750 copies in English and 200 copies in French of its Minutes of Proceedings and Evidence and that Standing Order 66 be suspended in relation thereto.

Attest.

LÉON-J. RAYMOND,
Clerk of the House.

MINUTES OF PROCEEDINGS

THURSDAY, July 3, 1958.

(1)

The Standing Committee on Marine and Fisheries held its Organization meeting this day at 10.00 a.m.

Members present: Messrs. Browne (*Vancouver-Kingsway*), Danforth, English, Howard, Keays, Legere, Macdonald (*Kings*), MacLellan, Matthews, McGrath, McPhillips, Morris, Noble, O'Leary, Robichaud, and Stewart.—(16).

The Clerk of the Committee attending, on motion of Mr. Browne, seconded by Mr. Noble, and there being no further nominations, Mr. English was elected Chairman.

Mr. English took the Chair and expressed his thanks for the honour they had bestowed upon him.

The Committee proceeded to its routine business.

On motion of Mr. McGrath, seconded by Mr. Keays,

Resolved,—That Mr. McPhillips be elected Vice-chairman.

On motion of Mr. Browne, seconded by Mr. Howard,

Resolved,—That a Subcommittee on Agenda and Procedure (steering committee), comprised of the Chairman and four members to be named by him, be appointed.

On motion of Mr. Howard, seconded by Mr. Danforth,

Resolved,—That permission be obtained to print, from day to day, 750 copies in English and 200 copies in French of The Committee's Minutes of Proceedings and Evidence.

After a brief discussion on future procedure, days and hours of meetings, the Committee decided to leave this matter to the Chairman who undertook to confer with other chairmen of committees of the House.

It was agreed to invite the Minister of Fisheries to be present at the next meeting.

Before adjournment, the following members were appointed to the Subcommittee on Agenda and Procedure: Messrs. Legere, Browne, Robichaud, and Howard.

Thereupon the Chairman asked the members of the Steering Committee to remain for a brief meeting.

At 10.25 o'clock, on motion of Mr. Danforth, seconded by Mr. Morris, the Committee adjourned to the call of the Chair.

FRIDAY, July 11, 1958.

(2)

The Standing Committee on Marine and Fisheries met this day at 9.00 o'clock.

Members present: Messrs. Anderson, Batten, Browne (*Vancouver-Kingsway*), Carter, Crouse, Danforth, English, Granger, Howard, Keays, Legere, Macdonald (*Kings*), Matthews, McQuillan, McWilliam, Pickersgill, Robichaud, and Stefanson.—(18).

In attendance: The Honourable J. Angus MacLean, Minister of Fisheries; Mr. G. M. Clark, Deputy Minister.

The directors of the various services are listed in the evidence (*see Minister's statement*).

The Orders of Reference of Tuesday, June 3rd, Wednesday, July 2nd, and Thursday, July 3, 1958, were taken as read.

The Chairman presented the First Report of the Subcommittee on Agenda and Procedure which the Clerk read:

"Your Subcommittee on Agenda and Procedure met on Thursday, July 3, 1958.

Present: Messrs. Legere, Browne, Robichaud, and Howard, and the Chairman.

Your Subcommittee recommends:

1. That the Minister of Fisheries be invited to attend the first meeting and subsequent meetings whenever he is free.

2. That the next meeting be held on Friday, July 11, at 9.00 o'clock and at 9.30 o'clock when meetings are called on Mondays.

3. That future meetings be arranged by the Chairman after conferring with other Chairmen.

4. That the Committee consider the Departmental Estimates referred to it *in groups*.

Your Subcommittee met again on Thursday, July 10, all members being present.

The Chairman reported on the meeting he had with other chairmen of Committees and, after a brief discussion, it was agreed to hold meetings on Tuesdays, Thursdays and Fridays from 9.30 a.m. to 11 o'clock. Your Subcommittee so recommends."

Said Report was adopted.

The Chairman called items 130 to 133 of the Main Estimates of the Department of Fisheries; he introduced the Minister who, in turn, introduced his officials.

The Minister made a statement on the organization, the functioning, the various services and the responsibilities of his department.

The Minister was questioned and he was assisted by his Deputy Minister.

Messrs. Robichaud and Howard congratulated the Minister for his statement; they also referred to the directors of the various services of the department.

Mr. Robichaud suggested that Mr. Gordon O'Brien general manager of the Fisheries Council of Canada be called at some later date as a witness before the Committee.

At 11.00 o'clock, the Committee adjourned until Tuesday, July 15, at 9.30 o'clock in the morning.

Antonio Plouffe,
Clerk of the Committee.

EVIDENCE

FRIDAY, July 11, 1958.

9.00 a.m.

The CHAIRMAN: Gentlemen, we have a quorum and we shall proceed immediately. Will the clerk read the steering committee's report?

(See-minutes of proceedings)

The CHAIRMAN: May it be adopted by a motion?

Adopted.

We are going to deal with the Department of Fisheries. I will call items 130 to 133 of the main estimates.

GENERAL SERVICES

Item 130. Departmental Administration	\$371,750
Item 131. Information and Educational Service, including Grant of \$3,000	
to Nova Scotia Fisheries Exhibition	\$187,000
Item 132. Economics Service	\$316,900
Item 133. Industrial Development Service	\$611,365

We are very pleased to have with us the hon. Minister of Fisheries, who will make a statement. I wonder first of all if the minister would care to introduce the officials of his department who are present.

Hon. Mr. J. A. MACLEAN (*Minister of Fisheries*): Thank you very much Mr. Chairman. First of all, as the chairman has suggested I would like to introduce the departmental directors and senior officials who are here this morning. In addition to the ones I will introduce there are also some others who may be introduced later on but to start with I would like to introduce Mr. George Clark, the deputy minister on my right, Mr. S. V. Ozere, assistant deputy minister, down at the back; Mr. J. J. Lamb, director of administrative service; Dr. A. L. Pritchard, director of conservation and development service; Mr. H. V. Dempsey, director of inspection and consumer service; Mr. T. H. Turner, director of information and educational service; Mr. I. S. McArthur, chairman of the fisheries prices support board and Mr. McArthur wears two hats, he is also chief administrator of the fishermen's indemnity plan; Mr. J. J. Carton, departmental solicitor and Dr. J. L. Kask, chairman of the fisheries research board. I think I missed Mr. W. C. MacKenzie, director of economics service and Mr. L. S. Bradbury who is the director of industrial development service. I think I have everyone now.

First, Mr. Chairman and gentlemen, I want to say that on behalf of the Department of Fisheries—and I am sure I speak for my officials as well as for myself—we welcome the opportunity to have our departmental estimates examined by your committee. I think it is something that will be of great advantage to us. We welcome your comments. We hope that your questions can be answered fully and frankly and that will be our ambition in any case to do so.

Any suggestions you make will be carefully weighed and any criticisms you may have will certainly not go unheeded.

In introducing the estimates of the department to the committee, I would like to make a few general remarks. I will be brief so do not get too anxious, it is not my intention to keep anyone too long listening to me. My remarks will be very general but since many of the members of the committee are new members of parliament there are a few general remarks I would like to make by way of introduction.

As all of you know the fishing industry is a very important one in our economy from more than one point of view. It is important from a historic point of view to begin with because it is the oldest industry in Canada. It was the first thing that Europeans turned to when this part of the world became known to them after they gave up the notion of trying to find a short route to the orient. It was the tremendous potentiality of a supply of fish, especially in the northwest Atlantic that attracted Europeans to this part of the world. That part of our fishing industry has been going on for at least 456 years this year.

There has been fishing continuously on the Grand Banks of Newfoundland since 1502.

Then, our industry is extremely important from another point of view. It is a well known fact that as populations of countries increase relative to their arable lands that these countries turn more and more to the living resources of the sea as a source of food supply, especially proteins and foods containing essential minerals and trace elements of various kinds which are essential to the wellbeing of both animals and man.

Then, of course, the fishery is a resource that can be regenerated indefinitely. It can reproduce itself if properly husbanded so that it will not only remain a constant resource, but that its usefulness and its productivity may even increase as time goes by if properly handled.

Now, that is a very brief background leading up to our responsibilities. And you might properly ask what the responsibilities of the federal government are in this field. As far as Fisheries are concerned the federal government is responsible for all sea and inland fisheries. By agreement certain of the inland provinces administer their own fisheries under federal legislation; in other cases by agreement provincial authorities administer the sports fisheries although again the fisheries regulations are made under federal statute.

There are a number of acts of parliament that are administered by law under the authority of the Minister of Fisheries. I do not intend to go into details as far as they are concerned at the moment, but my deputy will at a later time.

Having stated in those brief words what the responsibilities of the federal government are, with regard to fisheries, you may then fairly ask how this problem has been approached by governments over the years and what facilities have been provided to meet the responsibilities of the federal government to the Canadian people with regard to fisheries.

Well, to begin with, it is considered essential that as much as possible be known about the problem and about the resources and the myriad variety of creatures, fish, that are involved in it. And in an attempt to accomplish that end we have a research arm known as the Fisheries Research Board. The Fisheries Research Board has its headquarters here in Ottawa. Biological and technological stations are established at Nanaimo and Vancouver in British Columbia, in London, Ontario, Grand River, Quebec, Halifax, Nova Scotia, St. Andrews, New Brunswick, and St. John's, Newfoundland, and in addition to that an Arctic research unit in Montreal. These stations are headed by directors of outstanding scientific ability and high qualifications in every case.

Then, having provided this means of being well informed on the nature of the problems facing us, we have a responsibility as far as conservation is concerned. In this regard, based on scientific information, fishing regulations are devised and enforced by the department with the aim in view that the resource may be safeguarded and conserved.

Now, the word "conservation" may conjure up in a lot of people's minds a note of unreasonable protection and a sort of hoarding. That is not our conception of conservation as far as fisheries are concerned. Our notion of

conservation is an intelligent exploitation of resources so that we can get the maximum production from the resources without jeopardizing their future potentialities.

In addition to the enforcement of regulations regarding the catching of fish and when and how and under what circumstances, as far as conservation is concerned there are many other things that we must have in mind so as to minimize as much as possible the impact of civilization on the environment of fish. It is a strange thing that a lot of people do not realize that civilization does have much impact upon the environment of fish; people will not be surprised to not meet a black bear when they are walking down Bank street, but because there is water in the Ottawa river they expect fish to be there. They do not realize that civilization has perhaps affected the environment of the black bear here in Ottawa no more than it has affected the environment of the fish that were in the Ottawa river in its virgin state.

These changes can be subtle in many ways. There is water pollution which destroys fish or breaks the life cycle of which fish are a part. For instance, by having sedimentation in the stream in some cases it will almost screen out enough sunlight to prevent the plankton from growing, which is a measured food supply for the fish. In other cases you might have siltation of a stream where fish lay their eggs and as far as a human being on a cursory examination is concerned there is perhaps no harm, but by siltation you may prevent the water from filtering through the beds where fish eggs are laid and the eggs just die from oxygen starvation. Those are a couple of examples.

Then you have such things as chemical pollution and change in water temperature, change in the level of run-off and the regularity of it due to deforestation or changes of various kinds in the use of water-shed of the river concerned and many things of that kind. So conservation is not a simple thing by any means.

Then, too, we have a responsibility to see that the product of the industry meets the standard of high quality and hygiene which makes it suitable for human consumption under all circumstances. And that gives us a responsibility for having a widespread inspection service so that fishery products are produced under sanitary conditions and are of a quality which meet the necessary requirements. Mr. Dempsey, whom I have already introduced to you, is head of that service.

Then we have the markets and economics branch whose responsibility it is to study the industry from the point of view of its economics and Mr. MacKenzie, its director, will probably go into more detail on that matter at a later time.

In addition to those services we have an industrial development service. We have an educational service and a fisherman's indemnity plan administered by Mr. Arthur. Those are the main services, but in addition to that we have the normal administrative staff and Mr. Lamb, whom I introduced earlier, is the director of administration.

Then we have a legal branch to keep us out of trouble and enforce our regulations, so that we are on solid ground legally on all occasions and so on in that way.

The department is organized on a functional basis by regions and operates area offices under area directors of fisheries at St. John's, Newfoundland—that is for the Newfoundland area—Halifax, Nova Scotia, which is the headquarters for the maritimes area; Winnipeg, Manitoba, central area, that is, the prairie provinces and the Northwest Territories, and Vancouver, the Pacific area, which includes British Columbia and the Yukon.

The Fisheries Prices Support Board that I mentioned briefly is located here in Ottawa in the headquarters of the department and is under the chair-

manship of Mr. McArthur. The Prices Support Board maintains a small staff and in connection with any necessary investigation into the need for price support the other services of the department are available to obtain the required information.

I might say in passing that there are some things which the general public associate with the Department of Fisheries that the Department of Fisheries does not administer. Perhaps first and foremost of these is unemployment insurance for fishermen which is administered by the Department of Labour. Then, there is the Fisheries Improvement Loans Act, which is administered by the Department of Finance, and then general matters dealing with trade and markets are administered by the Department of Trade and Commerce and facilities such as wharves and breakwaters, and so on, which may be built primarily for the use of fishermen are not built by the Department of Fisheries but by the Department of Public Works. Of course, the Department of Fisheries advice when necessary when called upon to do so by the Department of Public Works as to the economic justification for developments of that sort.

I am sorry, gentlemen, that I have kept you so long, but that is a very brief outline of the department and its responsibilities and the job that it is our obligation to cope with to the best of our ability.

As I said in the beginning we welcome this opportunity to have our estimates examined by this committee and we hope that we will be able to give full factual and frank answers to all your questions. Thank you very much indeed.

The CHAIRMAN: Thank you very kindly, Mr. Minister, for your kind words of advice. We shall now proceed to consider the figures before us.

Before starting I would ask the members to introduce themselves not only for the benefit of the members of the committee, but also for the benefit of the members of the press and the staff. I wonder if all of you at this first meeting would identify yourselves.

Now, we will proceed with the first group, general services, including items 130 to 133.

Mr. HOWARD: Mr. Chairman, before we get into the details and questions and comments and so on I wonder whether we should not approach this with not too much rigidity, that is, if we pass certain items or groups of items. When we are on subsequent items if it is necessary or occasion arises to refer back to them to allow that elasticity in going back and forth?

The CHAIRMAN: Yes, you can always refer to another item.

Mr. ROBICHAUD: I wish to thank and congratulate the minister for the brief but to the point statement which he has given us on the organization of his department and I am sure that every member of this committee will welcome the minister's offer to criticize and offer constructive suggestions to his department. I also want to take advantage of this opportunity to congratulate the directors of the different branches of the department and the officials of the department who have always given us their best cooperation. This may be an occasion also to congratulate the officers of the Fisheries Research Board because in fact I think this year, 1958, is the fifty-sixth anniversary of the Fisheries Research Board in Canada. If I remember correctly the first experimental station under the Fisheries Research Board was built in 1908, and I am sure that the Fisheries Research Board is greatly responsible for the progress and advancement which has been made in the fishing industry in our country.

Before proceeding with the discussion on different items I also notice the presence here this morning of Mr. Gordon O'Brien, general manager of the Fisheries Council of Canada and I would suggest, Mr. Chairman, with your permission that at one of our meetings Mr. O'Brien, who represents the fishing

industry, should be called as a witness so that we may have the opportunity to get the industry's viewpoint in this committee. Mr. Chairman, as you said, a discussion is open on the different items. I will now give an opportunity to some other members to speak before I proceed with my questions.

Mr. CARTER: The minister mentioned that the improvement loans were administered by the Department of Finance; does the Department of Fisheries have anything to do with that at all? Do you sit in on the request for loans; do you advise? Do you have anything to do with that?

Mr. MACLEAN (*Queens*): Not directly; but there are occasions when it can be referred to us for information on a man's efficiency as a fisherman or for the justification of a loan to him.

Mr. ROBICHAUD: On this very question, does this committee have figures showing the total amount which has been loaned to fishermen under these small loans? In my own personal opinion it has not been too practical, and this may be due to the fact that other provinces, especially Atlantic provinces, have a fishermen's loan board of their own. Although this act has been in force for a number of years, I doubt if it has been very practical because my understanding is that very few fishermen have taken advantage of these loans.

Mr. CARTER: Along that same line, could the information requested be produced by provinces in order that we may know the breakdown?

Mr. MACLEAN (*Queens*): I think we can obtain that. We have the information right here at the moment and perhaps Mr. Clark would give it to you.

Mr. PICKERSGILL: Before that information is given I wonder if Mr. Clark could also tell us—as I understand it these loans are applied for at the banks or at credit unions and they do not apply to any government department—does the bank use its own judgment about these things, or does any branch of the government? I am sure the Department of Finance does not but does the bank seek advice from the Department of Finance? In my experience when occasionally I have had letters from constituents describing some project they thought would be worthy of a loan, and I have suggested they go to the bank of Nova-Scotia,—which is the only bank I think we have in my constituency in various places,—up to now I have never heard of any of them getting a loan.

Mr. MACLEAN (*Queens*): The act is supposed to be parallel to the Farm Improvement Loans Act, which deals with agriculture. The loans are made through chartered banks and in the case of fishermen improvement loans are made through fishermen's credit unions. The government merely guarantees the lending institution against loss; and generally speaking the lending institution, since it is their money, have a lot to say as to whom it will be loaned. Nevertheless, the purpose behind the legislation is to increase credit for those who need it for a proposition that is economically sound. Perhaps Mr. Clark has some detailed figures here for which some of the members were asking.

Mr. G. R. CLARK (*Deputy Minister, Department of Fisheries*): Mr. Chairman, the specific answer to the question which was asked by the honourable member is taken from the Annual Report of the Fisheries Improvement Loans Act, Department of Finance for the fiscal year ending March 31, 1958. This is since the inception of the act in December 1955. The figures by provinces are: British Columbia, 97 loans made for a value of \$203,336; Manitoba, one loan for \$1,785; Ontario, 13 loans for a value of \$22,022; Quebec, 37 loans for a value of \$33,754; New Brunswick, 105 loans for a total value of \$63,045; Nova Scotia, 57 loans for a value of \$58,160; Prince Edward Island, 128 loans for a value of \$101,813; Newfoundland, 3 loans for a value of \$1,240, making a total, Mr. Chairman, of 441 loans for a total value of \$485,156.

Mr. HOWARD: Do I understand, sir, that is the total since the inception of the act?

Mr. CLARK: Yes.

Mr. CARTER: I did not hear the figure for Manitoba; could I have it again?

Mr. CLARK: There was one loan for a value of \$1,785.

The CHAIRMAN: Does that complete your information, Mr. Pickersgill?

Mr. PICKERSGILL: Yes.

Mr. HOWARD: On this particular item, Mr. Chairman, while I realize it comes under the Department of Finance, still I would imagine, as the minister said, there is close consultation at times between the two.

There is a bit of a deficiency in the act in its application to native Indian people. This now involves another department in regard to this matter; but in British Columbia particularly there are a great number of native Indians who participate in fishing, many of whom want to get out from under the rental arrangements with canneries, but who find great difficulty in getting loans under this act because banks will not accept any of the chattels of the native Indians. They feel they are unable to do so because if there is a default in payment, they are not in a position to collect from the native Indian because he is a native Indian and is not subject, so they say, to the same things as we are who are not Indians.

In this light I wonder whether some representation from the Department of Fisheries could not be made to the Department of Finance along these lines in order to extend the provisions of the act so that native Indians may be able to operate more completely under it than they are able to now?

Mr. MACLEAN (*Queens*): Mr. Howard, I appreciated your bringing this to the attention of the department; I will certainly look into it and see what the possibilities are. However, you will realize it is primarily the responsibility of the Department of Finance, with the Department of Citizenship and Immigration, of course, interested as well.

Mr. CARTER: Would it be possible to obtain some information as to the use made of these loans? I notice that Prince Edward Island and New Brunswick have made very good use of these loans, 105 loans for New Brunswick and 128 for Prince Edward Island, whereas there are only 3 for Newfoundland. In the case of Prince Edward Island would those loans be mainly used for lobster fishing? Would it be possible to obtain a figure showing how much of that amount would be for boats, engines or any other equipment?

Mr. MACLEAN (*Queens*): Yes, I think we have that information for you now. I will ask Mr. Clark to give you all the information he can along those lines.

Mr. CLARK: We have not got it broken down by provinces, but we can break down the totals for the purposes of the loans. The figures are: Fishing equipment, 116 loans for a value of \$111,198; purchase and repairs to vessels, 321 loans for a value of \$368,695; building and construction, 4 loans for a total of \$5,262.

Mr. HOWARD: Would Mr. Clark reiterate this in regard to the fishing equipment?

Mr. CLARK: There were 116 loans regarding fishing equipment for a value of \$111,198.

Mr. CARTER: The bulk of that money went for repairs to boats and equipment?

Mr. CLARK: Yes.

Mr. CARTER: In equipment, would you include a motor engine and equipment or just fishing gear?

Mr. CLARK: Mr. Chairman, offhand I am not familiar with the provisions of the act. It spells out what is defined as fishing equipment; but I think this is actual fishing equipment which presumably would take care of deck equipment for example, a vessel.

Mr. CARTER: Is the small use that Newfoundland has made of that fund during the last three or four years due to reluctance? Of course, I know one reason and that is that the banks are not available in the communities. Therefore there is no direct contact between many fishermen and the banks, and there are no credit unions. But even taking into consideration the number of people who are able to get to a bank, the number of loans is extremely small. I was wondering if you have any idea why that is so? Is it the reluctance of the bank to lend the money? Are they more reluctant in Newfoundland than they are in Prince Edward Island, or do the conditions under which the loans are available make it impossible for our people to take the same advantage of them?

Mr. CLARK: Just as a matter of speculation I think the first factor that was mentioned by the hon. member would be the case, that is the fact that the banks are not available in the communities and there is no direct contact with the fishermen. I think this is the biggest single factor.

Mr. CARTER: Mr. Clark well knows that on the Burin peninsula alone there is a bank at Grand Bank and a bank in Burin. That makes two banks on the Burin peninsula. Even with these two banks on the Burin peninsula three loans is extremely small for four years. That argument does not hold good for the Burin peninsula.

Mr. CLARK: Not in all cases. I cannot hazard a guess really as to why the banks did not loan money. It may be that the fishermen have not applied in many cases.

Mr. PICKERSGILL: I recognize that this is a little irrelevant, Mr. Chairman, but does the department have much information about the comparative generosity of these provincial loan boards. That may be part of the explanation there. I would suspect that in, for example, Prince Edward Island, there may be no provincial loan board at all.

Mr. CLARK: Yes there is.

Mr. PICKERSGILL: There certainly is one in Newfoundland. We will probably have to look at both the provincial government and the federal government to get the real picture.

Mr. MACLEAN (*Queens*): This probably has some bearing on it, and I would think also that the type of fishing that is carried on has a great deal of bearing on it as well. For instance, in Prince Edward Island the majority of fishermen there are lobster fishermen who fish for a couple of months a year, with a small boat and some traps and so on. With that type of situation you are more liable to have a lot more individual loans than you would in fisheries that require large boats and very expensive equipment which would be beyond the resources of this particular act to loan money for. For larger equipment such as draggers, and so on, loans are made directly by the provincial loan boards. So I think the type of fishing has a great deal to do with the number of loans in any given area.

Mr. McWILLIAM: Has the department the information and data showing the number of loans granted by banks and the number granted by credit unions? It looks to me as if Newfoundland would require the service of credit unions in their small communities. That might be the answer to their problem.

Mr. MACLEAN (*Queens*): We have not got it broken down in that way, Mr. McWilliam, but it might be possible to obtain it from the Department of Finance or when those estimates are before a committee or before the house.

Mr. CARTER: These loans are guaranteed so the bank does not carry a great deal of risk in making them. We have quite a number of lobster fishermen in Newfoundland, too, but in addition to that we have a situation now where many fishermen who had been employed in the woods operations connected with the paper industry have now been forced to return to the shore fishery. To set them up in a shore fishery they need a dory and a four horsepower engine. They may possibly have to build just a little building by the waterside premises. About \$1,000 would cover all that, and set them up. Yes, the three loans in Newfoundland only total \$1,200 altogether. So, they must be extremely small loans and two or three hundred dollars must be enough for them to get by on. It is very vital at this time, particularly in my riding, that some source of credit be made available to fishermen. I understood that this was the purpose of this loan. I think it is not working the way it was intended to work. We should look into it and find out why and remedy the situation.

Mr. ROBICHAUD: Before an answer is given to that—and my question applies to the same matter—is it not true that only 15 or 20 per cent of the loan is guaranteed?

Mr. MACLEAN: That is right. If the default on the loan is over a certain amount the government does not bail out the lending institution. They have some responsibility. The act only guarantees a small percentage of the total loss. It is useless to try to determine at the moment whether the apparent lack of loans in any given area is due to refusals on the part of the lending institutions or whether it is because the loans have not actually been applied for. If the latter were the case, publicizing the fact that this legislature exists might help the situation and induce more people to apply for loans. On the other hand if the shortage of a loan seems to stem from the fact that only a small percentage of the applications are approved, well that is a different thing. Frankly, I do not know which is the case, but I would be very pleased to have this looked into and to see what the possibilities are to have the legislation meet the situations for which it was designed.

Mr. PICKERSGILL: There is one suggestion I would like to make to the minister, through the chairman, if I might, and that is, that he might perhaps canvas his field officers—the department has a lot of field officers all through the fisheries area—and get an estimate from them as to whether there is a really great need for credit that is not being met by any of the existing agencies. I suspect there is, from the amount of mail I receive from my constituents; but I would not regard that as a very scientific test.

We all know that there are some people who would like to borrow money and who would not like so much to pay it back. We also know there are many other people who perhaps would like to borrow money and who would make good use of it and who would pay it back, if the facilities were available. If the minister could circularize his officials and find out what their opinions are on this, I think it might be very helpful from the point of view of future policy.

Mr. McWILLIAM: Thinking along the same lines in assessing the situation, information should be gained to find the number of loans granted by the provincial authorities because in this case Newfoundland probably granted provincial loans.

Mr. PICKERSGILL: I suspect our loan board, being Liberal, is more liberal.

Mr. CARTER: If we are going to get that information, Mr. Chairman, the important numbers are the number of loans, not the total loans; because the kind of loans given by the provincial loan board would be to the fishermen who, on purchasing a dragger or getting one built, would be loaned say \$15,000. But we are thinking here in terms of from \$1,000 to \$2,000, which would be a different type of loan altogether.

Mr. MACLEAN (*Queens*): Yes, Mr. Chairman; for the figures to be useful at all there would have to be actual comparison with regard to the type of loans there are and the number of loans. In other words there would have to be a breakdown of how many problems are being met rather than the amount of money involved.

Mr. CARTER: There was a ceiling of \$4,000 on these small fisheries improvement loans. So I think that if we had the figure of how many loans were under \$4,000, we would have a comparable figure.

Mr. HOWARD: Well, Mr. Chairman, I was going to change the subject matter to something else, if this has been exhausted. First I should associate myself with the remarks of Mr. Robichaud in appreciation of the minister's remarks and the general policy outlined therein. While personally I do not know too much about the activities of the various branches of the department, I do know that the great number of fishermen that I know personally are most appreciative of those activities and feel generally that the department and its administrators have done an excellent job in promoting the fisheries and the economy of fishing.

I appreciated particularly the remarks of the minister in relation to the increased effect that fisheries has on the economy of a nation in relationship to its increased population and the amount of arable land and the necessity of protecting fisheries against the impact of civilization, as he called it. This, of course, leads up to one very important argument that has been raging in British Columbia for some time now. I am referring to the fisheries versus power problem. Over the past years it appears that at least in terms of publicity those interests which are partial to the power aspect of it have had a greater influence on the minds of the general public than has the attitude of those who are partial to the fisheries. I would like very much to have a sort of comprehensive statement from the minister or from Mr. Clark or any other officials about the trend that is taking place and what steps are being taken in the research end to offset what I think is too much emphasis being placed on the necessity of power over the necessity of fishing.

Mr. MACLEAN (*Queens*): Mr. Chairman, if I might say a word on this in a general way first and then more specific information can be given by some of my officials as to certain factual aspects of the situation. To begin with, under the Fisheries Act the Minister of Fisheries has a responsibility to safeguard the resources. It is not just a matter of choice or fancy with any Minister of Fisheries; it is one of his obligations as long as the legislation that is on the statute books exists. He can only be relieved of this responsibility by an amendment to the act by parliament itself. The responsibilities and the powers of the minister and the governor in council with regard to protecting the fisheries are fairly extensive, both as to responsibilities and powers.

Now, regarding the general problem of fisheries versus powder in British Columbia, this is a matter of very vital importance because, as all members of the committee probably know, there has been a fantastic expansion in the demand for power in British Columbia over the last few years. The increase each year has always exceeded the forecast made by even the most optimistic economists who estimate the requirements of power for the year ahead.

This naturally has created very considerable pressures on the use of water resources and it has been said—well, you can have your cake and eat it too, and have the best of both worlds and have multiple use of water supply. This is true only to a very limited extent and I would like to make my remarks against the background of what I said earlier that the fishing resource is one that can go on indefinitely and we in the department, I, myself, feel that our responsibility and the responsibility of all of us is not only to this generation or to the immediate problem but we are in fact holding in

trust for future generations a resource that can be regenerated indefinitely and even expanded if properly husbanded and its importance, its relative importance will increase as time goes by.

It is true that generally speaking hydro power is at the moment the cheapest source of electric power. That is a very general statement, but that situation may only be a passing one. With the tremendous development in science over the last few years in the not too distant future it may be possible that electric power may be generated from atomic sources at a rate that is competitive, at least under some circumstances, with hydro power.

Then, the development of hydro power is not always cheap. The biggest cost factor in hydro power development is in capital cost, in the cost of a project, and that fluctuates widely with the cost of money at the time it is launched; in other words, interest rates have a much greater effect on a hydro development than any other kind of development because in the case of a hydro development the major cost is the capital cost.

Some hydro developments might be reasonably cheap, they might be very advantageous if looked at in the narrow sense, but when one considers the added cost of some sort of fishways or construction for the natural resources of the water concerned that will put the cost up. But more important still under many circumstances there is no feasible way yet known to have fish and power on a water system especially if it is a long one. The development would visualize not only one power development at one place but a series of dams because even under the most beneficial circumstances you cannot have 100 per cent success with getting fish up over an obstruction and then the young ones down it again. You are bound to have a percentage of loss.

Well, if you go through this a number of times on a long water system you end up with almost nothing at all; in other words, you create practically all these insuperable problems for the migration of fish.

On the west coast, of course, our most valuable species there is the salmon which breeds in the fresh water. On the east coast from many points of view at least our most important fish are ground fish which live their entire life cycle in the ocean and do not interfere with power projects.

I am not sure that I have been of any help to you, Mr. Howard, but if there are any specific questions one of the officials will be able to give you further information.

Mr. HOWARD: I think certainly you have and I am sure in my own mind your views are not merely because the act imposes that upon you as an obligation; I am sure it is your own personal attitude which is reflected in your remarks which incidentally coincide with mine precisely.

I rather think, though, there has been a failure to adequately get this point of view across to the general public. As the minister said, in British Columbia in the past few years there has been a tremendous industrial expansion and it looks like it will continue and in connection with this there has been a great deal of emphasis placed on the necessity for electric energy for this industrial expansion and all of the interests that are partial to the industrial expansion and to the needs of electrical energy have been, in my opinion, through their public relations officers, concentrating on getting across to the general public the fact first that power is more important than fish.

Following that they back off a little bit and say it is possible to have fish and power at the same time which, as the minister has just said, is at the moment, with all the research that has been made into it, not possible. The failing, I think, that has taken place is the lack of publicity that has been given to all the supporting arguments on fish and fisheries being maintained.

I do not know whether there is any branch in the Department of Fisheries that concentrates on this aspect of it, on the public relations part of it, but I think if there is it should be expanded and in conjunction with it, of course,

the ideas of the fishing industry—the ideas of the employees etc. in the fishing industry, should also be expanded.

I might say that I read over with a great deal of interest a bulletin from the Fisheries Research Board entitled salmon research and hydro-electric power development which is number 114, and I would certainly commend this particular bulletin to the reading of anybody who is interested in this power versus fish controversy.

I still think that we must place more and more emphasis on the public relations point of view on the question of the necessity of maintaining our fisheries.

Mr. PICKERSGILL: I would like to say a word here on what Mr. Howard has been saying. I think that despite what Mr. Howard has said about fisheries and the publicity gained by the power interests, the power interests' impression on the public were not any more than those impressed on them by the former Minister of Fisheries. He was one who certainly made himself heard on this subject and he did it on every occasion, and it sounds as if, from what the present minister says that he is following in his footsteps.

Mr. BROWN (*Vancouver-Kingsway*): I agree that fishing should be preserved but I think enough effort has not been made to see whether we can have fish and power on the Fraser river and I think that is what is being done now.

I think that Dr. Shrum from the University of British Columbia has said we should do enough research to determine if we can have that.

My own feeling is that we have the big river in the United States, the Columbia, right alongside of us in which experimentation has been going on over the years and it has been very interesting and has not shown too much effect as yet but they have increased their run there somewhat which shows there is perhaps some possibility. But there again the publicity should be brought out, I think, in that direction because we have the Columbia river down there to compare it with and perhaps from that point of view the whole Pacific northwest should be considered as an area instead of just the Fraser river.

Mr. McQUILLAN: I would like to ask a question and I would like to make a few remarks after I get the answer. In the early beginning of fishing on the Atlantic coast was the salmon run ever a factor?

Mr. MACLEAN (*Queens*): Oh yes, and still is.

Mr. McQUILLAN: Well, it is comparatively small now, statistically.

Mr. MACLEAN (*Queens*): That is right, statistically it is comparatively small.

Mr. McQUILLAN: Well, it seems to me, may be I am too realistic, but as British Columbia develops more and more of our fishermen are going to have to turn to ground fish as we have on the Atlantic coast and we are going to be fighting a rearguard action all the time I am afraid because the fishing industry only supports a comparatively small population of British Columbia. It may be true that the world is going to need that fish in the years to come, but the people of British Columbia are not going to be satisfied to see their province remain static for the sake of providing food for other people in the world. It is not going to be hard for them to get all the fish they want. That is why there are two very divergent views.

I would like to know one other thing and that is the average value over the last ten years of the catch of fish spawned in the river?

Mr. MACLEAN (*Queens*): I do not know if we have that information right here or not, but I can certainly get that for you.

Mr. McQUILLAN: I think the whole thing has to be weighed from a relative point of view. Mr. Howard said that the power interests etc. had done a better job of public relations but that is not so. I think perhaps there is a lot more credit on the fishermen's side.

I am not one way or the other. I am trying to look at the whole thing realistically and if British Columbia is going to provide the industry to support the ever increasing population the fishing industry will not do it, so something is going to have to give some place.

Mr. MACLEAN (*Queens*): Well, naturally one of the problems is of course, in the production of power there may be as a matter of fact there are other sources of electric power. It is just a matter of cost.

Mr. McQUILLAN: Well, of course, that is a very important factor.

Mr. MACLEAN (*Queens*): That is a very important factor of course, but the economics of the whole thing would have to be very carefully weighed and it might be, and as a matter of fact I think it is, a fact that this hydro-power, many of the developments contemplated would not likely be cheap power either, they would be perhaps a little cheaper than some other source of power, but there are a great many variables in any particular program which must be contemplated. You cannot make generalized statements in my opinion.

Mr. PICKERSGILL: I wonder, Mr. Chairman, since we are talking about salmon, if the departmental officials could tell us anything about how successful they are in the recent program for conserving the Atlantic salmon. As the minister knows, there have been some changes made, particularly in Newfoundland, that have caused some anxiety to some of our constituents. Have they had enough experience to say anything about that?

Mr. MACLEAN (*Queens*): Well, perhaps Mr. Clark has a few figures on the Fraser salmon, so if he might—

Mr. PICKERSGILL: I beg your pardon.

Mr. MACLEAN (*Queens*): If he could give those at the moment and then we can have something said in reply to your question.

Mr. CLARK: Mr. Chairman, I think in answer to the hon. member's question, dealing specifically with regard to the Fraser river, I have some figures on market value which may indicate the extent of value of this fish from the Fraser river. The market value of Fraser river salmon of all species taken by Canadians was \$22,727,000.

Mr. McQUILLAN: Over what period?

Mr. CLARK: It is the period 1952 to 1955, the average production based on 1955 prices.

Mr. PICKERSGILL: Is that per year?

Mr. CLARK: Per year, the average.

The Fraser river contributes about 39.5 per cent of the total of all salmon caught in British Columbia; in other words, the total market value of all British Columbia areas is \$57,513,000, of which the Fraser river contributes about 39.5 per cent. The balance is made up from the Skeena, the Naas and some of the others.

Mr. McWILLIAM: May I interject here? This total figure, does that include the salmon netted by the Americans?

Mr. CLARK: No, that is just Canadian, Mr. Chairman.

Mr. McQUILLAN: Mr. Chairman, the Canadian catch is a real factor, I will admit that, but to enlarge on the point I was making a few minutes ago that is less than the annual production of any industry, the salmon catch in the Fraser river.

Mr. HOWARD: Mr. Chairman, on the same subject, what effect has the deep sea netting of salmon by the Japanese ships had upon the production or the amount of fish taken from the Fraser river?

Mr. CLARK: So far as we have been able to observe from the scientific investigations under the North Pacific Fisheries Commission there is no evidence at all up to this time that any salmon spawned in British Columbia waters have been taken by high seas fishing.

Mr. ROBICHAUD: Coming back to the salmon fishing, Mr. Minister, can you explain to this committee—there has been in recent years quite a few changes in the season on the Atlantic coast. Three or four years ago the season for Atlantic salmon was delayed, commercial fishing, in this year it was brought back approximately to where it was before. Can you explain the reason for these changes?

Mr. MACLEAN (*Queens*): Well, in a general way I can say we now have an Atlantic Salmon Coordinating Committee made up of representatives of the provinces concerned and our own department. They meet each year and make recommendations as to what should be done and the changes in the seasons and so on that have taken place in recent years are as a result of their pooled information or their pooled suggestions. Perhaps Mr. Clark could be more specific on the matter than that.

Mr. MCWILLIAM: Mr. Chairman, before Mr. Clark makes his remarks on this subject I would like to clear up a point for the information of the committee, perhaps. The fact is that in this coordinating committee each Atlantic province and the province of Quebec are represented, is that correct?

Mr. MACLEAN (*Queens*): That is correct.

The CHAIRMAN: Any other questions.

Mr. ROBICHAUD: Mr. Chairman, I think Mr. Clark has not answered this question.

Mr. CLARK: Mr. Chairman, as was pointed out by the minister there is an Atlantic Salmon Coordinating Committee which is composed of representatives from all the Atlantic provinces, provincial governments, and includes our own department. This committee has been in existence for several years now and meets annually to review the research work which has been done.

We also have in connection with the coordinating committee an industry advisory committee and representatives from the commercial and the sports fishermen's organizations on the Atlantic coast are on that committee. The scientific work is undertaken by the Fisheries Research Board along with our own fish culture branch of the department and on the basis of the investigations made the scientific committee makes recommendations to the main committee and then these recommendations are balanced in the light of the representations made by the various interests. It was considered a few years ago that postponing the opening date perhaps would have some conservation value. Last year or about January or February of this year, when the committee met, as a result of the scientific investigations, it was found that this was not doing the job which was expected and consequently in order to balance the commercial industry interest as against the sports fishing interest these regulations were changed to approximately what they were a few years ago.

Mr. CARTER: Mr. Chairman, while we are on the subject can anybody tell us or supply any information as to the periodic fluctuations in the date of the salmon run in Newfoundland? The salmon run does not reach its peak on the same date every year and I have a lot of complaints this year from my fishermen that the salmon run had reached its peak before they were allowed to put out their nets.

Mr. CLARK: Mr. Chairman, we, of course, if we had a really good crystal ball, would like to know the precise date too. Unfortunately, fish are animals and creatures of the sea depending on water temperature for their feed and they will arrive at approximately the same time but not precisely or exactly the same time each year. These are fluctuations which are completely unpredictable.

Mr. PICKERSGILL: There is no pattern in them.

Mr. CLARK: There is a pattern, but it varies a week or so, with no rigid pattern.

Mr. KEAYS: Mr. Chairman, I believe in so far as the Gaspé section is concerned that your policy in advancing the season is to be commended because over a period of years the production of salmon in the Gaspé area has been going down very rapidly and this year it has improved both commercially and sportswise.

Mr. ROBICHAUD: Mr. Deputy Minister, would the change in the season have any effect on the increase in catch? Can you attribute the earlier season to this increase?

Mr. CLARK: It is pretty hard to tell at this stage this year. The latest reports we have had is that salmon fishing in practically all areas this season has been quite good. Whether this is because of the advancing of the opening date or just a condition of the return of more fish because of former conservation measures which we conducted a few years ago, which would help the return from better spawning, I do not know. The only thing we are fearful of is we are going to have the effects of some of the D.D.T. spraying particularly in some areas about 1960 or 1961.

We think from observations in past years in the spawning areas that this is when we will feel the effect of the D.D.T. spraying and we are not predicting any hopeful growth or good runs in 1960 and 1961.

Mr. HOWARD: There are one or two other matters I would like to expand on but to get back to this fish versus power question for a moment or two, if I may, I did not elaborate in my original remarks probably because I did not think it was necessary, that everybody would appreciate the problem. But in order to clear up at least in Mr. McQuillan's mind a misunderstanding that may exist, there are apparently a number of hydro power plants in sites in British Columbia that are on non-fishing rivers.

It would appear to me that in view of the inability to determine at the moment whether you can have fish and power on the same river or can take steps to ensure that it remains a fishing river, that we should concentrate on our hydro-electric developments in non-fishing rivers, to ensure that we can have at least, if only to a limited degree, a fish and power project combined, even though they are not on the same river.

At some time in the future, as expressed by the minister, with the development of atomic or nuclear energy we may be able to move into that field of developing electricity and thus not have to worry about eliminating fisheries or greatly reducing fisheries in British Columbia by that time.

Now, I understand that not too long ago there was an experiment in British Columbia, on the coast in transplanting eggs or transplanting yearlings or under yearling fish from one site where they normally spawned or are born to another site and then checking returns of the number of fish to this second site.

I wonder if we could have some explanation as to the extent of that.

Mr. MACLEAN (*Queens*): Well, I should like to say a word here and perhaps one of my officials can give to you specific information. In my remarks to begin with I did not intend to create the impression that we in the department or in other groups considered the fish interests are jealous, so to speak, of

development in other fields. I might say that with the stage of advancement as far as the problem of getting fish around power sites is concerned, we felt that at the present time the accent should be put on the point of view where fish are not concerned to any great extent. That is the policy that is being carried on in a very cooperative fashion by the power companies and power interests generally.

They have been most cooperative with the department in providing facilities for the migration of fish and supplying an adequate run of water etc. and other requirements.

The only thing that we are interested in is preventing what time would prove to be an unwise development made perhaps without sufficient consideration of what the repercussions might be. If means could be found of providing fish and power under all circumstances on a stream, no one would be happier than we would be because that would solve an awful lot of our problems in a big hurry. But we have to be realistic about it and frankly at the present time we see no practical solution at the moment in sight.

There are possibilities and there is a great deal of research being done not only on the possibility of getting fish around power sites but in introducing things such as artificial spawning beds in other areas and things of that sort.

So I do not want anyone to get the impression because it would be unjustified to say that we have a closed mind in regard to possibilities in this field. That is not the case at all. On the other hand, we do not want to have ourselves, the general public or anyone else believe the problem is a simple one and that it has already been solved; that is not the case. Now Mr. Clark, the deputy minister, perhaps would have more specific information in answer to your question.

Mr. CLARK: Mr. Chairman, I think the minister has explained it very well. The problem is not an easy one. It is not merely a question of getting the migrating salmon over a dam because this is relatively easy, depending on the height of the dam. There are many other factors which must be taken into consideration. Even if you are successful in getting the fish over the dam these build-ups behind the dam have the effect of creating a huge lake which spoils the spawning grounds for the fish. The water temperature changes, the pressures and all these other factors have an effect and, if you can ignore all these problems there is the problem of getting the migrants downstream again, the young fish that go to sea to grow and they encounter these drops. It is not a simple problem, but a great deal of research work is going on not only on the Canadian side but under a very extensive cooperative program with people on the United States side—the Columbia river was mentioned. We work very closely with all the scientists on the American side who are experienced in connection with this problem and some progress is being made. However, we have not as yet the complete solution to all these problems. I think one of the members mentioned the question of publicity on the fisheries side of the story. I think this has been done. We have in British Columbia and have had for the past three or four years what we refer to as a fisheries development council. This committee or council is composed of officers of the Department of Fisheries and the fisheries research board, representatives of the fishermen's organizations, the cooperatives in British Columbia, the companies, the sport fishing interests and the people who operate fishing camps. All these people are represented on this council. It is a coordinated effort to attempt to provide the fisheries story to the general public, and there is no conflict. Actually speaking, as the minister has pointed out, the cooperation we have received over the past few years with the power company interests has been extremely close and very valuable. I think they recognize too the problem with which we are faced. Of course, they have their problems in providing hydroelectric power,

but most of the companies we are dealing with in the hydroelectric development field have been most cooperative in recognizing the fisheries problems. There is a great deal of money being spent on research work by ourselves and the salmon commission which is between Canada and the United States, so all these factors are being taken into consideration. However, I must confess we have not come up yet with all the answers to these major and complex problems.

In regard to the question Mr. Howard specifically asked about artificial spawning grounds, this was an experiment conducted first of all by the department, later taken over by the fisheries research board and the Fraser River sock-eye salmon commission is involved in it too. This experiment is being carried on at Jones creek where, through the efforts of our scientists we discovered if you can provide suitable spawning facilities, the proper amount of gravel, the condition of flow of the water, temperature control and that sort of thing, you can transplant certain species. We have attempted that with pink salmon in this Jones creek experiment. We have been gratified at the success of this experiment. It is a hopeful sign and we are extending the programme during the coming year.

Mr. HOWARD: Is this confined to pinks?

Mr. CLARK: Pinks at the moment.

Mr. HOWARD: Do you hope to extend it to other species?

Mr. CLARK: Yes. Of course as we know, all species of Salmon do not act in the same way, so this matter poses some problems.

Mr. CROUSE: I realize this may not be in order, but we are talking at the present time about conservation and I would like to interject a discussion of measures that have recently been implemented to conserve ground-fish stocks in the Atlantic. I am referring to the international agreement which was arrived at recently to carry either large mesh twine on deep sea draggers if they are haddock fishing or salmon fishing, or small mesh twine if they are redfishing or flounder fishing. The practical application of this regulation, as I understood it, the ship must decide before leaving port in what type of fishing it is to be engaged and if it is decided it is to be a redfish strip, they are allowed to carry only small mesh twine. They proceed to the banks and upon arrival there are no redfish available. They are now approximately 300 miles from port and not wishing to return without a catch they proceed to further banks, possibly the Grand Banks off Newfoundland, and there with a small mesh twine, which is all they have been allowed to take to sea, they proceed to catch cod and haddock.

The fishermen themselves do not wish to catch small or as we term them, scrod fish. But the regulation that was imposed upon them gives them no alternative and they return to port with not only large cod and haddock, but considerable quantities of small fish. Upon arrival, if there is an inspector there, they are immediately fined. The only alternative they have is to throw their nets overboard and I have information of this actually happening. So they have destroyed the evidence upon arrival in port and the answer they would give to the fisheries inspector is on the last tow their gear was torn on the rocks and the net that caught the fish was not available.

Mr. PICKERSGILL: Surely you do not accept that.

Mr. CROUSE: I would point out for the benefit of the committee that large mesh twine on a fishing dragger used on the redfish or flounder banks would in no way destroy these banks because the large mesh twine would not affect the redfish; they are a smaller type of fish and they go through the large mesh. In the interests of conservation, I think they should be permitted to carry both large and small mesh so this situation would not continue and it will also conserve the fishing stock.

Mr. CLARK: Unfortunately, dropping their nets overboard is a new one to me; it seems to be an expensive way of getting out of a fine. I think it can be taken with a grain of salt, as I have not heard this one before.

The problem is that with the intensity of fishing for groundfish on the Atlantic coast area, unless there are to be very drastic measures taken for conservation—in other words, allowing, with the mesh size in the trawl net, the small fish to escape—pretty soon there is going to be a serious problem of depletion. I think the members from the Atlantic coast have a pretty good idea of the concentration of fishing in the northwest Atlantic area.

The problem is this, Mr. Chairman, that the European fleets of course all use a larger mesh size than we do, so the impact is really on Canada if we are going to conserve. We have found this idea of allowing a ship to carry two nets, one small one for rose fishing and the larger size for cod and haddock, is not working out because unfortunately fishermen are the same all over and they will use a small mesh net for cod and haddock.

Mr. CROUSE: Mr. Chairman, that is what I just pointed out. When they are allowed to carry both sizes and they find it necessary to go after cod and haddock, they use the large mesh because there is no money in catching scrod cod and haddock. At one cent a pound, they cannot get any gross and they must decide before leaving port the size of mesh they will carry. If they are on a redfish trip, most of these ships work on a charter from the large fishing companies. On the east coast it is usually National Sea Products, and if they decide they require larger stocks of flounder which we catch as such, but usually mark in the stores "fillet of sole" at a very fancy price—the fishermen leave port carrying small mesh nets and once on the grounds if the type of fish they were sent after are not available they must go after another catch or return empty-handed. The regulation which has been designed by the Department of Fisheries to conserve fishing is in fact depleting the grounds of the very fish they hope to save. That is the practical application of this new regulation.

Mr. CLARK: I am inclined to doubt this, but you may be right; it is a new regulation and we have not seen its full effect, but a man must declare what he is going to fish. Unfortunately, it is not what they bring in, Mr. Chairman, because these small fish, cod and haddock, which are taken in the small mesh nets are destroyed by throwing them overboard. It is the fish which are destroyed and they are dead. Therefore they are not allowed to grow and this is the problem.

Mr. GRANGER: To get back to salmon for a moment, there is one very good source of salmon produced in the small rivers and streams of Newfoundland and Labrador. Your department has done an excellent job to control many of them, but there are still quite a few small rivers and streams where salmon frequent which are not controlled and where I should imagine there is a fair amount of poaching. I would like to suggest you increase the number of fishery guardians in Newfoundland and Labrador.

In power versus salmon, I would ask you to keep in mind the Exploits river. The salmon go up to Bishop's Falls but they do not go past the dam there. As a result of this there is no salmon further up in the inland waters area. But there are salmon in the lower Exploits and it strikes me it might be a possible source of salmon supply for the future.

Mr. MACLEAN (*Queens*): Thank you very much, Mr. Granger. Regarding this specific problem, I would appreciate it if you would send me a memorandum concerning it and I will have it looked into. With regard to the other one of added protection in the form of additional guardians, we will certainly take the matter into consideration. There is always the problem of expense versus fish, but we will certainly take it into account.

Mr. CARTER: Mr. Chairman, this is a slightly new subject. The deputy minister in replying to Mr. Crouse's question I think referred to the European draggers. In my riding we have a number of small fishing grounds at some distance offshore, and at certain times of the year European draggers congregate on these fishing grounds and make it impossible for our local fishermen to use them.

The three-mile limit or the twelve-mile limit will not affect that because most of these grounds are outside the twelve-mile limit, perhaps 20 miles offshore. So we cannot solve that problem in that way. I am wondering whether it might be possible to reach some sort of international agreement with Spain and Portugal, which are the two countries most concerned, in that if they are going to fish those grounds at all they should use the hook and line trawls rather than draggers; because when they use nets and drag over these banks they just prevent the Newfoundland fishermen from fishing at all. He cannot set his gear on that ground knowing that a dragger will drag over it in the night and drag it all up. If they were using a hook and long line they could set them and the local fishermen as well as the Europeans could utilize those grounds. Because if they set across one another there is not any great damage done; but if they are going to persist in dragging a small area, then they deny the use of these grounds to our fishermen altogether.

I wonder if some other approach can be made to that problem to get some agreement to use the hook and line. I believe the time will come when we will have to use the hook and line instead of the draggers on the Grand Banks.

I am not convinced of what the scientists tell us, that the fish population is indestructible. I think that the experience on the George Bank shows that the fish population there was depleted, and you have to combat that by increasing the size of your mesh. If that is so, with more intensive fishing, the time will come when we will have to take another look at whether we should be dragging at all. I think myself that a more intensive hook and line fishery is better. You certainly do not destroy the fish with the hook and line that you destroy with draggers.

Mr. MACLEAN (*Queens*): This is an old problem. It is one to which we have not found any solution, but we will certainly explore it and see if there is any possibility of some sort of mutual agreement which might ease the situation. This is a subject of course which could be discussed at a conference of the Northwest Atlantic International Fisheries Commission. There might be some agreement regarding regulations by which the commission might be able to relieve a local situation of this sort where, in effect, the local people feel they have a vested interest in a certain fishing area, even if it is on the high seas, technically speaking.

Mr. CARTER: These small grounds are the only fishing grounds available to our shore fishermen. The fisherman who fishes in his longliner goes out and comes back the same day. If he cannot fish on this ground, he cannot fish at all.

Mr. ROBICHAUD: I have a few more questions to ask the minister on this first group of items. There is an item of \$160,000 under "fishing bounty". I understand that this is an item which has been there for years. I wonder if the department is giving consideration to having a more practical application of this amount. The fishing bounty as we know is being paid on account of a certain amount of money which was paid to the Canadian government for certain fishing rights by the United States of America, along our Atlantic shore.

At the same time, in replying to my question, I wonder if the minister or deputy minister could have tabled, for the information of this committee, the amount which is being paid, or which was paid last year, to the fishermen of the different provinces. Another question which I should like answered is

whether the fishermen of Quebec are entitled to this bounty? This might be an exception, where the province of Quebec forgets about its provincial autonomy and accepts money from the federal government. Anyway, I would like to have the figures.

MR. KEAYS: Is this becoming a political meeting, Mr. Chairman? If so, I should be only too happy to carry on.

MR. ROBICHAUD: Those are details which should be made available. As far as the fishing bounty is concerned, it seems to me that there should be a more practical application of this amount. With the increased number of fishermen we will have in years to come, starting from this year, which can be partly attributed to the unemployment insurance benefits now applicable to fishermen, this will mean an amount of \$4 to \$5 per fisherman per year plus a certain amount on a tonnage basis, which varies with the size of the boat. Has the department given any consideration to having a more practical application of this amount?

MR. MACLEAN (*Queens*): This is a kind of knotty problem. I think the members of the committee, or most of them anyway, are fairly familiar with this. It is a vote that we hold as it were in trust for a certain type of fisherman, for a certain area, in this country; and they have a vested interest in this fund. Over the years various ministers have tackled this problem, and I think without exception they failed to find a better solution than the sort of ad hoc one that is in existence. You asked for specific information. I think we can give you that now.

MR. CLARK: I understand Mr. Chairman, the question is that the committee would wish the amount paid under this fishing bounty, by provinces. I have the figures for 1957-58.

In Nova Scotia the total was \$82,271.70; Prince Edward Island \$14,228.70; New Brunswick \$25,290.75; Quebec \$37,891.85; the statutory vote is \$160,000. The figures I have quoted, Mr. Chairman, total \$159,683.

MR. MCQUILLAN: I want to ask a question about something which occurred last summer in the gulf of eGorgia, namely the red tide, red plankton that invaded the oyster beds and this caused a great loss to the oyster industry. It upset very badly the seafood market on the Pacific coast, and frightened the life out of everybody concerned. For some time that was in evidence in the gulf. I have known cases like this before on the west coast of Vancouver Island, but it is the first time I have known it to invade the lower east coast of the island. It seemed to me that someone was perhaps a little remiss in reporting that to your scientists so that some warning could have been given beforehand, before the unfortunate publicity occurred.

MR. MACLEAN (*Queens*): Perhaps Mr. Clark could give us the answer to this one. We have a similar related problem on the east coast with regard to this.

MR. CLARK: I do not think there is any question of being remiss in making the report. This is a condition which is partly caused by water temperatures and tidal conditions, which no one can predict. It occurs very quickly. This situation which is referred to, Mr. Chairman, took place on the west coast. This was the first time we had know of it ourselves, in so far as the attack on the oysters was concerned. It occurs very frequently in regard to clams. This red feed, which was taken by the clams and oysters in this case, is not poisonous to the shellfish themselves. It does not kill the oysters or the clams; but when human beings eat them, it is extremely poisonous to them. There is no way of predicting this thing. It happens frequently on the Atlantic coast and it does occur frequently with clams in the Pacific coast. However, this time there was a mass of red feed and it did affect the oysters

and the people who ate them. Of course, the Department of National Health and the provincial Department of Health had to clamp right down, as people can die from this poison.

Mr. McQUILLAN: My point, Mr. Chairman, is that this so-called red tide was in the gulf for some considerable time before it invaded the oyster beds. Before these cases of poisoning came about the fishermen mentioned it to me. I travel up and down the coast and I even saw it from the air beforehand. I warned my own family and my friends not to have anything to do with shellfish in that area at that time; but it was not until after these cases of poisoning occurred that the department became aware of it.

It might be very hard to follow out to the ocean, true; but in the gulf of Georgia in that particular case it just seemed to me that somebody was not quite on his toes.

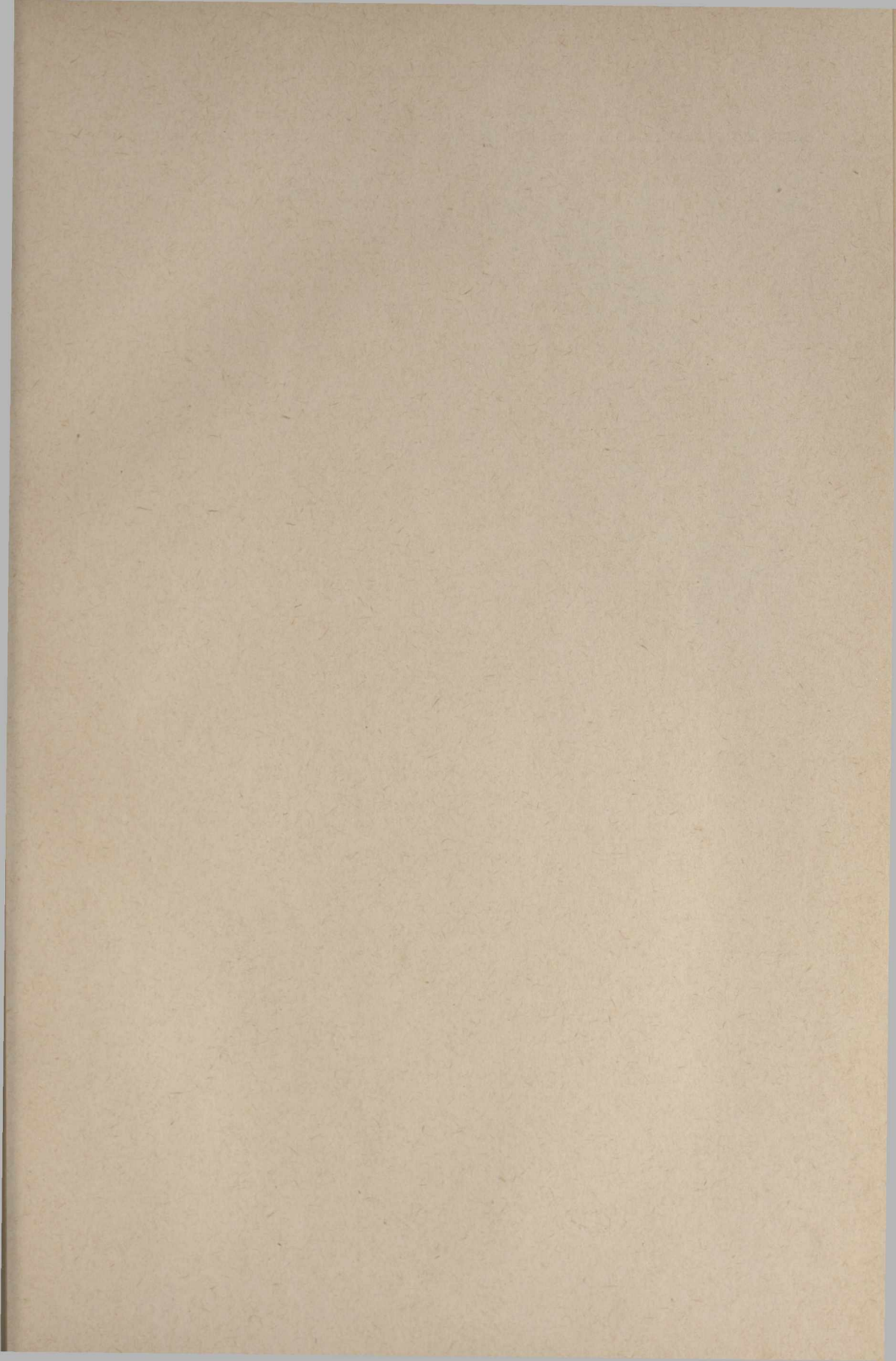
Mr. CLARK: I think in all fairness, Mr. Chairman, as I explained, I had never heard of oysters being attacked before but clams, yes.

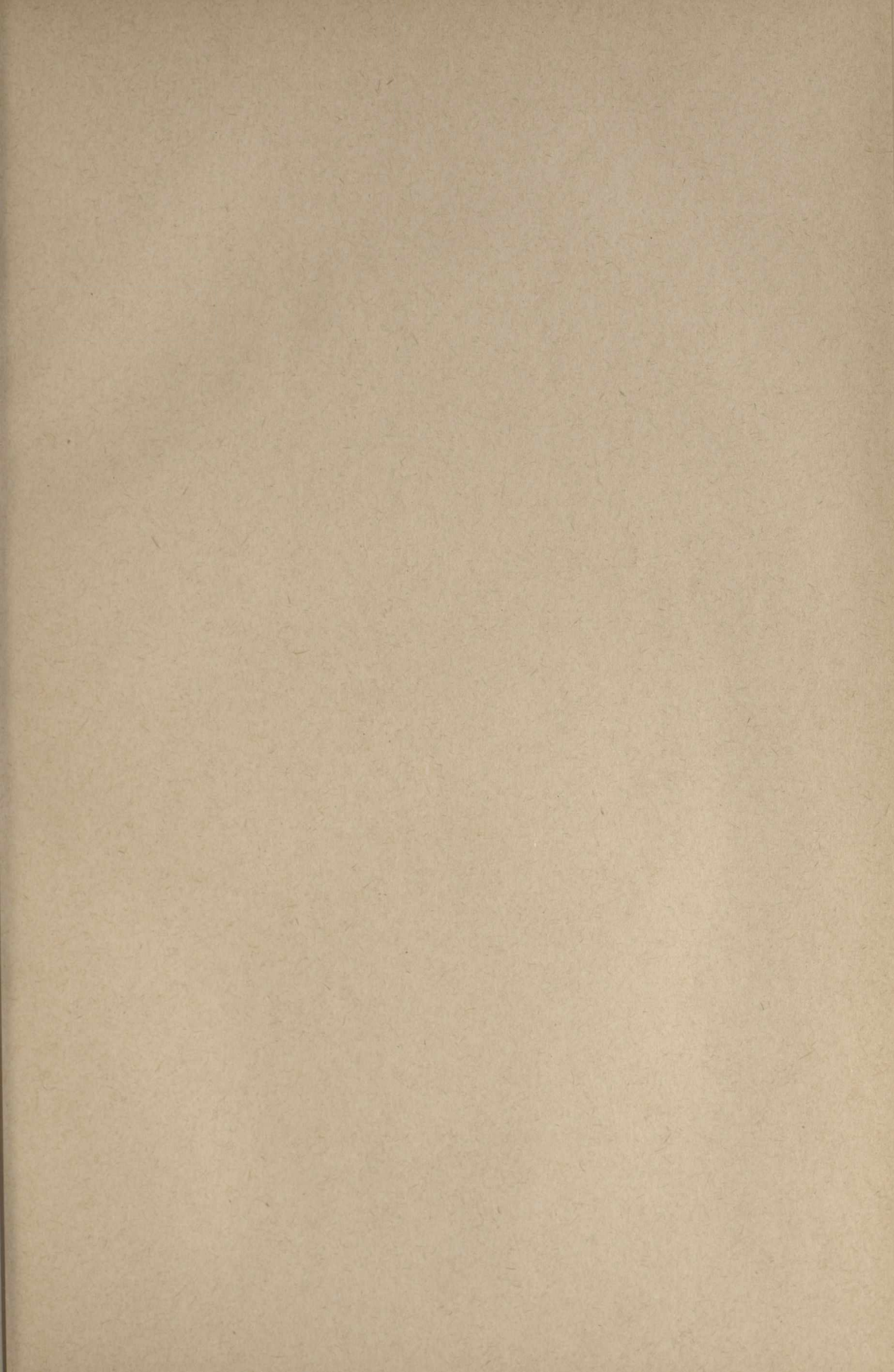
Mr. McQUILLAN: People eat clams too.

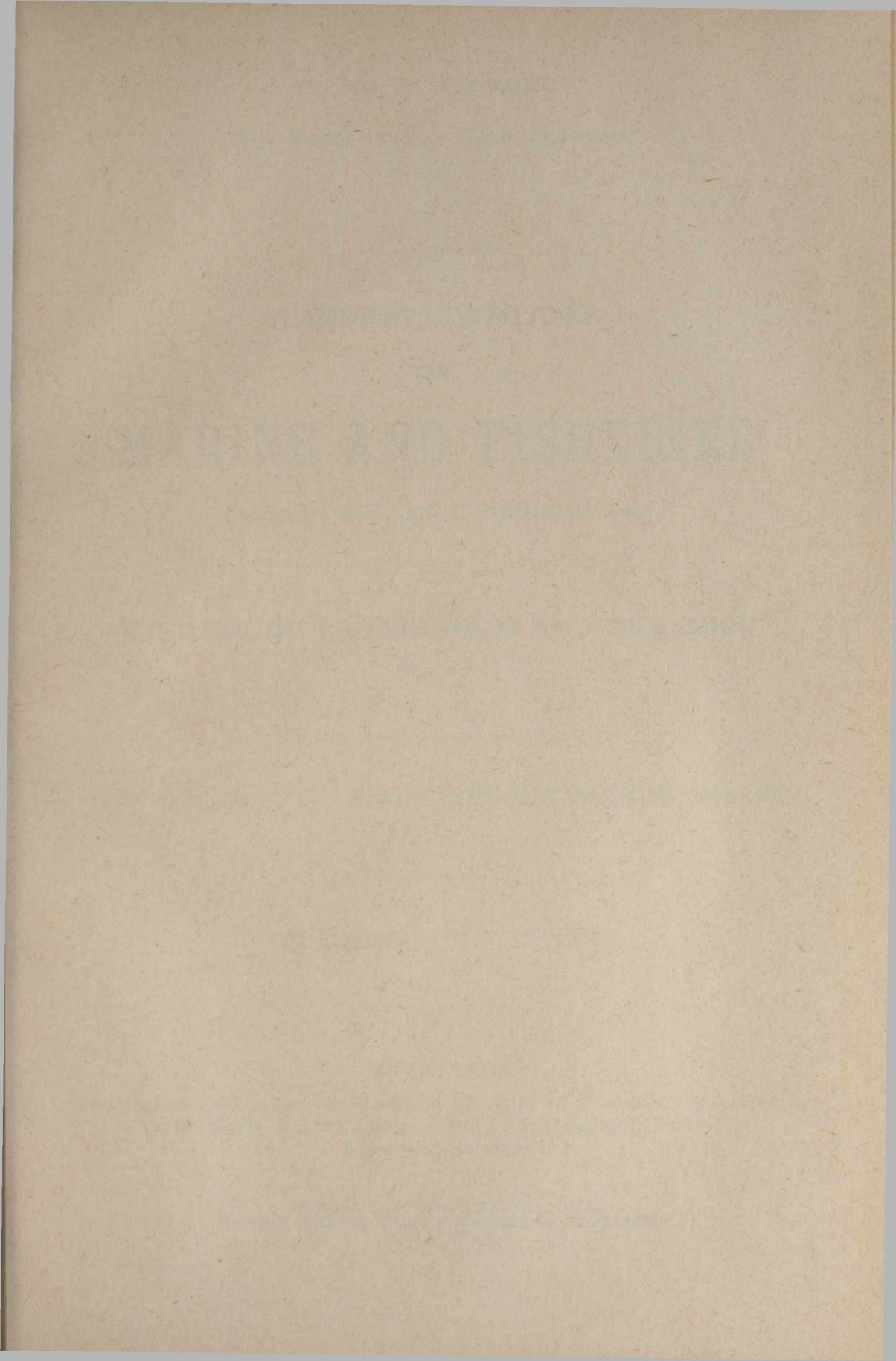
The CHAIRMAN: Shall this group of items carry?

Mr. ROBICHAUD: We have more questions.

The CHAIRMAN: We will adjourn. The next meeting will be on Tuesday, July 15.







HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958

STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 2

DEPARTMENT OF FISHERIES-ESTIMATES 1958-1959

TUESDAY, JULY 15, 1958

WITNESSES:

The Honourable J. Angus MacLean, Minister of Fisheries; and Messrs.
G. M. Clark, Deputy Minister and L. S. Bradbury, Director,
Industrial Services.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958

STANDING COMMITTEE
ON
MARINE AND FISHERIES

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Vice-Chairman: A. De B. McPhillips

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Anderson,
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Bourget,
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Kingsway*),
Carter,
Crouse,
Danforth,
Drysdale,
Gillet,
Granger,

Howard,
Keays,
Legere,
Macdonald (*Kings*),
MacLellan,
Matthews,
McGrath,
McQuillan,
McWilliam,
Michaud,
Morris,
Noble,

O'Leary,
Phillips,
Pickersgill,
Richard (*Kamouraska*),
Robichaud,
Speakman,
Stefanson,
Stewart,
Tucker,
Webster—35.

A. Plouffe,
Clerk of the Committee.

MINUTES OF PROCEEDINGS

TUESDAY, July 15, 1958.

(3)

The Standing Committee on Marine and Fisheries met at 9.30 a.m. this day. The Chairman, Mr. English, presided.

Members present: Messrs. Batten, Browne (*Vancouver-Kingsway*), Crouse, English, Howard, Keays, Legere, Matthews, McWilliam, Noble, Pickersgill, Robichaud, Stefanson, Stewart, and Webster—15.

In attendance: The Honourable J. Angus MacLean, Minister of Fisheries; Messrs. G. M. Clark, Deputy Minister; S. V. Ozere, Assistant Deputy Minister; J. J. Lamb, Director, Administrative Services; A. L. Pritchard, Director, Conservation and Development Service; J. L. Kask, Chairman, Fisheries Research Board; L. S. Bradbury, Director, Industrial Development Service; W. C. MacKenzie, Director, Economics Service; H. V. Dempsey, Director, Inspection and Consumer Service; T. H. Turner, Director, Information and Educational Services; J. G. Carton, Departmental Solicitor; Ian McArthur, Chairman, Fisheries Prices Support; E. B. Young, Assistant Director, Conservation and Development Service, W. R. Hourston, Chief, Fish Culture Division; J. A. Albert, Chief, Financial and Stores Branch; Mark Ronayne, Assistant Director, Information and Education Service; A. W. Abbott, Assistant Chief, Financial and Stores Branch; H. A. Wilson, Fisheries Research Board; R. Hart, Industrial Development Service.

The Chairman observed the presence of quorum and reminded members that the discussion was on the first group of items. Items numbered 130 to 133 inclusive—General Services.

After questioning of Mr. MacLean and Mr. Clark, items numbered 130 to 132 inclusive were adopted.

Mr. Bradbury was questioned with respect to item 133—Industrial Development Service—and following discussion the item was adopted.

Item 555 (Supplementary)—Industrial Development Service was called and adopted.

At 11.00 a.m. the Committee adjourned to meet again at 9.30 a.m. Thursday, July 17, 1958.

J. E. O'Connor,
Acting Clerk of the Committee.

EVIDENCE

TUESDAY, July 15, 1958.
9:30 a.m.

The CHAIRMAN: Good morning, gentlemen. We have a quorum, so we will proceed. As you will recall we were still on the first group of items.

Items 130 to 133, "General Services".

Gentlemen, I would be very much obliged if the discussion could be confined as much as possible, to the items before us, in order that we can adopt them, this morning. At the last meeting we were discussing salmon, and then suddenly we found ourselves discussing codfish. As a result, several members could not discuss thoroughly items which were of interest to them. As I said previously, I have no objection to other items being discussed if it is relevant to the subject. Shall we now try gentlemen to confine ourselves to the items before us. In view of the warm weather, if anyone wishes to take his coat off, I have no objection.

Mr. ROBICHAUD: Could we have some explanation on the work of the economic service of the department for which there is an item of \$316,000?

Hon. J. ANGUS MACLEAN (*Minister of Fisheries*): I will ask Mr. Clark, the deputy minister, to say a few words on this matter.

Mr. G. R. CLARK (*Deputy Minister, Department of Fisheries*): Mr. Chairman, this is vote No. 132. As part of the federal fisheries administration the economic service of the department is responsible for the assembling, analysis and interpretation of facts relating to the economics of the Canadian fishing industry. This particular field ranges from the collection of current information on production, sales and prices to detailed studies of fishing craft performance, factors affecting the income position of fishermen and that sort of thing required by the Department of Fisheries and related agencies.

Mr. ROBICHAUD: Mr. Chairman, there is another item, No. 131, "information and educational service" in regard to which I would like to say a few words. I think we all realize that our respective provincial or municipal governments who are responsible for education are not in a position to give to the fishermen the education they should have, especially concerning their fishing operations. I wonder if the minister of the department would consider expanding these services to fishermen? There is a great need for education among our fishermen. Most of our fishing operations are now either mechanized or modernized. Our fishermen are not in a position to follow this trend in modernization unless they are given a certain amount of education to prepare them to take full advantage of the new system of fishing. I believe the Department of Fisheries and the research board are the only ones in a position to give this education. Would the minister and his department give further consideration to extending the educational program of the department?

Mr. MACLEAN (*Queens*): Mr. Chairman, I am grateful to the honourable member for bringing this subject to my attention. It is a problem of which we in the department are very much aware. As you know the federal government over the course of years has instituted a program of vocational training;

and fishing is a vocation where the changing trends in modernization and new techniques make it necessary for men engaged in the industry to keep up to this trend so they can compete on a reasonable basis.

There has been formed the Atlantic regional advisory committee on fisheries. This committee has representation from the provincial government as well as from the federal government. One of the problems under consideration is this very problem of some type of vocational training to which the department would be in a position to contribute in some form or another. I would like Mr. Clark to say a few words to expand on what I have said. I have just given the background to bring you up to date on what the position is.

Mr. CLARK: Mr. Chairman, with your permission perhaps I could enlarge a bit on this matter. As the minister has pointed out, we have been aware of this situation for quite some time. Last March at a meeting in Quebec of deputy ministers of the Atlantic coast provinces the federal-provincial Atlantic fisheries committee was formed with this very purpose in mind.

In this particular field there are two facets. One of them is the question of making available to the fishermen and the industry general information which is assembled and which comes to us. But I think the two aspects are (1) a research into fishing techniques and production facilities. The second part we expect to work out with the provincial governments concerned as an actual demonstration unit. We feel after some experience and consideration of this problem over some years that one could educate—if that is the proper word—the fishermen by literature and talks. But I think that an actual demonstration of new techniques, fishing gear and that sort of thing is a more effective means, and that is what we hope to accomplish.

The CHAIRMAN: Are there any further questions?

Mr. HOWARD: Mr. Chairman, at our first meeting Mr. Clark mentioned this matter very briefly in answer to a question, and that is with respect to the salmon that are caught out in the Pacific by the Japanese fishermen. There appears to be quite a bit of controversy between the united fishermen and allied workers union on the coast of British Columbia and the Department of Fisheries with respect to this question of British Columbia salmon, or salmon that spawn in British Columbia waters being caught by Japanese out near the 175th meridian.

The fishermen's union on May 2 issued a press release which arose out of a meeting they held. Five British Columbia members of parliament were in attendance at this meeting. I was not there. I do not know what went on, but I wonder if we could not perhaps have a more detailed explanation of this Japanese fishery problem, especially in the light of the points which the fishermen's union presented or raised in this press release. I might add incidentally that I understand the points raised in this press release were also dealt with extensively by that union in their fisheries publication. Perhaps if I might refer to them briefly, we may be able then in some way to overcome this conflict of opinions.

The first one they mentioned was the reason for objecting to the statement that there was no evidence of any great number of British Columbia salmon being caught over the line where the Japanese were fishing. The second one was the fact the Canadian research vessels did not travel beyond 155 degrees west longitude, or as they put it, 750 miles this side of the provisional line where the Japanese fishing operations begin. The point is that the Canadians have relied entirely upon studies by American research vessels which, as they say, were directed primarily towards getting evidence for protection of Bristol Bay sockeye and other Alaskan salmon.

Mr. Clark's name is mentioned in this particular one, but I do not think that has too much bearing on it. They make reference to Dr. Needler of Nanaimo admitting weaknesses in spot fishing tests and quote him as saying it was hard to put figures on numbers of salmon present until we know more about depth distribution and general studies and by tagging and other means indicate a wide mixing area in the north Pacific where salmon of North America and Asia intermingle.

Could we have a comprehensive indication of what has happened in the past on this research program, with special reference to the points raised, as well as where we are going in the future. I made inquiries of the minister in the house on this matter and he gave us a very detailed account of what was going to be done this coming year in the extension of this research program.

Mr. MACLEAN (*Queens*): Mr. Chairman, as honourable members know there is an international agreement with regard to the north Pacific fisheries and the international north Pacific fisheries commission was established under the convention. This body has Canadian representation, and it so happens that Mr. Clark is the chairman of the Canadian section of the Commission. I do not think there is anyone better qualified to answer the questions and to say something about it than he is in his role as chairman of the Canadian section. I will ask him to say a few words.

Mr. CLARK: Mr. Chairman, I will try to be as brief as possible on this question, because it is a very huge and complex one. I think, Mr. Chairman, that to indicate the size and magnitude of the problem I should first mention the size of the ocean area covered by the north Pacific fisheries convention. It has an area of about 32 million square miles, extending from the equator north to the meeting of the Arctic ocean and Bering Strait. The area in question has an average width of more than 5,000 miles from the shores of Asia to those of North America and included in the area are vast bodies of water such as the Bering Sea and the Sea of Okhotsk. I think that will give you some idea of the extent and magnitude of the problem.

I might say also that this area equals about one-sixth of the surface of the earth. With that, Mr. Chairman, I will try to deal with the specific point raised by Mr. Howard. A meeting was held in Vancouver by the Canadian section of the international north Pacific fisheries commission. It was a meeting open to the public. Fishermen were present as well as representatives from industry. We reviewed for the benefit of the Canadian industry the work which had been going on under the commission. There is, of course, this controversy or difference of opinion. As Mr. Howard pointed out in the press release, by the united fishermen and allied workers union there is a difference of opinion, but we must go on the scientific findings. As I pointed out at the last meeting, up to the present time we have no evidence to indicate that there are any significant number, if any, of salmon of British Columbia origin being taken in the high sea fishery west of the 175th meridian.

Now the chief point in the U.F.A.W.U. press release was the fact that Canada had not done enough, and that therefore we lack the information to make such statements. The point overlooked was the fact that under the north Pacific commission there are three countries working on this under a joint program, so that the information is not solely obtained by Canada. It is obtained by research staffs both in the United States and in Japan. All the scientific information obtained is pooled and this is the basis for our statement that up to the present time there is no evidence that any significant numbers, if any, of salmon of British Columbia origin are being taken in the Japanese high seas fishery. That is the difference, Mr. Chairman, and all we can go on are the scientific findings to date.

Mr. HOWARD: If I may pursue that question further, I understand there is a meeting in August in California or some city in the United States of the parties to this north Pacific salmon fisheries commission. Is it in August?

Mr. CLARK: Yes.

Mr. HOWARD: Do we have any idea at the moment what special matters will be dealt with there, from the Canadian point of view? I understand that each party is required to give sixty days' notice or so many days' notice of items they want placed on the agenda for discussion.

Mr. CLARK: Mr. Chairman, if I may try to explain this, there is a meeting of a committee of the north Pacific fisheries commission to be held in Honolulu starting on August 7.

Mr. ROBICHAUD: I am wondering if all this discussion is not out of order. This comes under item 144 "special".

The CHAIRMAN: It was referred to at the last meeting.

Mr. ROBICHAUD: That question comes under 144 "special".

Mr. MACLEAN (*Queens*): If I may interrupt, I think we may be able to finish the answer to this question in a very few seconds.

Mr. CLARK: Gentlemen, the meeting is already arranged for August 7. It is a meeting which is referred to in the commission as the first ad hoc committee. That committee in fact is a subcommittee of the commission. This particular committee is charged with the responsibility of dealing with the abstention reports. Under the convention Japan agreed to abstain from fishing salmon, halibut and herring—in the case of salmon east of the 175th meridian. Under the convention it says also that Canada and the United States must prove after five years, which is this year 1958, that the conditions of abstention by Japan are being met by Canada. In other words, we have to show that we have the fishery under scientific investigation, that it is under the regulation of the country concerned, in this case Canada and the United States, and the fishing is being exploited to its maximum capacity. These reports were provided over a year ago and this committee will meet in Honolulu to go over the reports, this being the five-year period. This determination has to be made to show that the abstention by Japan from fishing these species of fish will be continued and that is the purpose of the meeting.

Mr. GROUSE: I wish to make reference to another matter while we are speaking of conservation. There was an article in the local press which stated that outside the committee a fisheries department officer said the fine for carrying large and small mesh net on a ship ranged up to \$1,000 and he did not think it would be advisable to throw trawl net away because it costs between \$9,000 and \$15,000.

For the benefit of the committee, I would like to say that while the total weight of a working trawl weighs approximately 4½ tons, it is composed of eleven sections in all. They are named as follows, a square, two top wings, two lower wings, a lower belly and upper belly, a lower lengthening piece and an upper lengthening piece, a length and upper cod end piece. The change made by the Minister of Fisheries called for an increase in the size of the mesh from the bellies to the cod end. I have here invoices from a local supplier in Halifax, John Leckie Limited, and they give the costs of these sections of trawl and the total net would cost \$238.50. That is for manilla twine.

Mr. ROBICHAUD: Does it say what size trawl?

Mr. GROUSE: That would be a No. 41 trawl.

Mr. ROBICHAUD: That is for a 65-foot dragger.

Mr. CROUSE: No, for a 100-foot dragger. The amount of expendable twine would be the bellies, lengthening pieces and cod ends, and they would amount to \$128.50; so if a fishing dragger had to dispose of its twine and they had two or three sections, the amount would not in any way be comparable to the fine you have to pay. I would like to correct the impression of any departmental officials that these nets would run into \$9,000. The total cost of the net with the floats and so on would run approximately \$3,000. I give this statement for the information of the committee.

Items 130 to 132 inclusive agreed to.

Item 133. General Services—Industrial Development Service \$611,365

Mr. PICKERSGILL: Mr. Chairman, I am very much interested in this item. I noticed that this item has been reduced by about one-third. I think I know the reason why it has been reduced this year but I wonder if the minister or his deputy, or one of the officials of the department could give us a brief outline of the various projects that are being undertaken at the present time and what progress is being made with them. I regard this function as one of the most useful of the Department of Fisheries.

Mr. MacLEAN: Mr. Chairman, in regard to this item, I think the guess of the hon. member is probably right as to why it is reduced considerably. The main reason for the reduction in the vote is that the construction at Valleyfield, Newfoundland is completed, and because of the reduction of the number of projects in the Pacific area. This is quite a large construction item which has been spread over a relatively short time and accounts for the rise in the vote above the normal for the period during which this establishment at Valleyfield was being constructed. That is the main reason for the decrease in this vote.

The member for Bonavista-Twillingate also wanted a brief review of the program which is being carried out under this item. I would ask my deputy minister to say a few words on this subject.

Mr. CLARK: Mr. Chairman, actually in regard to the program at Valleyfield, the plant is in operation. We have completed the construction work. I believe it was completed fairly late last year. It was impossible because of the construction period to really get underway last year but it is now in operation.

We have a number of projects going forward at the present time. If it is your wish I think perhaps the director of the industrial development service, Mr. Bradbury, could give the details of those projects.

Generally speaking we are engaged in some rather important aspects of fisheries development at Valleyfield. For instance, we are experimenting this year in the use of refrigerated sea water at Valleyfield to hold codfish so that it is kept in good condition when it comes in tremendous quantities, certainly in that area of Newfoundland, and so the cod can be kept in good condition to be used either for salting or filleting operations.

We are also experimenting on a device for desalting heavily salted codfish so that it can be used in the production of light salted cod.

These remarks cover briefly a couple of the projects but if you wish more detail perhaps Mr. Bradbury could give some further particulars in regard to these projects.

Mr. PICKERSGILL: Perhaps before we go on with those details I might say that I would be flattered to think that these projects were all being carried out in Valleyfield. I have been under the impression that there are some other projects comprehended in this vote. I thought it might be rather interesting for the committee, as I know it would be for me, to know what else is being done under this vote.

Mr. ROBICHAUD: Mr. Chairman, before this question is answered, perhaps at the same time someone might also explain why there is a reduction in the item for technical services for fishermen in the fishing industry from \$323,000

last year to \$232,000 this year, a reduction of about \$111,000. I understand there is a reduction of \$200,000 approximately in respect of the building program. At the same time as an answer is being given to the last question asked by Mr. Pickersgill could we have an explanation of why this technical service for fishermen in the fishing industry is reduced by \$111,000.

Mr. KEAYS: There is a reduction in that item of \$90,000-odd.

Mr. ROBICHAUD: The details of this item appear at page 214.

Mr. MACLEAN: Yes, the reduction in that item is in the amount of \$90,500. That is the reduction you are referring to?

Mr. ROBICHAUD: Yes.

Mr. MACLEAN: The details appear on page 214.

Mr. ROBICHAUD: The reduction in that item is \$90,000, yes.

Mr. CLARK: Mr. Chairman, if it is permissible, before calling on Mr. Bradbury to give details of those projects I might say that it is true that all of this work in the industrial development service is not being done at Valleyfield. Indeed, any work there in connection particularly with salt fish is not only being done for the benefit of Newfoundland, but is being done for the benefit of the entire Atlantic coast industry. This is a pilot plant or experimental plant for actually carrying out work. The information and the results of this work are available to all branches of the industry.

There are a number of other projects which are not being conducted particularly at Valleyfield, but are spread on the Pacific coast and in several areas of the maritimes.

Mr. CROUSE: Mr. Chairman, could the minister or his deputy explain to the committee the reason behind this construction of the plant at Valleyfield when we have an experimental plant similar to this in Halifax, where experiments no doubt have been carried out. Is the original expenditure in respect of the Valleyfield plant justifiable when we now have other facilities at Halifax?

Mr. MACLEAN: I presume you are referring to the station of the fisheries research board at Halifax when you speak of facilities there. The purpose of the plant at Valleyfield is not the same. The station at Halifax is a station for what you might loosely call pure research although there is applied science work done there as well.

The plant at Valleyfield is designed to develop processes, applying scientific knowledge that may be gained at other places, through the facilities of the research board. For example, applying new techniques to the salt cod industry. That is one example. Another example would be the producing of varieties of the product which would have a wider market and perhaps a market which would have a higher return for the fishermen.

There are many other aspects of work to be done in connection with the processing of salt cod especially, and so on. I think it would be much more effective if Mr. Bradbury, for example, gave a general statement on the work that is being done under this vote, including that work which is being done at Valleyfield. Time seems to go by very rapidly while I am talking.

Mr. L. S. BRADBURY (*Director, Industrial Development Service, Department of Fisheries*): Mr. Chairman, I believe the hon. gentleman, or at least many of you from the east coast, will be well aware of the problems in regard to the salt cod fish industry in particular. We seem to meet crisis after crisis.

We have been endeavouring to find at least part of the answer to the problem. I might mention, to cover the earlier question, that the reduction in this vote for technical services to fishermen is mainly accounted for by the fact that a good deal of work that is being done in the industry on refrigerated sea water for salmon and halibut has reached a stage where it has been taken

over by fishing firms on the west coast and our investigation is really completed. That accounts for some of this reduction.

Another part of the reduction would be accounted for by the fact that we have an installation in Catalina. This is a continuous drier installation that was completed last year. That would reflect another reduction this year in our estimates.

In regard to the Valleyfield program and its purpose, as the minister has already explained, Valleyfield is not a research station in the sense of the stations of the research board. We take, shall I say, the recipes that are developed by the research board and other research agencies, for that matter, and put them into use at Valleyfield. This is a plant for the application of recipes developed by the research board and commercial research establishments.

I will refer to this aspect very briefly because the deputy minister has already mentioned it, but our work on refrigerated sea water is an operation of this plant, taking the facts that our scientists have learned on the west coast and attempting to apply them to the situation on the east coast.

We feel this has great possibilities in retaining the quality of the fish on the east coast.

The deputy minister has also referred to the desalting of salt cod. There has been a tendency over the past few years for fishermen to heavy salt their fish. They are getting away from the days when the fishermen and his wife and children dried fish in so-called fish flakes. I think that process is something in the past. It was carried on for perhaps 400 years without change. The situation is rapidly changing.

With this change fishermen find it much easier and more profitable to them to heavy salt their fish. At the same time we have to bear in mind the market requirements in an effort to place the industry in a position to take advantage of the markets and times for heavy or light salted fish. We have been working on the problem of desalting of fish. This work has already been done extensively in research board stations, particularly the station at Grande river. We are now applying in semi-commercial quantities this desalting process.

Many firms in the past have, of course, desalted heavy salted fish. There is nothing very new about that. However, nobody has a recipe to pass on to the fishermen or to the operators.

We also have a project with the introduction of what we call a continuous strength brining process. The salt cod in the past has mainly been salted in bulk. The old system involved salting for several days. This continuous strength brining process will provide a continuous full strength pickling process. This will mean the curing of fish in the matter of hours rather than days.

We also produce small commercial quantities of types of salted fish depending on the market. For example, Portugal has one particular requirement in size and quality. The Italian market has another requirement. The Spanish market the same, and so it goes.

Fishermen in the past, as I have already indicated, cured their own fish but they no longer do that. We are rapidly approaching the stage that a great percentage of fish will be dried in large commercial driers, on which we have been working for some years. Fishermen definitely have an art in curing fish and we are trying to bring that art into the drying plants. We are working on that problem in Valleyfield with the hope that we can pass on this information, and with the intention of passing it on, to the large centralized artificial drying plants.

Many of the members will have seen the salt cod packed here in Canada. I imagine that some of you have been in the markets to see some of the packages being displaced. Again we have been packing fish and handling

fish in the same way as it has been done for the past 300 or 400 years. We feel there can be considerable improvement in packaging. We are adopting the practices of some of the other food industries and working on consumer packages and better packages generally.

I should say again, as the minister has already indicated, that the work which we are doing at Valleyfield has regard to the salt cod industry at this time. This work is done primarily for the salt cod industry and for the fish industry in eastern Canada. However, there is no limit placed on the amount of work that we expect to be doing in Valleyfield. I imagine we will gradually expand to other products and other processes.

Mr. CROUSE: From information that has been supplied to me it would appear that this plant at Valleyfield is definitely duplicating effort. The federal government I believe entered into an agreement with a commercial firm in Bonavista a year prior to the opening of the plant at Valleyfield for the purpose, as we have been informed, of proving if it was economically sound to produce light salted codfish in artificial driers.

We were also informed that this project would take three years. If it proved to be economically sound the commercial plant would continue with operations. If it proved to be not economically sound it would turn back into a federal research board project, is that correct?

In any event I believe it has been demonstrated in a private plant that light salted codfish can be economically dried in artificial driers. I am wondering about the economics of setting up this expensive plant at Valleyfield at a great cost to the taxpayers when this work has been previously done in these other plants with a large amount of federal assistance.

There is also the question in my mind in regard to the further plant being built at La Scie. There appears to me to be a considerable duplication in this regard. These projects are all being conducted in the one province and it is doubtful to me that this should be so. There is no similar assistance being provided in Nova Scotia, New Brunswick or in Prince Edward Island. I would like to know the reasoning behind this continued experimental work especially in view of the fact that we have already discovered some of the facts.

I would also like to know why this Valleyfield plant was located there. I understand it is practically inaccessible except by helicopter during five months of the year. There is no road into it, according to Mr. Pickersgill who stated in the house that he would like the government to build a road to this plant. I also understand there is not a very good fresh water supply and that the icing conditions are extreme. Perhaps Mr. Pickersgill would have something more to say about this than I have. I understand you can only reach Valleyfield by boat and I am wondering why it was located there in this inaccessible place at such a cost to the taxpayer.

Mr. MACLEAN: Mr. Chairman, there are one or two things I would like to clear up first, if I may.

To begin with, the plant referred to at La Scie is not a federal government establishment at all. We have nothing to do with that plant. It is a plant which was established by the provincial government of Newfoundland.

In addition to that it has nothing to do with the processing of salt cod, it is a filleting plant, I believe.

As far as some of the other questions are concerned, I would like to have it clearly understood that this plant at Valleyfield is designed as a pilot plant for various process developments in the salt cod trade. We hope as a result of the establishment of this plant that the salt cod industry can again become economical. The salt cod industry is one that caters to low-cost markets. Most of the salt cod products are shipped to points such as the West Indies, Italy, Spain and so forth. This is in direct contrast to such products as lobster, salmon, scallops and things of that sort. Those products are directed

toward entirely different markets. The salt cod industry caters to a low-cost market. Salt cod is a staple and basic food for many people.

The purpose of the plant at Valleyfield is to try to find ways and means of expanding the markets or at least preventing them from declining and contracting. There are many aspects to this: finding ways of producing a more attractive product; a better quality product that is more uniform so that a buyer will know exactly what he is buying when he wants a certain quality or type of fish; also such things as packaging, distribution and so on.

The work that is being done there is being done for the whole salt fish industry in the entire country. That is what the accent is on in this plant at the present time.

If those problems become solved the plant can be turned to other uses.

There is little or no duplication between the work that is being done in this plant and any other experimental work that has been done by the Department of Fisheries in years past.

As for the location of the plant, I take no responsibility for that. I find that it is a fait accompli.

As Minister of the Department of Fisheries it is my responsibility, without passing any comment on the wisdom of the decision as to the location, to try and get as much value for the taxpayer's dollar as is possible as far as the plant is concerned.

There are difficulties involved in construction anywhere in Newfoundland. Some of those difficulties certainly applied to the plant at Valleyfield.

One difficulty that was mentioned had to do with the question of sufficient supply of fresh water. That problem has been solved satisfactorily, I believe.

In any event, as I said earlier, I take no responsibility for the location of the plant. I do take the responsibility for making this plant as great an asset to the codfish industry especially, and the whole Atlantic coast, as it is possible to make. We hope it will be advantageous to the cod industry by improving the production of salt cod, and by producing under new and improved methods. We hope this project will result in high quality and more standardized attractive products for merchandising.

Mr. PICKERSGILL: Mr. Chairman, since Mr. Crouse has mentioned my name and in view of the fact that everybody knows that this establishment is in my riding I would like to make a few observations in regard to some of the points he has raised.

In the first place in regard to the inaccessibility of Valleyfield, I might say that in spite of the fact that the election was held at a most inappropriate time of the year I was able to get there, without using a helicopter.

Mr. KEAYS: That was in sheer desperation.

Mr. PICKERSGILL: There was no desperation in my situation.

Mr. McWILLIAM: It is not apparent in the result.

Mr. PICKERSGILL: I understand there are about seven miles of road still to be built and then it will be possible for Mr. Crouse to take his car and drive up to the North Sydney, put it on either—

An Hon. MEMBER: The *William Carson*?

Mr. PICKERSGILL: I am not sure whether the present government will be able to get the *William Carson* going into Port aux Basques but there is always some way of getting cars across. He will be able to drive to Valleyfield by October, I should think and I hope he will.

In that connection, I wonder if the minister could say whether any effort is going to be made to establish some sort of official visit to this experimental station? I think if we call it an experimental station instead of a plant a lot of the misconceptions that Mr. Crouse has would be overcome. That is what I think it is.

It was planned in happier days that there would be an official opening of this plant. I think it is now perhaps a little late to arrange that, but it does seem to me, sir, that there would be great advantage if the government would make some special arrangement, perhaps after the road is opened, so there will be no doubt about the accessibility. It would be advantageous to have a representative group of people from the eastern provinces visit this experimental station to see for themselves really what this plant is.

I think every member of the committee knows that I have a good deal to do with the decision which was made by the government, of which I was a member, to build this experimental station where it is. The exact location was not chosen by me. The location was chosen on the advice of the officers of the Department of Fisheries.

The feeling of the government at that time was that the research station at Halifax was doing a marvellous job—it still is doing a marvellous job—but it was not, as Mr. Bradbury has very properly said, engaged in industrial research; it was engaged in basic research.

At that time we saw a rapid decline of the light salted codfish products and a move to the heavy salted codfish. The inevitable result was that there was going to be an over-production of heavy salted cod with a pressing market for light salted cod. That is a consideration of real importance. I am sure that Mr. Crouse will appreciate that some means had to be found of producing light salted cod artificially, and producing it at a cost that would make it economical.

This experimental station, as I understand it, at Bay Bulls, which took place before I ever was in Canada, did not demonstrate that light salted cod could be produced artificially and be done economically at all.

I do not think the experiments which took place at Bonavista demonstrated that it could be done economically. This experiment demonstrated that first-rate Newfoundland fish could be produced, but did not demonstrate that it could be done economically.

It is quite obvious that if this great industry—the oldest industry we have—is going to expand and prosper that we must produce a kind of fish that the European markets want and a kind of fish that some of the Caribbean markets want. That problem is by no means solved yet. It seemed that the logical place to put an experimental station for the purpose of solving that and similar problems was in the province which had traditionally produced light salted cod. There is no problem about the heavy salted cod which was produced on the mainland, and that was the reason for the choice of a location in Newfoundland. It seems a very sound one. When all is said and done, this experimental station is really analogous to the federal experimental farms located throughout the country. They concentrate in various areas on the important products of that area, and it does seem to me we were a little late in getting started on this problem. Perhaps the fishing industry has not had the same amount of attention directed toward these problems as the farming industry has. This is not surprising in view of the relevant importance and relevant number of persons engaged. But it seems to me we would be doing no service to the fishing industry of the eastern part of Canada if we attempted to discourage the government or the treasury from doing everything possible in the way of research in order to preserve and expand that industry which employs so many people and to which so many of our people are going back at the present time, because they cannot find other employment.

Mr. CROUSE: I do not take exception to the construction of the plant in Newfoundland if the plant is needed. My reasoning was in regard to the location of the plant. I could not follow the reason for the plant being in this inaccessible spot when other more accessible places were available in Newfoundland. Possibly St. John's would have been a more suitable location. I also

question the need. I believe it was proven by the fisheries research board some twenty years ago that light salted codfish could be dried artificially in a plant. If it was found by the merchants in Newfoundland who are in the salt fish business that they require further information, then I cannot follow the reasoning this work should be done at the expense of the taxpayers of Canada. Similar plants operating in Nova Scotia and New Brunswick have offered their facilities free of charge to the government to carry out any experimental work they desire for the benefit of the industry. That offer has been freely made. It was never accepted and I cannot follow the reasoning. Of course, as has been admitted by the minister, it was carried out. It is a fait accompli by the former administration. I still raise objection to the continuance of throwing good money after bad when we have provided plants that are making their facilities available at much less cost than we are expending on this present experimental plant. It looks to me like a duplication.

The CHAIRMAN: Shall item 133 carry?

Mr. ROBICHAUD: No. I have another question which is of major importance to our fishermen and I believe this is the proper item under which to bring it in. It is true it has something to do with the fishery research board but its practical application comes under this heading. It has to do with the herring fishery. I think we all know the Gulf of St. Lawrence is one of the most prolific herring fishing grounds in the world. Despite the research which has been made by the fishery research board, our herring fishermen, or the great majority of them, are still using the fishing methods of their great grandfathers. Following the findings of the Atlantic herring investigation committee, which I believe operated for a period of ten years in conjunction with the Atlantic provinces and Newfoundland in cooperation with the federal Department of Fisheries, there must have been findings or results which could be made applicable in a practical way by fishermen.

I believe it is the duty of the federal government to take advantage of those findings and pass them along to the commercial fishermen in order that our herring fishermen can use more modern technical methods in fishing. As I have just said, most of our fishermen still use the old drifting method with small boats, and this results in a very short season. The only time he can get the herring is during or close to the spawning period. This limits the herring fishing season to a period of five or six weeks in most areas of the Atlantic provinces.

Therefore, Mr. Minister, I would suggest that the department take a firm stand to make those findings available to the fishermen. There is an unlimited market for herring. There are so many ways and means or methods of processing herring. The market is there and it is unfortunate that a country like Canada should import herring from Iceland or Norway when we have at our door a tremendous amount of available fish. I realize that our fishermen with their outmoded methods are not in a position to follow the schools of herring, and this is where the department could be of tremendous advantage to the industry, by making available or instructing our fishermen to learn more modern practical methods in fishing for herring. The market is there; the processors are there, and the fish are there. It could be used, as I have said, in different ways and it would be of more advantage to the industry if the methods known by the fisheries research board could be made available to the fishermen.

Mr. CLARK: Mr. Chairman, I think Mr. Robichaud is quite right. The exploratory herring fishery work is going on this year and this question of new methods or techniques of catching is being proceeded with. We have under way now the use of a mild-water trawl in the New Brunswick area. We have

demonstrated its feasibility on the Pacific coast in catching herring. We are transferring the results of this to the New Brunswick area and the work is going on this summer.

Mr. ROBICHAUD: Where is it being used?

Mr. CLARK: Off Caraquet.

Mr. ROBICHAUD: It will be used this summer?

Mr. CLARK: Yes.

Mr. LEGERE: I do not agree with Mr. Robichaud and I will tell you why. We have herring fishing in Nova Scotia around Yarmouth, Clare, and Shelbourne, which is the riding I represent. I think instead of teaching them how to catch herring, they should install places where they can sell them. That should be the first consideration. I know from practical experience I have seen them come in with sixty or seventy barrels of herring and they have had to dump them back in the water after they had worked all night to catch them. It is no use teaching them how to catch something if they cannot sell them afterwards.

Mr. ROBICHAUD: This refers back to my first argument, and the reason they have not the facilities to take care of the catch is because the season is limited. It is so short that no company or fish dealer would go to the expense of setting up a modern plant to handle the catch on account of the lack or the availability of fish. As I have said, the herring are available under the outmoded method close to the spawning period. No plant is able to operate unless the season is extended to such a period where it would be economically sound for this plant to operate. As far as the marketing of fish is concerned, I do not think it is the duty of the department to establish processing plants all along the shore and I know if herring was available anywhere on the Atlantic coast area, that the dealers would establish the plants to take care of the production.

Mr. LEGERE: I object to that. In our area the Vital Food people from New York are the biggest distributors of pickled herring in the world. They are interested in getting all the herring they can, but this year they still have last year's catch lying in New York. They are unable to sell it.

Mr. MACLEAN (*Queens*): It is a complicated problem and I think the discussion so far has demonstrated that very point. It is not an easy problem. The department has been doing and will continue to do experimental exploratory fishing for herring. The results of the investigation of course may make a problem for the use of the herring. Large quantities of it are canned and smoked and processed in other ways. There is a very large market for herring meal produced in a reduction plant. Reduction plants can use a vast amount of herring as long as it pays to do it. Then there is the matter of cat and dog foods.

Mr. LEGERE: Down home they point out to me that herring is not as good as the offals from the codfish, polluck, haddock and so forth for making fish meal. They prefer to have these instead of the herring. We have a fish meal plant located in the Shelbourne area and they do not use herring. They use codfish, polluck, haddock and other species.

Mr. MACLEAN (*Queens*): There are plants that use herring exclusively. They produce herring oil and if a plant is properly designed, they can produce herring oil and herring meal. Herring have a high oil content. There is a huge market for it.

The CHAIRMAN: Shall item 133 carry?

Mr. PICKERSGILL: Before we leave this item, there is another question I would like to put to the minister. I do not know whether his attention has been drawn to the speech made by Senator Pratt in the Senate on the first of July. If he has not seen it, I would recommend it for his attention. In that speech he made a suggestion which I have heard him make privately before, that there is an immense field for experimentation and industrial research in the field of processing codfish and other ground fish. There has never been much success up until now with the canning of codfish, but Senator Pratt made a suggestion there—and I think everyone knows he is not a theorist; he is a fish merchant with a long record of successful operations. It might well be that new methods could be found for treating cod particularly and other ground fish as well—canning it and providing a food that would be acceptable in the market which would pay much higher prices than the Caribbean market.

Has the department undertaken any kind of research along those lines or do they contemplate doing so?

Mr. MACLEAN (*Queens*): To begin with Mr. Pickersgill, I have a copy of Senator Pratt's speech, but I have not had time to read it. However, I certainly will read it and I might say that we in the department do not look with a closed mind on the problem of the use of fish which may now go into the salted product. We look at the problem as a general one. We may find a solution in entirely new processes thus substituting salting for some other forms of processing. As far as canning codfish is concerned, it is not entirely unknown. During the last war quite considerable amounts of codfish were canned and still are being canned to some extent. It is commonly known as chicken haddie.

Mr. PICKERSGILL: I have eaten some myself.

Mr. HOWARD: I have a question. I believe it comes under item 130, but I was engrossed with something else at the time. Recently in Kitimat there were two court cases, one was with respect to a fisherman leaving a salmon gill net unattended while in use, and operating a salmon gill net longer than the maximum 200 fathoms. Arising out of the court case judge Schultz, the county court judge, in commenting on the charges said in effect that the Fisheries Act is full of difficulties, and according to this press report, with simpler wording would have been avoided. I do not know really to what he is referring but I wonder whether it would not be advisable for departmental solicitors or officials to get in touch with judge Schultz and find out what he was getting at. If that was so, maybe it would be possible to simplify the wording of the Fisheries Act in this regard.

Mr. MACLEAN (*Queens*): I am glad to have that suggestion and I will follow it up. There are perhaps difficulties in the Fisheries Act at times.

Mr. HOWARD: I do not know to what he is referring.

The CHAIRMAN: Shall item 133 carry?

Item agreed to.

The CHAIRMAN: There is a supplementary item No. 555 at page 4 of the supplementary estimates. Shall this item carry?

Item 555. General Services—Industrial Development Service—further amount required	\$35,000
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Mr. LEGERE: In regard to this fishing bounty, I would like to direct a question.

The CHAIRMAN: We are not supposed to discuss it. It is a statutory item not referred to this Committee.

Mr. MACLEAN (*Queens*): I believe, we can discuss it but I think these statutory votes are not referred to the committee, so perhaps we will have to leave discussion on them until they come up in the committee of the whole.

Mr. PICKERSGILL: Would the chairman permit me to say a word on the point raised by him?

The CHAIRMAN: Yes.

Mr. PICKERSGILL: I think it always has been the practice in the committee of supply to allow any reasonable discussion of the statutory items on the first item of the department and I think you would be unduly restrictive if we did not proceed. It would mean this would come up in the house when it might well be disposed of here, and in this way you save everyone's time. I would hope the chairman would allow the honourable member to proceed.

The CHAIRMAN: Yes. I permitted a question on that item at the last meeting, so I have no objection.

Mr. LEGERE: I probably worded my question wrong, but I wish to put before the committee for their consideration the fact that in my riding those applying for fishing bounties must fish three months in the same boat and catch 2,500 pounds of fish. If a man fishes in one boat for two months and in another boat for a month, it makes the three months, but he cannot get the fishing bounty.

Mr. CROUSE: Yes he can. Mr. Chairman, I have had some experience in this particular problem. It would be necessary for the fisheries inspector who checks the information to add the number of months. We in Lunenburg, have as you know, large deep-sea fishing fleets and at times certain crew changes take place. We possibly work at fishing for seven or eight months of the year and yet they may be on four or five different boats during that period of time. At the end of the season the fishing companies give their time to the Department of Fisheries inspector in the area and he adds it up.

Mr. ROBICHAUD: The misunderstanding might be this. There is one part of the fishing bounty paid on a tonnage basis for the boat, but if the boat is not used for three months, the boat share may not be entitled to a fishing bounty, but the fisherman would get it if he has his 2,500 pounds.

Mr. LEGERE: He has put in a divided time of three months.

Mr. ROBICHAUD: If he puts it in in two different boats, he would get it.

Mr. LEGERE: In this case there was no tonnage on the boat whatsoever. I was on the wharf when he was refused his bounty because he fished in two boats and had not put in a three-month period in any one of them. He did not qualify. Of course, I should add that this happened a few years ago. Perhaps things have been straightened out since then. I was just wondering if it would be possible again?

Mr. MACLEAN (*Queens*): Mr. Chairman, I cannot be sure that this was the case a few years ago, but what Mr. Legere says may have been right a few years ago. However, at the present time if he puts in the required amount of time and catches the regulation amount of fish, he will get the bounty whether he fishes from two boats or only one.

Mr. CLARK: The regulation says that one claim only will be allowed in each season and that the claimant may have fished in two vessels, or a vessel and a boat, or two boats.

Mr. LEGERE: I would like to know what Mr. Robichaud had in mind when he wanted to do away with this bounty and do something else with the money. Would you tell me what you had in mind?

Mr. ROBICHAUD: Mr. Chairman, I do not think it is up to me to answer this question. However since it is being put to me, I will answer it. It has been

discussed before at fishermen's meetings in Halifax or Amherst and it was felt that there may be some practical ways of applying this money instead of distributing it to the fishermen as it is now. I think this year the fishermen will receive about \$5 or \$6. In normal years it may have been between \$7 and \$8 or \$9 at the most and what I had in mind when I brought this matter to the attention of the committee was that maybe it could be used to better advantage, so that all the fishermen could benefit; for instance, as insurance coverage. They would have \$160,000 every year which could be applied to the fishermen's indemnity fund as an insurance coverage which will protect every fisherman, or it could be used as a life insurance policy for fishermen. We know quite a few of our fishermen are lost at sea every year, and many of them have no insurance coverage. If every commercial fisherman was covered, say in the amount of \$500 or \$1,000, this money could be used as a life insurance. There are many other ways in which this money could be used, but as we were told the other day it is a statutory regulation and is applied on a certain basis as per a treaty agreement with the United States. It may be that the federal government does not have the authority to change the application of this bounty, but certainly it could be used to better advantage than it is now by distributing in the spring of each year \$7 or \$8 to an individual fisherman.

Mr. CROUSE: Mr. Chairman, from personal experience, I think we should tread lightly on that suggestion. It is one form of gratuity which the fishermen look upon as their right. The \$5 or \$6 is greater than gold, and if they want to put it into life insurance or some protection, they are free to do so. To change it would be to carry bureaucracy too far. If you put it to a vote, you would find that all the fishermen would vote to have it continued as at present.

Mr. ROBICHAUD: This will be seen.

Mr. CROUSE: Granted.

The CHAIRMAN: Shall item 555 carry?

Item agreed to.

The CHAIRMAN: Now, gentlemen, it is eleven o'clock. We will adjourn until 9:30 a.m. on Thursday, July 17.

—The committee adjourned.

HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958

STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 3

Estimates (1958-59)—Department of Fisheries

THURSDAY, JULY 17, 1958



WITNESSES

Honourable J. Angus MacLean, Minister of Fisheries; Mr. G. R. Clark,
Deputy Minister, Mr. S. V. Ozere, Assistant Deputy Minister.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958

STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: Roland L. English, Esq.

Vice-Chairman: Albert DeB. McPhillips, Esq.

Messrs:

Anderson	Howard	O'Leary
Batten	Keays	Phillips
1. Belzile	Legere	Pickersgill
Bourget	Macdonald (<i>Kings</i>)	Richard
Browne (<i>Vancouver-</i> <i>Kingsway</i>)	MacLellan	(<i>Kamouraska</i>)
Carter	Matthews	Robichaud
Crouse	McGrath	Speakman
Danforth	McQuillan	Stefanson
Drysdale	McWilliam	Stewart
Gillet	Michaud	Tucker
Granger	Morris	Webster (35)
	Noble	

(Quorum 10)

Antonio Plouffe,
Clerk of the Committee.

1. Replaced by Mr. Murphy on Wednesday, July 16th.

ORDER OF REFERENCE

WEDNESDAY, July 16, 1958.

Ordered,—That the name of Mr. Murphy be substituted for that of Mr. Belzile on the Standing Committee on Marine and Fisheries.

Attest.

LEON J. RAYMOND,
Clerk of the House.

MINUTES OF PROCEEDINGS

THURSDAY, July 17, 1958.

(4)

The Standing Committee on Marine and Fisheries met this day at 9.30 o'clock a.m. Mr. Roland L. English, Chairman, presided.

Members present: Messrs. Anderson, Batten, Bourget, Browne (*Vancouver-Kingsway*), Carter, Crouse, Danforth, Drysdale, English, Granger, Legere, Macdonald (*Kings*), Matthews, McWilliam, Murphy, Noble, Pickersgill, Robichaud, Speakman, Stefanson, Stewart, and Tucker. (22)

In attendance: The Honourable J. Angus MacLean, Minister of Fisheries; Messrs. G. R. Clark, Deputy Minister; S. V. Ozere, Assistant Deputy Minister; J. J. Lamb, Director, Administrative Services; A. L. Pritchard, Director, Conservation and Development Service; J. L. Kask, Chairman, Fisheries Research Board; L. S. Bradbury, Director, Industrial Development Service; W. C. MacKenzie, Director, Economics Service; H. V. Dempsey, Director, Inspection and Consumer Service; T. H. Turner, Director, Information and Educational Services; J. G. Carton, Departmental Solicitor; Ian McArthur, Chairman, Fisheries Prices Support; E. B. Young, Assistant Director, Conservation and Development Service, W. R. Hourston, Chief, Fish Culture Division; J. A. Albert, Chief, Financial and Stores Branch; Mark Ronayne, Assistant Director, Information and Education Service; A. W. Abbott, Assistant Chief, Financial and Stores Branch; H. A. Wilson, Fisheries Research Board; R. Hart, Industrial Development Service, and Mr. J. J. Hutchison, Chief, Purchasing Branch.

The Committee resumed its examination of the estimates of the Department of Fisheries.

Items 134 to 143—Field Services—were called. The minister was questioned; he was assisted by the Deputy Minister, Mr. George R. Clark, and his Assistant Deputy Minister, Mr. S. V. Ozere.

In answer to Mr. Murphy who enquired whether witnesses would be called when the Committee studies item 144, being the International Commissions (Canadian share of expenses), the Minister said experts on the subject would be present.

At the suggestion of Mr. Murphy, arrangements for the showing of films will be made for Friday, July 18. Members will be informed of the time and place.

The Minister and the Deputy Minister were questioned at some considerable length on guardians and wardens.

At 10.55 a.m. the Committee adjourned until Friday, July 18, at 9.30 a.m.

Antonio Plouffe,
Clerk of the Committee.

EVIDENCE

THURSDAY, July 17, 1958.

9:30 a.m.

The CHAIRMAN: Good morning, gentlemen. We have a quorum and we shall proceed to the study of the second group comprising items 134 to 143, which are divided into four branches. The first branch comprises items 134, 135 and 136; the second branch comprises items 137 and 138; the third branch items 139 and 140 and the fourth branch items 141, 142 and 143. If you find it necessary to discuss certain points, you can always refer to other items of the second group. I am pleased to welcome this morning another member of the committee, Mr. Murphy. As you know, Mr. Murphy replaces Mr. Belzile.

Mr. MURPHY: Mr. Chairman, before we consider item 144 which concerns the international commission on the Great Lakes fisheries, could we have a statement from the minister regarding a film that was shown to our committee some three or four years ago? I was wondering when this film might be shown as it sets out the different specimens of the lamprey. I would also like to know what witnesses we should have available when this item comes up for discussion.

The CHAIRMAN: If there is no objection we can always pass item 144.

Hon. J. Angus MACLEAN (*Minister of Fisheries*): If I understood you right, Mr. Murphy, you wanted to know what the possibilities were of seeing this film before we reach item 144.

Mr. MURPHY: I think it would be of interest to the members of the committee if they could see the film in order that they would know the extent of the menace to the fishing industry in the Great Lakes.

Mr. MACLEAN (*Queens*): Mr. Chairman, the film to which Mr. Murphy refers has to do with the sea lamprey. The particular film in question is an American one. We have a copy of it available and we can arrange to show two or three films which I think would be of general interest to the committee. There is one film on salmon showing its struggle for survival; I think this is the most recent film the department has produced. Another film which we have pertains to the fisheries of Great Slave lake. If it is agreeable to the committee, I would suggest that we arrange to have these three films shown some evening between seven and eight p.m. This, I think, would be a more suitable time. I do not think it would be wise at this stage to take up the actual time of the committee during our regular sitting hours. If it is agreeable to the committee, we could arrange to have these films shown in some other suitable room. We could give advance notice of the times of showing and we would try to select a time when there would be as little conflict as possible. If the committee so desires, and if they think it is impossible to have a time which would be suitable to all members, we could run the film twice. We could run it once between seven and eight p.m. and again from eight to nine p.m.

Mr. CARTER: How long are they?

Mr. MACLEAN (*Queens*): Roughly twenty minutes each.

Mr. CARTER: You could show them in an hour?

Mr. MACLEAN (*Queens*): Approximately.

Mr. ROBICHAUD: We are sitting Friday night, but that would be tomorrow night between seven and eight p.m.

Mr. MACLEAN (*Queens*): Yes, that may be arranged.

The CHAIRMAN: Does everyone agree?

Agreed.

Mr. MURPHY: Mr. Minister, would you speak to the other matter?

Mr. MACLEAN (*Queens*): There will be a meeting of the committee tomorrow morning and we could make a definite announcement as to when and where the film would be shown. It would probably be tomorrow evening unless there is something we are not aware of at the moment that would seriously conflict with the showing of this film.

Mr. Murphy also has inquired as to who would be available to give evidence when item 144 is before the committee. We have several officials, Dr. Sprules for example; and the Canadian agency doing the research in this field is our own research board. We can certainly have these people available; at least they will be available next week.

Mr. MURPHY: Would there be any likelihood of any of the members of the commission being in attendance or would it be necessary?

Mr. MACLEAN (*Queens*): Well, I do not think it would be necessary. Dr. Pritchard, who is a member of the staff of the department, is a member of the commission but unfortunately he is away at the present time and would not be available for some time. However, I think that all the information the committee would desire can be produced by the men I have already mentioned.

The CHAIRMAN: Are there any questions on items 134, 135 and 136?

Mr. ROBICHAUD: In regard to the production branch, I would ask Dr. Clark to tell us what measures are being taken to protect the shore fishermen or the inshore fishermen in the Bay of Chaleur area who are fishing cod by trawl lines and are being interfered with by small draggers. I believe the department has on record a number of complaints from the shore fishermen in this regard. At one time it was suggested there would be a line drawn across the Bay of Chaleur from Maisonnette Point to Paspebiac on the Gaspé coast. I understand that by an agreement with the province of Quebec and the province of New Brunswick draggers under 48 to 50 feet in length have been allowed to fish in the Bay of Chaleur while draggers over 48 to 50 feet in length are prohibited from fishing there. With the small draggers operating in the Bay of Chaleur I understand quite an amount of trawl gear has been destroyed by dragger interference. I wonder if the department could take measures to protect those shore fishermen against the operation of small draggers in the area.

Mr. CLARK: As Mr. Robichaud has pointed out, it is always a problem. The operations of the draggers of course are regulated by the conditions of their licence and they are supposed to respect the operations of what is referred to as set gear; in other words, the trawl gear to which Mr. Robichaud refers. We have these complaints from time to time. Of course, it is a very difficult thing completely to control or even to patrol with our own vessels.

When these reports reach us about interference we always investigate and if the name of the dragger is obtained by the fisherman who is complaining, then action is taken once we have the evidence. This, as I say, Mr. Chairman, is a problem which is always coming up because you have a conflict with the two types of gear. I do not know really any way in which the problem can be completely and 100 per cent brought under control. However, those are measures which we take to try to enforce the regulation and to protect the trawl or longline gear.

In regard to Mr. Robichaud's comment about the Bay of Chaleur area, there was an arrangement made a few years ago where the line was drawn, and these very small draggers are allowed to operate inside this line under the same conditions. They are to respect the set gear and stay away from doing any damage.

Mr. ROBICHAUD: I understand, Mr. Chairman, that it is impossible for the department to take measures that will be fully effective in protecting a percentage of fishermen using set gear, but would it not be possible in the department to have protection similar to what they have for some other purposes, for example lobster protection? In this instance they have a patrol boat stationed at Caracquet wharf. Would it not be possible to instruct this patrol boat to make regular patrols in the bay in order to keep these small draggers away from this set gear? In the last two seasons, this year more than ever, the fishermen along the Bay of Chaleur from Maisonnette up to the Stonehaven area and Grand Anse area are more numerous than they were in the past. There is no employment and they have to fish in order to earn a living. If it was possible to instruct the patrol boat to make regular patrols in this area at the same time they are patrolling the lobster grounds, it would be very effective in preventing these draggers from interfering.

Mr. CLARK: Those are the standing instructions, but if they are not being carried out, we will look into it. In fairness, I should make one further comment. We have a great deal of trouble with the longline gear fishermen in marking their gear so the draggers can see where their gear is set. It has always been a problem in cases where they have not marked their gear. They have the buoys out, and in a choppy sea it is difficult to see where the gear is set. They refuse to put flags up on their buoys and this adds to the problem.

The CHAIRMAN: Are there any further questions?

Mr. CARTER: Yes, I have a further question and I presume this is the proper item under which to ask it. Is the department planning to build or to provide some new boats for the chief supervisor of the river guardians in Newfoundland? I know the boats which they are using in my district are worn out. I am wondering if it would be in this item?

Mr. STEWART: It would be in item 136.

Mr. CLARK: Actually the question really comes under 136 which is construction or acquisition of buildings, works, land and equipment. The answer is, in these estimates under consideration we have not provided for the particular new equipment, but this is under constant review because it is important from our point of view to keep up the equipment and have adequate patrol vessels. I have no doubt that recommendations will be coming in regard to replacements if they are necessary in the coming year's estimates.

Mr. CARTER: Have any recommendations for replacements ever been received? I understood they were to be replaced.

Mr. CLARK: There is no provision at the moment in these estimates, Mr. Chairman.

Mr. CARTER: They certainly need to be replaced because the people are risking their lives going around in them at the present time. To begin with, they were second-hand boats and a great part of their life was consumed before they came to Newfoundland. We have been using these boats for the past seven or eight years. They are 40-foot cruiser type boats.

Mr. CLARK: Yes, I am aware of the situation. As I have pointed out, this is under review. No doubt, if it is required, provision will be made in the coming fiscal year to replace these vessels. I might point out, Mr. Chairman, that in vote No. 136, we have funds in the current estimates for replacement

of a vessel in the Newfoundland area which is a larger one than the one to which Mr. Carter is referring. This is a replacement of a 55-foot vessel to replace one which is now completely obsolete and in bad condition. I am referring to the Point May.

Mr. CARTER: When you are drawing up the estimates, would you take into consideration equipping these cruiser patrol boats with twin engines, because it is pretty dangerous if they go out with only a single engine. You are unable to sail or row these boats; you can only drift towards shore. I believe they should be equipped with twin engines.

Mr. PICKERSGILL: Even that is not an absolute guarantee, as I know.

Mr. CROUSE: Are these boats not equipped with an anchor?

Mr. CARTER: Yes, but I doubt if they are equipped for 100 fathoms.

Mr. CROUSE: What value is the anchor if they do not have the lines?

Mr. ROBICHAUD: I think you should know better.

Mr. CROUSE: I think the department should realize the lines should be there. They should be equipped with a 100-fathom line if necessary, or a 200-fathom line.

Mr. CARTER: A 200-fathom line would be necessary.

Mr. CROUSE: I think a 55-foot boat would be large enough to carry a 200-fathom line or more.

Mr. CARTER: I do not think these boats are 55-footers; they are between 35 and 38 feet.

Mr. MACLEAN (*Queens*): In any case, as replacements are made, we will review the situation carefully to make sure that all reasonable safety precautions are taken and safety equipment provided. We are conscious of the importance of observing all safety requirements and in providing as high a standard of safety as possible for our crews. In that regard, I may say we have been either successful or fortunate, or a combination of both. We have not had many accidents in recent years.

Mr. PICKERSGILL: I think this comes under item 134 and I would like to ask a question about the charter of aircraft. Could the minister or the deputy minister tell us just what is involved in this item? I cannot pretend to be entirely ignorant of it, but as I understand it, it involves the use of helicopters only. I was wondering if the department had given any thought to the possibility of a combination of helicopters and fixed-wing aircraft, which some of us think might suit a little better the conditions the department has to face.

Mr. MACLEAN (*Queens*): The deputy minister would be prepared to answer that question, Mr. Chairman.

Mr. CLARK: Mr. Chairman, the item under vote 134 of \$200,000 is for the charter of aircraft service chiefly in the Newfoundland area. The reason it is under this particular vote of field services administration is because the aircraft are used for all of the services or branches in the area. In this particular instance it covers the charter of helicopters under contract. The answer to Mr. Pickersgill's question is yes. We have given consideration to a combination, in other words a helicopter plus a fixed wing aircraft. We think perhaps next year this combination will be available.

Mr. PICKERSGILL: My recollection is that the department feels they have made a very considerable saving by using aircraft. I think for many of the members of the committee this may be a new subject. Has Mr. Clark any figure as to what savings have been effected by using these modern methods?

Mr. CLARK: Well, Mr. Chairman, we have not tried to calculate the actual saving in dollars and cents. This would be almost an impossibility, but we do know that the use of this service has saved us a very considerable amount of money due to the time element involved in getting around Newfoundland. In other words, if you send officers to certain sections in Newfoundland, you have to travel by boat. This may take weeks, whereas by aircraft you can do it in a few days.

Mr. PICKERSGILL: It has resulted in a great economic saving.

Mr. CLARK: It has been a considerable saving in time and personnel.

Mr. CARTER: Do we have a boat in Newfoundland for the Newfoundland patrol service equivalent to the Cygnus?

Mr. CLARK: We have not anything in the Newfoundland area as large as the Cygnus, but when she is required, particularly at certain seasons of the year, we send the Cygnus over from the maritimes area to act as the patrol vessel in outside waters.

Mr. LEGERE: I have a problem in my riding which concerns the quality of lobsters inshore. During the past year it has been noticed that a great number of the lobster are one-clawed and pistols. As you know, the American people are getting very discriminatory now; they want 2½-pound and 1½-pound lobsters and all two-clawed. The dealers are now afraid that there will be a price range between two-clawed lobsters, one-clawed lobsters and pistols. By pistols I mean those which have no claws at all. I was wondering what could be done to alleviate this situation.

Through personal experience, last fall we caught lobster and when they were sent to the states the report came back that 35 per cent were one-clawed and 15 per cent were pistols and there were very few selects. Consequently, we found it difficult to sell these lobsters. One firm we were selling to refused to take any more and we had to go to someone else. I know it was not his fault. His argument was that he could not sell those lobsters on the market. What can be done toward educating the fishermen to be more careful in the handling of the lobsters, especially the ones they throw back in the water? The fact that some of the traps still have those very large openings on the bottom in order to allow the small ones to get out, is responsible for so many of the one-clawed lobsters. They tangle their claws out and when the fishermen haul them in over the boat they lose their claws. Could this department do something or investigate what could be done to alleviate this situation, which probably will be a distressing one in time to come?

Mr. MACLEAN (*Queens*): To me at least this is a new problem. I appreciate the importance of it, although on the surface it appears as an unimportant thing. However, it is important because it has a bearing on the marketability of the lobsters. We will certainly look into the situation to see what can be done. In passing, I might say that we are doing a lot of experimentation in design of new types of lobster traps from new materials and so on and this is a consideration that can be taken into account in that program.

Mr. CARTER: Could we have some information about the new lobster traps? How do they compare with the old ones?

Mr. MACLEAN (*Queens*): Well, Mr. Chairman, if Mr. Carter is agreeable, it might be more suitable to discuss it on a later item.

Mr. McWILLIAM: Could the minister tell me what protective measures have been taken so there will be no recurrence of the destroying of young salmon and the spawn from D.D.T. spray? Maybe I would be permitted to

ask what happened to the action taken by the department against the forest protective company. I ask this question to get information. I thought possibly it might be dropped, although I do not know. Could we have some information on that?

Mr. MACLEAN (*Queens*): If I might say a word on the general problem of the protection of salmon and other species of fish on the one hand, and the necessity for forest spraying on the other, I know it is a very difficult problem. It is one where you have to choose the lesser of two evils. When spruce budworm or other forest insects of this sort attack in epidemic proportions, something has to be done. It has been said of course that a spraying problem should not be carried on if it is going to interfere with other forms of life. This is a risk that has to be taken because if the forests are not protected you are going to end up with no fish anyway. If the forest cover is destroyed, the environment of the fish will be destroyed to such an extent that in the long run the loss will be greater or perhaps complete, whereas if the forest cover can be protected this will not occur.

However, protection of the forest has a detrimental affect on the salmon population. It is a very serious one, but it is not one from which the resources cannot recover. For a period of a few years there is bound to be reduction in the number of salmon, but there would be enough survive to regenerate the fish to the normal balance. This happens after a very few years. I think my deputy minister would like to expand on that.

Mr. CLARK: As the minister has pointed out, the use of the present insecticide, which is D.D.T. is extremely dangerous and toxic to fish life. Because of this problem a very serious attempt is being made now by our own fisheries research board scientists, our own fish culture branch of the department, the Department of Agriculture and the forestry people working with the companies to try to develop a suitable spruce budworm spray which, at the same time, will not affect the fish life. That work is going on now and there is some hope of success. The problem, of course, is while we work quite closely with the people who are doing the spraying and they try in their strip spraying to stay away from the headwaters and spawning areas of the rivers, this is not always possible.

The other problem is this: The D.D.T. which is sprayed on the trees has an oil base. It washes off in a rain and finds its way down into the rivers and streams. This has an affect on the fish; but we are very hopeful, Mr. Chairman, that the results of the investigation into a new type of spray will be successful.

Mr. LEGERE: There is another conservation method that has been broached, especially in Clark's Harbour, and that concerns berried lobster. They call them the mother lobster. Some are advocating that the government should buy the berried lobster and do what they did in the United States,—stamp them and then they remain government property, and would not be available for sale. I think that would conserve fishing, especially the production of lobster.

Mr. CROUSE: On that same subject, the fishermen in my own riding have said to me that the same situation exists in regard to the large lobsters they catch in Georges Bank, Grand Bank, Middleground and St. Pierre. The mother or berried lobster range upwards to twenty and twenty-five pounds in size. They are immense. At the present time these lobsters are consumed on the high seas where they are caught. The fishermen realize the tremendous effect it would have on the lobster population if they were brought in and turned over to a fisheries department inspector and then used to re-seed the inshore lobster grounds.

They have asked me if the department would give any consideration to paying for this type of lobster at the present time. There is no inducement to bring them to shore and if they could be encouraged to save these lobsters and bring them in, it would add to the growth of the stocks and improve the fishing as well as improve the gross for the fishermen who are landing them.

Mr. MACLEAN (*Queens*): Mr. Chairman, this to me at least is something pretty new, but I will certainly see that the possibilities in this regard are looked into. For example, offhand at any rate I have no idea of the quantities of these large lobsters that are caught in this way incidental to another type of fishing, but I will have it looked into and investigate the possibilities and the feasibility of the suggestion Mr. Crouse has made. I do not know whether it is something that would be justified or not, but in any case we will have it investigated.

Mr. BROWNE (*Vancouver-Kingsway*): I would like to ask a question similar to the one we had mentioned regarding D.D.T. spraying. I do not know the powers of the department in regard to the oil pollution of salmon bearing streams and so on. What power of prevention do they have in this regard?

Mr. MACLEAN (*Queens*): They have fairly extensive powers. I would ask the assistant deputy minister who was formerly head of our legal branch to answer that question more specifically. Under the Fisheries Act we have considerable authority along this line.

Mr. S. V. OZERE (*Assistant Deputy Minister, Department of Fisheries*): Mr. Chairman, when you speak of prevention, I do not think there is anything in the act that would enable the department to prevent spraying. There is a section in the Fisheries Act which makes it an offence for anybody to allow any substance to get into the waters that would be deleterious to fish life. Any time an offence of that kind is committed and the offender is apprehended, he is prosecuted under that section of the Fisheries Act. Unfortunately, the provision for fines under that section is not adequate. The fines are not sufficiently large to act as a deterrent. In any future revision of the act I think it would be desirable to consider increasing the fines themselves.

Mr. BROWNE: I rather had that feeling, and I think that most do a very good job. I know they do in Vancouver and they cut things down very quickly that come to their attention. I had the feeling that while they are on the job, the actual departmental people, there were probably other people working to prevent that from going on.

Mr. MACLEAN (*Queens*): I might say until recently that, generally speaking, the industries which have waste products and that sort of thing, which they might contemplate dumping into streams, our department works closely with such industries and points out to them the effects which might result and they have been extremely cooperative. Some industries have gone to very considerable expense, entirely on their own, to devise ways of preventing pollution. Generally speaking, the standard of citizenship, if you might call it that, has been very high. They have been very cooperative. There are exceptions, no doubt, but when the Fisheries Act was last revised probably what was contemplated more was individuals deliberately or carelessly contaminating streams rather than the possibility of the contamination of streams by large industries and all that sort of thing. So that, as Mr. Ozere has pointed out, depending on what the circumstances are and who you are dealing with in some cases the fines provided in the act would not be adequate.

Mr. LEGERE: Mr. Chairman, I would like to add a few more comments to what has just been said about buying a mother lobster. In the United States those lobsters are protected by the government. They are punched in the tail and no fisherman is allowed to have those aboard a boat. He must put them

back in the water. But in this part of the country I know from personal experience of having bought boiled lobster with roe in it. I do not know how long it would take that these would come out in the form of eggs, but if that lobster was caught and was not punched and was sent to the States and this form of roe was found it would not be long before the American people would be happy, because they would put these lobsters back in the water and build up their industry. I think if this did come out it would be prejudicial to the fisheries around our area anyway.

Mr. MACLEAN (*Queens*): This is probably an excellent suggestion. In any case we will have the possibilities investigated from a biological point of view—not only biological as the deputy minister mentioned, but from an administrative and financial point of view as well. But we will see what the possibilities are and we will certainly have this investigated.

Mr. PICKERSGILL: I wonder if the minister could tell us what is the difference between a fisheries warden seasonal and a fisheries guardian seasonal. I notice in the details in the estimates, pages 216 and 217, that the number of fisheries guardians has decreased or the number provided for has decreased from 365 to 317, and the number of fisheries wardens has increased from 105 to 130. Perhaps at the same time the minister might explain the decrease in the one case and the increase in the other. I notice, though while there is a decrease of 48 in the number of fisheries guardians there is an increase of as nearly as I can make out approximately \$16,000 in the amount of money, and there does not seem to be anything like the corresponding increase—oh, yes, there is quite a substantial increase also in the other case where the number of employees has increased.

Mr. MACLEAN (*Queens*): I think, Mr. Chairman, first for the information of the committee I should define what a guardian is and what a warden is. They do the same job of work but a warden, although seasonally employed, is a civil servant. He is selected by the Civil Service Commission at our request when an establishment is created. The guardians do the same job, they are there for the same purpose, but guardians are not civil servants, they are ministerial appointees.

There has been a trend over the years in most departments, including this one, to have as many of the federal government employees as possible in the civil service rather than ministerial appointees. Now, in theory at least this should be the aim, because when a man is a civil servant he has greater security in his job once he has been selected, you should have a wider group to select from and you have an opportunity of training a man because, although he is seasonally employed, it becomes more or less a career with him and he should become more efficient as experience is gained.

The increase in the number of wardens is not as great as the decrease in the number of guardians because they have a larger area to patrol. Man for man they are more expensive, because they work for a longer period and they cover a larger area and they have more travelling expenses than would a guardian who is a man appointed by the minister to carry out this work in a small area, an area where he lives ordinarily. Does that answer your request?

Mr. PICKERSGILL: I think it answers most of the questions I have asked, but it has raised perhaps as many questions as were answered and I have one or two more. First of all, it did not answer one question. It does seem rather strange that there should be a decrease in the number of guardians from 365 to 317, that is, a decrease of 48, and an increase of \$16,000 in the amount provided for remuneration. Does that mean that the remuneration of these guardians has been very substantially increased in the last year?

Mr. MACLEAN (*Queens*): This is a little bit misleading. At least part of this seeming anomaly results from the fact that this year there has been a general increase in salaries for the civil service and that accounts for most, I think all of the increase.

Mr. PICKERSGILL: There were one or two other questions that occurred to me as the minister was speaking. There really is a distinction without a difference between a warden and a guardian as I understand it. The only difference that matters between a warden and a guardian is that the guardian is appointed by the Civil Service Commission rather than the minister. Does that mean they are both included in the superannuation or excluded from it? Perhaps I might as well ask you one or two questions before the minister answers.

The second question came to my mind because the minister said, if I understood him, that the area of selection for wardens was more restricted than it was for guardians and I had understood that the exact reverse was the case; that in the case of wardens there were very narrow limits, although seasonal, that the civil service, when they had to make a selection in some cases, had to select from one side of the river instead of the other side; whereas there is no such restriction fettering the minister and I know there have been cases where the guardians have been chosen quite some distance from the place they were guarding and I wondered what the situation was in that regard.

The third point that occurred to me—I appreciated what the minister said about greater stability of employment and so on, and greater security. Does that mean that if a warden has once been employed and as long as he does not do something that justifies his dismissal he has the right to be appointed again next year?

Mr. MACLEAN (*Queens*): That is true in the case of a warden. He is on the same basis as far as employment is concerned as any other civil servant except for the fact that he is not a fulltime employee, he is not employed all the year round. Superannuation applies to wardens but not, generally speaking, to guardians.

Mr. PICKERSGILL: Are there some exceptions in the case of guardians?

Mr. MACLEAN (*Queens*): There are some ministerial appointees on federal jobs where, if they are in the employ of the government for a number of years, they have an option to contribute to the superannuation fund but not in the case of guardians.

Mr. PICKERSGILL: Are the salaries generally higher for wardens than for guardians?

Mr. MACLEAN (*Queens*): Yes, they are higher, I am informed.

Mr. PICKERSGILL: Does the minister know anything about this other question about the area of selection?

Mr. MACLEAN (*Queens*): Well, I would like to say a word about this. I would first, Mr. Chairman, like to assure Mr. Pickersgill that he is not the only member of parliament who has some misgivings about this problem, especially with relation to the area from which an applicant may be chosen as a warden.

Mr. PICKERSGILL: I have heard that.

Mr. MACLEAN (*Queens*): And this is something that we have been reviewing very carefully because although in theory the system may be excellent, one has to be very careful that in practice, that in application, the theory behind it is actually being carried out.

Now, we are reviewing the whole question of the areas from which a warden to fill a particular position may be chosen. As a result of the selection by the Civil Service Commission of wardens in certain cases what appears to be discrimination has occurred for a variety of reasons. For example, as you know in all civil service competitions veterans have a preference. Then there is an area preference, but area preference overrides the veterans' preference; so by devising a competition that restricts the area to a very limited area you may have the result of, in effect, eliminating all veterans from the competition, although there may be some highly qualified veterans apply, who may even lead the competition, but then they are excluded from employment because they live outside the area to which it applies.

This is something which is very important and when a situation arises where discrimination seems to have taken place merely by the Civil Service Commission applying the regulations this is not a very good thing. It does not lead to good public relations as far as the department is concerned and this is something that has to be reviewed very carefully and revised where necessary.

My feeling is that the area to which preference applies in the selection of the warden should not be too small, too restricted, so that you have a reasonable selection to choose from, because after all the man who is selected becomes a civil servant with all the protection of the civil service and it is reasonable that to acquire such a position he should acquire it as the result of competition with a fairly large group of people. So that in effect the merit system is truly functioning.

I do not know that there are any other points that I have not answered.

Mr. PICKERSGILL: I have one further question for the minister. I know law does not require him to do it, but does the minister in effect in practice in making his appointment of fisheries guardians also follow the veteran's preference?

Mr. MACLEAN (*Queens*): Yes. This is something I would like to say a word about. As has already been stated, there is no obligation on the minister to appoint veterans in preference to non-veterans, but as a matter of policy I have in selecting ministerial appointees tried to follow the rule that veterans should not, generally speaking, be replaced by non-veterans, but on occasion there are cases where a veteran has been fired or let go because of inefficiency or for some very good reason and in all cases, in that type of case, it is not always practical to replace him by another veteran. But we try to do this.

Then, another consideration is—this might apply to crews for patrol boats or something of this sort—we may replace six men with six other men. Six vacancies may occur and these six vacancies are filled.

It may not follow that a man who was a steward perhaps on a vessel and was a veteran is necessarily replaced by another steward who is a veteran but we try to make sure that an equal number of veterans at least are employed to fill the group of vacancies that has occurred.

Mr. PICKERSGILL: The minister has mentioned the word "replacement" and that, of course, raises another question in my mind. I would have assumed that no question would have arisen of replacement of any of these guardians except in cases where their services in the previous year had not been satisfactory. Although they are appointed by the minister I know from personal experience having met some of these people and talked to them a good many of them have had these positions as fisheries guardians for a number of years and their families have come to depend upon that position for their livelihood.

I wonder if the minister could assure us that he made no replacements except where he was completely satisfied that the previous incumbent had not carried out his function satisfactorily.

Mr. MACLEAN (*Queens*): Mr. Chairman, I am not quite sure that I understand what the member has in mind but if he means exactly what he said I am afraid I cannot assure him of that for this very simple reason: It depends on the area. The hon. member may not be aware of this, but there are some areas where, for a great number of years the selection of guardians, ministerially appointed, had been from a pool of labour which constitutes roughly half the population, and the other half of the population had been strictly excluded from participation in the possibilities of employment with the Department of Fisheries in some areas.

Now, from my point of view, although I have great sympathy with the people who were former employees in these fields, I have taken every precaution to ensure when a man is replaced he is replaced by someone equally good or better because the efficiency of the department is the required consideration. But this is not a difficult thing to achieve in some areas especially because there is a pool of potential employees constituting half the population who have not been drawn on for quite a number of years.

In that group there are some very exceptional men. So, as a general principle, I have not replaced anyone or failed to re-engage anyone, to put it that way, because something I would like to make perfectly clear is that these guardians are employed for one season only.

Mr. PICKERSGILL: Oh quite.

Mr. MACLEAN (*Queens*): And there is no commitment to employ them the next season. That is the distinction between guardians and wardens but I must say that in every case where a guardian has shown himself to be very conscientious and of a high capability, in other words, the top half generally speaking as far as efficiency is concerned, these people are invariably re-engaged if they seek re-employment.

Mr. PICKERSGILL: Mr. Chairman, the minister has expressed himself with great delicacy and I will try to express myself with equal delicacy. The minister talked about a labour pool, a potential pool consisting of approximately half the population. Of course, that conceivably might happen in some of the provinces but as the minister is well aware that could not have happened in the outport areas of Newfoundland as recent statistics will show.

As I understood the categories into which the population has been divided by the minister, I would think in the case of Newfoundland he would be restricting himself very severely in many of the outport regions by using the criterion he seems to be suggesting.

Mr. MACLEAN (*Queens*): As I have said this has varied a great deal in the various areas and if the member will examine the reply to a question which I made recently he will realize in Newfoundland there have been relatively few guardians who have not been re-engaged and where they have not been re-engaged invariably it is for good reason. They would not have been re-engaged whether there had been a change of government or not.

Mr. TUCKER: What do you mean by "very good reasons for not engaging them"?

Mr. MACLEAN (*Queens*): There are many occasions when guardians fail to carry out their duties, they are not on the job, some cases of drunkenness or abusing the public. There are many, many reasons; they are dismissed for cause.

Mr. TUCKER: Am I correct, Mr. Chairman, in my understanding that, all things being equal, a veteran is given preference?

Mr. MACLEAN (*Queens*): That is right.

Mr. PICKERSGILL: Well, the minister knows, of course, of one particular case in one particular part of the coast of Newfoundland where a veteran was replaced by a non-veteran and I wonder if the minister could in that case—I would just as soon not use any names—if the minister could in that case indicate what were the peculiar qualifications which fitted the new incumbent for the position?

Mr. TUCKER: Mr. Chairman, I have a similar case. I do not know if it is the same case as Mr. Pickersgill's case. It is in my particular riding.

Mr. PICKERSGILL: This case is in my riding so it cannot be the same case.

Mr. TUCKER: I intended to make sure of my ground and that is why I did not say what my intention was because I have a case where a veteran was replaced by a man who was not a veteran and the man had given good service for five or six years; I checked with the department and I believe he has not been rehired this year.

Mr. CROUSE: I have a similar situation in my riding and I dare say many of the other members of this committee have also experienced this, where veterans are not replaced by veterans. I am wondering if the minister is answering every one of us present on this particular question because it would probably take all the time of the committee.

Mr. PICKERSGILL: On a point of order, Mr. Chairman, is not Mr. Crouse confusing the issue? Is not he talking about wardens? There is no area restriction upon the minister in his appointment, but what Mr. Tucker and I are talking about is guardians for whom the minister has to take the responsibility. What Mr. Crouse, I think, is talking about is wardens who are appointed by the Civil Service Commission and where the minister cannot take the responsibility.

Mr. MACLEAN (*Queens*): I am not sure of what particular cases the two members of the committee from Newfoundland have in mind, and therefore I cannot quote any names, but I will certainly be glad, if they have not already approached us in this particular case, if they would draw it to my attention and I will be very glad to give them a detailed answer.

I want to say that every year as a matter of course there is a report made on every guardian that is employed by the department and depending on that report made by the officials of the department who are civil servants if this report shows that the man is not a capable guardian he is not considered for re-employment. I have some of these reports in front of me right here, and I will not mention any names but I will quote one from—

Mr. PICKERSGILL: I think the minister misunderstood my question. I was not asking for what reason this particular employee was not re-engaged and the case was the case of Broomfield, so the minister will not have any trouble finding it. I was asking what were the peculiar qualifications which led the minister to select the person he appointed in place of this man. That is what I was anxious to find out, or what exceptional qualifications the new appointee had.

Mr. MACLEAN (*Queens*): I will be very glad to do that in any particular case that any member has in mind.

Mr. PICKERSGILL: Perhaps the minister would like to think about that and tell us at the next meeting of the committee.

Mr. MACLEAN (*Queens*): I might consider that, but to give you an example of a report on a guardian I will just quote one here, not saying who the guardian is. The report on him says in part:

“Has low educational standard, is a poor worker and lacks all qualities for a guardian. His services were not satisfactory and a replacement is recommended.”

Now, when a report of that sort is made on a man there is no choice but to replace him and, as I said, although there is no obligation on the minister to do so I try on every occasion to employ as many veterans as possible, but when perhaps vacancies occur as a result of reports of this type in a general area it does not necessarily follow that any individual veteran is necessarily replaced by a veteran in that particular place provided the balance is maintained or an improvement on the balance from the point of view of veterans' preference because it may not be in the interests of the department—you may not obtain the highest possible efficiency that way. For example, in one area where a vacancy has occurred which was previously filled by a veteran the best man available may not be a veteran whereas in the next area the reverse might be true.

Mr. TUCKER: I do not wish to prolong the matter, but my particular case has been partially answered by the Department of Fisheries and I am waiting to receive a response from the official concerned. Unfortunately, I did not put my question right, which I shall do in future.

Mr. MACLEAN (*Queens*): Furthermore, I would just like to say that I think the committee should be clear on this point, that except in the case of wardens, who are civil servants, casual employees of the department, which is what guardians are, the fact that they have been employed for one season does not necessarily mean that they will be employed next season because they have no prior right or vested interest in the position.

Mr. TUCKER: They are all given that understanding when they take the job?

Mr. MACLEAN (*Queens*): That is right. There are many other considerations that have to be taken into account too, and although this has nothing to do with fisheries as such it is just a matter of the humanitarian point of view. There are many cases where some man has perhaps a large family and he has met with misfortune and so on, he applies for the job and there is a tendency, other things being equal, to give it to such a man in preference to the one who does not need it as badly.

Mr. PICKERSGILL: I must say that while I agree completely with the minister and what the minister has said about the legal situation I still think that most of us would feel that while we would not quarrel very much with, if I might express it this way, the minister's looking perhaps a little more to his friends than to those who were not his friends in making an entirely new appointment. I think there would be a feeling that in the case of someone who had had a position for six or seven years or even two or three years and who had a family to support and who had become accustomed to that kind of employment to support his family that there ought to be, as a matter of public policy,—the minister has said very rightly on humanitarian grounds there ought to be very strong reasons before that man is replaced by someone else, even if the new appointee is someone better because, after all, he was a civil servant or a veteran performing the same kind of work. I think it is the general feeling of most of us you do not like to take what a man presumes to be his livelihood away from him without some real cause.

Mr. MACLEAN (*Queens*): That, generally speaking, is true. We try to be reasonable in the selection of personnel. Personnel problems are always fraught with difficulties at the best of times, as any selection officer in the civil service would be only too glad to concur in.

Mr. CARTER: I have two questions along the same lines, Mr. Chairman, arising out of what the minister has said. How long has the civil service been selecting people for these vacancies? Is this a new development?

Mr. MACLEAN (*Queens*): As far as wardens are concerned I think it is six or seven years, maybe longer than that—six or seven years, I think, the position of warden as opposed to guardian was first created.

Mr. CARTER: This is not a new policy now, this has been going on for some time?

Mr. MACLEAN (*Queens*): Yes.

Mr. CARTER: When you decide whether a person is going to be a guardian or warden how do you figure it out, because they both do the same job? Do you depend on his appointment? On what basis do you decide whether this fellow should be a warden or guardian?

Mr. MACLEAN (*Queens*): It depends on the establishment that is created. If the establishment is for a warden then he is appointed and he is appointed by the Civil Service Commission.

I take it your real question is, how is it decided whether to create the position for a guardian or for a warden. This depends on the situation. There are some places where travel is difficult, where there is a lack of roads, along a particular area of a long stream perhaps through a mountainous area or something of this sort, where it is more practicable to have guardians who live in the area and are employed for a short period of time to patrol the relatively small area. Whereas in another situation you might have an area where there is a lot of angling carried on, perhaps where the place is readily accessible by road where a warden with an automobile could patrol a large area effectively.

Mr. CARTER: Is that one of the criteria, that there are roads.

Mr. MACLEAN (*Queens*): Not necessarily, no. I used it just as an illustration.

Mr. CARTER: I am a little puzzled about how you can determine whether you should have a warden or whether you should have a guardian, because in my district we have them both and they do identical jobs under identical conditions. To have one man doing this job and you have this chap getting employed as a guardian at a lower form of remuneration and another fellow next door doing exactly the same job with better pay, higher classification and superannuation does not seem to me to be quite right.

Mr. TUCKER: That was my feeling too. I was wondering if it was absolutely necessary to have a definition as to what is the difference between a warden and a guardian or is it necessary to have both guardians and wardens.

Mr. LEGERE: I wonder what course the other administration took on that.

Mr. CARTER: I can set my friend at ease. The case I have in mind does not concern the present minister. I did not know that the civil service was making selections for these at all. Personally, I have no complaint. There have not been any changes in my district that I know of that have not been justified—but I am puzzled. If we are going to make a distinction and create categories of employees there should be some well-defined difference to justify treating two people doing the same job differently.

Mr. MACLEAN (*Queens*): This is an important point. It is something that has to be considered very carefully. The policy of changing where it was considered feasible from guardian positions to warden positions was commenced six or seven years ago and has been carried on ever since to some extent. Practically every year there have been some changes made. As I said to start with, the theory is when a man is a civil servant he has to compete for the position under the regulations of the civil service against a fairly large group of other competitors and therefore in that way you get higher calibre of men. The motive behind all this is trying to achieve a greater efficiency.

I agree with Mr. Carter that the theory may not always be proven in practice and there are occasions I think perhaps when this policy of changing over from guardians to wardens should be very carefully considered before

taking further action on it. Now, I may be misinterpreting what you have in mind. You may have in mind that in all cases they should be wardens rather than guardians.

Mr. CARTER: Before the minister goes on, I cannot get clearly established in my mind that part of the theory which says you must have a superior type of fellow to do a job in this region and you do not need a superior type to do an identical job in another region. If the two jobs are identical, they should require identical qualifications and to take two employees of equally good qualifications and say, "you are a guardian and the other fellow is a warden", and to pay them on a different basis without knowing in their mind or in my mind why they are classified as such.

Mr. MACLEAN (*Queens*): Mr. Chairman, I know that my deputy minister can handle these questions for you as far as the difference between the two positions and the theory behind it is concerned. He has been steeped in this problem for a number of years and I am wondering if it would be agreeable to the committee if I could excuse myself for fifteen minutes because I have a special request to go to a cabinet meeting. However, I will be back.

Mr. ROBICHAUD: Before an answer is given to Mr. Carter's question, I might insert a remark here which I would like answered. Is it not true also that the policy followed by the department is something like this, that a warden is appointed replacing a guardian where usually the term of employment is a month or so longer and also where the duties of this guardian are more or less on a permanent year-to-year basis. The need for a guardian in a particular region will come every year, whereas in the case of a temporary guardian, there may be some years or seasons when the department may decide to do away with the appointment as there would be no need for such an appointment in that particular area.

Mr. CLARK: I do not want to get involved in the question of ministerial appointments, but I will deal with the matter from a departmental point of view. The wardens' positions as mentioned by the minister, have been established by the Civil Service Commission.

Mr. CARTER: What do you mean by that? Do you mean the Civil Service Commission says to the Department of Fisheries, "you can have five or ten wardens?"

Mr. CLARK: If I may be allowed to continue, the department submits its personnel estimates based on its own experience regarding its own requirements on the consideration of efficiency of operation. The department submits the personnel estimates for so many positions for wardens and the elimination of guardians on the basis of efficiency and length of time required to cover a particular area by a warden who is a civil servant. That is the distinction which is made. As Mr. Robichaud pointed out the guardians are on for short periods of time; whereas in some cases we have found, on the basis of experience, that a longer time limit than a guardian's employment is required and therefore we request a civil service position in our estimates. It is on the basis of experience by the department itself and in the interests of efficiency and also, as the minister has pointed out, to get a better selection by a wider competition.

Mr. CARTER: I must confess that appears to me to be a very strange reason. You are saying if you are going to employ a fellow three months, he is a guardian but if the job is a six months' job, then you make him a warden, but surely that has nothing whatever to do with the person's qualifications or the kind of work he is doing. It only has to do with the period.

Mr. CLARK: The fact remains that in a competition held under the Civil Service Commission, as was pointed out by the Minister, there is a much better opportunity, speaking from the department's point of view, of selection of employees of proper qualifications to do the job.

Mr. CARTER: I do not think anyone quarrels with that, but you have two identical jobs. They are identical in all respects except the length of time you are going to employ people in them.

Mr. CLARK: They are not identical by any means and I think that will be borne out by some of the members, Mr. Chairman, who have had as much experience as I have in this problem.

Mr. McWILLIAM: The selection of wardens over guardians has proved to be more efficient for the department in regard to conservation. That is my thinking on the matter. I was here when that changeover was made and I think it was really for better efficiency.

Mr. CARTER: Does a warden have more responsibility than a guardian?

Mr. CLARK: A warden has much more responsibility than a guardian.

Mr. CARTER: What extra responsibilities does he have? He does not supervise anybody.

Mr. CLARK: Yes, he does. In certain areas the warden will have under him some of the seasonal guardians and therefore he is a supervisor.

Mr. CARTER: Well, I am getting more confused because I have in mind a clear case and it seems to me from what has been said that guardians as well as wardens are being selected by the Civil Service Commission. Are there any cases where guardians are ever selected by the civil service?

Mr. CLARK: No.

Mr. ROBICHAUD: Is it not true also that the wardens are in uniform and they are more or less assistants to the inspector of protection or inspection?

Mr. CLARK: That is correct.

Mr. TUCKER: Is there any difference in the length of time that the wardens are engaged or employed; is it so many months for each guardian or do they have different periods, different months? Are they all employed for the same period?

Mr. CLARK: The wardens are on the staff for a period, generally speaking, of six months.

Mr. TUCKER: And what is the period for guardians?

Mr. CLARK: Generally speaking, guardians will probably be on for two or three months.

Mr. CARTER: There may be a case where a guardian applies for a period of two-and-a-half months and another case where he applies for a period of three-and-a-half months.

The CHAIRMAN: Shall item 134 carry?

Mr. McWILLIAM: Mr. Pickersgill asked that I give leave to carry that item subject to the question asked in regard to the Bloomfield guardian; otherwise that group might carry subject to what I have said.

The CHAIRMAN: Gentlemen, we have to leave the room as there is another committee commencing at 11 o'clock. We will adjourn until tomorrow morning at 9:30.

HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958



STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 4

Estimates (1958-59)—Department of Fisheries

FRIDAY, JULY 18, 1958

WITNESSES:

The Honourable J. Angus MacLean, Minister of Fisheries; and Messrs.
G. R. Clark, Deputy Minister and H. V. Dempsey, Director,
Inspection and Consumer Service.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958

STANDING COMMITTEE
ON
MARINE AND FISHERIES

Chairman: Roland L. English Esq.

Vice-Chairman: A. De B. McPhillips

Messrs.

Anderson,
Batten,
Bourget,
Brown (*Vancouver-
Kingsway*),
Carter,
Crouse,
Danforth,
Drysdale,
Gillet,
Granger,
Howard,

Keays,
Legere,
Macdonald (*Kings*),
MacLellan,
Matthews,
McGrath,
McQuillan,
McWilliam,
Michaud,
Morris,
Murphy,
Noble,

O'Leary,
Phillips,
Pickersgill,
Richard (*Kamouraska*),
Robichaud,
Speakman,
Stefanson,
Stewart,
Tucker,
Webster—35.

A. Plouffe,
Clerk of the Committee.

MINUTES OF PROCEEDINGS

FRIDAY, July 18, 1958.

(5)

The Standing Committee on Marine and Fisheries met this day at 9.30 o'clock a.m. The Chairman, Mr. Roland L. English, presided.

Members present: Messrs. Anderson, Batten, Carter, English, Granger, Howard, Légère, Macdonald (*Kings*), MacLellan, McWilliam, Pickersgill, Richard (*Kamouraska*), Robichaud, Speakman, Stefanson, Stewart, Tucker, and Webster. (18)

In attendance: The Honourable J. Angus MacLean, Minister of Fisheries; Messrs. G. R. Clark, Deputy Minister; S. V. Ozere, Assistant Deputy Minister; J. J. Lamb, Director, Administrative Services; A. L. Pritchard, Director, Conservation and Development Service; J. L. Kask, Chairman, Fisheries Research Board; L. S. Bradbury, Director, Industrial Development Service; W. C. MacKenzie, Director, Economics Service; H. V. Dempsey, Director, Inspection and Consumer Service; T. H. Turner, Director, Information and Educational Services; J. G. Carton, Departmental Solicitor; Ian McArthur, Chairman, Fisheries Prices Support; E. B. Young, Assistant Director, Conservation and Development Service; W. R. Hourston, Chief, Fish Culture Division; J. A. Albert, Chief, Financial and Stores Branch; Mark Ronayne, Assistant Director, Information and Education Service; A. W. Abbott, Assistant Chief, Financial and Stores Branch; H. A. Wilson, Fisheries Research Board; R. Hart, Industrial Development Service; Mr. J. J. Hutchison, Chief, Purchasing Branch, and Dr. William M. Sprules, Special Assistant to the Deputy Minister.

The Committee continued its examination of the estimates referred.

The Committee reverted to replacement for guardians and wardens and the Minister, assisted by Mr. Clark, answered questions.

The Deputy Minister gave a list of Acts under which the department functions.

Items 134 to 136 inclusive—Field Services—were called, considered and adopted.

Items 137 and 138—Inspection Branch—were called, discussed and adopted. Before their adoption, the Minister made an explanatory statement on the Inspection Branch and Mr. Dempsey, the Director, gave some details.

The Deputy Minister referred to some departmental publications which will be made available to the members of the Committee.

Items 139 and 140—Operation and Maintenance—were called, considered and adopted.

Referring to the Consumers Branch and before adjournment, the Minister invited the Members and their friends

1. to a showing of five films this day from 7 to 8 o'clock p.m. in the Railway Committee Room;
2. to a luncheon at one o'clock Friday, July the 25th, to be held in the Fisheries Department Test Kitchen, in the West Block.

The Chairman informed the members of the Committee that beginning next Tuesday, the 22nd, the Committee will sit until 11.30 a.m. except on Friday.

At 11.00 o'clock the Committee adjourned until Tuesday, July 22nd, at 9.30 o'clock a.m.

Antonio Plouffe,
Clerk of the Committee.

EVIDENCE

FRIDAY, July 18, 1958.
9:30 a.m.

The CHAIRMAN: Good morning, gentlemen; we have a quorum so we shall proceed with a further study of the items under review, items 134, 135 and 136.

The minister and his deputy gave us all the details concerning the different information which was requested with respect to the employees such as wardens and guardians. Are there any more questions on the above-mentioned items?

Mr. PICKERSGILL: I have one question that was not answered and that had to do with the qualifications of the new appointment at Bloomfield.

Hon. J. ANGUS MACLEAN (*Minister of Fisheries*): Yes, in my absence, this question was left over from yesterday. The vacancy occurred in this area due to an adverse report on the previous employee and it was recommended he should not be re-employed. As a successor, three names were suggested and one of these applicants was employed as it was considered he was the most suitable of the three. Do you want names mentioned?

Mr. PICKERSGILL: I am not particularly interested in the names; what I am interested in are the qualifications of the person who was appointed.

Mr. MACLEAN (*Queens*): He was considered suitable for the job in every sense. It is a fact that he was not a veteran, although the previous holder of this position was. As I explained yesterday we do not attempt to guarantee that every time a vacancy occurs which was previously filled by a veteran that his successor will necessarily be a veteran.

Mr. PICKERSGILL: Were either of the other two veterans?

Mr. MACLEAN (*Queens*): Not to my knowledge. In any case, it so happens that this man who was appointed has recently resigned and at the moment the position is vacant.

Mr. PICKERSGILL: Well I just wondered about that, Mr. Chairman, because I had heard, and I am just repeating gossip, the gentleman who was appointed did have some qualifications—and although perhaps the minister has not mentioned it, he may possibly be aware that this man was also in the taxi business. He was continuing in the taxi business and was not notable for assiduous attendance at the river. However, that might not be correct.

Mr. MACLEAN (*Queens*): We check very carefully to make sure they are doing their job. Of course, we cannot have a 100 per cent check, but we do not for one moment tolerate the continued employment of anyone who does not do his job; that is, if we are aware of it. Naturally there are occasions when a guardian may get away with doing a pretty sloppy job or neglecting his work for a period of time before he is caught.

Mr. PICKERSGILL: Did this gentleman resign of his own volition or did the department urge him to resign?

Mr. MACLEAN (*Queens*): He resigned of his own volition and a request came in yesterday for authority to employ a replacement for him.

Mr. PICKERSGILL: I would suggest to the minister that in the Bloomfield area there are quite a number of veterans who are not employed and if he

does not see fit to re-employ the veteran who was there before, I would hope he would do his best to have a suitable veteran placed in the job.

Mr. MACLEAN (*Queens*): We try to do that, but mind you on occasions we have retained temporarily veterans who are borderline cases, people whom we would prefer not to have because we have not a suitable veteran replacement for them. We have done that on occasion.

Mr. CARTER: I would like to have clarified what the minister said about his general policy. I can understand the minister should not guarantee that every veteran would always be replaced by a veteran. I never would expect that; but this other business of observing a general balance, I think that too has its disadvantages. I would like to know from the minister whether all things being equal if a suitable veteran was available to replace another veteran, a veteran would get the preference?

Mr. MACLEAN (*Queens*): Yes.

Mr. ROBICHAUD: I understand the guardian on the Pokemouche river in Gloucester was not rehired this year, although he had to his credit overseas service. I understand his services in the past had been very satisfactory to the department. My information is that he may have been replaced by another veteran who is receiving a disability pension and who may not be too fit to do the work on the river. I understand the replacement is also the local postmaster. I was wondering how he could do his job satisfactorily on the Pokemouche river?

Mr. MACLEAN (*Queens*): I have not the details on that particular case, but I will be very pleased to look into it and give you the particulars. If we find this is an unfortunate appointment, we will do something about it. I would like to state again the fact that these people are employed for one season and even if they fill out that season reasonably satisfactorily, they have no vested interest in the position. They are not in the same category as a civil servant and there is no inference that the same individual will necessarily be employed the following year.

The CHAIRMAN: Are there any further questions?

Mr. LEGERE: I would like to ask, Mr. Chairman, for the benefit of this committee, for a list of the acts administered by the department.

Mr. MACLEAN (*Queens*): Yes, I think that is something that perhaps we should have done on the general item to begin with, but this is as good a place as any to do that. The deputy minister or the assistant deputy minister can give a rough outline or in some detail the acts that are administered by this department. I think I said in my original statement there was the Department of Fisheries Act setting up of the department, the Fisheries Act and the Fisheries Research Board Act. However, there are many others and perhaps the deputy minister would say a word on these.

Mr. G. R. CLARK (*Deputy Minister, Department of Fisheries*): Mr. Chairman, I think perhaps this may be of assistance to the members of the committee. I am very pleased this question has been raised because I think it will indicate the scope of the activities and the responsibilities assigned to this department.

As the minister has mentioned, there is the Department of Fisheries Act, which established the Department of Fisheries; the Fisheries Act; the Fish Inspection Act; the Meat and Canned Foods Act as it applies to fish and shellfish; the Coastal Fisheries Protection Act; the Deep Sea Fisheries Act, which covers the fishing bounty on which there was some discussion; the Fisheries Research Board Act; the Fisheries Prices Support Act; the Northern Pacific Halibut Fishery Convention Act; the Sockeye Salmon Fisheries Convention Act, which now also includes pink salmon of the Fraser river area; the

Pacific Fur Seals Convention Act; the Northwest Atlantic Fisheries Convention Act; the North Pacific Fisheries Convention Act; the Whaling Convention Act; the Great Lakes Fisheries Convention Act; the Newfoundland Fisheries Board Act; and in addition, there should be mentioned the Appropriation Act because a number of regulations by order in council such as the indemnity fund plan, the bait freezer subsidy plan, the vessel subsidy plan and salt assistance program are established under the authority of the Appropriation Act by parliament. I think that covers the list.

Mr. STEWART: Does the Navigable Waters Protection Act have a limited application?

Mr. CLARK: No.

Mr. PICKERSGILL: It is true that the Newfoundland Fisheries Board Act is administered partly by your department and partly by the Department of Trade and Commerce.

Mr. CLARK: Yes.

Mr. LEGERE: On this salt assistance program—

Mr. ROBICHAUD: There is a special item just to cover that matter.

Mr. CARTER: I would like to clear up one point on which I am still not quite clear; that is with respect to wardens and guardians. Yesterday I mentioned the need of some small boats, cruiser types, for use in the patrol service. My question is: Do you call wardens these people who travel in these boats and who are assigned to a definite district and who supervise and give instructions to guardians and collect reports

Mr. MACLEAN (*Queens*): They may be fisheries officers.

Mr. CARTER: If they are not, what classification do they have?

Mr. MACLEAN (*Queens*): In some cases they may be wardens but that is dependent on their position. They are probably fishery officers who are full-time civil service employees with a higher rate of pay and with higher qualifications, generally speaking, than wardens. I believe now there may be some anomalies with regard to wardens and guardians in Newfoundland as compared to the rest of the country. This is due to the fact that when Newfoundland came into Confederation we took over the service in Newfoundland and there may have been accommodation made for the employees there in fisheries who were taken over by the Department of Fisheries. This may be slightly different in some respects than the practice in the rest of Canada. Am I right on that, Mr. Young. Mr. Young is with the Department's Conservation and Development Service.

Mr. E. B. YOUNG (*Assistant Director, Conservation & Development Service, Department of Fisheries*): Mr. Chairman, we would hope that the warden system in Newfoundland, as well as that of the officers and the guardians, would at some date be brought into line, so that the operation would be quite similar to that in the maritimes. At the present time however, I think it is quite true that there are instances, as Mr. Carter says, where guardians are doing exactly the same work as wardens. At some time, when the warden system can be brought under better organization and control, I think we will have the system working in Newfoundland the same as in other parts of the country.

Mr. PICKERSGILL: Does that mean there are people in Newfoundland denominated as guardians and they are deprived of the advantages of the Superannuation Act although they are doing exactly the same work as people in Nova Scotia who would have the advantages?

Mr. YOUNG: I think the answer to that is no. If that is so, it is because the fishery warden is not quite as efficient an operator as we would like to

see him be. The fishery guardians in Newfoundland are appointed to do the same work in Newfoundland as the fishery guardians in the maritimes.

Mr. HOWARD: Unfortunately, I was not able to be here yesterday and there were one or two problems I had hoped to raise. They may have been dealt with or they may more appropriately be dealt with under another item. One has to do with dogfish on the west coast.

Mr. MACLEAN (*Queens*): That was not covered, but there is a special supplementary vote and we can discuss it at that time.

Mr. HOWARD: I wondered too whether under this item this question of insecticides being used by forestry people in spraying for insects has been discussed?

Mr. MACLEAN (*Queens*): That was dealt with yesterday.

Mr. LEGERE: Are we covering the whole field service now?

The CHAIRMAN: No, the first three items. Shall item 134 carry?

Mr. CARTER: Before we carry that item, there is something I would like to say. I think Mr. Robichaud yesterday opened the discussion on this item with some reference to trawlers or draggers encroaching on inshore grounds. My question is quite similar. I have had complaints from some of my constituents who complain of drift netting, herring fishermen who use long drift nets at night and they deprive them of their bait. In order to obtain fresh bait they set out their own herring nets to catch herring for bait, and when these nets are operating overnight they do not get any bait. I am wondering if any consideration could be given to that problem? Apparently it is somewhat similar to the dragger problem; one operation is encroaching on the other.

Mr. MACLEAN (*Queens*): It is a pretty difficult question because, without any reflection on the questioner, it is a kind of a general question. However, we will certainly check on this point.

Mr. CARTER: I might say that this condition exists in certain areas and does not generally in a geographical sense. There are certain little inlets where the people set their nets and drift with the nets and in that same area the fishermen cannot get the bait they require.

Mr. CLARK: I do not know how general it is. I do not know whether Mr. Carter is referring to Canadian draggers or not.

Mr. CARTER: I am talking about the local people.

Mr. ANDERSON: Why do they not go out at night and get their bait?

Mr. LEGERE: The way they fish herring down home they set their net and leave it there and go home to bed.

Mr. ROBICHAUD: That is why they cannot sell it, possibly.

Mr. LEGERE: They bought them just the same, Mr. Robichaud. The market is not there on account of quality.

Mr. MACLEAN (*Queens*): There is a report from our area director on this matter saying there was some difficulty last year, but according to the information I have this year the situation is relieved because of a greater run of fish and the problem is not arising. However, we will have it checked into in order to see if there is anything that reasonably can be done to meet the problem.

Items 134 to 136 inclusive agreed to.

The CHAIRMAN: Now, the second branch consists of items 137 and 138.

FIELD SERVICES

137. Operation and Maintenance	\$1,371,700
138. Construction or acquisition of buildings, works, land and equipment	\$ 80,125

Mr. MACLEAN (*Queens*): If I may interrupt for a moment, we held a discussion yesterday about the showing of films. It has been arranged to show four films tonight in room 277 which is the railway committee room. The films will be shown from seven to eight p.m. and if there is any demand for it, we can run the films twice. I would like you to understand that attendance is not limited to membership of the committee. If anyone knows of anyone else who is interested in seeing these films, any members would be free to attend and would be perfectly welcome. The films which we intend showing are "The Salmon's Struggle for Survival" which takes 27 minutes; "Great Lakes Invader", having to do with the lamprey, which takes 15 minutes; "Fisheries of the Great Slave" which takes 20 minutes and "Fish Spoilage Control" which takes 10 minutes. There are also film strips that can be shown as well.

Mr. STEWART: Did you say the time was seven p.m.?

Mr. MACLEAN: Yes.

Mr. ROBICHAUD: Now that we have reached the inspection branch of the department, I believe for the benefit of the committee that it might be interesting to hear a statement from the minister on the progress which has been made in this most important branch of the department in the last two or three years. The inspection branch is one which has to do with the inspection of fish for market and it is a branch which I understand is rather difficult for the department to administer, especially now when the department has taken definite steps to get involved in the inspection of fresh and frozen fish. The result of this inspection has a lot to do with the cash returns to the fishermen and in assuring a good market, whether a domestic market or an export market. Therefore, I think before we start this branch the minister might want to make a statement in order to let the committee know what stage has been reached with regard to the inspection of fresh and frozen fish. I have in mind particularly ground fish of the Atlantic provinces.

Mr. MACLEAN (*Queens*): Perhaps I should make a statement on this service, what it amounts to, what we are responsible for and what it engages in at the present time. I have a memorandum here which I will refer to in the course of my remarks.

The inspection service is responsible throughout Canada for the administration of the Fish Inspection Act and the Meat and Canned Foods Act and the regulations thereunder in so far as they apply to fish and shellfish, which includes the inspection and grading of fish, shellfish, fish products and marine plants. Methods of inspection, grading, production and processing, are kept under continuous study with a view to improving the quality of fish and fish products. In the Pacific area all canned British Columbia salmon and herring are subject to grading and inspection. Samples are drawn from time to time and tested in a laboratory in Vancouver. In addition to that these laboratories take samples and inspect imported fish which is sold on the Canadian market; and although the imported quantity is not great, there is a very wide variety of fish products that are imported in small quantities, usually by delicatessen shops and for the purposes of catering to new Canadians who are used to fish products manufactured in Europe and other places.

In the central area since 1951 the department has been engaged in a program of compulsory inspection of fresh frozen and filleted whitefish for export. This action was necessitated by the refusal of the United States food and drug administration to allow entry into the United States of whitefish infested with parasites. We have permanent inspection stations in various places throughout the west, at Hay River, Edmonton, Prince Albert, Big River and Winnipeg.

At the request of industry a voluntary quality inspection was provided for some 5 million pounds of species of other fresh water fish including lake trout, pickerel and pike through the same period.

In the maritime area a wide range of fish and fish products is inspected, including salt cod in various forms, pickled alewives, pickled mackerel, bloaters, oysters and fresh and frozen lobster meat. In addition to that, there is a voluntary inspection and grading of canned fish such as chicken haddie, mackerel, kippered snacks, herring, tuna and so forth.

The department licenses lobster canneries, and inspection of the premises is required very frequently during the operating season in order to ensure that the plant conforms to the sanitary requirements under which issuances of the licences were based.

There is a close check kept on production at all times and in order to do this we have a number of laboratories, including some mobile ones.

In the Newfoundland area salt cod which accounts for the bulk of the fish production there is subject to compulsory inspection prior to export to European, West Indian and other markets. This large production is packed and inspected according to the specific grades which have been established by regulation. Inspection is also carried out on pickled herring. At the request of the industry, voluntary quality inspection was provided to nearly 65 million pounds of fresh and frozen fillets. This program extended to the inspection of fish plants on a voluntary basis only. In Newfoundland the main laboratory is at St. John's and there are seven other inspection centres located in that province.

The problem of compulsory frozen fillet inspection is an important one. It is our aim to have complete coverage so that all fish production, including the frozen product will be inspected and therefore be qualified for a Canadian inspection grade much as is the case in respect of meat and other products that are sold in international and interprovincial trade.

I do not know whether or not I have covered your question.

Mr. ROBICHAUD: Mr. Chairman, I think the minister has very well covered the different inspection stages. I am keenly interested in fresh and frozen fillets and I was also interested in his statement where he said that 65 million pounds of fish inspection has been provided.

Could the minister give us further detail as to the success of this inspection? I realize they are meeting objections in respect of ground fillets or cod fillets, for particular reasons which I will not mention here. What steps have been taken by the department to properly train inspectors for this special inspection of fresh and frozen fillets. Also, could the minister state, briefly, how this inspection has been received by the industry or the fish producers and how it has been received by the consumer?

Mr. MACLEAN (*Queens*): I will ask my deputy minister to say something on this and later ask Mr. Dempsey who is in charge of inspection to speak on it.

Mr. CLARK: First of all with reference to the very delicate way in which Mr. Robichaud put the question about these outside organisms, this is a very serious problem. A great deal of work has been, and is, being done on it. Admittedly we have not found a solution to the problem yet but there are some hopeful signs. With that I might leave that rather delicate subject.

In respect of the success of the inspection system for frozen and fresh fillets, this program is being extremely well received by the industry. In fact, the industry is now pressing the department to augment its program and place the inspection system on a full compulsory basis. I think the consumer reaction is good, as is evidenced by the better quality of fillets of all kinds which are being found in the retail stores throughout Canada, and indeed, into the United States market.

I assure the committee the program is successful and is going ahead, to some extent, perhaps faster than we can cope with it at the present time.

With reference to the question concerning the training of inspectors, we are having courses of our own which are put on by our scientific people and the fisheries research board scientists to educate our own inspectors in these techniques of quality inspection.

Mr. ROBICHAUD: Following on that, I hope that those inspectors who are trained by the department, would put more emphasis—and I am not saying they are not doing it—on passing along their knowledge to the fishermen themselves, because if we want good fresh and frozen fillets the fishermen have to take the best care that is possible of their fish; the boats have to be kept cleaned and the fish well looked after and well washed before they are delivered. I hope that more emphasis will be placed by those inspectors on the passing on of their instructions to the fishermen. This is a very important program.

Mr. CLARK: I quite agree that the problem is not only one of technical application but is also one, as Mr. Robichaud pointed out, of education right down to the fisherman in the boat to encourage him to keep his boat clean and to look after his fish before they even reach the plant. The problem of the lowering of the quality commences immediately the fish is taken from the water.

Mr. PICKERSGILL: There is no question, I suppose, of the complete jurisdiction of parliament to require compulsory inspection of fish even if sold in the local market.

Mr. CLARK: This, of course, is a problem; but we have been working with all the provinces throughout Canada and practically all of them now have complementary provincial legislation which ties in with the federal legislation to remove the problem of jurisdiction.

Mr. PICKERSGILL: I would like to ask about the inspection of salt fish. Mr. Clark no doubt is familiar with a regrettable incident which occurred last year in the exports from Newfoundland to Europe. I wonder if anything is being done to make sure, as far as the department is able, that that would not happen again?

Mr. CLARK: Yes, sir. We know of the incident which Mr. Pickersgill has pointed out. It was not only regrettable but was also expensive from the exporter's point of view. We have already taken steps to improve, in so far as the department is concerned, our inspection of salt cod. This, of course, requires to a great degree the full co-operation of the industry itself.

Mr. PICKERSGILL: I assume that is forthcoming?

Mr. CARTER: I would like to ask a question in respect of what Mr. Robichaud said about educating the fishermen. If the fisherman does not do his part it cannot be remedied afterwards. I think we should carry on a campaign and not just leave it up to the individual inspector, or fisheries officer, to do the educating. The inspector's opportunities are not too numerous for that sort of thing. I think this is something which should be organized in an effort to make the fishermen conscious of the importance of their part in making fish quality fish.

In fish inspection, the human element, even on the part of the inspector himself, is quite a variable factor. I wonder if anything has been, or can be, done to minimize that human element by the use of some mechanical, electronic, or technical device which will provide a more uniform standard of inspection, or assessment.

Mr. MACLEAN (*Queens*): In answer to the general question about the problem of having the fisherman realize he is dealing with a very perishable

food for human consumption right from the start and that the fish should be treated as such, this is a very important point; it is one of which we are very conscious. We are trying to take effective steps to make the fisherman far more appreciative of this fact. This is one of the things that is being studied by the federal-provincial committee in the Atlantic which has been set up as an advisory organization as far as problems of this type are concerned.

From the point of view of the technical question which you have asked here as to standard control, if you might call it that, perhaps Mr. Dempsey would have something to say on that.

Mr. H. V. DEMPSEY (*Director of Inspection and Consumer Service, Department of Fisheries*): It is true, Mr. Chairman, that the human element in inspection does create the greatest difficulty administratively. In the fresh and frozen fish inspection all of the work which we are applying today is as a result of the successful labours of the fisheries research board over a period of many years. It was found, particularly in respect of ground fish, that a certain chemical measurement could be made which coincided with the quality of the fish at certain levels. These are not applicable by the fisheries officers as chemical measurements. In other words, inspection of fresh fish, particularly, still remains, and always will I think, an art rather than a science.

In the training of inspectors, to remove the human element they are given quantities of fish to judge and their physical or organoleptic assessment of the fish, over a period of time, is recorded and at the same time the laboratory staff make chemical tests of the inspector's judgment and eventually we bring the inspectors to the same level of judgment of the product. We have found, in practice, that this judgment is good for five or six months, and after that it begins to slip. Then the inspectors have to be brought back in for further training. At the present time we have found that to be the only effective method of equalizing the human judgment factor in assessing the quality of fresh and frozen fish.

In respect of salted fish it is probably a less difficult task because the judgment is made there on certain more or less fixed physical characteristics of the product as to colour, size and so on.

Mr. CARTER: May I ask three or four questions on that point? Since most of our fish, or practically all of it, is going to the United States, are our inspection standards and procedures patterned on the United States standards or requirements?

Mr. CLARK: The Canadian standards for inspection have not been taken from the Americans. In fact the Americans have adopted many of our techniques. Ours are higher than the standards in the United States. In fact officials of the United States fish and wild life service have been up to see us many times and, indeed, some of their technical officers have taken part, at the request of the United States, in our training courses.

Mr. CARTER: I am very glad to hear that. I would like to ask about another phase of inspection. I am not sure whether this comes under the Department of Fisheries or whether it comes under the Department of Trade and Commerce. I am referring to a cull. A cull is something which varies very, very widely because there is the human element and other factors.

One of the factors is that the cullers are paid by the fish shipper and some people think that under that arrangement the culler is likely to be influenced by the person who pays him. If he were paid by the government he would probably render a more independent judgment. Would the minister care to make a comment on that?

Mr. MACLEAN (*Queens*): I will ask Mr. Clark to deal with that. I am fairly familiar with it but I think he is more familiar with it. This is something which applies exclusively or virtually to Newfoundland.

Mr. CLARK: Mr. Chairman, Mr. Carter has roughly outlined the procedure. The federal government, or the federal department, fell heir to the system at the time of union with Newfoundland. We have never, ourselves, particularly liked this system, for the very reason pointed out by Mr. Carter. If you have an inspector, or grader, or culler, who is in the employ of the man who is buying the fish there is always doubt as to whether or not his judgment in culling, or grading, is biased.

It is also legally a moot point as to whether this system of culling is indeed a federal responsibility or one which belongs to the provincial administration because it takes place within the province. The fish are first brought in, in this instance, and perhaps eventually find their way to the export market which would bring in federal responsibility.

Very recently, in St. John's, there were discussions held about this question, and the provincial authorities admitted it is a provincial responsibility, in the first instance. We are trying to work out with the industry a much better system to overcome this very problem.

Mr. TUCKER: Are these cullers sworn in, or are they not?

Mr. CLARK: They are licensed and they are sworn in to do a proper job; but this is always, again, subject to the human element.

Mr. PICKERSGILL: With respect to the point raised by Mr. Clark, I did not know that there was any suggestion that this might be under provincial jurisdiction. Since the amount of salt codfish that goes into the international trade, particularly in Newfoundland, is so high, and in a much higher proportion than is the case in respect of wheat—and the Privy Council made a decision on this a long time ago—there would surely be no serious doubt about the capacity of parliament.

Mr. CLARK: I am only giving you the discussions which took place in the past few weeks. We have not submitted the question to the Department of Justice for a complete legal opinion.

Mr. CARTER: The culler, I think, has perhaps a more difficult job than has the inspector really, because in the salt fish market each market has its own requirements; they must have a certain amount of moisture or they do not want it, and an allowance must be made for absorption of moisture from the time it is sold until it reaches the ultimate purchaser in the world market. I think we should certainly be considering some form of mechanical culling because this business of culling affects the fisherman as much as the fish buyer.

If one person suffers from a strict culler, then the fisherman gets less for that fish and the merchant who collects from him suffers and possibly, ultimately, the last purchaser benefits. On the other hand, if we have a slack culler the fisherman benefits beyond what he is entitled to as compared with others, and the shipper benefits. Therefore, there is a very wide discrimination in the application and effects of this cull.

This business of discovering the moisture content and the size and different defects in the fish, I think really is so important to Newfoundland that we should try certainly to minimize the human element in every possible way.

Mr. PICKERSGILL: On that very point, I wonder if Mr. Clark could tell us what happens in the other provinces? He said that this is a problem which is peculiar to Newfoundland.

Mr. CLARK: In the other provinces in connection with salt fish, for example, in Nova Scotia there are no such things as cullers. The inspection is done in Nova Scotia by federal inspection officers and in the first instance by the buyer and the fishermen. We enter the picture in so far as inspection is concerned when it becomes available for export.

However, in Newfoundland, there is a different system where the culling is done in the initial buying stages between the buyer and the seller.

Mr. PICKERSGILL: Is that because of the fact that there are no fish made in Nova Scotia in the sense fish is made in Newfoundland?

Mr. CLARK: I think so.

Mr. PICKERSGILL: If fish is made still in the Gaspé, what happens there? Of course, you have no effective jurisdiction, I suppose.

Mr. CLARK: We know of the system, and it is the same as in Nova Scotia; but the inspectors are Quebec inspectors.

Mr. ROBICHAUD: The fishermen do not do it any more themselves.

Mr. CARTER: The only difference as between Newfoundland and the other provinces is that the fisherman catches the fish and brings it to his plant. There is no need to protect him from the buyer.

Mr. MACLEAN (*Queens*): There is that difference there; yes.

Mr. LEGERE: I would like to ask a question in respect to fresh fish inspection. How is it carried out?

Mr. CLARK: The term we use is organoleptic.

Mr. LEGERE: Would you elaborate on that?

Mr. CLARK: I would prefer, Mr. Chairman, with your permission, that on the technical side perhaps Mr. Dempsey would answer the question. The organoleptic test is smell, taste and vision.

Mr. DEMPSEY: I do not think, Mr. Chairman, that a specific answer can be given to the question as to how much is smell and how much is taste and vision. I can only take as an example, a trip of fish. A boat comes into dock and the inspector with his training knows if the trip has been iced down properly and he will have no great worry about the fish from one to five days out of the water; he concerns himself more with the fish seven, eight or nine days in that boat.

This is very difficult, quite frankly, to explain. He judges by the odour. He will smell a few fish to see if there is an off odour, fruity or sour, or he looks to see if there are sunken eyes and he examines the gills and other factors. All these things are examined and the inspector reaches a decision, based on his training and then relates these factors to the quality of the flesh of the fish which has been proven by the chemical measurements which were taken during the training which he received.

Mr. CLARK: I would like, for the benefit of the committee, to give you some of the items in the way of aid to fishermen. I would like to point out that we have prepared a series of pamphlets for the benefit of the fishermen. These are widely distributed. They deal with the handling of fish in in-shore boats to protect the quality of the product. These are illustrated by pictures showing the right and the wrong way. The same thing is provided in respect of larger vessels. There is another pamphlet which deals with fresh water fish that is white fish on the inland lakes. These pamphlets are widely distributed to the fishermen and the industry as part of the educational programme.

There are also showings of film strips, which was mentioned earlier by the minister, which we would be prepared to show to the committee.

Mr. ANDERSON: In connection with the inspection of the fish after they are filleted, do the inspectors make the inspection of the fillets or is it done by an employee of the fishing company? I mean, before they are shipped to the distribution point.

Mr. CLARK: The inspection is done by federal officials.

Mr. ANDERSON: I am familiar with the situation which was mentioned here before. In my own part of the country it is anything but satisfactory. I will take the matter up personally with Mr. Dempsey.

Mr. CARTER: Since salt is so important in the curing, what protection, particularly in Newfoundland, do we have? Is there any inspection of salt? Do we have any fixed standards?

Mr. CLARK: No; not federally, but the provincial government in Newfoundland has a statute on the books which they are about ready to implement, I understand, concerning specific requirements and qualifications for salt to be imported in the first instance into the province and to be sold in the province for these purposes. They have asked us to cooperate in determining the quality and in inspecting the actual salt under these measures set out in their proposed regulations. I might say that we have over many years, at the request of the industry, analyzed the salt in our own laboratories for various importers and users of salt.

Mr. CARTER: Since the federal government has laid down standards for fresh fish and the quality of fresh fish, have any similar standards been laid down in respect of salted fish? For example, we have light and heavily salted fish, and there is a considerable overlapping; also we have pickled fish and there is a considerable overlapping there as between individual processors. Have any fixed standards been developed and laid down to distinguish light salted from heavy salted?

Mr. CLARK: Mr. Chairman, on this point, this is something on which we have been working with industry itself in order to develop these standards. We have made some progress. There are certain standards in heavy salt fish which have been in operation for many years as a result not only of our own experience but the experience of industry itself. The same holds true on light salted fish; but to date we have not been able completely to work this out with industry as to what the standards should be. We expect to have more meetings with the industry very soon to try again to work out satisfactory arrangements which are mutually suitable.

Mr. CARTER: Has any work been done to determine the maximum height of a fish pile? You will of course appreciate the difficulties in this regard. There must be a dividing line somewhere beyond which it would not be safe to put excess weight.

Mr. CLARK: Yes, a great deal of work has been done on that problem and we have available that information. It has been given to industry and the processors of salt fish. A number of them have taken it up and found it to their advantage. However, there are others who are continuing with the old methods which they have used for many years. Again it is I think partly a matter of education.

Mr. TUCKER: Mr. Clark, you referred to the distribution of pamphlets; could you tell us the way in which these pamphlets are distributed among the fishermen because I agree with the previous speakers who have stressed the importance of getting the fishermen to realize that the fish is an article of food and should be treated as such. I do not think too much emphasis can be placed on that point. I think also, wherever possible, the federal Department of Fisheries should try to get across to the fishermen that particular point, especially during the winter time by means of radio broadcasts or television. I would like to know how these pamphlets are distributed.

Mr. CLARK: They are sent to our area offices and then are sent to the local fishery officer for distribution to the fishermen. We get as wide a distribution as possible. The local fishery officers are supplied with these pamphlets for distribution in their local areas.

Mr. TUCKER: I am also very glad to know that serious consideration is being given to the matter of culling, because I have known cases where one culler will try to act honest and carry out his duties. He will refuse to take fish because they are squabby or not sufficiently dried to be culled. In some

instances the fishermen will take the fish to another community and have no trouble in disposing of it. To my mind that discourages the curing of good fish. If he does not sell to one fellow he will take it to another who will accept it.

Mr. MCWILLIAM: Are these pamphlets printed in both languages.

Mr. CLARK: Yes.

Mr. TUCKER: What is the total value of exported salt fish?

Mr. CLARK: I think we have the figure available if we can locate it.

Mr. PICKERSGILL: I think the figure given by the Minister of Trade and Commerce yesterday was \$32 million last year; I might be wrong, but it was something like that.

Mr. CARTER: I thought the total value was \$132.5 million.

Mr. PICKERSGILL: That is for all kinds, but I think for salt fish it was \$32 million.

Mr. ROBICHAUD: The commercial value is higher than that.

Mr. CARTER: I would like to return again to this question of education of the fishermen. Fishermen are the most important people in this whole project because if they do not play their part nobody else can do anything about it. Have we prepared films regarding the spoilage of fish and showing the actual condition of fish as it gets to the market? Our fishermen only think of fish as they see it and I do not think they have the faintest idea what it is like when it gets to the consumer. I think if we had some films of that it would bring home to them the necessity of taking special care. The films would also show the causes of the various conditions.

Mr. CLARK: This question could really be answered better after you have seen the film strips. These are the ones we show locally throughout the winter to fishermen, wherever we can.

Mr. CARTER: I have never heard of this being done in my riding.

Mr. TUCKER: I have never heard of it either.

Mr. MACLEAN (*Queens*): We will show some of these film strips. We are continuously trying to give them the widest possible distribution. If there are some areas where there is not sufficient coverage, we will try to make sure they are shown to as many fishermen as possible.

Mr. CARTER: In most of our fishing villages we do not have electricity and a great deal would depend upon the type of equipment used. If you had battery operated equipment it could be shown everywhere.

Mr. CLARK: This is one of the technical problems in some of the outlying areas, but we have projectors which are battery operated to overcome this.

Mr. WEBSTER: Mr. Dempsey said when they inspect the fish they judge by the odour, the colour of the flesh and so on. What happens to the cod or fish that is five days old or three days old?

Mr. LEGERE: It is iced.

Mr. WEBSTER: If the inspector does not pass it, does it find its way back as food?

Mr. DEMPSEY: The inspection of fresh and frozen fish at the present time on the east and west coasts is voluntary. The inspector gives his judgment as to the quality of the fish and I must say in probably over 90 per cent of the cases the plant operator accepts that judgment and the fish which is said to be unsatisfactory or unfit for processing is disposed of in a meal plant. However, Mr. Chairman, it is a voluntary inspection and at the present time there is no compulsion on the plant owner to accept his judgment.

Mr. CARTER: Mr. Dempsey just referred to a point that the government should do something about. This voluntary system leaves the fishermen completely at the mercy of the plant operator. I have received complaints from fishermen who complain that good fish are brought in and for one reason or another the plant operator can discard any amount of fish he wishes and shunt it over to the meal plant. As a result of this, the fisherman does not get paid anything for it.

Mr. HOWARD: Does he shunt it back again?

Mr. CARTER: No. He only gets paid for the fish taken into the plant. The fisherman has to pay all the overhead charges and then some of his fish go to the meal plant. It gives a very good profit to the operator and no benefit at all to the fishermen. There should be some protection somewhere for the fishermen.

Mr. MACLEAN (*Queens*): I take it, Mr. Chairman, that this is the other side of the coin. You are referring to fish that are first quality for food purposes and the processor chooses to make meal of it instead.

Mr. CARTER: Yes. No one would quarrel with fish unfit for consumption being put into a meal plant, but there is room to quarrel when good fish is being put into the meal plant.

Mr. LEGERE: It seems to me that the fish dealer in question is discriminating against himself. The more fish he can put up and sell, the more money he is going to make. If he is doing what you say he is, he is working against himself.

Mr. CARTER: If he obtains these fish for nothing, he can make more money out of the meal plant than out of the fillet.

Mr. LEGERE: Let him take the fish home and say, "we will not give it to him".

Mr. PICKERSGILL: There is another side of the question which is more important than the one Mr. Carter has brought up. It is rather horrifying to think, from what Mr. Dempsey said, that 10 per cent of the people who are processing fish are not willing to accept this present voluntary system and therefore queering the market for everybody. We know what happened a year or two ago in the United States when some bad Canadian fish got into the states and the whole market was affected. The name of all Canadian fish was affected by this and it does seem to me it would be very desirable if the department would consult with the Department of Justice to see whether there are any limits to the jurisdiction of parliament in this field, and if there are not, if the minister would give most careful consideration in the next session to bring in compulsory legislation. There may be a motion already, but if there is not, I think the department should be asked to consider this matter. Wheat as an agricultural product comes under the concurrent jurisdiction of parliament and the legislatures. It is entirely under federal jurisdiction. It seems odd that the processing of fish should not come under similar jurisdiction.

Mr. MACLEAN (*Queens*): Mr. Chairman, this is something which has been of great concern to us and we are pressing forward with it as rapidly as possible. If there has been some misunderstanding, I should say we have the jurisdiction to deal with the inspection of frozen and fresh fillets and we will make it compulsory as quickly as we have the staff and the facilities to do so. That program is in hand and we hope in the very near future that this will be possible so that the 10 per cent or less—I think perhaps 10 per cent is a little high as an estimate—but whatever the number is, that this will be brought into line with the conscientious producers who already accept it.

Mr. PICKERSGILL: I would not want the minister to think I was in the least critical of his department. I have great admiration for the minister's department and I think they are doing a wonderful job. What we all want to do here regardless of our political affiliation is to strengthen their arm a bit.

Mr. CARTER: In order to avoid any misunderstanding, whatever inspection service we have at the present time in my district, as I understand it, is confined to the product after it is processed or in the course of being processed. It does not apply to fish coming out of the boat and I think if we are going to have a good inspection service, that is where it should begin.

Mr. MACLEAN (*Queens*): Yes, Mr. Carter, I realize your point, but nevertheless our responsibility and our jurisdiction is one of making sure that products entering into provincial and international trade are of the quality they are purported to be.

Mr. PICKERSGILL: That is the point. I would hope the minister would have a discussion with the Minister of Justice to see if in the past we may not have been taking a restrictive view of the possibility of parliamentary jurisdiction. I do not know whether or not the chairman with the views he may hold about federal and provincial jurisdiction will agree with me, but I think this is one place where we would like to see federal jurisdiction as wide as possible.

Mr. HOWARD: There is an item which I might as well raise here even though it may be more applicable under the consumers branch.

Some time ago I sent to Mr. Dempsey a page out of the fishermen's paper and I understand the union of fishermen and allied workers have also sent the original label from the can to the department. It relates, in this instance, to the crab meat being processed or canned in Japan, and the words "Product of Japan" which are supposed to appear on there actually appeared underneath the label where it was stuck to the can. The answer I received was that this was being investigated.

Mr. MACLEAN (*Queens*): The situation is that some of this crab meat was imported from Japan. The wording "Made in" or "Product of Japan" was, in some instances, covered up because of the manner in which the label was wrapped. This turned out to be, probably, a mechanical error of the machine which put the labels on the can. In cases where this was not distinctly readable or visible, the cans have to be relabelled. I presume all the qualifications have to be met before they can be marketed. This has been done and corrected.

I might say one other word in respect of the inspection which may be of interest to the committee. Some years ago the province of Quebec, through an arrangement with the federal government, took over the inspection of fish in the province of Quebec because at that time the fish produced in Quebec did not enter into the interprovincial or international trade to any great extent.

We are at the present time negotiating with the province of Quebec and they are extremely co-operative in this matter in respect of us re-taking over this inspection, which is actually our responsibility. This is being done. We are in the process of taking on the employees at present in their service and incorporating them into ours. That is a further step to standardize the inspection of fish across the country as a preliminary to compulsory inspection so that we will be able to apply a uniform code of inspection right across the country.

Mr. CARTER: Does the minister feel now that it is a matter which comes under provincial jurisdiction, or would it be a matter which transgresses provincial jurisdiction if we had a federal inspection of fish all across the board? What I am thinking of is, for economical reasons or for physical reasons, because of the lack of staff, is such an inspection not feasible? Could we not work out an arrangement with the provinces so that the fisheries officer

on the spot could act as a board of appeal in the event that a fisherman wishes to appeal that he is not being treated properly, in the event that he feels that his fish is capable of being produced when he is only being paid for having it converted at a meal plant?

Mr. CLARK: There may be some legal point involved in this; but, I think it is pretty clear legally if the product is to enter into the interprovincial or export trade then it comes under federal jurisdiction.

If the fish are to be sold locally within the province, then it is outside of federal jurisdiction. I do not think this is too much of a problem really. This is one of the things in our whole inspection system; it is part of the program.

Mr. CARTER: It is going on; you are working towards it?

Mr. CLARK: Yes.

Items 137 and 138 agreed to.

139. Operation and Maintenance	\$1,178,300
140. Construction or acquisition of buildings, works, land and equipment....	\$ 221,580

Mr. McWILLIAM: Could we have a general outline of the oyster reseeded program?

Mr. MACLEAN (*Queens*): I might say, as a very general statement for the information of the members of the committee who are not from the maritimes, that some years ago a virus disease attacked oysters in Prince Edward Island and as a result of research done by the research board it was found that strains of oysters evolved which were disease resistant and that the beds there regenerated themselves over a period of years. This disease struck other oyster beds.

First, we had to do experiments to see whether or not it was the same disease and whether or not Prince Edward Island oysters were resistant to that disease as well. We found they were. As a result this disease resistant oyster is being transplanted in these infected parts so that the beds will be regenerated in as short a period of time as possible. If nothing were done nature would look after the problem probably over a period of twenty-five years, or something of that order; but by transplanting disease resistant oysters in these areas we hope to cut this period of regeneration down to something like five years.

Mr. McWILLIAM: The program is very well advanced?

Mr. MACLEAN (*Queens*): Yes.

Mr. ROBICHAUD: In connection with this branch, Mr. Chairman, which has to do with fish culture and development, I have a problem which has something to do with development and it may also concern the fisheries research board. I wonder if this would be the proper time to bring it up? It has to do with the waste of fish.

We know, where ground fishing is carried on in a large scale, quite a percentage of the fish viscera is being thrown back into the water. This viscera certainly has food value, if not for human consumption certainly for some other purpose.

In my own constituency we have concentrated in a very limited area a production of about 60 million pounds of ground fish annually which is being delivered during a period of five or six months from May to November. In connection with this production, the waste is being thrown back into the water by the fishermen to an extent of approximately 15 or 18 million pounds.

We know that the fresh fillet represents only about one-third of the total quantity of the fresh fish even after 25 per cent has been thrown in the water as waste. Has any research been done by the department to determine the possibility of saving this waste? What I mean here is that it might be advisable

for the department to take into consideration the possibility of constructing at the department's expense, a pilot plant in an area where the production is heavy enough to warrant such construction and such research.

I have in mind a plant where the entire waste could be used. Then, if it was found to be practicable, smaller plants could be built in other areas and the plant could be turned over to the industry after depreciation; it could be purchased by the industry. A pilot plant such as this would determine the possibility of having smaller plants in other areas if the experiment proves satisfactory.

Mr. MACLEAN (*Queens*): I could give you a short reply to the question now. I might suggest that it could be covered more thoroughly under the item on the fisheries research board. However, there is a very considerable amount of research in this field with great promise. I do not think it is an exaggeration to say that. We have produced already on an experimental basis by means of a small pilot plant, for example, fish flour which can be incorporated in various types of food. This fish flour is manufactured from fish waste and is very high in protein and essential chemicals. It can be used to supplement other types of food and to increase the protein content of such things as bread and so on.

Mr. ROBICHAUD: When we reach the proper item may we have a complete statement on this matter by someone in the fisheries research board?

Mr. MACLEAN (*Queens*): Yes.

Items 139 and 140 agreed to.

Mr. MACLEAN (*Queens*): I have a very brief announcement to make.

Under the consumers' service branch we have a service which is trying to induce the Canadian people to eat more fish on all occasions, and in connection with that we have test kitchens in various parts of the country. We have one in Ottawa in the west block. I would like the members of the committee to come over there for a fish luncheon a week from today at one o'clock, if that is agreeable.

Agreed.

The CHAIRMAN: Next week the meetings will be held on Tuesday, Thursday and Friday from 9:30 to 11:30.

Mr. ROBICHAUD: Except Friday

The CHAIRMAN: Except Friday.

HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958

STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 5

Estimates (1958-59)—Department of Fisheries

TUESDAY, JULY 22, 1958



WITNESSES:

The Honourable J. Angus MacLean, Minister of Fisheries; Mr.
G. R. Clark, Deputy Minister and Dr J. L. Kask, Chairman,
Fisheries Research Board, Department of Fisheries.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958

STANDING COMMITTEE
ON
MARINE AND FISHERIES

Chairman: Roland L. English, Esq.

Vice-Chairman: A. De B. McPhillips

Messrs.

Anderson,
Batten,
Bourget,
Brown (*Vancouver-
Kingsway*),
Carter,
Crouse,
Danforth,
Drysdale,
Gillet,
Granger,
Howard,

Keays,
Legere,
Macdonald (*Kings*),
MacLellan,
Matthews,
McGrath,
McQuillan,
McWilliam,
Michaud,
Morris,
Murphy,
Noble,

O'Leary,
Phillips,
Pickersgill,
Richard (*Kamouraska*),
Robichaud,
Speakman,
Stefanson,
Stewart,
Tucker,
Webster—35.

A. Plouffe,
Clerk of the Committee.

MINUTES OF PROCEEDINGS

TUESDAY, July 22, 1958.

(6)

The Standing Committee on Marine and Fisheries met this day at 9.30 o'clock a.m. The Chairman Mr. Roland L. English presided.

Members present: Messrs. Anderson, Batten, Browne, (*Vancouver Kingsway*), Carter, Danforth, Drysdale, English, Howard, Keays, Legere, Macdonald, (*Kings*), MacLellan, Matthews, McGrath, McQuillan, McWilliam, Noble, O'Leary, Pickersgill, Robichaud, Stefanson, Stewart, Tucker.—(23)

In attendance: The Honourable J. Angus MacLean, Minister of Fisheries; Messrs. G. R. Clark, Deputy Minister; J. J. Lamb, Director, Administrative Services; W. C. MacKenzie, Director, Economic Service; I. S. McArthur, Chairman, Fisheries Research Board; Dr. J. L. Kask, Chairman, Fisheries Research Board; O. C. Young, Vice Chairman, Fisheries Research Board; T. Turner, Director, Information and Educational Service; E. B. Young, Assistant Director, Conservation and Development Service; Dr. Wm. M. Sprules, Special Assistant to Deputy Minister; J. G. Carton, Departmental Solicitor; R. Hart and W. A. Abbott, Administrative Service; L. Moren, Fisheries Research Board; Dr. W. Carr, Economics Service.

The Committee continued its study of the estimates of the Department of Fisheries.

Before proceeding the Chairman thanked the Minister and the Deputy Minister for Films which were shown last Friday.

Items 151, 152, 153—Fisheries Research Board of Canada—were called. Item 565 of the supplementary Estimates was also called.

Mr. Clark tabled copies of Departmental publications which were distributed. The list follows:—

1. Canada's Atlantic Salmon.
2. Canada's Lobster Fishery.
3. Canada's Pacific Salmon.
4. Canadian Fish Culturist, The.
5. Canadian Fish Recipes.
6. Choose Canadian Fish,—for Variety and Economy.
7. Department of Fisheries, 27th Annual Report.
8. Easy Fish Casseroles.
9. Favourite Fish Recipes.
10. Fish for Parties.
11. Fish for Year 'Round Salads.
12. Fisheries Fact Sheets.
13. Fresh Water Delicacies, (1955). (Colors yellow & black.)
14. Fresh Water Delicacies, (Black and White).
15. Handling Fish in Inshore Boats to Produce a Quality Product.
16. Handling Fish in Trawlers at Sea to Produce a Quality Product.
17. Oceanography, Science of the Sea.
18. Oceans of Goodness.
19. Oven Cookery of Fish.
20. Purse Seines to Lobster Pots.

21. Quantity Fish Recipes.
22. Science in Fisheries.
23. Trade News.
24. Versatile Cod, The
25. Way to Cook Fish, The (1955)
26. Way to Cook Fish.

The Minister made a brief introductory statement on the Fisheries Research Board. Dr. J. L. Kask, Chairman, was called and examined.

The Minister was assisted by Mr. G. R. Clark and Mr. J. J. Lamb.

Items 151, 152 and 153 of the main Estimates were adopted. Item 565 of the supplementary Estimates was also adopted.

Items 556, 557, 558 and 559 of the supplementary Estimates were adopted, the discussion thereon having taken place on Items 134 to 140 on Thursday July 17th.

At 10.45 o'clock the Minister left for a Cabinet Meeting.

The Deputy Minister answering a previous question read into the record figures in respect of export of mackerels and squid.

Mr. Robichaud expressed his appreciation for the work done by the Fisheries Research Board of Canada and Dr. Kask was applauded.

The Committee then proceeded to the consideration of Items 141, 142 and 143 of the main Estimates and Item 560 of the Supplementary Estimates—Consumers' Branch, etc. These items were adopted.

At 11.40 o'clock, the Committee adjourned until Thursday at 9.30 o'clock.

Antonio Plouffe,
Clerk of the Committee.

EVIDENCE

TUESDAY, July 22, 1958.
9:30 a.m.

The CHAIRMAN: Good morning, gentlemen. We now have a quorum so we shall proceed.

I would appreciate it very much if with unanimous consent we could pass to the study of the research board which is covered in items 151, 152 and 153 due to the fact that Dr. Kask, Chairman of the Fisheries Research Board will be out of town for a week.

I would also like to thank the honourable Minister of Fisheries for the very interesting film he was kind enough to have shown to us last Friday.

We have also a list of publications which have been distributed to the members of the committee and for these I wish to express my sincere thanks to the deputy minister, Mr. Clark. The list will appear in the minutes of the committee. We will proceed now with items 151, 152 and 153.

Hon. J. ANGUS MACLEAN (*Minister of Fisheries*): I would suggest, Mr. Chairman, that we also include in that group a supplementary estimate dealing with the research board.

Mr. ROBICHAUD: Mr. Chairman, before we proceed with the questions, it might be in order for Dr. Kask to give us a statement on the work of the Fisheries Research Board. He could make it a general statement and in giving his statement maybe Dr. Kask could answer a question which I asked at the last meeting in connection with the research which has been done to take care of the waste of fish which is now being thrown away. As I mentioned before, about 15 to 20 per cent and maybe more of the ground fish—that is 15 to 20 per cent in weight—is being thrown away. It has a high food value and I understand the research board has done considerable work in research in order to find a way to save this waste.

Mr. MACLEAN (*Queens*): Mr. Chairman, if Mr. Robichaud would be kind enough perhaps I might make a few general remarks at this time and then Dr. Kask could, if the committee so desires, give a more detailed statement with regard to the work of the Fisheries Research Board.

I think perhaps the work of the research board and its organization is sufficiently unique that I should do this. By way of general explanation I should say first that the ministry of fisheries—you might call it that—the elements for which I report to the House of Commons are made up of the department as such and then the scientific arm of the ministry which is constituted under a special act of parliament, the Fisheries Research Board Act. The board consists of not more than eighteen members and a chairman. Members are unpaid; they get only their out-of-pocket expenses in connection with their duties and the majority of them must be scientists. These scientists are outstanding men in their fields and they are drawn from the universities and the research foundations in the country and in some cases from the Department of Fisheries itself. The other members of the board are from the Department of Fisheries and leaders in the fishing industry. The chairman, Dr. Kask, who is sitting on my right, is employed full-time. I think I have introduced him to the committee before. The chairman reports directly to the minister and the research board is responsible for carrying out almost all the research that is done in the federal fisheries field.

There are three main fields of research: biology, which of course as the name implies is the study of fish and other marine life. Its rate of reproduction, its depletion and growth and so forth. This work is carried on at Nanaimo, London, Ontario, St. Andrews, New Brunswick and St. John's, Newfoundland. The second branch is oceanography which of course is research with regard to the ocean itself, its climate, currents, temperatures, productive capacity and so on. Now, oceanography is of interest not only to the Department of Fisheries but also to navigation, defence, meteorology and so forth. So in this field the research board does work for us in collaboration with other departments of government on problems in which these departments are specially interested. The oceanography is carried on from Nanaimo on the Pacific coast and from St. Andrews, New Brunswick on the east coast.

The third field of research is technology. This includes studies in the preservation and processing of fish and the use of by-products. Now, Mr. Robichaud's question dealt specially with this and I am sure Dr. Kask will be very pleased to make some remarks on it. This field of research is carried on chiefly from Vancouver, British Columbia, Grande-Riviere, Quebec and Halifax Nova Scotia. There are application units in London, Ontario and St. John's, Newfoundland. Then in addition to this we have in the research board an Arctic research unit dealing with problems affecting the Arctic specifically and the headquarters of this unit is in Montreal. I think in a very general way that covers the situation, so I will ask Dr. Kask, if he will make some comments in a general way and in particular in reply to Mr. Robichaud's question.

Dr. J. L. KASK (*Chairman, Fisheries Research Board, Department of Fisheries*): Thank you, Mr. Chairman. Honourable gentlemen, in the technological field which Mr. Robichaud particularly alluded to we have a great deal of information developed on the use of the so-called waste or by-products from the fishery. You will recall at one time practically all of the fishermen's running expenses were paid from the oil that was obtained from fish livers. This is because of the natural vitamin potency which is contained in this oil. Scientists have moved on and much cheaper synthetic vitamin sources have been found, so a new use would have to be found for the liver. Livers are all thrown away at sea unless some specific valuable use is found for them. We have now tried to make what we call liver residue or a special necessary food out of the liver. This has been developed and there is an accessory food element in the residue that adds to the speedy growth of cattle and chickens and this has again given a certain value to the liver. One of the great shortcomings in all of our fisheries material is that we cannot guarantee it in sufficiently great supply so that the companies which deal in cattle foods and human foods on a large scale are able to rely on a continuing and large supply. As you know, most fisheries enterprises are scattered over long areas of coastline and though in total the amount of waste material is quite great, in order to accumulate it to a central area it is so costly in many instances that it is cheaper to throw it away than it is to bring it into a central area and process it.

Another product which has been developed by our scientists is so-called fish flour and up until now only the waste materials of the fish have been used in developing this material. It is white in colour and the only reason they call it flour is because it looks like flour. It is a white odourless material that is almost 100 per cent protein. It can be used and has been used experimentally as an additive food and relatively small quantities would supply the animal protein required. The big food requirement in the world today is animal protein and this could be a source of fortifying bread, cakes, rice patties in the Far East and so on. It can be manufactured on an experimental scale. We have done it. It can be added to cakes and we have even fed it to members of this committee in the past. It has been recognized as being an exceptionally fine source of almost pure animal protein. We have not yet been able to lick the cost. It entails

economic studies from now on to ascertain how it can be made up in sufficient quantities in order that the large food firms could rely on a continuing source. It is still quite expensive to manufacture in our pilot plant, but it has possibilities. I can assure Mr. Robichaud there is nothing in the fish that we do not have some scientific way of utilizing but the economics and the industrial problems back of it still leave much to be resolved. One of the big problems of course is bringing material, which is so widely scattered, into one area so that it can be used.

Mr. ROBICHAUD: You have mentioned that a great supply is required in order to operate economically and you mentioned you have been unable so far to locate sufficient supplies. Have you any idea of the amount of fresh fish that would be required in order to operate a plant economically? I have in mind this area of Gloucester county where within a distance of twenty miles there is landed in a period of five months over 50 to 60 million pounds of ground fish. I doubt if there is any other area on the Atlantic coast where such a concentration of landings can be found. I wondered if this would not be the proper area to carry on an experiment on a large scale. The fleet is there; we have 50 to 70 draggers operating during a period of five months. The quantity of fish is there and it is landed at three landing points within a distance of twenty miles. Has any consideration been given as to the possibility of this area being used as I have mentioned?

Mr. MACLEAN (*Queens*): If I might say a word on that, Mr. Chairman, the industrial application of any scientific findings would be applied by the Industrial Development Branch of the department. Mr. Robichaud's suggestion may have possibilities, but as Dr. Kask has said, the problem from now on is one of economics. It is a question which will be studied and can be studied in any case by the Atlantic advisory fisheries committee which has, as has been said, representation on it from the provinces as well as from this department. I do not know whether that answers your question or not, but it is a field that has possibilities and these possibilities will be investigated.

Mr. ROBICHAUD: Mr. Chairman, the reason I brought up this matter now is because when I brought it up when we were studying the industrial development branch of the department I was told it could be brought up better before the committee when the research board estimates were being studied. Now my point is, Mr. Chairman and Mr. Minister, that I would appreciate it if the department could give serious consideration in the practical application of the research made in this field by the research board. As I have mentioned before this area of Gloucester county is certainly one of the largest producing areas on the Atlantic coast and specially for the landing of fresh fish. An experiment of this kind is more practical where fresh fish is landed, because if fish is being salted at sea, as in certain cases, then it would become more difficult to save this waste. As I have said, the quantity is there; there is between 50 and 60 million pounds of ground fish landed in a period of five months, and I would ask the department to give serious consideration to the possibility of practical application of this research in this particular area.

Mr. MACLEAN (*Queens*): Mr. Chairman, when I suggested this could best be taken up in regard to the item on the research board, I think it goes without saying it was not my intention to try to cut off discussion on this point, but merely that the scientific aspects of the work which has been done comes under the research board. I am grateful to Mr. Robichaud for his suggestions and I assure him this will be looked into carefully to see what the economic possibilities are. And as he has pointed out the Gloucester area of Canada is one of the oldest and most productive areas of ground fish with the exclusion of some areas in Newfoundland. But apart from Newfoundland, it is one of the oldest fisheries in Canada and goes back well into

the sixteenth century. It is a very productive area and it would seem since most of the production from that area goes into fresh fish or fillets that it would be perhaps the most suitable place or at least one of the most suitable places in Canada where development in this field might take place if it is found to be economically feasible.

Mr. CARTER: I would like to direct a question in regard to this flour to which Dr. Kask has referred. I understood him to say that they use only fish waste to produce the flour. What would be the yield from say 100 pounds of fish waste? Could you give us some idea what that might be?

Dr. KASK: The yield would be small because there is a great deal of water in fish waste, and in fish muscle. The yield would be around 5 to 10 per cent.

Mr. CARTER: Has the board conducted any experiments to see what the benefits of combining protein with flour would be? Would it destroy the key to the keeping power of the flour or do you know how much flour you could mix with this protein?

Dr. KASK: These experiments have been carried out, but not by us.

Mr. CARTER: More by the Department of Agriculture?

Dr. KASK: The agricultural people and the food people and our colleagues in the Department of Fisheries who deal with fortifying human and animal food from fish products.

Mr. LEGERE: Mr. Chairman, as you well know, down in Nova Scotia we have no oysters. They will not thrive there and I was wondering if any experiment has been made in regard to why they will not grow in Nova Scotia?

Dr. KASK: Oysters are a shellfish and are extremely dependent on water temperatures. We differentiate oysters from clams and other shellfish of that kind in calling them warm-water bivalves rather than cold-water bivalves. The reason is the oyster will often grow in cool water, but will not reproduce and in many areas where oyster farming is carried out now on a large scale, particularly on the Pacific coast, the seed oysters have to be imported into the areas. Cold water will not induce the oysters to spawn. If you want an oyster industry in a cold water area, one of the things you would have to do would be to introduce the seed oysters.

Mr. LEGERE: We brought from New Brunswick three different kinds and planted them and we never found a shell.

Dr. KASK: One of the things about the ocean is it is very, very enormous and the shells do disintegrate rather quickly, so the mere fact that a few shells were not found is not too unique, but the fact that your imported oysters did not spawn, is something that could have been foretold, if the water temperatures are low.

Mr. LEGERE: It has been said around home that oysters will not grow in Nova Scotia because they do not feed at a certain temperature; is that so?

Dr. KASK: If the temperature is low enough I think that is correct. The oyster feeds by ingesting a stream of water and it extracts tiny food materials out of the water, so as long as the life processes go on the oyster will feed, but if the temperature is too low, it will feed at such a low rate, if at all, that it probably will not thrive or survive.

Mr. STEWART: Is there any industrial scientific work carried on at St. Andrews?

Dr. KASK: Yes, we had a considerable amount of work in collaboration with the industrial development services of the department. For instance, one of the things under investigation is the development of a mechanical clam digger. One of the features of digging clams by hand is that this method is very destructive to the young clams and to spawn, so we are trying to develop a less

destructive and perhaps more efficient mechanical clam digger. They have demonstrated it in many areas of the maritimes and we think in time with the help of our industrial development colleagues this might become a standard form of harvesting clams.

Mr. STEWART: Dr. Kask, I would like to have the number of people employed in that type of work at St. Andrews and the annual expenses in connection with it.

Mr. MCQUILLAN: On a couple of occasions there has been an attempt to introduce lobster to the Pacific coast. The last attempt was made four or five years ago. Could you give us your opinion on any evidence of success or complete failure in that experiment of introducing lobster on the Pacific coast?

Dr. KASK: Mr. Chairman, the introduction of lobster was done rather against our better judgment, because we had had considerable experience in this field before. The reason for our concern about it was not that it was very bad but the chance of success would be very small. The lobster were taken at the request of private individuals in and around Prince Rupert who had a little enclosed area where they thought the temperatures of the surrounding area were sufficiently unique that lobster could grow, thrive, spawn and reproduce. We did cooperate with them, at their expense of course, in sending these lobsters out. The lobsters did survive for a length of time which could have been foretold, but the venture was not a complete success. They did lay eggs, but the ocean area there is so great and the number of eggs—as you know the lobster life history is an extremely complex one. The eggs have to be fertilized and then they go through two or three free swimming larval stages before they settle down to become a lobster. These larvae were for the most part swept out to sea and they did not survive. This experiment was not entirely a failure, as I understand the lobster did grow to a larger size. One was fed, I believe, to government officials to prove it was a reasonable success but it was not considered to be a successful transfer of lobster.

Mr. MCGRATH: Would the doctor comment on what has been done by the department in research or investigation into the commercial value of Newfoundland capelin?

Dr. KASK: The capelin is one of a very numerous species in that area and they form a very important basis of food for larger fish. Our scientists have for years been trying to perfect a better use for capelin. However, up until now development has not been sufficient to fully utilize these resources.

Mr. MCGRATH: I would like to suggest, Mr. Chairman, that the Newfoundland capelin is very much akin or similar to the smelt. It can be frozen, attractively packaged and sold. It is very similar to the smelt. I think there are possibilities in regard to it and I wonder if experiments have been carried out by the Department of Fisheries investigating the possibilities of canning the capelin.

Mr. MACLEAN: I think perhaps Mr. Clark could say a word in this regard, Mr. Chairman.

Mr. G. R. CLARK (*Deputy Minister of the Department of Fisheries*): Mr. Chairman, if I may interrupt at this point about the capelin, the Department of Fisheries along with the fisheries research board have in mind some investigation as to the utilization of this very vast quantity of capelin which comes to the shores of Newfoundland. We would agree with you, sir, that there are possibilities of marketing capelin as a food fish. We are now engaged in an investigation into this possibility.

Mr. PICKERSGILL: Mr. Chairman, I understood that a year or so ago the fisheries research board was having some difficulty in recruiting suitable people for its staff because there did not seem to be too many careers for fishery

scientists. I wonder what the more recent experience has been, and whether any efforts have been made in the universities, and particularly in Memorial University, to encourage more students to go into this field.

It does seem to me that the fisheries research board, if it is going to continue to do the excellent work it has been doing in the past, has to have a steady flow of first-rate people coming into it. I believe there were a few years when, if it had not been for immigration, we would have been in a very bad way, indeed. Perhaps Dr. Kask could say a word about this.

Dr. KASK: Mr. Chairman, the fisheries research board has, in many instances, been particularly fortunate in recruiting. We have had a fairly large application for some of our specialist types.

As Mr. Pickersgill pointed out, we have some difficulties in different areas. We have difficulties in particular specialties, or particular disciplines. In order to meet that difficulty we have, in the past several years, developed two ways of attempting to overcome these difficulties.

One way is by granting special scholarships in our field of interest. These scholarships are administered by the National Research Council with their own scholarship program, but are specially geared and steered into our field of interest.

During the three years that this scholarship system has been in effect we have recruited four post-graduate scholarship students through our own scholarship efforts. That is a pretty high percentage, and we think a particularly gratifying one.

The other way in which we are trying to provide for the future of what we call our raw material for our research staffs, particularly at Memorial University in Newfoundland, is by seconding one of our specialists in the field to help with the instruction in that area. We have, in Newfoundland some very capable, and we think well qualified, scientists in our field. From that area we are able to attract people who are interested in the seas and in the seas' products.

We find that in the last two years—a year and a fraction—we have been supplying help from our own stations in instructing at universities, and that we are attracting a greater number of bright high school students into the field. We hope that four years from now the consequences of this will become evident.

Mr. PICKERSGILL: I have a related question to ask, Mr. Chairman. I would ask this question of the minister rather than of Dr. Kask.

The minister no doubt has visited the fisheries building in St. John's and I do not suppose he is any more proud of it than was his predecessor. Has he made any progress with the Minister of Public Works in regard to getting the plans finished for a new fisheries building in St. John's? I think he would agree that it is very urgently needed.

Mr. McLEAN: Mr. Chairman, I agree that some space is definitely needed in our building in St. John's, Newfoundland. This matter is now under study—perhaps "study" is not the right word—by the Department of Public Works and our own department.

The hon. member may be aware that when Newfoundland came into Confederation this building in St. John's was purchased by the federal government for use by the research board. However, there happens to be a tenant still occupying a part of it on a temporary basis—this tenant being the provincial government—until they have built other accommodations for the services which they now have in that building. This temporary period has been lengthening a great deal and is still going on. We hope that some solution will be found so that the whole of the present building can be used for

the purpose that it was intended by the federal government, and that additional accommodation can then be provided as well to create one unit to accommodate both the Department of Fisheries and the fisheries research board.

Mr. ROBICHAUD: Mr. Chairman, in regard to this question of scholarships, I understand that \$25,000 a year has been in the estimates for the last three years. Could Dr. Kask give us some details as to the application of this amount for scholarships? To what type of graduate is it available? You have mentioned that the graduates would be selected under the National Research Council. Would they be university graduates, or is this for post-graduate courses only?

Dr. KASK: Mr. Chairman, this \$25,000 for scholarships is aimed at post-graduates almost entirely. It is a specialized scholarship. That is some people that do study, for instance, in chemistry—we want them particularly in biochemistry—we encourage them to continue study in fields related to ours so that when they come out of post-graduate study they will be more nearly suited to our requirements. Fisheries work in chemistry and physics and the related discipline is rather specialized.

The closest type of trained personnel that we have are the agricultural people. We have drawn from those graduates as well, especially in the field of bacteriology, agricultural bacteriologists and men of that kind. We are trying now to encourage specialization in our special interest fields.

Mr. ROBICHAUD: We were given this morning a copy of this booklet *Canada Lobster Fisheries* which I have seen before. I think the Department of Fisheries should be congratulated for this magnificent booklet which has a lot to do with the education of the fishermen. When I say "education" I mean practical education.

I would suggest to the Department of Fisheries that a number of copies of this booklet should be made available to every school in fishing communities where lobster fishing is being carried on. I understand the fisheries inspectors in lobster fishing areas have been distributing a certain number of copies of this booklet. A booklet of this kind has a great deal to do with the educating of fishermen.

It could also have a lot to do with the conservation of lobster fisheries. Dr. Wilder, who is responsible for the lobster investigation, should also be congratulated for preparing this booklet.

I would appreciate it if consideration could be given to a larger distribution in schools, where lobster fishing is carried on, of this booklet, and I would also appreciate it if this booklet were printed in French.

The CHAIRMAN: Perhaps Mr. Clark could say something in that regard.

Mr. CLARK: Mr. Chairman, we appreciate Mr. Robichaud's remarks. We do think this is a very excellent publication. I can assure him, Mr. Chairman, that the distribution is made very widely. This booklet is also published in French.

I might add, Mr. Chairman, that we have had a very excellent response from the departments of education of the various provinces which have received quite a number of the various publications, particularly this one, that we publish, and they are being used in the schools in the various provinces.

Mr. LEGERE: Coming back to the question of these scholarships, Mr. Chairman, what would be the amount per year, and what would be granted to a post-graduate student taking up this course?

Dr. KASK: Mr. Chairman, that varies with the type of scholarship. We have three types of scholarship. One is a bursary type which involves just a few hundred dollars a year to help a student along.

Another type involves a \$100 a month scholarship; the third type is the regular post-graduate scholarship which involves all the living costs, and would run in the neighbourhood of \$2400 or \$2600 per year.

Mr. LEGERE: Is that scholarship given with the understanding that after a student has graduated, he has to join the Department of Fisheries?

Dr. KASK: Mr. Chairman, there is no legal binding, but there is a moral binding. There is the fact too that usually the recipients of the scholarships are well aware of the source of their support and work very closely with our regular research group.

Mr. PICKERSGILL: I would like to ask Dr. Kask about the experimental work in producing light salted fish.

Does he feel that the research board has finished its work in that field and that this is now an industrial development problem? In other words, the experiment at Bonavista so far as research is concerned was a complete success, and nothing more needs to be done in that field, is that correct?

Dr. KASK: Mr. Chairman, the research in regard to light salted fish has not been completed. We have a great deal of information on the books and on our shelves that has not yet been fully applied. In that sense we think that the application in some areas is a little behind research.

Mr. MCQUILLAN: Until about ten years ago we had a pilchard fishing industry on the coast of British Columbia. I think the last worthwhile catch was made around 1946. This industry seems to have pretty much disappeared. Is there any possibility of that run coming back? I realize that they do not spawn, as far as I understand, locally and we do not have much control over them, but could you give us some information in regard to the pilchard fish?

Dr. KASK: Mr. Chairman, the centre of the pilchard industry during the time that British Columbia was enjoying a pilchard fishery, and the centre of the spawning area was at approximately two latitudes; at San Francisco and at Monterey, California. The fishery that British Columbia was prosecuting were the oldest stage groups that wandered that far north.

Subsequent to 1946—1947 there was some catastrophic situation in the oceans that affected the centre of gravity and the centre of spawning for pilchards moved further south. The actual spawning centre at the present time still is off the shores of lower California which is many hundreds of miles further south.

For a number of years the pilchard fishery was almost defunct in the United States as well as in British Columbia. In the southern parts of the United States the boats now from Monterey, where the centre of the pilchard fishery in the United States was, are going further south for their catches. The chance of pilchards returning to British Columbia at the present time is relatively remote.

If the centre of the population, which seems to be drifting north again, comes back to the same area, I think that the larger fish will again penetrate British Columbia waters and the pilchard fishing industry will be reinstated.

Mr. CARTER: I have two or three questions to ask, Mr. Chairman. I would like to move back to questions in regard to fishing in Newfoundland.

Are there any special problems in respect to processing capelin? Do capelin have a greater water content than other fish?

Dr. KASK: Mr. Chairman, as far as we know there is no great problem of processing them. It is merely a problem of acceptability at the present time. My information is that they have been put into cans and treated in oil. They have been sun-dried, as you know, and used almost as a dried fish and canned in the round. They have been prepared in a great number of ways. Those

people who like them like them very much. There is no great demand for them. There is no reason that we can see why they should not become valuable fish. They are used, as you know, quite extensively in pet food.

Mr. CARTER: Has there been any reseach into the possibilities of creating artificial flavours for fish?

Dr. KASK: Yes, there has been, but other governmental departments take a rather dim view of this. As you know, there have been artificial colours added and artificial flavours added.

One of the things, Mr. Chairman, that might be mentioned is that the great tuna canning industry is based on the removal of the fish flavour from the fish and canning the residual fish and adding oils. They take the natural fish oil out and add vegetable oils and other oils.

In that way they have created a large industry. They take out the flavour in that case rather than add flavour. In that regard the government departments do not seem to have much objection, but if new flavours are added they do.

Up until now very little scientific work has been done, but a lot of test work has been tried. So far there has been very little obvious success.

Mr. CARTER: Can you tell me what has been done in respect of preserving fish by arresting bacterial growth through radiation?

Dr. KASK: Mr. Chairman, up until now this is only in the experimental stage. The radiation of fish by rays recently has been undertaken by a group of independent research people in Canada and the United States. We are working very closely with them but this has not yet developed to the point where it is commercially possible.

Mr. CARTER: One of the things that has always puzzle me is that we do not put up codfish in tins. I would think that for export to warm countries we should be able to develop a market for tinned codfish. This is only being done on a very small scale. I was just wondering what the reason for that was. Is this again a problem of demand, or have we just not bothered to create a demand, or has the problem to do with cost?

Dr. KASK: I think, Mr. Chairman, that the situation there is that most of the so-called white fish are relatively oil free. They do not make a very desirable canned product. There is nothing in the muscle tissue that prevents the canning of them. They are just unacceptable when canned. This applies also to halibut and other so-called white flesh fish.

Mr. CARTER: I have not experienced this myself, but I have been told that some cod which has been put in tins, is just as good as ordinary fresh fish. I know that the quality varies a good deal, and perhaps that might be one of the problems.

Dr. KASK: Mr. Chairman, I do not think I can answer that one. I know that it has been tested and I know it has been tried in the canned form, but the regular commercial acceptability does not seem to follow.

Mr. MacLEAN: Mr. Chairman, perhaps I could say a word in this regard. As the committee realizes, during the war and after the war especially there was considerable quantities of codfish and other ground fish canned. It was generally known commercially as chicken haddie. This is a product that does not, as Dr. Kask has just said, seem to be in very great demand commercially. This may partially be due to the problem of getting people used to it. It may be because it is considered that the cost is such that there is more value, in the minds of the consumer, in other types of canned fish if canned fish is to be used at all.

Perhaps the deputy minister could say a word in this regard.

Mr. CLARK: Mr. Chairman, I do not think there is very much I can add. I think what has been said on this subject is quite right. There is no problem actually in producing the article. I think the problem is a matter of consumer demand and marketability of the product.

Mr. CARTER: Mr. Chairman, if as Dr. Kask has said, ground fish are deficient in oils to the extent that they do not put up well in cans, or are not as acceptable as the fattier fish, could we not put oil in the can, and could we add the flavour of the oil at the same time in order to make this an acceptable product and thereby make better use of this wealth that we have?

Mr. CLARK: Mr. Chairman, I think this is quite possible. As Dr. Kask said, vegetable oils are added to tuna fish which is relatively a dry white fleshed fish. The moment you start to add oil you increase your cost and again it becomes a matter of consumer demand. Will people pay the price required for this type of product?

Mr. CARTER: Yes, but we will never know the answer to that question unless we try it. We have to do something to begin with.

Mr. CLARK: Mr. Chairman, I think there are a number of companies on the Atlantic coast who are now putting up, as the minister has mentioned, chicken haddie. Cod is put up in oil now by one of the companies. This has already been done in respect to these various products.

Mr. ROBICHAUD: Is it true also, Mr. Chairman, and Mr. Clark, that some of the American canners have spent considerable time and money in research and advertising in regard to this product? I do not think I need to name any particular company but they have certainly tried to introduce this type of product,—canned chicken haddie—in the United States, but it has not been received too well.

Mr. CLARK: I think that is correct, Mr. Chairman.

Mr. ROBICHAUD: The product has not been too well received, Mr. Chairman.

I wonder if Dr. Kask could give us some information as to the type of work or research that will be done by the A. T. Cameron vessel which was recently launched by the Department of Fisheries?

Could Dr. Kask also give this committee some detail about the new 153-foot vessel for which tenders were called a day or so ago? This vessel is supposed to be a steel vessel which will operate on the Atlantic coast. Tenders have been called already by the Department of Fisheries. Perhaps Mr. Clark could give us some information in that regard.

Mr. MACLEAN: The first vessel which Mr. Robichaud has referred to belongs to the fisheries research board. It is a research vessel and I will ask Dr. Kask to say a word about that.

The other vessel Mr. Robichaud mentioned belongs to the Department of Fisheries and perhaps Mr. Clark will have something to say about that.

Dr. KASK: Mr. Chairman, the A. T. Cameron, which has just recently been christened and launched, we hope will be in operation by early October. It is designed particularly and primarily for the study of the ground fish problems on the east coast of Canada.

Because it is a big and expensive ship we feel that we must use it in as many ways as possible, so we are going to conduct some experiments on what we call pelagic fish as well as herring and those fish that swim at the top.

We have also put in certain types of freezing units in the ship so that our technologists can carry on further experiments on the freezing of fish at sea, permitting them to keep the fish in better condition.

Actually the A. T. Cameron is an all-purpose ship. Its primary responsibility, and its primary reason for being is to develop further information on what we call the population dynamics of the ground fish on the coast of Canada.

Mr. ROBICHAUD: What was the total cost of the A. T. Cameron?

Dr. KASK: The total cost of the A. T. Cameron is \$1,314,000.

Mr. ROBICHAUD: Does that include equipment?

Dr. KASK: It includes everything.

Mr. CLARK: Mr. Chairman, in connection with the second part of Mr. Robichaud's question, the recent tender calls for a departmental patrol vessel is to replace our large patrol vessel, the *Cygnus*. The committee might be interested in knowing that the *Cygnus* now is getting quite old. She was built during the war. She was a bangor mine-sweeper type vessel. She is about at the end of her life and is now becoming extremely expensive to keep up and repair each year. Therefore it has been decided that we should have a replacement for the *Cygnus*.

Mr. LEGERE: Mr. Chairman, I would like to address a series of questions to Dr. Kask.

Has there been any experiments made to confirm the fact that herring rise to the top of the water when it is a dark night but on moonlight nights they stay at the bottom?

Dr. KASK: Mr. Chairman, this falls into rather a new science that is called ethology, which is the behaviour and study of fish.

The curious thing in regard to herring is that in one area they do exactly as you have indicated and in other areas they do exactly the opposite.

The pilchard fishery, which was discussed just a moment ago, in the California area was entirely a night fishing operation because the fish would never come to the surface in the daytime. At night in the moonlight is when the big catches were being made. The pilchard fishery in British Columbia was mostly a daylight fishery. These are the same species except, as I indicated, that it was the older age groups of this centre group that came as far north as southern British Columbia to form the fishery there.

They come up at night in one area and not in another. We are not in a position to say why. We do know that these fish respond to light, to sound, to temperature and to a number of conditions.

Mr. LEGERE: Further to that question, Dr. Kask, when they are in the process of spawning, regardless of the moon, they do rise to the top in the same areas?

Dr. KASK: That is in response to instinct.

Mr. LEGERE: My second question concerns lobsters. Why do lobsters relish fresh water to the extent that they drink themselves to death?

Dr. KASK: Mr. Chairman, I do not think they quite drink themselves to death. This involves a physical principle known as osmosis. Every fish grows up in a medium. Those that grow up in the medium of salt water become conditioned to the concentration of the salt in the water. When this animal moved to fresh water, unless it has an impervious skin, as salmon does where part of its life cycle changes from a salt water environment by degrees into a fresh water environment, there is a terrific physical difference of osmotic pressure; that is when they go from one concentrated medium into a less concentrated medium.

The lobster is not designed for that type of exchange, consequently it absorbs the fresh water until the time that the blood of the lobster and the body juices are of the same concentration as the water outside. I will continue to absorb water until such a time as this equilibrium is reached.

Mr. LEGERE: Does Dr. Kask know what is put in fresh water to preserve lobsters and keep them alive?

Dr. KASK: Mr. Chairman, the usual thing that is put into fresh water if you are going to keep them alive in fresh water is something that will insure aeration. That is to say, they keep a complete supply of oxygen.

Mr. LEGERE: There is a lobster industry at Pubnico operated by an American firm from New York. They keep lobsters alive for nine months in fresh

water without any damage to them whatsoever. I was wondering if there was some chemical process or if there was some chemical product they put in the water in order to make the water livable for lobsters.

Dr. KASK: I do not know of any chemical they put in, sir. I do know they must continually add oxygen to the water.

Mr. McGRATH: Mr. Chairman, I wonder if we could have a comment in regard to what the department is currently doing in respect of the public relations job of selling the Canadian people on the advisability of eating fish, and the advantages of the various dishes that can be prepared from fish.

It seems to me that there is a selling job being done for just about every primary product in this country with the exception of—perhaps I should qualify that. I should not say with the exception of fish, but it seems to me that fish take a back seat to other products.

Mr. MACLEAN: Mr. Chairman, perhaps I might just suggest that this subject will be taken up under vote 141, the consumer branch. We have not come to this vote yet. Mr. McGrath, your question applies directly to that particular vote, consumer branch, because that is the type of work that that branch does.

Mr. CARTER: Mr. Chairman, I have two or three more questions.

I understood Dr. Kask to say that research was being done in regard to the use of radiation for arresting bacterial growth. I did not quite catch whether he felt the results were encouraging or not.

Dr. KASK: Mr. Chairman, the experimental results are quite encouraging. In the fisheries field this has not developed far enough so that it can be applicable. Our units are following very closely the residuals that the Atomic Energy Commission are doing in regard to the use of radioactive material for preserving fish.

Mr. Chairman, perhaps I might add at this point that in Newfoundland as well as in other areas the use of anti-biotics is developing and is increasing the shelf life of a fish by quite a considerable amount. Where this method is introduced into the ice it has a bactericidal action, as you know, and increases the keeping time of fish. If this is applied to fish it will help to maintain the fish in a fresh condition for a much longer time, which make the difference between being able to sell them and not being able to sell them. Antibiotic dips have also been used to a lesser extent but also very effectively in refrigerated sea water which helps to maintain the fish in a fresh condition for a longer period of time.

Mr. CARTER: Before we leave the herring, I would like to direct a further question. In some parts of my riding the herring fishery has failed for three or four years in succession and the fishermen think that is due of course to the effects of intense seining, that is bottling up the herring at spawning time by setting seines out in their spawning areas in the rivers. Could Dr. Kask tell us what the research board has found in regard to that and whether there is a natural decline in the over-all picture with respect to herring in Newfoundland waters?

Dr. KASK: If I might say a word. Our scientists do not think this failure of herring to appear is a sign of depletion, but rather one of availability. As you know, in a very comparable herring fishery, the same species in Norway has fluctuated a very great deal over the centuries in which fisheries have been carried out there. The fact that herring do not always appear in their local haunts does not mean the mother lode has been seriously reduced. It may mean that they are not in the area where they have been found for a number of years. The Norwegian herring fishery a few years ago, prior to the end of World War II, had a production of 100,000 tons a year but more recently with their sonic depth finders and survey vessels they have found

the main body of herring and their fisheries production is now nearly one million tons a year. The Norwegian scientists do not think that by even taking that much herring that it is affecting the basic herring stocks very much. That, of course, is not a final story. It could be having an affect on it, but we do not think this is the case off the Newfoundland coast.

Mr. CARTER: What were the results of investigation carried out by your board in trying to locate stocks of herring in Newfoundland during the last four or five years?

Dr. KASK: This work was done in cooperation with our colleagues in the industrial development service and the results have not been such that we have been able to say where the main stocks of herring are located. We have found herring, but off the Newfoundland coast and off the coast of the maritimes in general the mother lode has not yet been found. However, we feel that in the next few years we should be able to locate the main body of herring by eliminating the different areas where they are not found. We think of this survey in terms of a ten-year survey period.

Mr. TUCKER: What export value have squid and mackerel as articles of food?

Mr. CLARK: We will have to obtain that for you. I do not have it readily available.

Mr. TUCKER: It has some value?

Mr. CLARK: Yes.

Mr. McQUILLAN: Up until 1937 or a number of years prior to that there was quite a large fish hatchery program on the coast of British Columbia. Around about 1937, I believe it was, the government decided to discontinue these hatcheries. Is there any thought that they might have been discontinued prematurely and that they might have been of some value? Is there any thought of instituting such a program?

Dr. KASK: There are two answers to that question. They were not discontinued prematurely in the sense that the hatchery techniques as then known were not being effective. They were costly but not demonstrably effective. This does not mean hatcheries should be done away with as a way of increasing our fisheries supply especially in regard to anadromous fish like salmon to which this hatchery business seems to lend itself so readily. We have recently been doing experiments in a relatively new branch of science known as ethology or fish behaviour and it has been found that such minor changes as for instance if you release the young pink salmon during the day they will die; if you release them at night they will live. The techniques of raising fish from eggs to fingerling size are well known and can be done efficiently. The subsequent life history is the one that was not known and where losses occurred the reasons for the losses were not known. We think we have found some of the reasons for these losses and we may find that with the coming of increased multiple uses of rivers such as reservoirs to get rid of urban and industrial pollution, hydroelectric power dams etc., is not conducive to fish survival and we may have to revert to the fish hatchery. But we hope it will be in a more enlightened way, than past practices.

Mr. LEGERE: I have another question for Dr. Kask. A short while ago we were discussing how the herring were affected by the moonlight. I understand that you can do such a thing as torching herring and they will rise to a red glow. That seems to be contradictory.

Dr. KASK: Each of the species of fish react differently to different stimuli. We are for instance trying to kill lampreys by means of ultra-high frequencies. Light attraction is one of the means that is being made use of currently in

many areas in the capturing of fish. We are trying to make it more scientific than in the past. One of the ways used to attract fish is to find an attractive type of light to which they will respond. This has been made use of very effectively in scientific work and in making scientific collections. Light has the effect of attracting fish into a concentrated area. If you fish for specimens on the high seas you can often capture them by submerging a light of different intensities. Each kind of light will attract different populations and you can dip them out. There is another way of trying to accumulate or concentrate fish that do not naturally concentrate or school such as herring and salmon. These are being brought together by electrodes set different distances apart. In experiments we have been able to attract the fish to one electrode and then send it back to another. That can be easily demonstrated in a controlled laboratory, but at sea it is more difficult. We understand there is another method, although we have not seen it. We hope to be able to see it if we get a group of our scientists to Soviet Russia. There, in the Caspian Sea a form of electric fishing is conducted which concentrates the fish and pumps the fish into a boat. We understand this is being used on an industrial scale but it has not been confirmed.

Mr. LEGERE: The salt-dried cod in the St. Marys bay area turns to a reddish hue but 25 miles further down it does not turn red; it will stay white. One explanation I received was that the cod were caught on a rock bottom and they were called a red or rock cod and the others were caught on a sandy bottom. Has that anything to do with the colour?

Dr. KASK: I think the use of the term red cod and grey cod is a misnomer and should not be interpreted in that way, because the local names of fish vary with the place and area. The red cod is often referred to as the rosefish and is a different species, but the turning red of fish in different stages of curing is for a very definite reason. One reason is due to the growth of what we call halophyllic bacteria. These are red in themselves and they coat the codfish with a red glow. If the source of bacteria is traced very often it is found that the same fish treated with one kind of salt with no bacteria will not turn red and another one treated with an impure type of salt will turn red.

Mr. ROBICHAUD: Someone mentioned a while ago the use of hatcheries. Could you give some comments to this committee on the practical application or maybe the unpractical application of lobster hatcheries such as they have had in the states and in Maine. I understand the research board in its earlier years tried these types of lobster hatcheries in Canada on the east coast and found it was not practical. Could you give your comments on the use of lobster hatcheries in the State of Maine now?

Dr. KASK: On this question, and this will help to answer Mr. Legere's question of the other day on the importation of large berried lobster from high seas areas into coastal areas to spawn. The reason lobster hatcheries and transplants have not worked is the same reason we gave for the transplanting of lobster from one coast to the other. The early life history of the lobster is extremely complex and its final success is dependent not only on the number of eggs but on the current systems and the locality in which the eggs are released. The lobster has two free swimming stages. We can fertilize lobster eggs more efficiently than they are fertilized in nature. We can bring them up to the first larva stage but when it comes through the first metamorphosis and goes to the second larva stage, the difference of the rate of development from one area to another is often sufficiently substantial that the larvae are often swept out to sea, before they settle down. The lobster populations are almost non-migratory and lobster populations of one area are almost independent of lobsters in another. There is some migration but not extensive ones. Each of these unit populations is fairly well dependent on itself for its reproduction

and is dependent on the very special conditions in its area. I do not think lobster hatcheries will again be undertaken until we know a great deal more about the current systems of the various areas.

The CHAIRMAN: The minister has to leave us now and I would ask that you excuse him.

Mr. MACLEAN (*Queens*): I have another meeting to attend, but if there is any specific question anyone would like to put to me before I go, I will answer it as my first responsibility is here. However, there is another meeting I should attend and I would ask to be excused.

Mr. PICKERSGILL: I would like to direct a question to Dr. Kask. Is the research board doing any research at the present time on the restocking of streams and lakes with trout, or is that considered too uncommercial?

Dr. KASK: The actual restocking is the responsibility of the fish culture section of the department.

Mr. PICKERSGILL: I understand that.

Dr. KASK: It is a very important point and in many areas planted fish form the basis of the only fishery they have. As you know, when you go outside of Canada in the State of New York for instance they have a put and take system where tank trucks leave in the dead of night so nobody knows where they go. Prospective fishermen set up watchmen to see where these trucks go and when they find out, it usually results in fishermen being lined up and down the banks fishing before dawn. In Canada we have not come to that point yet, but in some of our lake areas, especially in the maritime provinces where the lakes are not always too productive, artificial stocking and fertilization may be very important

Mr. PICKERSGILL: The board is studying some of these problems.

Dr. KASK: Yes.

Mr. PICKERSGILL: I imagine in a way trout fishing is one of the most valuable assets we have, even if it is not commercial in the ordinary sense.

Dr. KASK: It is being given very serious consideration.

Mr. CLARK: There was a question asked by an hon. member a few moments ago about the exports of mackerel and squid. If I may give the figures now, the mackerel exports for 1957 in all its forms amounted to \$1,814,000. In regard to squid, the figures are not shown separately in the monthly reports but there is of course a large amount of bait squid exported and this approximates \$500,000 a year.

Mr. PICKERSGILL: It is not exported as a food any longer?

Mr. CLARK: No.

Mr. MCGRATH: In view of that figure would the squid that is sold locally to the foreign fishery fleets be considered as exports?

Mr. CLARK: These are considered exports, yes.

Mr. MCGRATH: That would be the only type of export?

Mr. CLARK: Yes.

Mr. TUCKER: Is there no dry squid exported at all?

Mr. CLARK: It is not shown separately; there may be small quantities.

Mr. PICKERSGILL: Is the squid production at the present time greater than is required for bait service? Is anything being lost? I understand at one time there was an export of squid to China. I was wondering what the situation was at the present time.

Mr. CLARK: Our figures at the moment do not show this in so far as exports for human consumption.

Mr. PICKERSGILL: Perhaps I did not make my question clear. We know—some of us at any rate—that there is often a shortage of squid for bait purposes and I was wondering if there is any in excess of what is required to meet the demand for bait?

Mr. CLARK: No, I do not think so. The squid last year, particularly because of the water conditions in the squid areas, was quite limited. There was an under-production and a great demand for bait purposes. Our reports up to the moment seem to show that this situation has greatly improved compared to last year. I think from our current information there will be sufficient supplies of squid bait not only for local use but for export.

Mr. TUCKER: Practically half the catch is used by local fishermen?

Mr. CLARK: Approximately that.

Mr. ROBICHAUD: Dr. Kask, the clam fishery used to be quite an important fishery on the east coast and especially in the provinces of Nova Scotia, New Brunswick and Prince Edward Island and part of Quebec. I understand clam fishing has been declining steadily in the last ten years. What is being done by the Fisheries Research Board to preserve this fishery or bring it back to normal?

Dr. KASK: Two things are being done, one is to develop less destructive types of harvesting, and that has to do with the development of mechanical harvesters. We found that a human clam digger would kill a large proportion of the very young clams when digging for the sizes that were economically valuable. That is one of the reasons there was a rather large decline in some areas. The second way is to extend the area in which clams can be harvested, for instance in waters that are not usually exposed by tides. The clam populations extend into regularly submerged areas. Our mechanical clam digger can harvest these areas.

Mr. PICKERSGILL: Have you ever tried summer fallowing?

Dr. KASK: No.

Mr. PICKERSGILL: The question is not supposed to be funny.

Mr. CARTER: I would like to ask Dr. Kask if anything is being done to explore the possibility of the use of traps on the Grand Banks for the deep sea fisheries. The trap was invented in Newfoundland and in the early days it was a sole trap and they started to use it in forty or fifty fathoms of water. Is anything being done to utilize that method of fishing on the offshore banks, because I am of the opinion that fishing by draggers is a very destructive way of getting fish?

Dr. KASK: There is nothing being done now to extend that special technique to deeper waters but there is quite a lot of accumulated information on the use of traps in various types of fisheries. One of the very recent acquisitions the board has is a gear study section. This unit studies the application of known types of gear. The fundamental principles which makes a gear catch fish is also under investigation. Studies are also being conducted on the behaviour of the fish itself. So if this type of gear were applicable to deep sea fishing and it was proved to be more efficient than the trawl fishing or long line fishing, we should, in the not too distant future be ready to recommend its use. However, use of such techniques may be more important in the future than right now, because there is greatly increased competition from outside countries on the fish stocks off our shores. Fishing by foreign fishermen has increased and is still increasing and the type of fishing gear used by visiting fishermen from other countries has developed in some instances faster than ours.

Mr. CARTER: I was thinking that the use of the trap would be a very logical combination with this electronic method which you said would enable fish to congregate in one section. You could congregate them to the trap if you had the right method.

Dr. KASK: The principles of electro-fishing might well be adapted to the trap type operation.

Mr. CARTER: What is being done in the way of developing a new type of trap or seine for deep water herring fishing?

Dr. KASK: In this respect we again are a little behind some of our European colleagues. The principal difference in Norwegian seines is additional depth, and also the use of submerged seines. Norwegians also use seines to catch codfish, which a few years ago would have been considered quite a feat. The use of deep sea submerged seines is one of the techniques that could be readily applied in our fishing if we could establish where and at what depths our mother load of herring was.

Mr. ROBICHAUD: The opinion has been expressed at different times that draggers were destructive for fish. Is it not true that the drag moving at the bottom of the sea has the effect of disturbing the bottom and creating more food for the fish?

Dr. KASK: I think, Mr. Chairman, that arguments have been given over many years on both sides of this question and there has been no positive proof that trawls are destructive in the sense that they disrupt the bottom because they do have the effect of roiling up some of the decaying organic matter at the bottom and adding this more quickly to the general fertility of the sea. However, if trawls have mesh sizes that are so small that they do not allow the small fish to escape, and these are destroyed, then you are wasting your future deposits of young fish on the banks. By enlarging the mesh size for specific fish in order to allow the young fish to escape, the destructiveness of the trawl can be largely overcome. It is an effective way of catching fish but it is destructive when the mesh size is such that it catches undersized fish.

Mr. CARTER: May I ask a question. We have a lot of Spanish and Portuguese trawlers who come in on our small offshore banks. These banks are approximately twenty miles long and four or five miles wide. They catch large quantities of fish, some by hook and line and some by draggers. Then they cure the fish. What is the effect of that offal going down on to the banks? What effect does that have on the fishing grounds?

Dr. KASK: In general, I would think it would be beneficial. The sea like land needs fertilization and any organic material that will disintegrate rather fast will add to the general productivity of the sea. The trouble comes when you concentrate it into a very restricted area. In such cases decomposition utilizes the oxygen rather fast and the area can become polluted. In a large sea area this does not occur and the offal adds to the fertility of the sea.

The CHAIRMAN: Shall item 151 carry?

Mr. CARTER: I have a couple more questions. I would like to ask Dr. Kask two questions in regard to bait. What is being done by way of development of artificial bait which can be used on a long line?

Dr. KASK: There is not too much active work going on in this line. We find that fish are very sensitive to different kinds of light and that they are very sensitive to different kinds of smell. For instance, a great part of the tuna fishery in southern California is chummed to the surface by putting out live bait. By using a kind of fish perfume made of fish flesh you can create the same sort of feeding action by the tuna by pouring this liquid into

the sea. It attracts the fish into the area. This has never been very successfully applied to actual fishing although the reaction has been attained in controlled tanks.

Mr. CARTER: Dr. Kask, in regard to this type of cod jigger the Norwegians use, our fishermen claim that that jigger must be used with a white line to be effective. When they use a combination of the white line and this jigger, they can catch much more fish with it than with the ordinary one we have been using. How would you explain that?

Dr. KASK: Mr. Chairman, I do not think I can answer that, but I think it would involve reaction to either visual or some other stimulation. If white in contrast with red incites the fish to approach the jig it might well be the result of visual stimulation.

Mr. CARTER: I have one further question, Mr. Chairman.

In Newfoundland we have a tremendous problem in regard to bait distribution because our fishermen are scattered in coves 20 or 30 miles away from the centre. They only have small boats that travel at about three or four miles per hour and as a result they lose a whole day collecting bait. If the weather is stormy they have to dump their bait and start over again.

I would think this problem could be overcome in one of two ways. One way to overcome it would be to devise some sort of cheap bait holding house or depot, which the fishermen themselves could construct, possibly utilizing ice and sawdust, and things like that.

The other way of overcoming this problem would be to have a cheap refrigerated box something like the Canadian National Railways have developed which they call the Canex. Is the research board working on that problem?

Mr. CLARK: I think, Mr. Carter, the question really comes under another vote. We would be glad to give you the details in that regard when we are considering vote No. 145.

Mr. CARTER: I am asking you about the research. This is really a research problem. How could you develop a cheap device to hold bait for distribution? I think this is a research problem.

Dr. KASK: I would like to say a word on that. I think there is enough research information available that a Canex type of container for holding bait could be developed very fast. There is no specific research being carried out now towards solving the holding bait in small quantities in different areas.

The principles that would enable you to do that are already quite well known. I think one of the limiting factors would be cost. The problem of holding bait involves the removal of heat, and that involves expense. I am speaking in regard to small units. If a large enough unit could be developed it would become more economical, I would think.

Mr. CARTER: I think the development of a holding device like this refrigerated box would be a comparatively small cost as compared with the erection of a depot. I do not know how the cost would compare, but perhaps something could be done in that regard. Perhaps Mr. Clark could say something in this regard.

Mr. CLARK: I am quite prepared to reply to this question now, but I submit, sir, that is really a problem coming up under vote No. 145. The questions which Mr. Carter is asking relate directly to that vote.

Mr. TUCKER: What is the situation in regard to dogfish on the Atlantic coast? As far as I am aware they have been a source of menace and a curse to the fishermen particularly of Newfoundland. I understand the dogfish of the Pacific in 1944 had a market value of \$4 million. Has the dogfish of the Atlantic any commercial value?

Dr. KASK: The commercial value of the dogfish was due largely to the large oil storing capacity of its liver, and the fat soluble vitamins in this oil. This was before the time that synthetic vitamins were developed. The dogfish liver still contains a lot of oil and vitamins but the market for this product now is much reduced. That is one of the reasons why dogfish was a valued product at one time and not now.

Mr. TUCKER: What is the situation in regard to the dogfish of the Atlantic?

Dr. KASK: The Atlantic dogfish does not have as large nor as good a liver, nor as good a quantity of oil as the dogfish of the Pacific.

In regard to your other point, of the dogfish being a nuisance to fishermen, that is a very real problem. Sharks, as you know—the dogfish is a member of that family—can be reduced by an intensive fishery rather quickly if they had a commercial value.

For instance, when the dogfish, the soupfin shark and other sharks were of high commercial value, due to the value of the oil in their livers, an intensive fishery reduced the stocks very quickly. The dogfish bear their young alive and only a few are born at one time. They respond very quickly to heavy and directed fishing.

In order to reduce them in numbers without—a profitable commercial fishery, that is if you subsidize the dogfish fishery just to destroy them—it would be I think almost prohibitive in cost. I remember in respect to the Pacific coast that for one year at least, the department tried to encourage the catching of dogfish by a subsidy which never was taken up very effectively, largely because even with the subsidy the fishery did not prove profitable.

They did not make a good fish for reduction purposes because they are very hard on the reducing machinery. The reduced product according to our industry advisers is very hard to market if it can be sold at all.

This is a real problem and one for which we have not yet found a ready solution.

Mr. TUCKER: The dogfish is a nuisance as far as fishermen are concerned. I think some consideration should be given in regard to this problem. At the present time the Atlantic dogfish are looked upon as being a nuisance.

Mr. CLARK: Mr. Chairman, just for the sake of the record I should like to point out that in regard to this dogfish problem there is a supplementary item here, No. 564, which we will come to. At that time I should be glad to explain just what we have in mind. This is the predatory removal program which concerns these dogfish.

Mr. CARTER: Mr. Chairman, I was wondering if anything is being done by the research board in regard to utilizing the skin of the dogfish? There certainly should be some commercial use.

Dr. KASK: Mr. Chairman, again quite a bit of information is known about the products that can be made from dogfish skins, but there are other better sources of similar material. For instance, it makes a good quality leather, and it also makes a pretty good abrasive, but it is not in a competitive position with other abrasives and other materials that seem to have greater acceptance.

Mr. STEWART: I notice an increase of roughly \$13,000 in regard to vote No. 151. What is the reason for that increase?

Dr. KASK: That increase is largely due to the increase in salaries and costs. There is no difference in the administration.

Mr. McGRATH: As you know, apparently we are experiencing difficulty in the sale of salt codfish on the Peruvian market. A certain suggestion has been raised that a portion of this trouble is due to the quality of the fish. It has been suggested that codfish dried by mechanical process does not have the same quality as codfish dried by natural process—that is sunlight.

Would the doctor perhaps comment on this suggestion? Is the department aware of this situation?

Dr. KASK: Mr. Chairman, on that subject I cannot authoritatively say that one is superior to the other. All I can say is this; it has been demonstrated that the artificially dried product can be made much more uniform than the sun dried product.

In general, if the fish quality is followed through the whole process, you could probably put a better quality fish consistently into the market by this controlled type of drying than by sun drying. Although sun drying may have certain beneficial effects that you cannot have with this other process.

Mr. McGRATH: Is the Department of Fisheries continuing to experiment in an effort to improve the ways and means of adequate processing of dried salt cod?

Mr. CLARK: Yes.

Mr. LEGERE: Mr. Chairman, I would like to ask Dr. Kask a question in regard to his explanation of the mechanical clam-digger. Does this mechanical clam-digger make use of compressed air?

Dr. KASK: Mr. Chairman, it does in a way, but it also makes use of streams of water under pressure.

Mr. ROBICHAUD: What is the government policy in regard to the issuing of permits for mechanical clam-diggers?

Mr. CLARK: Mr. Chairman, we have not reached the stage yet in this matter of issuing licences for this particular apparatus. It is still in the experimental stage except, as Dr. Kask has pointed out, we are almost at the stage of being able to turn the apparatus over for commercial use. At that time then presumably a policy for licensing will be developed.

Mr. TUCKER: I should like to ask a question regarding the seal fishery of Newfoundland. The seal fishery, as far as Newfoundland is concerned, is practically extinct.

I should like to ask this question. Has any consideration been given to the future of the seal fisheries on the east coast? Are there as many seals born now as there used to be? I would like to ask also if there is any truth to the statement that seals are being killed at too early an age?

Dr. KASK: I think, Mr. Chairman, from a biological point of view and a conservation point of view, the seal herd, except in one or two seasons, have not been over-exploited according to our best information. We make counts and estimates from airplanes of the populations, and find that the main herds of seals have been maintaining themselves very well.

During one or two years we think that there has been over-exploitation.

One of the problems in regard to seal fishery is an economic one, and that is one on which I am not competent to answer.

Mr. TUCKER: What about the age for killing seals?

Dr. KASK: I do not think that would have very much effect, Mr. Chairman, on the population studies in this case. A seal is dead whether you kill it when it is young or when it is older. As long as the main effort of killing is applied to the young of the seal—the ones that are in the most demand—the only conservation measure that the opening date would have—that, as you know has been internationally established between the participating countries—is that less seals might be taken during the season.

Mr. LEGERE: Mr. Chairman, I would like to direct a question to Dr. Kask. This question also concerns loss. Has there been any regulation made to establish an Irish moss mechanical harvest?

Dr. KASK: Mr. Chairman, there has been. We have been fairly closely associated with Irish moss studies which are being carried out by two units in

Canada; the fisheries research board and the National Research Council. The mechanical harvesting system has been receiving considerable attention recently in Canada as well as in other parts of the world. This has not been too productive so far, but we think in time it will probably be developed.

Items 151 to 153 inclusive agreed to.

Supplementary item 565 agreed to.

The CHAIRMAN: Gentlemen last Friday we passed items 134 to 140 inclusive of the main estimates. We should also have passed items 556, 557, 558 and 559 appearing in the supplementary estimates.

Supplementary items 556 to 559 inclusive agreed to.

Mr. ROBICHAUD: Before we adjourn, I think that all the members of this committee will join with me in expressing a vote of thanks and appreciation for the work which is being done by Dr. Kask and his scientists in the field of research.

Their findings have been most valuable to the fishing industry. They are doing wonderful work.

Dr. KASK: We are very grateful for that.

Mr. CARTER: Mr. Chairman, I do not think my question is related to any of the items that we have carried, but before Dr. Kask leaves, I wonder if he could say anything is being done in respect to research on seaweed?

Dr. KASK: Mr. Chairman, Irish moss, of course, is seaweed.

Mr. CARTER: Yes, but I had reference to the ordinary kelp.

Dr. KASK: Research by our Board is not being carried out in regard to developing new products from seaweed because a great deal is known about the products that can come from seaweed. One of the limiting factors in regard to seaweed is the harvesting cost.

There is a seaweed industry of rather small size—other than the Irish moss industry—which is continuing now on the Pacific coast. There is a considerable seaweed industry in California but it is all marginal operation.

In regard to the development of new products from seaweed, again research is a little ahead of exploitation. This is not one of our high priority projects. We will certainly keep the matter under review and if anything should develop in the way of new and more efficient harvesting methods we will take note of them.

FIELD SERVICES

Item 141. Consumer Branch	\$ 77,855
Item 142. Fishermen's Indemnity Plan—Administrative Expenses	\$219,000

Mr. McGRATH: Mr. Chairman, I have a question regarding advertising by the Department of Fisheries. It seems to me that this is a very important subject. I think statistics will prove that the local consumption of fish in Canada is practically negligible. I was wondering what steps the Department of Fisheries has taken in this regard. There is a selling job in respect of local consumption or home consumption of fish and fishery products.

Mr. CLARK: Mr. Chairman, vote 141 is the consumer branch of the Department of Fisheries under the inspection and consumer service.

We have in this branch a home economic section which has test kitchens across the country. The main test kitchen is here, of course, in Ottawa. This is a service to help the consumption of fish in Canada. The home economists of the department—whom I might say are recognized as perhaps the best in the world—are girls who demonstrate to women's organizations, hotels, restaurant associations, chefs and the like for the purpose of getting the general public to realize the value of fish in the diet, and also, of course, to demonstrate the practical and efficient ways of cooking fish.

This service, or branch of the Department of Fisheries, works closely with the fishing industry itself particularly through the Fisheries Council of Canada, and ties in with the work which the industry itself is doing in advertising.

This branch, I might say, Mr. Chairman, is not an advertising branch. The actual advertising of the Department of Fisheries is carried on under another service, the informational and educational service of the Department.

The consumer branch is the practical way of demonstrating to the general public the uses of fish and proper cooking so there can be an expanded consumption in Canada. We think this branch has done excellent work. I think we have made good progress in this particular field.

Mr. McGRATH: The point has been established, I take it, that the Department of Fisheries does not retain the services of a professional advertising agency?

Mr. CLARK: We do, sir, in connection with our general advertising, which I mentioned comes under the vote for informational and educational services.

Mr. LEGERE: Mr. Chairman, I would like to address a question. I think this should be directed to Mr. Clark. This question concerns the fishermen's indemnity plan.

Mr. PICKERSGILL: I have another question concerning the consumer branch, Mr. Legere, if you do not mind.

Mr. LEGERE: Yes.

Mr. PICKERSGILL: This is a comment rather than a question.

I think most of the members of the committee know that we have, over the past considerable number of years since the war, had about 25,000 Italian immigrants come to Canada. These people come from the very part of Italy where we sell our salt fish. I was wondering if the consumer branch, or the information branch—I think it would primarily be an operation of the consumer branch—have made any effort in an attempt to get in touch with these Italian communities, and particularly the newer people, in order to insure the continuity of the consumption of this fish.

I have the feeling that most of these people are concentrated in a few large centres like Toronto, Montreal, Hamilton and are very easily reached. It seems to me that they should be reached before they lose their taste for salt fish. I think the consumer branch might do quite well in a very specialized way with this group of people.

We have also had a few Portuguese immigrants. I do not know whether that immigration is apt to continue, but so far as the Italians are concerned, they represent a very sizable portion of our total population today.

Mr. CLARK: Mr. Chairman, the point, that Mr. Pickersgill has brought up, is one that is being given attention by the consumer branch of the Department of Fisheries, and we are keeping in touch with new Canadians. We have home economists stationed at Vancouver, Winnipeg, Montreal and Toronto, the very centres to which he refers. These home economists are in touch with the very people he is referring to, with this purpose in mind.

Mr. LEGERE: In regard to this fishermen's indemnity plan, I think it is in order to thank the government for their policy in having adopted this plan to help out the fishermen on our coast.

There is one point I would like to make and that is that in our area—district No. 4—the insuring of traps is carried on by an officer appointed especially for that job. He collects the money and he sends it into the Department of Fisheries. When the time comes to pay the fishermen, a man comes down from Halifax to inspect these traps. I do not think this is fair. The man who is taking the money in Yarmouth must be trustworthy because he is allowed to collect the money and I think he should be trusted to the extent of allowing him to see if the trap is in disrepair and requires insurance payment.

The fact that this gentleman from Halifax waits until all the fishermen get their traps ashore means a considerable time lapse, probably a month or a month and a half before he makes his inspection and then passes out the money which naturally belongs to the fishermen.

My suggestion would be that there should be a change made there. I think this fellow—and I could give you his name; Kelly Grant—should be given the power to take Mr. Andy Fraser's place. I think he should be given the same power, and then the fishermen would not have to wait for Andy Fraser to come down into this area to inspect the traps in order for the payment to be made.

Mr. CLARK: Mr. Chairman, what we have attempted to do is to give extremely speedy service in the payment of claims. I think we have been reasonably successful in that. If there has been some lag I am very happy to know about it. I can assure the hon. member that we will look into it immediately because the whole object of the exercise is to be able to put a man back in business with as little delay as possible. We will certainly look into any lack of liaison having regard to claims being paid.

Mr. LEGERE: Thank you.

Mr. PICKERSGILL: I have a question on this subject.

Is the same advantage taken of this plan in all fishing areas?

Mr. CLARK: Mr. Chairman, the indemnity scheme comes in two parts. As you know there is the part dealing with vessels, and the part dealing with lobster traps.

Mr. PICKERSGILL: I was thinking particularly of the part dealing with lobster traps.

Mr. CLARK: As Mr. Pickersgill will appreciate, we have seen as a result of our experience in this regard, that in areas where the loss, or the potential loss is not great, based on the fisherman's own experience, then he does not insure his traps. In areas where there are large losses each year, then, of course, the fisherman does take the insurance and therefore the whole scheme is not too good from a financial point of view for that reason.

Mr. CARTER: Is there any consideration being given to the extension of the scope of this plan in order to give insurance to fishermen for other types of equipment?

Mr. CLARK: Mr. Chairman, consideration has been given to this at various times as a result of representations and so forth. I think it is correct to say that no serious consideration has been given by the minister in regard to extending the coverage to other types of gear for the reason that it is a difficult matter to insure some of these types of gear. Of course the loss might even be worse than the loss in regard to lobster traps. We have thought about it a number of times but so far no specific recommendations have been made.

Mr. CARTER: A salmon fisherman who loses his salmon net is in a worse position than a fisherman who loses his lobster trap. I would think that he should be entitled to the same type of protection. The same suggestion is perhaps true of other fishermen. A long-liner who loses 100 lines of gear has a big expense to face.

Mr. MCWILLIAM: Salmon fishermen have made representations in regard to losses from time to time, but the problem as I understand it arises in assessing the loss. That is where the big problem lies. There has been no practical way worked out to assess the losses at the present time.

Mr. CLARK: That is correct, Mr. Chairman.

Mr. CARTER: Surely you can assess the loss of a salmon net or 100 lines of fishermen's gear as well as the loss in regard to lobster pots.

Mr. MCWILLIAM: You cannot assess what you cannot find.

Mr. BATTEN: Mr. Chairman, I would like to refer to item 141.

What are the locations of the various kitchens across the country?

Mr. CLARK: You are speaking of the locations of the home economist kitchens?

Mr. BATTEN: Yes.

Mr. CLARK: Ottawa, of course, is the headquarters of the test kitchens. They are located at Vancouver, Winnipeg, Montreal and Toronto.

Mr. BATTEN: Mr. Chairman, may I ask this question: is there any connection between this consumer branch, either directly or otherwise, and the tourist development in various places?

Mr. CLARK: Yes, there has been a great deal of contact with the various tourist organizations both provincially and with the federal agency. Our people work very closely with these agencies to see if they can come up with appealing dishes, particularly of fish, because that is what we are interested in.

We are interested in expanding the consumption of fish in Canada, and fish products.

Mr. BATTEN: Thank you.

Mr. CLARK: I might also say, Mr. Chairman, that there is a test kitchen in Halifax, and we are now proceeding to establish one in Edmonton.

Mr. McGRATH: Mr. Chairman, the deputy minister answered my question with regard to advertising, but part of the question remains unanswered. This part came under the informational and educational vote.

Perhaps the deputy minister could take this into consideration and perhaps tell the committee at some future date, or some appropriate time, the name of the advertising agency that handles the advertising for the Department of Fisheries, and also tell us the amount of money that is involved.

Mr. CLARK: Mr. Chairman, I can give that information now. The name of the advertising agency is the MacLaren Advertising Agency in Toronto with branches across Canada. The amount involved is \$20,000. This is shown in the vote, Mr. Chairman.

Mr. CARTER: Mr. Chairman, in regard to this consumer branch which operates kitchens, do you have experts in the cooking of salt fish?

Mr. CLARK: Mr. Chairman, I think I could safely say that our home economists are experts in all types of fish.

Mr. CARTER: I would like to suggest that we should bring out some periodical to encourage people to cook salt codfish dishes. I do not know what the economists are doing, but I do not find very many salt fish dishes anywhere in Canada. I think if we were to publish a few periodicals or reviews it would perhaps show people how to cook salted codfish and would help in the development of the salt fish industry.

Mr. ROBICHAUD: You do not see salt fish on the menu of the parliamentary restaurant more than once a year.

Items 141 and 142 agreed to.

Item No. 143. Field Services—To provide for the destruction of Harbour and Gray Seals \$41,500

Mr. ROBICHAUD: Before we leave item 143 I have one short question to ask. Could Mr. Clark tell us the amount of money that was spent last year in providing protection for harbour and gray seals? Could he also tell us what the bounty per head is?

Mr. CLARK: Yes, I can give a breakdown, Mr. Chairman.

In the maritime area the bounty payment for a harbour or gray seal is \$5 for pups and \$10 for adults. The amount spent out of this vote for that area was \$8,000.

In the Newfoundland area the amount spent was \$10,500 and in the Pacific area the amount spent was \$23,000.

Mr. PICKERSGILL: Is this a conservation measure or an income maintenance measure?

Mr. CLARK: It is a predator control measure, Mr. Chairman.

Item agreed to.

Supplementary item 560 agreed to.

The CHAIRMAN: We will adjourn until the next meeting, Thursday morning at nine-thirty a.m.

HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958



STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 6

DEPARTMENT OF FISHERIES—ESTIMATES 1958-1959

THURSDAY, JULY 24, 1958

WITNESSES:

The Honourable J. Angus MacLean, Minister of Fisheries; Mr. G. R. Clark, Deputy Minister and Dr. Wm. M. Sprules, Special Assistant to the Deputy Minister and Mr. I. S. McArthur, Chairman, Fisheries Prices Support Board.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958



STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: Roland L. English, Esq.

Vice-Chairman: A. De B. McPhillips

Messrs.

Anderson,
Batten,
Bourget,
Browne (*Vancouver-Kingsway*),
Carter,
Crouse,
Danforth,
Drysdale,
Gillet,
Granger,
Howard,

Keays,
Legere,
Macdonald (*Kings*),
MacLellan,
Matthews,
McGrath,
McQuillan,
McWilliam,
Michaud,
Morris,
Murphy,
Noble,

O'Leary,
Phillips,
Pickersgill,
Richard (*Kamouraska*),
Robichaud,
Speakman,
Stefanson,
Stewart,
Tucker,
Webster—35.

A. Plouffe,

Clerk of the Committee.

MINUTES OF PROCEEDINGS

THURSDAY, July 24, 1958.

(7)

The Standing Committee on Marine and Fisheries met this day at 9.30 o'clock. The Chairman, Mr. Roland L. English, presided.

Members present: Messrs. Anderson, Batten, Browne (*Vancouver Kingsway*), Carter, Crouse, Danforth, Drysdale, English, Keays, Legere, Macdonald (*Kings*), Mattews, McGrath, McQuillan, Murphy, Phillips, Pickersgill, Robichaud, Stefanson, Stewart, and Tucker—(21).

In attendance: The Honourable Angus L. MacLean, Minister of Fisheries, and Mr. G. R. Clark, Deputy Minister; Dr. Wm. M. Sprules, Special Assistant to Deputy Minister; Messrs. I. S. McArthur, Chairman, Fisheries Prices Support Board; J. J. Lamb, Director, Administrative Service; W. C. MacKenzie, Director, Economics Service; T. Turner, Director, Information and Educational Service; J. G. Carton, Departmental Solicitor; O. C. Young, Vice-Chairman, Fisheries Research Board; J. A. Albert and A. W. Abbott, Financial Branch, R. Hart and W. E. Snaith, Industrial Development Service; E. B. Young, Assistant Director, Conservation and Development Service, and Dr. W. Carr, Economics Service.

The Committee resumed its examination of Departmental estimates.

Items 144 to 150 inclusive of the Main Estimates and items 561 to 564 of the Supplementary Estimates Canadian share of expenses of the International Commissions, Newfoundland Bait Service, etc. etc. were called and considered.

Mr. Murphy, referring to tables published in 1955 on the Catch of Trout in Great Lakes, etc., asked that the tables be put up-to-date and produced before the Committee.

Mr. Clark produced the above tables and, on motion of Mr. Murphy, seconded by Mr. Stewart:

Ordered,—That the said tables be printed as appendices. (*See Appendices "A", "B", "C", "D", "E" in this day's Evidence*)

Discussing sea lamprey, Mr. Murphy tabled copies of two documents, one prepared by the Dow Chemical Company, of Midland, Michigan, and the other one emanating from the United States Department of the Interior, Fish and Wildlife Service, of Ann Harbour, Michigan. These copies were distributed forthwith.

Referring to item 144 and sea lampreys, the Minister made a statement and introduced Dr. William M. Sprules. Mr. Clark and Dr. Sprules were questioned at some considerable length on this menace to fisheries.

The Minister and his Deputy answered questions relating to the International Commission for the Northwest Atlantic Fisheries and the International North Pacific Fisheries Commission and related problems. The Minister and the Deputy Minister were assisted by Dr. Wm. M. Sprules and Mr. I. S. McArthur, Chairman of the Fisheries Prices Support Board.

Items 144 and 145 of the Main Estimates were adopted as was item 561 of the Supplementary Estimates.

At 11.45 a.m. the Committee adjourned until Friday, July 25, at 9.30 a.m.

Antonio Plouffe,
Clerk of the Committee.

EVIDENCE

THURSDAY, July 24, 1958.
9.30 a.m.

The CHAIRMAN: Good morning gentlemen, we now have a quorum. We shall proceed this morning with the study of the special group comprising items 144 to 150 along with the items for the supplementary estimates 561 and 562.

SPECIAL

Item No. 144. Canadian share of expenses of the International Commissions, as detailed in the Estimates	\$ 860,620
Item No. 145. To provide for operation and maintenance of Newfoundland Bait Service	\$ 439,425
Item No. 146. To provide for the extension of educational work in co-operative producing and selling among fishermen	\$ 90,000
Item No. 147. To provide for administrative expenses of the Fisheries Prices Support Act	\$ 66,030
Item No. 148. To provide, subject to such terms and conditions as the Governor in Council prescribes, for payment of assistance to producers of salted fish on products designated by the Governor in Council, in the amount of 50% of the laid down cost of salt used in their production, including authority to charge administrative costs to the Vote in these Estimates which provides for administrative expenses of the Fisheries Prices Support Act	\$ 600,000
Item No. 149. To provide for assistance in the construction of vessels of the dragger or long liner type, subject to such terms and conditions as may be approved by the Governor in Council	\$ 350,000
Item No. 150. To provide for assistance in the construction of bait freezing and storage facilities, subject to the regulations established by the Governor in Council	\$ 30,000
	\$2,436,075

SPECIAL

Item No. 561. To provide for operation and maintenance of Newfoundland Bait Service—Further amount required	\$ 274,720
Item No. 562. To provide for a contribution towards the cost of a building for the Nova Scotia Fisheries Exhibition, Lunenburg, Nova Scotia, in accordance with an agreement entered into by the Minister of Fisheries, with the approval of the Governor in Council, the total cost to be borne in equal shares by the Government of Canada and the Nova Scotia Fisheries Exhibition Association (Revote).....	\$ 19,481

We shall start with item 144 with the right to refer to other items of the special group if necessary. Are there any questions on this particular item?

Mr. MURPHY: Mr. Chairman, I would first like to express my thanks for your holding this item over so that I could attend, because this is one particular item of the estimates in which I am especially interested. I would like first of all to have tabled some reports which I will ask to have brought up to date. I think the committee would like to have a statement by the minister or the deputy minister, and I hope too, Dr. Sprules.

Mr. J. A. MACLEAN (*Minister of the Department of Fisheries*): Mr. Chairman, this item covers the seven international commissions of which Canada is a member. These are the International Northwest Atlantic Fisheries Commission, the International Whaling Commission, the International Great Lakes Fisheries Commission, the International Pacific Fur Seals Convention, the International North Pacific Fisheries Commission, the International Pacific Salmon Fisheries Commission, and the International Pacific Halibut Commission.

Mr. Clark and Dr. Sprules will be prepared to answer specific questions. Mr. Murphy has asked a question which comes under the Great Lakes Fisheries Commission. Perhaps Mr. Clark would have something to say about that.

Mr. G. R. CLARK (*Deputy Minister, Department of Fisheries*): Mr. Murphy, you referred to some tables that you had in mind. Would you mind telling me what tables they are.

Mr. MURPHY: At a meeting of the committee in May of 1955, we had tabled first, "Catch of Trout in Great Lakes, by lakes and total Ontario, 1930-1953" I was asking that that table be brought up to date. Also, appendix C, "Catch of Whitefish in Great Lakes, by lakes and total Ontario, 1930-1953", and I wanted that brought up to date. And, appendix D of those minutes "Catch of Whitefish in the United States between 1930-1953," and I wanted that brought up to date. Then the "Catch of Lake Trout, 1885-1952 (United States)", and I ask that that be brought up to date, together with appendix F "Great Lakes Commercial Fishery Statistics, by lakes, quantities and values—U.S.A., Canada and Totals, 1930 to 1953", and I ask that that be brought up to date. I wonder if you would have that prepared.

Mr. CLARK: Mr. Chairman, we have it prepared. Do you wish it tabled or read out?

Mr. MURPHY: I think it should be tabled, but I would like, with your permission Mr. Chairman, so that the committee men become more familiar with this menace, to quote some figures that were tabled from the previous report which will be included in this appendix. Take the "catch of trout in the Great Lakes by lakes and total of Ontario". I will give you the total in Ontario for 1930. This is in hundredweights, 51,205 and in 1956, it was 6,410.

In dealing with trout, that shows the decrease in Ontario and I would like to refer to lake Huron. In 1930 the catch was 29,347 hundredweight and last year the catch was 500. That gives an indication of the seriousness there.

I want to refer to lake Superior because I think we will have considerable evidence concerning that particular lake. In 1930 the catch was 15,302 hundredweight and last year 5,270.

In the United States the catch of trout in 1930 was 9,688 expressed in thousands of pounds and last year 1,813. That is an indication, Mr. Chairman, of what the lamprey has been doing to the Great Lakes fishing industry. With that Mr. Chairman I wonder if Mr. Clark would make a statement to bring us up to date on what has been done with respect to the curbing and destruction of this menace since the International Joint Commission was set up. Do we still have the same members and so on?

Mr. CLARK: Mr. Chairman, if I may just point out one thing. Mr. Murphy was referring to figures of last year. I do not think he meant 1957, because the most recent figures we have are for 1956.

Mr. MURPHY: I stand corrected on that.

Mr. CLARK: It is just so that the record may be right, sir.

Well, Mr. Chairman and members of the committee, the Great Lakes Fishery Commission was formed, as you know, between Canada and the United States for the purpose of attempting to control and eliminate the predator lamprey which entered into the Great Lakes some years ago from the sea, and up the St. Lawrence river. Then, with the opening of the Welland canal, it spread into the Great Lakes, all the way up, and eventually reached Lake Superior. The lamprey were not native to the Great Lakes in the first instance, but they found this fresh water environment particularly conducive to their growth and predation. They have unquestionably, over the years, completely eliminated the valuable species of trout and whitefish in many of the lakes, and have now reached into Lake Superior to a fairly large extent. The attempts now under the Great Lakes Commission are for the purpose of trying to control and eliminate this predator menace which has caused very very serious damage and practically, to all intents and purposes, have ruined the fishery in so far as the valuable species of lake trout and whitefish are concerned.

The work of the Great Lakes Commission has been that of working together jointly between Canada and the United States, first of all to make a survey of the streams where the lamprey spawn in the Great Lakes. The work of the commission has been concentrated on the erection of barriers, particularly electrical barriers, in the streams going into Lake Superior. The view of the scientists and all those engaged in this work was that the concentration of effort should be made in Lake Superior, because that is where the remaining stock is, particularly of lake trout. And it was felt, that by concentrating in Lake Superior, and if we were successful in controlling this menace, we could then move into other lakes and start a program of rehabilitation. The work has been going on. There are a number of these electrical barriers which are quite successful and all of the streams have been surveyed on both sides of the line, with Canada and the United States, and also many of the lamprey spawning streams in Lake Huron have been surveyed so that we know now where these areas are. When we are ready to move into lake Huron there will be no time lost.

The commission Mr. Murphy referred to is composed of three representatives from each country, Canada and the United States. The head of the Canadian section of the Great Lakes Commission is Dr. Pritchard, of the department, assisted by Dr. Harkness of the Ontario Department of Lands and Forests and Dr. Blackhurst, representing the industry generally of Ontario.

There are three counterparts from the United States side, one from the federal government, one from industry generally and one state man, representing the various states bordering on the Great Lakes.

I do not know whether that is sufficient at the moment, Mr. Murphy, or whether I can add anything to it.

Mr. MURPHY: Is Dr. Harkness one of the members of the commission? Ontario is the only province on the Great Lakes.

Mr. CLARK: That is correct.

Mr. MURPHY: Was he recommended by the Ontario government?

Mr. CLARK: He was.

Mr. MURPHY: And these three members are the ones who were originally appointed?

Mr. CLARK: That is correct.

Mr. MURPHY: What salary do they get?

Mr. CLARK: They get no salary, Mr. Chairman.

Mr. MURPHY: How often do they meet?

Mr. CLARK: There is an annual meeting of the commission set up in the rules of procedure and under the convention itself; but they do meet at least on two or three occasions at other times during the year.

Mr. MURPHY: How many of these streams—let us take Lake Superior first—are spawning grounds for the lamprey?

Mr. CLARK: The actual number in lake Superior?

Mr. MURPHY: Yes.

Mr. MACLEAN (*Queens*): I might say perhaps while we are looking this up, Mr. Chairman, that the original program as far as attempting to control the lamprey is concerned, and its effects on the fishery, was what you saw in the film the other night, in the form of electrical barriers in the mouths of the streams, into which the lamprey migrate to spawn.

There has also been a program of testing of chemicals, in the hope that a selective chemical might be found which would be poisonous to the lamprey and harmless to other forms of life. In the last year some success has been made in this field. A number of promising chemicals have been found and

experimental work is being done in that regard on both sides of the international boundary. If complete success is met with, this might prove to be the most feasible way of controlling the lamprey if they can be poisoned in the larvae stage.

Dr. Sprules, who I do not think was introduced to the committee, will have some more specific information on this matter, and I would like at this moment to introduce him.

I think perhaps the specific information that was asked for is now available. There is nothing more I want to say.

Mr. MURPHY: I might say, Mr. Chairman, that today I received from the Dow Chemical Company of Canada Limited some releases, and information. One, is on Dowlap—the poison to which the minister just referred. The other is from the United States Department of the Interior fish and wildlife service. This article I think is very interesting. Perhaps the Clerk would pass these around as far as they will go. Have you that information, Mr. Clark?

Mr. CLARK: I think I can give the information, Mr. Chairman. First of all may I say in 1958-59 in lake Superior, the current fiscal year, a total of 69 electrical barriers will be operated, 22 in Canada and 47 in the United States. The specific number of lamprey streams actually in the lake Superior area is in the order of 104.

Mr. MURPHY: And how many in lake Huron, including the Georgian Bay area?

Mr. CLARK: Approximately 117.

Mr. MURPHY: How many of those streams have these barriers?

Mr. CLARK: At the moment in lake Huron none of the streams has any of the electrical barriers for the reason that I stated, that the concentration by the commission has been first of all to do this work in lake Superior where there is still a stock of lake trout.

Mr. MURPHY: Mr. Clark, that is an interesting statement. I think the committee would like to know why there is not a joint attack. Is it because of a lack of money—appropriation of money—to meet this menace?

Mr. CLARK: Well, Mr. Chairman, that is partly it, but the main part from the point of view of the investigation is that it is considered better to concentrate the effort where there are known stocks of lake trout left, so that once we can control the lamprey in lake Superior and save the remains of that lake trout stock, then we will move down into the other lakes, lake Huron, for example, where there are no trout left to any appreciable extent, and then control the lamprey or eliminate them if it is possible by this combination of electrical barriers plus the poisons to which the minister referred, and then commence a rehabilitation program of restocking the lakes where there are now no lake trout. In other words, the remains of the stock could be used from lake Superior to restock the other lakes, once the lamprey is under control.

Mr. MURPHY: I think you tabled the figures before, either you or Dr. Sprules, that the estimated annual loss to the commercial industry—I am not speaking about the inland sport fishing, but the commercial fishing—is in the neighbourhood of \$5 million a year.

Mr. CLARK: That was at the time the value to Canadian fishermen of the lake trout fishery.

Mr. MURPHY: And it is more than that now due to the increased menace in lake Superior.

Mr. CLARK: Well this is a very difficult question to answer, Mr. Chairman, because there are still very large stocks of other species of fish in the lakes.

The fishermen, of course, are not taking the valuable species, that is the lake trout, because there are no stocks left in some of these lakes. But, they are fishing other species, and in volume there is actually more production coming out of the lakes of other species but not of lake trout or whitefish.

Mr. MURPHY: Of course, they use more modern methods and fish longer hours due to the increase in expense of operation.

Would you tell the committee, Mr. Clark, what our contribution has been to this effort for the last three years, since the commission was set up?

Mr. CLARK: The Canadian contribution, Mr. Chairman, runs to approximately \$450,000 per year.

Mr. MURPHY: That is, for this year?

Mr. CLARK: That has been about the average since the commission was set up.

Mr. MURPHY: I thought it was somewhere around \$350,000 the first year?

Mr. CLARK: Yes. We can get the figures for the individual years; but, it does run along that figure. \$350,000 to \$450,000 a year.

Mr. MURPHY: In view of Lake Michigan being wholly within American territory what contribution does the United States make to this commission?

Mr. CLARK: Under the arrangement in the commission, Mr. Chairman, the United States contributes 69 per cent of the funds for lamprey work to the commission, and Canada, 31 per cent.

The amount of money which is furnished by the United States, the 69 per cent, is paid into the commission and part of that money can be used in Canada. Because of this reason, as you explained it, Mr. Murphy, Lake Michigan being wholly within the United States territory, it was felt, on the basis of the value or interest, that they should pay the larger percentage; but part of the United States money can be used for lamprey work in Canada.

Mr. MURPHY: It is being used, Mr. Clark?

Mr. CLARK: Yes, sir, it is.

Mr. MURPHY: I mean, this commission, the Canadian and American interests are working jointly?

Mr. CLARK: That is correct.

Mr. MURPHY: Are any of the American states bordering on the Great Lakes making any efforts to rehabilitate the fishing industry, independently of this commission?

Mr. CLARK: Yes.

The arrangements with the commission are that individual states, or in the case of Ontario, there is a coordinated program. Any work done by the individual states, either in research work or rehabilitation work, and also by Ontario, is coordinated into the overall program. Some of them are doing this additional work.

Mr. MURPHY: Are not some of the states making grants in addition to research, by way of restocking the lakes, and other means of curbing this menace?

Mr. CLARK: They are doing, Mr. Chairman, as I understand, some work on their own under the coordinated program for which the states pay themselves. They are not making grants in that sense.

Mr. MURPHY: That is what I mean, it does not come out of the commission's money?

Mr. CLARK: No.

I do not think any of the individual states are doing anything in the way of restocking in so far as trout is concerned. I think they are restocking pike, pickerel and some of the other fish on the American side, which are really, now, sports fish.

Mr. MURPHY: I thought Michigan was restocking on trout?

Mr. MACLEAN: Perhaps Dr. Sprules could add something to this.

Mr. MURPHY: I would like to complete my questioning of Mr. Clark first. How many of these lampreys were caught by these electrical barriers in the last three years, year by year?

Mr. CLARK: I think we could find that information, Mr. Chairman. I do not think we have it readily available, the actual number of lampreys killed by either the electrical barrier method or by the poisoning system which is only under testing at the present time, but I think we could probably obtain the information.

Mr. MURPHY: Mr. Clark, can you give evidence on this chemical?

Mr. CLARK: I think Dr. Sprules, Mr. Chairman, is more familiar with the technical aspects of the chemical.

Mr. MURPHY: Perhaps other members of the committee would like to ask Mr. Clark some questions before we come to Dr. Sprules.

The CHAIRMAN: Mr. Browne?

Mr. BROWNE (*Vancouver-Kingsway*): There is one point I find interesting there.

We have heard they practically wiped out certain stocks of fish in the Great Lakes. What do the lampreys do then; do they attack other species of fish, do they live off these fish?

Mr. CLARK: Yes, Mr. Chairman. After they have cleaned out the lake trout they have attacked the whitefish, and now there is evidence that they are attacking other fish, for example, bass. They are predators and they are out for food. Once the stock they like best, or the feed they like best, is gone, they will immediately turn and attack other fish and there is evidence they are doing so.

Mr. MURPHY: I wonder. Mr. Chairman, for the benefit of the committee, those who did not see the picture, if the minister or Dr. Sprules could briefly outline the life of a lamprey, how it sits in the mud for four years after it is spawned and goes out for one year and then comes back?

Mr. MACLEAN (*Queens*): I think perhaps Dr. Sprules would be better qualified to do that.

The CHAIRMAN: Mr. Sprules?

Dr. WILLIAM M. SPRULES (*Special assistant to the Deputy Minister, Department of Fisheries*): Mr. Chairman, the life history of the lamprey is rather a fascinating one and can be quite simply told.

The adult lamprey run from the lakes up into the small spawning streams which are tributary to the lakes. There they deposit eggs on the gravel riffles, areas of fairly fast water where there is gravel about the size of an egg or a little larger. The female averages about 80,000 eggs, so a pair are potentially producing 80,000 young lamprey in the nests in the river.

The hatching of the egg takes place in just a few weeks time and a small transparent organism emerges from the egg, which is the larva lamprey. This does not have the features of the adult; it does not look anything like the adult lamprey; it is a small transparent organism without any grasping mouth parts.

This larva drifts downstream and takes up residence in the mud. From the mud they can move on occasion under their own steam. As they grow they can move back upstream to more suitable areas. But in general they are moving downstream with the current as they are dislodged occasionally.

If not dislodged they take up residence in the mud, with the mouth protruding through the mud and facing upstream, like a funnel. Here they feed passively; the stream must pass small organic matter into the mouth of the larva lamprey, and slowly he grows.

He will stay in the mud of the rivers for four, five, six years, depending on temperatures and food supplies. That is how long it takes him to grow into something the size of a pencil.

At around four, five or six years the animal changes; it is completely metamorphosed. At this time the mouth changes into a sucking mouth, as you noticed on the film, and develops a large group of teeth which are inside the oral disc.

When this stage is reached the young lamprey emerges from the mud and decides there is a better place to live. It moves out of the mud and is moved by the spring freshets of that year out into the lake. It is now active and able to swim of its own accord and attack fish, which it must now do in order to carry on its life process. It grows at the expense of the fish to which it becomes attached, and remains about 12 to 18 months in the lake. During this time it is living off the fat of the land, so to speak, and changes from a small animal of the size I now show you up to the animal you saw the night of the film, about 22 inches long, and so big around.

At the end of, let us say, 18 months the adult then feels the urge to reproduce and starts moving from the lakes and congregating in the estuaries, ready to move back upstream into the original spawning areas.

I think, in brief, that is the life history.

The part of the life history which is of concern, of course, is the parasitic stage while the lamprey is in the lake. As the young lamprey moves out of the rivers we find that he will attack immediately any fish that happens to be passing by. As he is carried by that fish into other areas he may leave that one and move on to another.

The reason for the selective killing of trout and whitefish could quite easily be circumstances. The fact that the life history of the trout and whitefish is such that some of them are where they should not be at the time the lamprey is first interested in attaching itself to fish. If there are no fish there the lamprey would move through the lake until it finds suitable fish to feed on.

At the present time I think we have recorded lamprey scars on almost every species of fish in the Great Lakes, at least any sizable species. They do not seem to attach themselves to the small minnow groups, but I think this is a physical feature. Certainly, they are definitely attacking all of the sucker group, all the whitefish group, including many of the herring family and the trout, bass and perch,—the whole run of larger fish in the Great Lakes.

Mr. MURPHY: Doctor, would you tell the committee what happens to a fish ready to spawn when it is attacked by the lamprey?

Dr. SPRULES: Well, if it were attacked right after the spawning act? I certainly have not seen this happen but I see no reason, from the knowledge and behaviour of the fish, why the animal would not go on to spawn.

However, if the attack has been made some time prior to spawning I think we would find that the adult host was quite weakened and would tend to spawn in marginal areas at the best. It would sort of limp into port and could quite definitely affect the efficiency of the spawning, if it had been weakened by the lamprey attack.

Mr. MURPHY: Is there any evidence, doctor, of how much meat the lamprey consumes from the time it goes into the lake until it goes up to spawn?

Dr. SPRULES: Yes, there have been experiments done by the United States wild life and game service, and there is a study of the number of pounds of fish required to change the small lamprey, when he starts to feed, into an

adult able to spawn. I do not have those figures at my finger-tips, but we can locate them. It is not 100 pounds, as I recall; it is something in the neighbourhood of five to ten pounds.

Mr. MURPHY: I thought it was more than that.

Dr. SPRULES: It may be. I would like to look this up.

Mr. MURPHY: Would you tell the committee, doctor, what the success has been and what the prospects are of fighting this menace through chemicals?

Dr. SPRULES: Well, I certainly believe that the use of a selective lampreyicide is essential to the speeding up of the control process.

As we reported to the committee in 1955, the electrical barrier, or any physical control on the spawning stream, is simply preventing the adults of that area from spawning. Therefore, if we started to control every adult lamprey this year we still will have serious lamprey predation in the lakes for at least six years, because the young lamprey of last year are growing up in the mud and each year there will be a year class going out to the lakes.

The beauty of the use of lampreyicide is that we can move into the rivers, having set up the electrical or physical barrier to the adult lamprey, and thus prevent spawning in the future, and wipe out this accumulation of up to six year classes of young lamprey, thus affecting a much more rapid control of the lake.

Mr. MURPHY: Supposing next year you had a chemical that was satisfactory, you could go into the streams where the lamprey are and kill all the lamprey that has been spawned and are from one to five years old?

Dr. SPRULES: That is absolutely correct.

Mr. MURPHY: In that case, if your experiments are successful, you would be re-establishing the fishing industry in a very short time.

Dr. SPRULES: Well, it depends on which lake you are speaking of.

Mr. MURPHY: Take, first, Lake Superior, where you already have some trout, and nature would be doing her work?

Dr. SPRULES: That is perfectly correct, but it would be six or seven years before those fish were reaching catchable size.

Mr. MURPHY: The point I am concerned about is that you are operating in only the one lake because you have only so much money, and you are not operating in Lake Huron because you have not the money. Until you do, the other catches will be decreasing, unless the fishermen extend their efforts, as they have in the last few years, in respect to their endeavours to catch other types of fish.

Therefore, if you do not touch Lake Huron for four or five years it would be twelve years at least before the fishing industry was re-established in Lake Huron.

Dr. SPRULES: Yes.

The reason behind the commission's decision, as I understand it, to concentrate its efforts in Lake Superior is twofold. First, there is a native stock of trout to restock that lake and, second, that the costs are quite high for the use of chemicals for control and for electrical control.

Until we are perfectly sure that the control methods are effective, I am sure that the commission felt that it would not be desirable to move out, expending a lot of money into other lakes, which might be just a monument to inefficiency.

Mr. MURPHY: Could you, doctor, table information as to the number of lampreys killed through these electrical weirs, and also some estimate of the number killed while in the mud? Would you tell the committee what the cost of each of these electrical weirs is? I suppose they vary, depending on distance from headquarters?

Dr. SPRULES: It is the material cost, to all intents and purposes, and if you need more material because the stream is wider you increase the capital cost. These barriers average about \$10,000. That is the figure we have been working on as an average cost of the capital structure for the electrical barrier.

Then, the operating cost each year after is very much the same as the original capital cost, but a little bit less.

The poison, which to some of you would seem to be a very easy way of effecting this control, would cost something like \$100,000 for a small stream.

Mr. MURPHY: What is that, again?

Dr. SPRULES: The poison, the cost of the poison, to poison a small stream, will run about \$100,000 per application. The reason for this is—

Mr. MURPHY: You would be killing lamprey up to five years old, though, wouldn't you?

Dr. SPRULES: That is right, yes.

One of the major difficulties with the chemical at the moment is that it is a shelf chemical as yet; it has not been put into commercial production for us. Companies, certainly Dow, will put it into commercial production, and once we can indicate the requirement for many thousands of pounds, I expect the cost per pound will be reduced. At the moment it is very expensive, since it is only a small bottle of compound which some chemist has evolved. It was just a chemical which had no use, just a synthesized organic chemical which a chemist found and put on the shelf.

Mr. MURPHY: Are the results of the experiments as good, so far, as you expected?

Dr. SPRULES: Yes, the kill on the recent field tests I would say were spectacular. The kill, I think, can be made complete.

Mr. MURPHY: I think at the last committee meeting something was said about some light rays or electrical rays being experimented with to kill the lamprey as they are going up to spawn. What is the story on that?

Dr. SPRULES: Well, that did not prove workable in the field. There were experiments carried on in the laboratories for some time following our original hearing, but at the present time nothing is being done experimentally in the field; it is still a laboratory toy.

Mr. MURPHY: Are there lampreys spawning in Lake Erie?

Dr. SPRULES: Yes, there are.

Mr. MURPHY: You discovered that the last three or four years?

Dr. SPRULES: Yes, that is right.

Mr. MURPHY: Have you any idea of the number of streams?

Dr. SPRULES: They are limited in number. There is one stream in the Delhi area and one or two small streams in the Niagara Falls area, in the area down at the eastern end of the lake. As yet there is nothing showing in the large muddy tributaries, like the Grand and Thames, in that section.

Mr. MURPHY: You are not operating any mechanical weirs in Lake Huron?

Dr. SPRULES: There has been a mechanical weir on the river which flows through Delhi.

I am sorry, you said in Lake Huron. No, there are no mechanical weirs in Lake Huron. There was an electrical weir at Thessalon and several other electrical weirs in that north shore area.

Mr. MURPHY: Doctor, if the commission had more money, I think that is the contention of the former minister, a joint attack could be made. After all,

this is a loss today, and has been through the years, of \$5 million a year to our fishermen and we are appropriating around \$400,000 a year. Would your department or the commission be prepared to make an attack in Lake Huron if the money was available?

Dr. SPRULES: Well, I am not really in a position to answer this question. The commission made their decision to completely—

Mr. MURPHY: They made their decision based on the amount of money they had available, didn't they?

Dr. SPRULES: In the original phases of this commission, they had no indication of how much they should spend or how much they could spend; they were always given what they requested.

Mr. MACLEAN (*Queens*): I think it is fair to say, Mr. Chairman, that money is a very important aspect of the program, but it is not the whole answer. There are other considerations, such as the availability of scientists with the required qualifications, and the results of experiments. It is well to do an experiment on a reasonably small scale in order to determine whether it is going to be successful or not. In other words, you must have some program which has at least a fair promise of success before you are justified in spending huge sums of money and great effort.

It is not just simply, in my estimation, the amount of money required. Had there been an endless amount of money available from the beginning of the program I think that is fair. There may have been some stages, or some speeding up might have been achieved by the expenditure of much increased amounts of money, but it would not be at all in proportion to the success which would be achieved. One has to spend as much money as can be reasonably justified by the results.

As progress is made there may come a time when we will be requiring a much larger amount of money, and that might even be the very near future, if experiments with the lampreyicide which Doctor Sprules has mentioned prove to be completely effective. Especially in the early stages, money alone is not the critical factor. I think that is the thinking of the commission.

Mr. CROUSE: On that point, Mr. Chairman, I have one question on the assumption that the big fish eat the little fish: In your investigation, Doctor Sprules, could you tell the committee, has there been any natural enemy found for these lamprey which could be introduced to eat the fish, without eating the other fish?

Dr. SPRULES: Mr. Chairman, there have been one or two animals found, the northern pike and some of the fish-eating birds; but the quantities are very very small and we have not found any animal which is using lamprey, either the small lamprey or the large, as a really major part of its diet.

Mr. ANDERSON: Mr. Chairman, are there any lamprey fished commercially? There are a lot of newcomers to the country who eat the lamprey.

Dr. SPRULES: Mr. Chairman, practically all of the lamprey that are in good condition at any of our barriers are utilized by some of the new Canadians who are used to eating pickled and smoked lamprey in their own countries. The Latvian groups are particularly interested in getting any of the lampreys that are in good condition.

Mr. ANDERSON: Have you found that the lamprey feed on anything else but fish in the adult stage?

Dr. SPRULES: Mr. Chairman, I am not familiar with any other organism in the water which has been preyed upon by the lamprey.

Mr. ANDERSON: I just wondered what happens in small areas where the lampreys have cleaned out the fish. Do the lampreys all die? In the area with which I am familiar the lampreys have taken every species of sport fish; trout, whitefish, small and large mouth black bass, perch and pickerel.

Mr. McQUILLAN: Is the lamprey eel prevalent on the Pacific coast?

Mr. CLARK: Mr. Chairman, there are lamprey in the seas on both coasts, but the sea is so huge there is not the concentration that there is in the lakes.

Mr. MURPHY: Dr. Sprules, is the commission spending any money in regard to this problem in Lake Michigan?

Dr. SPRULES: Mr. Chairman, there are many—let us say several—of the electric barriers established on the major lamprey spawning streams in Lake Michigan. Many of these were planned and under construction at the time of the commission's formation.

Mr. MURPHY: You do not know how much money out of the commission's allotment was spent in regard to Lake Michigan.

Dr. SPRULES: I do not know, Mr. Chairman.

Mr. MURPHY: Mr. Clark, how many streams did you say there were emptying into Lake Huron, including Georgian bay?

Mr. CLARK: I think the figure I quoted, Mr. Chairman, was 117.

Mr. MURPHY: You are speaking now of Lake Huron?

Mr. CLARK: Yes, sir.

Mr. MURPHY: Has any survey been made in regard to the cost of establishing electric barriers in each one of them?

Mr. CLARK: I do not think an actual survey has been made of the cost of constructing electric barriers in these streams. The streams themselves have been surveyed in an effort to determine whether or not they are lamprey spawning streams.

Mr. CARTER: I would like to change the subject.

I wonder whether, while we are discussing this international commission, if the minister could bring us up to date with respect to the results of the conference held in Geneva last fall having regard to international agreements and certain conservation methods of fish resources in our territorial waters?

Mr. MURPHY: Mr. Chairman, I think we should complete this phase of the item before we go on to something else.

I wonder if Dr. Sprules could tell the committee a little more about the probable success of the use of the chemicals of which you spoke earlier. I think this would be of great interest to the members of this committee.

In view of the experiments that you have made up to date, can you say how much more time it will take before we have a chemical that will destroy the lamprey in the spawning beds?

Dr. SPRULES: There are two chemicals at the present time which have been rather extensively used in field tryouts. One is the chemical to which you referred, and the other is a chemical very closely related to it. I will not burden the committee with the chemical terminology of these, they are quite lengthy.

These are phenols and he was to be very, very careful with the use of phenols in water.

These two chemicals can be applied at such low concentrations and still kill lamprey that there is, to all intents and purposes, no kill of other species of fish, and very, very limited, or insignificant kill of any other aquatic organisms. These chemicals in the concentration in which we use them are specific to lamprey. They are so completely effective that I should say that if all the rivers could be fully treated with a proper concentration from the headwaters to the estuaries there would be very few if any lamprey left in the streams that were treated.

Mr. MURPHY: That is very encouraging.

There is one point, Mr. Chairman, I wish we could get some more information on. We have not heard much about the inland lakes and streams of northern Ontario where we have a great tourist industry.

I know for a fact that some of these lakes and streams that empty into Lake Huron and Lake Superior have now been contaminated with this curse. Is there any data in that regard as to the extent to which the lampreys have contaminated these streams?

Mr. CLARK: We have no information in that regard because the responsibility of the international Great Lakes fishery commission is confined to the Great Lakes under the convention between Canada and the United States.

It may be possible or probable, that the Ontario department of lands and forests have this type of information. I do not think we have any information at all in regard to the inland lakes to which you refer, Mr. Murphy.

Mr. MURPHY: All you are concerned with are the streams emptying into the Great Lakes from inland?

Mr. CLARK: That is correct.

Mr. MURPHY: Those are the streams you are treating?

Mr. CLARK: That is right.

Mr. ANDERSON: I would like to ask Dr. Sprules a question. How is this poison introduced to the waters? Is it introduced in a liquid form? I understand that this is so because of the fact that it is heavier than water and settles to the bottom of the streams, being very effective because it does not bother the other fish. Is this in a liquid form or is it used in powder form?

Dr. SPRULES: Mr. Chairman, I will have to obtain this information. There have been two methods of introducing these chemicals.

One method is by using a powder compound, and one method is by using an aqueous solution, where the salt is put into a solution. Whether the salt is put into a solution before introduction into a stream or not, I am not sure.

Mr. CLARK: I think Mr. Chairman I might be able to answer that question. I have not personally seen the application, but in a paper which was produced in regard to the technical side aspects it mentions that there is a pumping system, and it is a solution. I understand it is in the powder form but is mixed into a solution and then introduced in a liquid form, and because of its specific gravity goes to the bottom.

Mr. MURPHY: I am only speaking from memory, but I saw an item in a newspaper not too long ago which said that the lamprey kill in the United States was something in the neighbourhood of 300,000 to 600,000 and that ours was only about 5,000 or 6,000. Do you know anything about that report?

Mr. CLARK: I do not know the actual figures, Mr. Chairman. I did not see that report, but we have found that the lamprey streams on the American side carry more lampreys than the streams on the Canadian side. Apparently the lamprey like the streams on the American side better than those streams on the Canadian side because they are located in flatter areas and apparently are more conducive to the spawning habits of the lamprey.

Mr. MURPHY: Do employees of the Department of Fisheries attend these weirs in order to count these lamprey after they are dead? How do you make the count?

Mr. CLARK: Yes, a count is made. I am sorry we do not have the figures readily available.

Mr. MURPHY: Perhaps you could table those figures?

Mr. CLARK: Those figures could be obtained, I think, without too much difficulty. It involves going through the reports.

Mr. MURPHY: I think they would be of importance and interest to this committee and should be tabled.

Mr. CARTER: Could I have an answer to the question I asked?

There was an international conference in Geneva last year at which the problems of conservation and extension of territorial waters was discussed. I wonder if the committee could be brought up to date in regard to the results of that conference?

Mr. MACLEAN: Mr. Chairman, I think I may be able to clarify the situation somewhat. The conference was held in February, March and April.

There was an international conference in Geneva convened by the United Nations for the purpose of reviewing, revising, and reaching new agreements on the problems involving territorial waters.

There were 86 countries represented at this conference. The subjects under discussion were not confined to territorial waters as far as fishing is concerned, although that was the item that seemed to receive a lot of publicity in the press, and understandably so. There were many other subjects discussed. There was the question of navigation in territorial waters discussed; there was a discussion of territorial waters for the purpose not only of navigation, but customs and excise and natural resources in regard to the continental shelf of countries.

Agreements were reached in regard to many of the fields concerned.

No actual agreement was reached—it required a two-thirds majority—in regard to the expansion of territorial waters for fishing purposes.

The conference was adjourned with the hope that it will convene again within a reasonable length of time—within the next year, probably. It is hoped that at that time an agreement can be reached in regard to this question of territorial waters as far as fishing is concerned.

There have been a wide variety of problems and different points of view in regard to territorial waters of various countries throughout the world. There is a great conflict of interest in this field.

Some nations are interested in having their territorial waters, for all purposes, extended to very wide limits, while other countries are interested in extending their contiguous waters for fishing purposes only, and keeping the old traditional three-mile limit, which is the range of an old-fashioned gun, as international territorial waters.

Many other countries would like to have their territorial waters extended for certain purposes, while other groups of countries for special reasons would like to see the territorial waters of the nations of the world fairly limited.

This is a very complex problem. It has facets dealing with defence and the rights of navigation through narrow channels. If there was an outright extension of territorial waters, many water channels, which some countries consider essential to their economy and to their survival, perhaps, in some cases, would be closed.

Examples of such places would include the strait of Gibraltar, the gulf of Aqaba and places of that sort.

You also have very complex problems in regard to areas where a number of relatively small countries border on one body of water, such as the countries of western Europe, which border on the North sea.

I hope that that explanation answers your question.

Mr. CARTER: I was interested mainly in the conservation aspect.

Mr. MACLEAN: That is a matter which comes with the purview of one of these commissions, and I think perhaps what Mr. Carter has in mind is ICNAF.

Mr. CARTER: Yes, that is right, Mr. Chairman.

Mr. MACLEAN: Perhaps Mr. Clark could say a word in that regard.

I might say that the annual meeting of ICNAF was held in Halifax in June. There are 12 countries now belonging to the international commission for the northwest Atlantic fisheries. The last two countries to join this commission were West Germany and Russia.

Perhaps Mr. Clark is able to give you some specific information in regard to the workings of this commission.

Mr. PICKERSGILL: Mr. Chairman, before that answer is given I would like to ask a question in regard to this conference on territorial waters.

Am I right that it was at this conference that Canada voted with Russia against Britain, France and the United States?

Mr. MACLEAN: I think that possibly happened under a particular set of circumstances.

Mr. ROBICHAUD: Before that answer is given I have a question directly related to territorial waters.

We all know that Iceland has taken the position that as of September 1, their territorial waters will be extended to 12 miles. Iceland has been joined in this action by the Faroes islands which are under Danish control. A few days ago Great Britain, Norway and four other countries joined in protest against this action by Iceland. Could the minister tell us if any action has been taken by Canada in this regard?

Mr. MACLEAN: Actually, Mr. Chairman, this is a matter which should be discussed more correctly in the estimates of the Department of External Affairs. I have no specific knowledge of any action that has been taken by Canada. I have seen releases in the press recently to the effect that a number of companies do not intend to recognize this unilateral extension of territorial waters which Iceland has said it will do September 1. I think this is rather a hypothetical question at the moment.

Mr. BROWNE (*Vancouver-Kingsway*): In regard to this question of territorial waters, how does it relate to the question of international law on the subject? I would refer you to the stand that the United Kingdom, France and Norway took in 1951, which was known as the Anglo-Norwegian case, in regard to protecting their fisheries.

I also refer to the Canadian declaration in 1908 that certain waters on the Pacific coast, such as the Hecate strait, which would be deemed to be territorial waters for conservation of fish.

In 1945 the United States government made a presidential declaration in regard to the conservation and protection of fisheries in the oceans contiguous to the United States.

All these declarations would seem to indicate, at least to me, that there is no established international law in this regard, by international agreement between the two nations, or by a bilateral agreement between the United States and Canada.

I think some of these things should be worked out. Are there any negotiations going on between Canada and the United States in regard to the Pacific coast, at least?

Mr. MACLEAN: This is, as I said before, quite an involved question. It is conceivable that the two countries could make a bilateral agreement with regard to the conservation of fishing, by drawing up some agreement of this sort. This is being done by one of these international commissions for specific purposes.

As far as territorial waters, as such, are concerned, you cannot enforce a law unless it has general acceptance. You can make declarations until you are blue in the face but you will get nowhere with them unless other countries

of the world are prepared to recognize them. If these countries do not recognize them you have no means of enforcing them unless you are prepared to do so by force, which I do not think would be a very good idea.

Mr. BROWNE (*Vancouver-Kingsway*): It is my understanding that Russia has declared a 12-mile limit in regard to territorial waters. Is that declaration being recognized and obeyed by other countries?

Mr. PICKERSGILL: What is your guess?

Mr. MACLEAN: This declaration is not actually recognized by other countries, but in practice it may be obeyed for reasons that are perhaps obvious.

Mr. CARTER: Is Mr. Clark going to tell us something in regard to ICNAF?

Mr. CLARK: Mr. Chairman, with regard to the international commission for the northwest Atlantic fisheries, as the minister has pointed out, this is an international commission having regard to the northwest Atlantic area. There are 12 countries which belong to this commission. If you would like, Mr. Chairman, I could mention the names.

The countries which are members of this commission are: Canada; the United Kingdom; the United States; Norway; Denmark; Iceland; Portugal; Spain; Italy; France; the Republic of West Germany and the U.S.S.R.

The commission is engaged in a joint co-ordinating program in the Northwest Atlantic area to determine what scientific requirements are needed for the management of the fishery in that area in order to maintain the resource on a maximum sustained yield basis.

People from many of the countries, as I think most of the members of this committee will know, come over from Europe to fish on this side of the Atlantic. There is very heavily concentrated fishing effort in this area, and all of the countries who are members of this commission feel that something ought to be found out about the situation on a scientific basis in order to properly manage the fishery.

A great deal of work of a scientific nature has been done since the inception of the commission. Progress is being made so as to make recommendations to the governments concerned for certain conservation measures, particularly having to do with the size of the mesh used in the trawl in order to allow the escapement of the small and immature fish so that they can grow up and therefore be available in later years in marketable and desirable sizes.

The co-ordinated program of scientific research of this commission is, as I have said, Mr. Chairman, making excellent progress. The commission held its 1958 annual meeting in Halifax which is, incidentally, the headquarters of the commission. They have a permanent secretariat—a small staff—located in accommodation provided by Dalhousie University.

As I have indicated, Mr. Chairman, a great deal of progress has been made in a very few years. I think we are well on the way to having the necessary information available so that we can make recommendations to the governments concerned in regard to conservation and management measures.

Mr. CARTER: Has the commission held any discussions or given consideration to the possibility that before too long, sometime in the future, the point will be reached beyond which it will not be wise to extend the dragging operations on the Grand Banks and other international fishing grounds.

Mr. CLARK: No, Mr. Chairman, the commission has not reached that stage in its work.

Mr. CARTER: Has any consideration been given—I mean, there is a deadline, a point somewhere which will be reached sometime, and would have to be anticipated a good many years before the point was reached, in order that a progressive restriction could be carried out, a program of restrictive dragging could be carried out, a substitution by other forms, other methods.

Mr. CLARK: That may eventually come. I would not like to make a comment on that, Mr. Chairman, because from the information we have available to us there is no indication that the dragging operation, use of trawlers, is any more destructive, provided it is used wisely and under proper conservation measures, than other methods of fishing.

Mr. CARTER: On the George's Bank the number of fish was being expended.

Mr. CLARK: That is true, but that does not prove it was the fault of the gear; it may have been over-fishing, not actually the kind or type of gear being fished.

Mr. CARTER: Yes, but the over-fishing on the Grand Banks is mainly by draggers, that is the only method used out there at the present time.

Mr. CLARK: That is correct. As far as I know it is a trawling operation.

Mr. CROUSE: Mr. Chairman, is not there a change in water temperature affecting the growth of fish stocks in any one year to a much greater degree than any amount of over-fishing by man? When you realize two-thirds of the world's surface is covered by water and cold northern currents or excessive amounts of ice-packs are coming down over the fishing grounds affecting the water temperature and then in addition you have this depletion of the fish stocks as a result of over-fishing—

Mr. CLARK: I think this is so. There is no question in our mind that the oceanographic conditions play a most important part in the availability of fish in a given season. The warming up of the water is one factor and the cold currents coming down in great masses is another. Therefore, I think the oceanographic conditions play a most important part in fisheries generally. The oceanographic work of the commission is an important segment of the entire scientific investigation.

Mr. CARTER: If the effect is as Mr. Crouse has stated it is, you have two factors depleting stock, not only the over-fishing by draggers but the changing water temperature. If those two should coincide you would have a much greater depletion than from either one acting separately.

Surely that points out even more forcefully the need for conservation methods, or for consideration being given to that eventuality.

Mr. CLARK: Well, Mr. Chairman, I think that it must be taken into consideration that this area is certainly far away from Canada's territorial limits, whatever they may be. The choice of the method of fishing is a decision for the people doing the fishing.

You can deplete the resource, if Mr. Carter's argument follows, equally as speedily by any other method of fishing if you have the combination of all of these factors which are depleting the resource.

Mr. CARTER: I would not agree.

Mr. CLARK: I would not like to comment, Mr. Chairman, on the question of gear, as between trawlers and some other methods of fishing.

Mr. ROBICHAUD: Is it not true also that George's Bank, being one of the main banks of the United States area, New England fishing centres like Boston, New Bedford and Gloucester, that it was a concentrated bank where practically the entire fleet of the United States was concentrating its efforts? If there is over-fishing it may be because they concentrated on that bank. Is that not an important factor?

Mr. CLARK: I think this is so. As Mr. Robichaud has pointed out, George's bank is a relatively small bank compared to other areas and for many years this was the area where the very heavy concentration of United States fishermen from Boston, Gloucester; they did most of their fishing there. That is why I said before, and perhaps in the case of George's bank this is true, that over the years there was some over-exploitation.

Mr. CARTER: Is not it a fact, Mr. Chairman, that for many years we were proceeding on the theory put forth by the scientists that the fisheries were inexhaustible? The experience of George's bank shows that is not so; as a result of concentration of fishing there could be depletion, and that could apply to George's bank, and could apply to other banks.

Mr. CROUSE: Mr. Chairman, in relation to that point: the facts are that today the fishing on George's bank, which Mr. Carter says is depleted, they are catching comparable amounts of cod and haddock on George's bank to what we are catching on the banks we have off Nova Scotia.

I submit for this committee's consideration that when the fishing becomes depleted on any bank it is not so much due to over-fishing as to natural causes.

Coming back to your point of trawling the fish on the high seas or on the Grand Banks off Newfoundland. If you look at a picture of the type of Russian trawler, which I would say would approximate a 10,000 ton ship, by what reasoning can this commission—God did not put the Atlantic ocean out there for Canada, it is for all nations of the world, and they are using it. By what reason can we condemn the use of any net?

Mr. CARTER: Mr. Crouse has got completely off the beam, Mr. Chairman. We are talking about the international commission, members of twelve nations who have got together to discuss this problem; we are not talking about any one country or taking advantage of another, this is a matter which confronts all countries and which concerns the commission.

Mr. CROUSE: Mr. Chairman, I may be off the beam as Mr. Carter says but I will bring him back to my original point: the statement he made was a bit off the beam, when he said fishing was depleted on George's bank. It is not depleted, they are catching comparable quantities of fish there today to other banks, and they have increased the fish take on George's bank by removing enormous amounts of shell-fish. The amount of scallops caught on George's bank has increased tremendously.

It is an area where currents from the north and from the gulf stream, I believe, converge and there are large amounts of plankton and food on which fish can feed. If those currents change you have a decrease in fishing, and then the following year it increases again.

There is no way in which you can actually tie that in with the over-fishing or lack of it.

Mr. CARTER: Mr. Chairman, may I ask this last question?

If there was no over-fishing on George's bank, if there were no signs of depletion, why was the size of the mesh increased?

Mr. CLARK: The size of the mesh was increased because damage was being done to the small, immature fish, which was a complete waste. These small fish were not allowed to escape the net and grow and later be available to the fishery.

I would like to make a point, Mr. Chairman. I think Mr. Carter said there were statements made by scientists in the past that the stocks of fish were inexhaustible.

Mr. CARTER: Yes.

Mr. CLARK: I do not recall the statements. They may have been made, but not to my knowledge. I do not think that any scientists would say that if you go out and kill all the fish the stocks would be inexhaustible. If the statement was made I do not think it was made in that sense.

I think it is true that you can fish a stock down to the point where it is uneconomical to continue fishing, but to say the stocks could not be completely exhausted I do not think is quite correct.

Mr. BROWNE (*Vancouver-Kingsway*): I think, Mr. Chairman, there has been a very important question raised here, the implications of a high seas fishery. If I might ask a question with relation to the Pacific ocean.

We have a problem out there which seems to be a difference of opinion between the Department of Fisheries, the international commission and the fishermen's union out there.

I think it is recognized that there must be conservation and the whole basis of a high seas fishery is a completely unscientific way of fishing. If we are to catch fish in the ocean, the way the Japanese are doing, we do not know where these fish are going to spawn and which streams they will take.

I realize this has to be done by international agreement, we might not be able to do anything about it here, but I do not see why there should be any difference in principle, any difference of opinion on the principle on the matter involved, whether the high seas fishing is an unscientific way of going about fishing. We do not seem to know where the fish the Japanese are catching in the ocean are spawning. We say we do not think, or there is no evidence, they are coming from Canadian waters; it might also be said that we do not know for sure that they are not coming from Canadian waters.

Aside from that it would not make any difference whether they come from Canadian waters or American waters, or any other waters; the fact is the appropriate conservation measures have to be taken.

As long as these fish are caught in the middle of the ocean I do not see any way of taking proper conservation measures.

Mr. CLARK: Mr. Chairman, this is the whole point of the international north Pacific fisheries convention. I think it is an arguable point, as to whether it is scientific or non-scientific to take salmon, for example, on the high seas.

This subject was touched upon at the first meeting of the committee and I attempted at that time to explain in a very brief and general way some of the provisions of the convention concerning the fisheries of the north Pacific.

The Japanese have agreed under the convention to abstain from fishing east of the 175th meridian. This was felt, at the time of the negotiation of the convention, to be about the dividing line between stocks of salmon from the North American coast and stocks of salmon from the Asiatic side.

The evidence up to the present time, and there has been a very comprehensive scientific investigation under the commission participated in very extensively by the three countries concerned, shows that there is an intermingling area somewhere about the 175th meridian.

At certain times of the year and in certain seasons there is no doubt, because, again, of oceanographic conditions, that some of the salmon spawned, let us say, on the North American coast do travel farther west than the 175th meridian. But, in so far as salmon originating in Canadian waters is concerned we have found no evidence to date that salmon from Canadian streams do travel that far west. This may change, of course, as further studies are made but, as I pointed out at one of the early meetings of this committee, we have had no evidence to date that that is so.

There are some stocks, beyond any question of doubt, particularly from Bristol bay, again apparently because of oceanographic conditions, which travel farther west than the 175th meridian.

I would like to make this point, also, Mr. Chairman, as to whether it is scientific or non-scientific to fish on the high seas: these are high seas water and it must be by agreement on an international level that there can be any recognition as to whether to fish on the high seas or not to fish; there is no control by any one country.

Mr. BROWNE (*Vancouver-Kingsway*): We all agree on that.

I said at the outset that it needs to be done by international agreement. But our Department of Fisheries can recognize a principle if there is a principle involved.

I do not know what streams Japan has of her own, but I understand they are very, very limited. At the moment there is only Japan in this position but with the question of territorial waters coming up if there is a principle involved of people fishing in the middle of the ocean other countries are going to fish out there who have no fish of their own. There is a principle there, if it is recognized in the case of Japan there would be nothing to stop Great Britain or the United States from going out and the whole thing would become a complete shambles.

I do not say this can be corrected, but I think we should admit there is a principle and that we should admit that principle and work towards that end. I do not say we are going to do anything about it at the moment, but I do not think there is any argument about the principle involved and that we should take a position.

Mr. CLARK: Canada has taken a position and has recognized the principle. The whole effort has been directed towards finding out the scientific facts so that under the terms and conditions of the convention conservation measures can and will be taken by the three countries concerned. But, first of all, I think it would be recognized by the committee, that we must have the scientific information upon which to base the recommendations for such conservation measures. Those are rapidly coming, Mr. Chairman.

Mr. MATTHEWS: Mr. Chairman, is it not true that salmon at Vancouver island, and around Vancouver island, make a certain circuit, the springs take one circuit and the cohoe another? I believe I saw some charts at your biological station which pretty well establish that they stick fairly close to that, except perhaps for some stragglers which swing out a little farther.

Mr. CLARK: I think generally it is true that the salmon seem to follow a pretty well defined pattern of migration. There are exceptions to this because of water conditions or something else, but generally speaking there seems to be a pattern of migration.

Mr. CARTER: May I ask, Mr. Chairman, if ICNAF, or anybody at all, have statistics as to the catches taken from the various banks? Could figures be produced for George's Bank for, say, the three years prior to the enlargement of the mesh?

Mr. CLARK: Yes, Mr. Chairman, the International Commission for the Northwest Atlantic keeps very voluminous statistics on the official breakdown under the statistical system of the convention in the various areas. We could produce a considerable number of volumes, if the committee wishes, for reading by the committee.

Mr. CARTER: I am not interested in all the statistics, but I would like to see the catches taken from George's Bank for the three years or the five years prior to the enlargement of the mesh. It was my impression that catch had been dropping.

Mr. CLARK: We can give the statistics for cod and haddock on George's Bank. I do not have them here, Mr. Chairman, but they are available.

Mr. CARTER: Thank you very much.

Mr. BROWNE (*Vancouver-Kingsway*): Mr. Chairman, there is just one question I would like to ask which comes under the International Pacific Commission: both the Fishermen's Association in British Columbia and the Fishermen's Union in British Columbia have asked that some measures

should be taken in respect to the Hecate straits area. Is it the intention of the government to consider that matter? Are there any negotiations going on at the present time, or what is the position of the government at the present time on that problem?

Mr. CLARK: Mr. Chairman, in answer to Mr. Browne's question about the Hecate straits: there is at the moment no formal negotiations going on about the Hecate straits fisheries, but there have been a number of unofficial discussions with the officials of the United States government on this matter. It is possible that in the not too distant future some formal negotiations will take place.

Mr. PICKERSGILL: It might help Mr. Browne if I said a word about this. I know a little about it because of some of the things done by the previous administration.

I think the feeling was that we could not mix formal negotiations about the Hecate straits with the negotiations going on about the twelve-mile limit because it would cause confusion. Since this was a question exclusively between Canada and the United States it was felt we should try and keep it separate and try not to get into two conflicts with the United States at the same time.

The matter has been considered in all the departments very actively in the last three or four years, not merely in the Department of Fisheries.

Mr. BROWNE (*Vancouver-Kingsway*): I think I am aware of that situation. I was suggesting we should take it up under the other. I think it should be done on a bilateral basis. We made a declaration as far back as 1908 that we had the right to do that. I take it is your opinion that there are certain rights there and we are working towards the establishment of them.

Mr. CROUSE: Mr. Chairman, this might not be the place to bring this point up, but I am serious as to the amount of research work which is being presently undertaken on the east coast with regard to the catching of shrimp in that area. From information I have received there are apparently fairly heavy concentrations of shrimp, some of them in the Belle Isle area.

As a matter of fact, within the past year Captain Albert Crouse landed at Canso around 500 pounds of shrimp caught in a five-inch mesh net. Various trawlers, who are not within Nova Scotia, are catching shrimp in that particular area. I am wondering if they are there in commercial quantities or if this could be developed into a new type of fishery? What is the department doing about this, as to ascertaining the size of these beds and the growth of this particular fish? What are the possibilities of having a new industry on the east coast, which would be shrimp catching?

Mr. CLARK: Mr. Chairman, this is an investigation which is now doing on between the department, under our industrial development service, and the Fisheries Research Board.

There are 29 species of shrimp and prawns along the Atlantic coast of Canada. The pink shrimp appears to offer the best prospects for commercial use. I might say, this particular species formed the basis of the shrimp fishery in Maine about ten years ago and is perhaps the most important species of shrimp in northern Europe.

Surveys on this species of shrimp were carried out some years ago from the St. Andrew's station of the fisheries research board and later from the Bay of Fundy and the Bay of Chaleur. The species was widespread but nowhere sufficient to promise a commercial fishery.

Last year we chartered a fairly large vessel with a deep sea net. The results show the shrimp catches to be as good as the usual catches of this shrimp in Norway and Greenland.

The successful commercial exploitation of the fishery will depend on the profits available, the efficiency of labour, the cost of labour, and so on. If landed on the mainland we think they can be sold on the fresh market to advantage.

The information is being made available to fishermen and the industry generally. It is then up to the commercial operators as to whether or not they go into this part of the business.

We are continuing the exploratory work on shrimps this year.

Mr. MATTHEWS: Mr. Chairman, this may be a little off the track, but I noticed in the paper that a lot of trout in Westwood lake in the Nanaimo area are dying. Is that usual? The temperature of the water was about 85.

Dr. SPRULES: Mr. Chairman, I have no information on this specific instance but temperatures rising into the mid-80's is pretty lethal for most species of trout world-wide. The middle 80's are considered the critical spot. Many of the trout can withstand an 85 degree temperature for just an hour or two, as long as the temperature changes away from that again; but if it continues they will die.

Mr. MATTHEWS: It is a sheltered lake and there are lots of logs on the bottom. I have never heard of that happening in that lake before. The department considered it was very successful in that area and a lot of work has been done there on trout.

Last year they used it for outboard racing and I was wondering whether that mixture or compound in gasoline with underwater exhaust could set up something which would do some damage?

Dr. SPRULES: Mr. Chairman, I would think the possibility of that being the case would be very, very small.

Mr. MATTHEWS: Probably very little chance.

Dr. SPRULES: Yes. The high temperature you have indicated indicates an oxygen depletion. The activity of the animal operating at that temperature is using too much oxygen and you get oxygen depletion, plus heat prostration.

Item agreed to.

145. To provide for operation and maintenance of Newfoundland Bait Service	\$439,425
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The CHAIRMAN: Mr. Murphy has asked for certain information to be tabled by Mr. Clarke and Dr. Sprules. It has not been tabled. Is it your wish this information be printed in the record? May I have a motion?

Mr. CARTER: I so move.

Mr. STEWART: I second the motion.

Motion agreed to.

The CHAIRMAN: Now, shall we proceed with item 145? Any questions?

Mr. PICKERSGILL: I would like the minister or deputy minister, Mr. Chairman, to tell us about anything done about the Newfoundland Bait Service.

Mr. MACLEAN (*Queens*): Before this question is answered, there was a question asked the other day by Mr. Stewart on another item.

Mr. Stewart asked the number of people employed on the development of the mechanical clam digger and the amount of funds involved. At the moment we have two men employed in the development of the mechanical clam digger and \$8,000 has been provided under the Industrial Development Service Vote for this project during the present fiscal year. I think that answers your question.

With respect to the item regarding the bait service in Newfoundland. I might say that when Newfoundland came into confederation it was agreed the federal government should take over the bait service which then existed in Newfoundland. During the last year there has been a complete survey of the problems having to do with the bait service in Newfoundland due to changing conditions and changes in the fisheries of Newfoundland. It was becoming evident that the bait service, at least in the opinion of many of the fishermen involved, was not meeting the purpose for which it was set up.

Now, as a result of this survey certain changes are being made, all of which I think will be improvements, and we hope that it will more adequately meet the situation. Actually there is a new depot about to be built at Bonavista. The site for this new depot has been acquired and most of the equipment for the plant has been acquired. Tenders have been advertised and the date for closing the tender is August 12. Mr. Clark may have something to say on this, and Mr. McArthur who directs the bait service in Newfoundland will be in a position to answer questions and give additional information.

Mr. CLARK: I think the minister has explained the bait service in Newfoundland—the historical part of it. But as a result of the survey which we have conducted in the department because of the changing conditions of the fishery itself, it was felt that the bait service was in need of some modernization and perhaps relocation of storage units. I think the committee will understand that to construct at every place where we have requests for bait depots is rather an expensive undertaking, because one must be assured first that at least you are going to attain to a reasonable degree a financially sound operation. As a result of the survey we have made, we are making certain changes which are now going on.

The minister has mentioned the new bait depot at Bonavista, which is one of the areas particularly where squid are available. This bait depot not only serves the local fishermen there but also acts as a storage plant to acquire the bait for distribution to other bait depots and other units in the program. Also, what we are doing this year, is taking over the bait depot at Long Harbour to be used also as another collecting and distributing point for servicing other bait depots. I think Mr. Carter raised the question at the last meeting of the committee about some small units which might be utilized for bait storage purposes. We had already investigated that, and tenders have already been let for the acquisition of small units to be placed in various locations in Newfoundland. They are a prefabricated storage unit, self-contained. It does not require a number of employees to operate and perhaps the small units in due time could be turned over for operation by the local fishermen themselves.

These prefabricated storage units will handle, I think, and have a capacity, of approximately 5,000 pounds of bait at a time. We also have funds, you will note, in the supplementary estimates under this vote for the acquisition of two refrigerated motor trucks to assist with the distribution of bait. So, Mr. Chairman, we are going to improve the bait service in Newfoundland to meet some of these difficulties which have been experienced by the fishermen in a number of localities to have bait available so that they can continue their fishing operations.

Mr. STEWART: Is that the only place in Canada where these services are maintained?

Mr. CLARK: That is correct. It is only in Newfoundland that we have these services.

Mr. BATTEN: What are the locations where these new units are to be built?

Mr. MACLEAN (*Queens*): Mr. Chairman, if I might interrupt, we have had a large number of requests from a large number of areas—26 I think is the total at the moment. We will not be in a position to meet all of these requests by any means. The final decision as to where the new bait holding units will be located has not been finally taken yet. Mr. Batten has made representations to the department and to myself with regard to a couple of locations and they will certainly be considered in conjunction with all the other requests.

Mr. CROUSE: Mr. Chairman, are these being built entirely by the federal government or in conjunction with private firms which are being subsidized?

Mr. CLARK: It is entirely a federal government operation.

Mr. STEWART: No contribution is provided by the provincial government?

Mr. CLARK: No.

Mr. PICKERSGILL: This is a constitutional obligation under the British North America Act.

Mr. CLARK: May I make a correction in regard to the quantity or capacity of these units. I think I said 5,000 pounds. I am not correct; it is 20,000 pounds.

Mr. CARTER: Have you the cost of these units?

Mr. MACLEAN (*Queens*): Perhaps Mr. McArthur has some information on that.

Mr. I. S. MCARTHUR (*Chairman, Fisheries Prices Support Board, Department of Fisheries*): The cost would be, Mr. Chairman, approximately \$5,500 per unit.

Mr. CARTER: \$5,500 per unit for a 20,000 pound capacity?

Mr. MCARTHUR: That is right.

Mr. CARTER: That is good. May I continue, Mr. Chairman. May I ask if the Long Harbour depot which Mr. Clark referred to, was leased to a private interest and now repossessed?

Mr. CLARK: This bait depot is one of the depots which was acquired at the time of union with Newfoundland. A few years ago a private operator made representations to lease the depot. This was agreed to. He obtained a lease and the understanding of the agreement was that he would continue to supply bait from that depot. But he enlarged the plant and used it for a time as a filleting plant in connection with his own operations. This private operator has now changed his operations to a great extent. He has very modern plants in a number of locations. The government has released him from his lease agreement. It was not sold to the private operator; it was only on lease, and by mutual agreement we have now taken back the depot at Long Harbour.

Mr. CARTER: Is the government considering cancelling other leases where the terms of the lease are not being lived up to?

Mr. CLARK: We have no such information or evidence, Mr. Chairman, concerning the other depots. I think there are only two, Grand Bank and Green's Pond, under lease. We have no evidence that the conditions of the agreements for leasing have not been lived up to; and therefore up to this time, as far as I know, no consideration has been given to taking them back.

Mr. CROUSE: I believe that the Catalina plant operated by Mr. Mifflin is leased to him under an agreement with the government. Is this plant entitled to continue on that arrangement? How much money has the federal government spent in that particular area? Could you give us those figures? What is the intention in the future of the department and the government with respect to that plant?

Mr. PICKERSGILL: On a point of order, we are discussing the item on Newfoundland bait service. I do not desire in any way to restrict Mr. Crouse, but I think we have more questions on that particular item and I wonder if we should not continue in an orderly way on that before we go back to that item already passed.

Mr. CROUSE: I was uncertain whether this was passed or not. Can we refer to that later on?

The CHAIRMAN: Yes.

Mr. TUCKER: How many bait depots are actually in operation in Newfoundland at the present time?

Mr. CLARK: We now have, Mr. Chairman, 23.

Mr. TUCKER: May I have a list of the locations of these units from an official of the department?

Mr. CLARK: Yes sir.

Mr. CARTER: Did I understand Mr. McArthur to say that this complete prefabricated storage unit with cooling operation can be established in any settlement for roughly around \$5,500 for a 20,000 pound capacity.

Mr. McARTHUR: Yes, Mr. Chairman, this is to some extent an experiment this year. I am not sure whether the minister mentioned this or not, but the provision this year is for four of these units because it is essentially on an experimental basis. The unit is prefabricated, made of four by eight panels which are fastened together with patented arrangements. One of these panels is a cooling unit, and the thing can be broken down very quickly, in a matter of an hour or so, and moved, even by helicopter, if necessary, because the individual panels can be taken apart. It is completely flexible in that respect and is completely self-contained and automatic and maintains a temperature of zero. Those are roughly the specifications.

Mr. CARTER: Would it be possible then for a fisherman to take advantage of the small loans fund to acquire these plants for themselves if they wanted to?

Mr. McARTHUR: Yes, Mr. Chairman, I should think so. The maximum loan, of course, under the Fisherman's Improvement Loan Act is \$4,000. But, there is provision in that act for loans for the acquisition of buildings and shore installations.

Mr. CARTER: A group of fishermen could combine, if they wished, to make advantage of that. Have you any idea about the maintenance and operation costs? What are they likely to be during a year, not including salaries?

Mr. McARTHUR: I cannot tell you precisely what the maintenance cost would be. These units are not likely to be in operation continuously for 12 months of the year. Our plan is to fill these units periodically during the season of bait supply and bait use. They would probably be more or less closed up at the end of the fall fishing season and just remain closed until the next year.

Mr. TUCKER: Could these plants not be set up as mobile units?

Mr. McARTHUR: They could be installed on a truck, I should imagine, but when one bears in mind the road facilities in Newfoundland in certain areas, it would create a problem.

Mr. PICKERSGILL: They are improved now.

Mr. McARTHUR: That is true for the Avalon peninsula. In certain areas you can ship by truck.

Mr. CARTER: These units can only hold bait which is already frozen. They could not freeze bait themselves?

Mr. McARTHUR: The four units being built this year will have a temperature of zero and we could not use them for freezing squid. But we have talked to the manufacturers and to our own technicological people, and there is no problem in stepping up the freezing capacity so that the units could be used for freezing if it should become necessary.

Mr. CROUSE: What will be the capacity of these units?

Mr. McARTHUR: The units we are building at the moment are based on 587 cubic feet, which is roughly 20,000 pounds at 40 pounds per cubic foot. But they are quite expandable and they could be doubled in size; you could step up your freezing mechanism.

Mr. CROUSE: Were the arrangements to build these bait depots part of the agreement entered into between Canada and Newfoundland at the time of confederation, or are they being built under a new agreement which was decided upon this last year?

Mr. MACLEAN (*Queens*): No. This is one of the obligations that Canada administers through its Department of Fisheries upon Newfoundland's entry into confederation. We are trying to improve the service in the sense of modernizing it so that it will cope with the problems which we are obliged to meet with a minimum of expense.

We are trying to evolve these smaller units which would be less costly and more flexible so that they can be made available in certain areas.

We have bait depots in areas where there is very little business because of the change in the pattern of the fishing industry in that province.

Mr. CROUSE: Could these bait freezers be moved to new areas?

Mr. MACLEAN (*Queens*): Not the old type of bait freezers because they are permanent.

Mr. CROUSE: What limitation would be placed on the federal government with respect to building these things? My point is this: that the fishing industry, as everyone in this committee is aware, is gradually changing; there is a transition and there is a change from fishing where the operation requires bait, to trawling where there are no bait requirements.

Whether this is destructive or is not destructive of the fishing industry, the fact remains that a trawler will catch a larger quantity of fish using a smaller number of men. Today there are no men going into the fishing industry if they can find any other industry to enter.

I wonder about the establishment of what could turn out to be—from the questions asked by some of the members from Newfoundland—small plants in the initial aspect of this operation which would operate in competition with privately established plants throughout Newfoundland and in other sections of the maritimes.

I wonder about the forces we are setting up by the provision of these plants. What will be the ultimate end of these bait depots and the end economy of establishing so many of them in view of the fact that the needs for bait will be constantly decreasing?

Mr. PICKERSGILL: Before the minister answers that question, might I be permitted to say a word about this matter.

I can understand Mr. Crouse's concern about any additional public expenditure—if there is going to be additional public expenditure. I do know quite a bit about the background of these circumstances going back to the days when the terms of union with Newfoundland were negotiated.

I am happy to see that the view taken by the previous government is being adopted by the present government.

We inherited this bait service. Upon confederation it became a federal operation. It is not a static thing, and if there are bait depots in places where there is no use for them, then they should be closed, and the losses, cut.

On the other hand, if there are areas where this service is required, and could be given more cheaply by modern methods and a saving of the taxpayer's money, or if there are areas where fishing has developed at a very considerable rate, then this is a very progressive thing to do.

I want to congratulate the department on what I think was the most progressive step they have taken since 1949. We have a lot of roads in Newfoundland now which did not exist in 1949. I congratulate them on the idea of getting these trucks which can be operated at a very small part of the cost to distribute the bait which was formerly distributed by boats. I think that is a forward and progressive step.

I also congratulate them on the idea of these little plants which can be built for \$5,000 and which cost very little to operate, instead of building big new static depots. This it seems to me is a very progressive and forward step. I do think that over the years there is a real chance that the department may actually economize in the cost of this service, having regard to the value of money.

But on the question of fishermen not going into the fishing industry if they can find any other employment, the experience in Newfoundland—it may be it is because there is so much unemployment this year that this is the only reason; but as far as Newfoundland is concerned, there have been more than 2,000 additional fishermen enter the fishing industry this year in Newfoundland as compared with last year.

Whether that is because there is more employment available there than elsewhere, or because they now have a feeling of security under unemployment insurance I do not know; but the fact is that at the present time approximately 2,000 more people—mostly heads of families—rather than single men—are entering the fisheries of Newfoundland this year.

Mr. CARTER: Mr. Chairman, apart from anything that has been said up to now, if the Newfoundland shore fishery is to survive at all it must be a hook and line fishery. It cannot be a dragger operation. I think that is a fair statement because we do not have dragger grounds for inshore fishermen.

An inshore fisherman must of necessity utilize the grounds that are available to him. These grounds can best be utilized by a hook and line fishing operation. The ordinary shore fishermen cannot afford the large capital investment which is involved in a dragger operation. The hook and line fishermen must certainly have a bed.

As Mr. Clark has pointed out, the pattern has changed, and because the pattern of the shore fishery has changed, it necessitates a change in the distribution of bait service.

Mr. KEAYS: Mr. Chairman, under the terms of the constitution, is there any limit to the amount of money which can be spent in this regard?

Mr. CLARK: No, sir, there is no limitation.

Mr. MACLEAN: Mr. Chairman, my understanding is that we are obligated in this regard. I will read the portion of the agreement which applies.

The Canadian government will seek legislation or take such other steps as may be necessary to provide that the Newfoundland bait service will be taken over and operated without fundamental change by the Department of Fisheries.

This service is something which we have inherited. It was operated for a number of years by the commission government of Newfoundland.

Mr. CARTER: Could I ask Mr. Clark if consideration is being given to the replacing of the Acartia or the utilizing of another ship in addition to the Acartia?

Mr. CLARK: Mr. Chairman, there is consideration being given in regard to the Acartia, which is a vessel which is used for the distribution of bait. It is a refrigerated vessel. She acts as a distributing unit to those big depots.

We have not given consideration to a second vessel up to now because we hope that with the increase in the number of roads we will be able to use refrigerated trucks to better advantage.

The Acartia, or a replacement vessel, will still be required because of the fact that there are many places which are not accessible by road.

The Acartia is becoming extremely old. She was built in 1917, and we have been giving consideration that perhaps in another year we will have to have a replacement.

Mr. TUCKER: Has there been any consideration given to the erection of a bait depot at Southport, Trinity bay?

Mr. CLARK: We have received representations in this regard, and consideration has been given to those representations, as well as to others.

Item 145 agreed to.

Supplementary item 561 agreed to.

The CHAIRMAN: Our next meeting will be held at nine-thirty tomorrow morning in room 268.

APPENDIX A

CANADA—CATCH OF TROUT IN GREAT LAKES, BY LAKES AND TOTAL ONTARIO, 1930-1953

(In Hundred Weights)

Year	Lake Superior	Lake Huron				Lake St. Clair River St. Clair Detroit River	Lake Erie+ Upper Niagara River	Lake Ontario Lower Niagara+ St. Lawrence Rivers	Sub-Total Great Lakes	Northern Inland Waters	Southern Inland Waters	GRAND TOTAL ONTARIO
		North Channel	Georgian Bay	Proper	Sub- Total							
1930.....	15,302	3,513	13,171	12,663	29,347	111	3,637	48,397	1,380	1,428	51,205	
1931.....	13,284	3,440	12,893	12,145	28,478	71	3,882	45,715	1,137	1,224	48,078	
1932.....	11,237	3,627	13,132	12,925	29,684	18	3,016	43,955	927	1,563	46,445	
1933.....	9,683	4,712	13,444	13,434	31,590	15	3,532	44,820	858	859	46,537	
1934.....	12,607	6,267	13,340	15,623	35,199	26	2,562	50,394	1,013	1,545	52,952	
1935.....	15,184	7,109	14,753	20,692	42,554	3	2,449	60,190	2,137	236	62,563	
1936.....	15,962	7,047	14,726	21,375	43,148	2	2,265	61,377	2,774	436	64,587	
1937.....	16,986	6,440	15,042	17,537	39,019	2	2,050	58,057	2,806	128	60,991	
1938.....	16,678	6,261	14,269	17,473	38,003	.....	2,758	57,439	2,711	255	60,405
1939.....	13,074	5,044	14,489	12,501	32,034	.....	2,688	47,796	2,588	374	50,758
1940.....	12,612	3,541	13,340	10,388	27,269	.....	1,874	41,755	1,637	249	43,641
1941.....	12,985	2,116	15,016	11,098	28,230	.....	1,258	42,473	1,648	.....	44,121
1942.....	13,610	1,234	12,743	8,001	21,978	.....	898	36,487	1,966	.....	38,453
1943.....	13,230	255	10,664	5,174	16,093	.....	763	30,086	2,285	.....	32,371
1944.....	15,527	92	8,152	3,158	11,402	.....	1	744	1,831	.....	29,505
1945.....	14,791	72	7,376	1,174	8,622	.....	1	1,051	1,424	.....	25,898
1946.....	15,309	60	6,959	295	7,314	.....	18	1,024	23,665	1,479	25,144
1947.....	12,865	28	3,681	65	3,774	.....	.....	638	17,227	1,508	18,785
1948.....	14,480	231	3,117	95	3,443	.....	2	423	18,348	1,484	19,832
1949.....	13,561	531	3,426	32	3,989	.....	217	215	17,982	938	18,920
1950.....	15,063	712	3,342	106	4,160	.....	.....	154	19,377	1,060	20,437
1951.....	12,732	857	4,399	266	5,522	.....	.....	402	18,656	1,096	19,752
1952.....	13,891	648	4,720	516	5,884	.....	.....	320	20,095	1,716	21,811
1953.....	13,711	228	3,212	.....	3,440	.....	.....	138	17,289	1,331	18,620
1954.....	12,660	140	1,540	.....	1,680	.....	.....	70	14,410	1,200	15,610
1955.....	10,030	20	710	.....	730	.....	.....	40	10,800	1,100	11,900
1956.....	5,270	10	490	.....	500	.....	.....	20	5,790	620	6,410

APPENDIX "B"

CANADA—CATCH OF WHITEFISH IN GREAT LAKES, BY LAKES AND TOTAL ONTARIO, 1930-1953

(In Hundred Weights)

Year	Lake Superior	Lake Huron				Lake St. Clair River St. Clair Detroit River	Lake Erie+ Upper Niagara River	Lake Ontario Lower Niagara+ St. Lawrence Rivers	Sub-Total Great Lakes	Northern Inland Waters	Southern Inland Waters	GRAND TOTAL ONTARIO
		North Channel	Georgian Bay	Proper	Sub- Total							
1930.....	3,717	1,924	9,939	2,466	14,328	7	10,877	5,519	34,449	6,756	14,228	55,433
1931.....	2,560	2,340	9,809	2,452	14,601	3	11,064	5,259	33,487	7,173	12,273	52,933
1932.....	1,934	1,680	11,948	2,192	15,820	8	9,122	4,183	31,067	7,001	10,589	48,657
1933.....	2,450	2,577	14,754	3,095	20,426	.....	7,100	4,736	34,712	6,663	5,904	47,279
1934.....	2,952	2,529	13,830	3,089	19,448	1	9,159	4,895	36,455	5,608	7,167	49,230
1935.....	3,774	3,041	12,922	3,403	19,366	16	11,901	6,574	41,631	13,036	116	54,783
1936.....	3,195	2,602	9,838	2,353	14,793	11	17,677	5,762	41,438	16,338	127	57,903
1937.....	3,008	2,542	11,229	2,870	16,641	4	14,010	5,516	39,179	15,922	84	55,185
1938.....	3,117	1,857	11,962	2,052	15,871	2	10,018	6,023	35,031	14,335	111	49,477
1939.....	3,396	1,572	11,180	1,151	13,903	7	23,122	6,646	47,074	16,497	100	63,671
1940.....	3,850	1,188	8,872	924	10,984	6	31,366	4,036	50,242	13,392	51	63,685
1941.....	3,149	851	7,480	931	9,262	5	33,586	4,416	50,418	13,281	.....	63,699
1942.....	3,197	849	5,839	1,139	7,827	.....	25,240	4,420	40,684	13,660	.....	54,344
1943.....	3,363	491	4,415	1,132	6,038	.....	14,814	3,293	27,508	14,352	.....	41,860
1944.....	4,037	308	3,644	1,425	5,377	.....	12,589	4,609	26,602	15,440	.....	42,042
1945.....	3,586	218	2,793	661	3,672	2	16,894	3,594	27,748	14,904	.....	42,652
1946.....	2,750	249	2,464	1,576	4,289	2	19,322	3,979	30,342	14,169	.....	44,511
1947.....	2,459	769	873	2,919	4,561	.....	27,263	3,578	37,861	11,557	.....	49,418
1948.....	3,057	1,466	2,446	5,379	9,291	.....	37,999	3,367	52,714	12,218	41	64,973
1949.....	2,770	2,725	8,050	2,430	13,205	.....	36,201	2,186	54,362	16,271	.....	70,633
1950.....	3,407	3,099	20,880	3,032	27,011	.....	13,904	4,189	48,511	17,376	.....	65,887
1951.....	3,406	2,018	30,252	3,652	35,922	.....	11,296	3,853	54,477	17,327	.....	71,804
1952.....	2,675	1,163	46,787	7,646	55,596	.....	14,236	4,165	76,672	17,591	.....	94,263
1953.....	2,822	1,339	61,662	1,797	64,798	.....	16,410	2,072	86,102	16,037	.....	102,139
1954.....	3,280	950	36,920	2,710	40,580	.....	5,560	2,280	51,700	16,740	.....	68,440
1955.....	2,540	570	16,460	2,580	19,610	.....	3,990	3,400	29,540	14,970	.....	44,510
1956.....	3,020	560	6,970	2,160	9,690	.....	5,420	5,930	24,060	16,430	.....	40,490

APPENDIX "C"
 CATCH OF WHITEFISH IN THE UNITED STATES BETWEEN 1930-1953
 (In Hundred Weights)

Year	Lake Superior	Lake Huron	Lake Michigan	Lake Erie	Lake Ontario	Lake of The Woods	Sub-Total Superior, Huron and Michigan	TOTAL
1930	2,947	33,798	47,886	3,069	874	998	84,631	89,572
1931	4,899	44,915	43,274	12,729	675	1,121	93,088	107,613
1932	4,506	43,329	35,576	11,686	546	1,663	83,411	97,406
1933	4,831	32,377	4,047	9,972	404	1,432	41,255	53,063
1934	4,832	25,658	21,818	7,774	836	1,642	52,408	62,760
1935	5,123	18,948	16,971	9,949	405	1,101	41,042	52,497
1936	3,741	14,422	10,255	11,584	531	777	28,418	41,310
1937	3,636	10,187	10,726	6,475	567	691	24,549	32,282
1938	4,554	5,580	12,589	9,109	558	635	22,723	33,025
1939	4,970	2,552	9,506	20,981	1,037	763	17,028	39,809
1940	6,922	1,881	9,548	26,058	111	665	18,351	45,185
1941	7,275	1,137	12,901	24,459	600	562	21,313	46,934
1942	7,510	951	13,406	19,239	210	529	21,867	41,845
1943	7,317	1,492	14,071	9,490	260	517	22,880	33,147
1944	6,633	1,852	17,532	5,674	574	218	26,017	32,483
1945	7,713	1,815	16,579	9,000	327	400	25,567	35,294
1946	9,149	5,450	25,576	7,970	(441)	335	40,175	48,921
1947	9,508	30,229	58,248	17,738	213	376	97,785	116,312
1948	12,006	29,719	52,472	27,894	82	328	94,197	125,501
1949	12,837	5,302	34,919	34,786	24	503	53,058	88,371
1950	10,399	1,142	23,608	16,046	210	639	35,149	52,044
1951	4,416	1,426	12,136	8,857	329	441	17,978	27,606
1952	3,508	1,676	17,703	13,587	228	466	22,887	37,168
1953	6,066	1,531	10,464	11,098	318	447	18,061	29,924
1954	10,045	914	7,889	3,879	98	480	18,848	23,305
1955	10,039	662	3,756	3,745	120	524	14,457	18,846
1956	9,173	298	569	4,453	127	369	10,040	14,989

STANDING COMMITTEE

APPENDIX "D"

CATCH OF LAKE TROUT, 1885-1952 (UNITED STATES)

(Expressed in Thousands of Pounds)

Year	Lake Ontario	Lake Erie	Lake Huron	Lake Michigan	Lake Superior	International Lakes of Minnesota	TOTAL
	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
1885.....	20	107	2,540	6,431	3,488	(1)	(1)
1889.....	6	67	2,181	5,580	3,367	(1)	(1)
1890.....	41	121	1,750	8,364	2,613	(1)	(1)
1892.....	(1)	(1)	2,382	6,437	(1)	(1)	(1)
1893.....	6	203	3,106	8,526	4,342	(1)	(1)
1894.....	(1)	(1)	2,039	8,533	(1)	(1)	(1)
1895.....	(1)	(1)	1,875	7,696	(1)	(1)	(1)
1896.....	(1)	(1)	1,527	9,020	(1)	(1)	(1)
1897.....	3	37	1,292	7,823	3,794	(1)	(1)
1899.....	15	32	1,460	5,285	3,625	(1)	(1)
1903.....	4	15	1,724	8,943	5,592	(1)	(1)
1908.....	14	7	1,382	8,631	2,903	(1)	(1)
1913.....	27	2	2,163	6,305	2,386	90	10,973
1914.....	29	6	1,365	6,837	1,676	162	10,075
1915.....	31	16	1,774	7,704	1,373	93	10,991
1916.....	14	5	1,798	5,999	2,178	75	10,069
1917.....	24	5	2,111	6,904	1,983	112	11,139
1918.....	22	21	2,614	5,810	2,326	94	10,887
1919.....	26	12	2,322	6,584	3,463	91	12,498
1920.....	28	2	1,220	6,984	2,016	123	10,373
1921.....	25	46	1,358	11,749	2,124	80	15,382
1922.....	34	2	1,828	7,540	2,175	88	11,667
1923.....	36	1	1,827	6,177	1,901	73	10,015
1924.....	45	1	1,395	7,224	2,565	86	11,316
1925.....	70	4	1,615	6,894	2,655	130	11,368
1926.....	61	3	1,685	6,530	3,280	(2)	11,559
1927.....	42	9	1,692	5,699	3,051	(2)	10,493
1928.....	43	3	1,598	4,819	2,962	(2)	9,425
1929.....	62	1	1,283	6,394	2,804	(2)	10,544
1930.....	24	5	1,729	5,441	2,489	(2)	9,688
1931.....	14	3	2,049	5,632	2,993	(2)	10,691
1932.....	18	10	2,165	5,470	3,067	1	10,731
1933.....	12	4	1,970	5,212	2,493	(2)	9,691
1934.....	14	(2)	1,576	4,957	3,374	.....	9,921
1935.....	7	(2)	1,743	4,873	3,476	.....	10,099
1936.....	8	2	1,400	4,763	3,233	.....	9,406
1937.....	13	3	1,340	4,988	3,085	.....	9,429
1938.....	17	(2)	1,270	4,906	3,167	.....	9,360
1939.....	16	.....	13,072	5,660	2,744	.....	9,792
1940.....	14	(2)	940	6,266	2,677	(2)	9,897
1941.....	3	.....	893	6,788	2,854	.....	10,538
1942.....	1	2	728	6,484	2,959	(2)	10,174
1943.....	3	(2)	459	6,860	3,053	.....	10,375
1944.....	4	(2)	363	6,498	3,740	(2)	10,605
1945.....	1	.....	173	5,437	3,369	.....	8,980
1946.....	1	.....	38	3,974	3,444	.....	7,457
1947.....	1	.....	12	2,425	2,964	(2)	5,402
1948.....	(2)	(2)	4	1,197	2,954	.....	4,155
1949.....	(2)	(2)	1	342	2,966	.....	3,309
1950.....	.....	.....	(2)	54	3,202	.....	3,256
1951.....	2	.....	(2)	11	2,915	.....	2,928
1952.....	2	.....	(2)	3	2,838	.....	2,843
1953.....	3	.....	.....	(2)	2,413	.....	2,416
1954.....	1	.....	.....	(2)	2,256	.....	2,257
1955.....	(2)	.....	(2)	(2)	2,101	.....	2,101
1956.....	(2)	.....	.....	.....	1,813	.....	1,813

(1) Data not available.

(2) Less than 500 pounds.

NOTE.—Data on the International Lakes of Minnesota include only the catch from Lake of the Woods prior to 1926. The data in this table were taken from the Report of the International Board of Inquiry for the Great Lakes Fisheries and from the annual statistical publications of the Fish and Wildlife Service. In some years, small quantities of related species may have been included in the data.

GREAT LAKES COMMERCIAL FISHERY STATISTICS, BY LAKES,
(Quantity shown in thousands of pounds.)

Year	LAKE ONTARIO						LAKE ERIE					
	U.S.A.		CANADA		TOTAL		U.S.A.		CANADA		TOTAL	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1930.....	682	65	4,021	265	4,703	330	29,540	1,655	12,680	710	42,220	2,365
1931.....	442	37	2,869	205	3,311	242	34,772	1,699	13,807	771	48,579	2,470
1932.....	521	37	2,232	162	2,753	199	33,670	1,439	12,733	703	46,403	2,142
1933.....	527	40	2,551	186	3,078	226	26,187	1,068	10,231	554	36,418	1,622
1934.....	717	55	2,231	163	2,948	218	32,809	1,433	11,500	632	44,309	2,065
1935.....	770	54	2,723	199	3,493	253	30,356	1,644	14,429	794	44,785	2,438
1936.....	601	46	3,126	212	3,727	258	36,777	2,154	11,953	706	48,730	2,860
1937.....	618	52	3,330	222	3,948	274	26,933	1,436	14,664	826	41,597	2,262
1938.....	690	54	3,068	212	3,758	266	27,619	1,981	14,501	797	42,120	2,778
1939.....	1,456	108	3,495	232	4,951	340	28,663	2,216	14,263	868	42,926	3,084
1940.....	1,359	92	3,022	187	4,381	279	22,944	1,772	9,767	690	32,711	2,462
1941.....	597	59	3,126	193	3,723	252	22,063	1,883	8,950	657	31,013	2,540
1942.....	325	39	2,488	156	2,813	195	24,131	2,741	10,037	660	34,168	3,401
1943.....	395	60	2,281	358	2,676	418	27,115	4,134	14,483	2,132	41,598	6,266
1944.....	400	68	2,637	425	3,037	493	28,837	3,320	15,255	1,891	44,092	5,211
1945.....	492	74	2,338	385	2,830	459	28,631	4,267	18,949	3,698	47,580	7,965
1946.....	384	68	2,059	317	2,443	385	29,121	4,489	18,925	3,088	48,046	7,577
1947.....	464	81	2,002	312	2,466	393	19,818	3,813	12,334	2,675	32,152	6,488
1948.....	386	65	2,045	290	2,431	355	26,502	4,102	14,926	3,024	41,428	7,126
1949.....	351	53	2,006	258	2,357	311	34,249	4,618	19,093	2,943	53,342	7,561
1950.....	189	44	2,219	309	2,408	353	23,982	4,572	16,866	3,149	40,848	7,721
1951.....	498	107	2,410	424	2,908	531	20,921	4,448	13,114	2,892	34,065	7,340
1952.....	668	173	2,281	393	2,949	566	25,351	4,357	17,417	3,249	42,768	7,606
1953.....	196	48	2,060	284	2,256	332	27,347	3,765	23,389	3,089	50,736	6,854
1954.....	311	60	1,915	268	2,226	328	28,340	3,895	28,914	3,406	57,524	7,301
1955.....	233	40	1,944	313	2,177	353	26,796	3,954	30,284	3,841	57,080	7,795
1956.....	180	31	2,638	429	2,808	460	30,744	4,227	44,683	5,434	75,427	9,661

APPENDIX E

QUANTITIES AND VALUES—U.S.A., CANADA AND TOTALS, 1930-1953

(Value shown in thousands of dollars.)

LAKE HURON						LAKE MICHIGAN		LAKE SUPERIOR					
U.S.A.		CANADA		TOTAL		U.S.A.		U.S.A.		CANADA		TOTAL	
Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
16,377	1,320	6,893	625	23,270	1,945	30,973	2,159	14,694	695	4,761	356	19,455	1,051
17,727	1,510	7,247	656	24,974	2,166	25,059	1,991	11,281	628	3,169	260	14,450	883
15,848	1,143	7,492	686	23,340	1,829	20,692	1,236	10,173	379	2,488	212	12,661	591
13,351	955	7,813	739	21,164	1,694	21,682	1,412	10,653	478	3,108	241	13,761	719
14,512	955	7,550	733	22,062	1,688	28,444	1,837	17,533	723	3,988	297	21,521	1,020
13,676	1,224	8,402	824	22,078	2,048	25,089	1,943	17,874	941	3,578	297	21,452	1,238
12,790	1,000	7,835	766	20,625	1,766	25,783	2,131	16,008	928	4,900	364	20,908	1,292
11,895	951	7,675	742	19,570	1,693	26,398	2,563	16,011	919	4,509	350	20,520	1,269
12,039	760	7,303	710	19,342	1,470	24,379	2,294	14,856	875	4,057	327	18,913	1,202
13,353	866	6,456	619	19,809	1,485	23,027	2,570	16,783	922	3,307	269	20,090	1,191
9,099	680	5,662	533	14,761	1,213	22,814	2,050	20,672	904	3,319	277	23,991	1,181
8,727	681	5,423	516	14,510	1,197	22,918	2,374	22,111	1,310	3,436	274	25,547	1,584
8,465	1,011	4,779	435	13,244	1,446	21,404	3,204	19,228	1,498	3,363	272	22,591	1,770
8,610	1,075	4,419	906	13,029	1,981	22,174	4,598	18,372	2,215	3,347	511	21,719	2,726
6,432	832	3,492	709	9,924	1,541	19,252	4,342	19,245	2,246	3,761	530	23,006	2,776
7,475	1,129	3,029	673	10,504	1,802	22,090	5,571	18,725	2,574	3,812	696	22,537	3,270
7,147	842	2,535	534	9,682	1,366	22,392	3,907	17,848	2,219	3,589	639	21,437	2,858
8,034	1,153	2,040	432	10,074	1,585	24,958	3,876	14,987	1,674	2,830	503	17,817	2,177
8,836	1,362	2,798	700	11,634	2,062	27,023	4,596	19,221	2,347	3,371	675	22,592	3,022
5,581	595	3,372	822	8,953	1,417	25,573	3,823	17,730	2,190	3,188	561	20,918	2,751
5,073	411	4,762	1,171	9,835	1,582	27,077	3,661	12,584	1,977	2,655	626	15,239	2,603
5,521	553	5,742	1,879	11,263	2,432	27,648	3,461	14,035	1,921	2,851	641	16,886	2,562
6,118	716	7,527	1,872	13,645	2,588	32,061	4,065	15,465	1,998	3,127	661	18,592	2,659
5,498	590	8,729	2,081	14,227	2,671	28,831	3,227	13,650	1,798	2,771	590	16,421	2,388
5,421	567	6,147	1,822	11,568	2,389	30,291	3,195	15,395	2,118	2,891	565	18,276	2,683
4,553	484	3,803	1,232	8,356	1,716	30,036	3,221	13,581	1,886	2,539	523	16,120	2,409
3,635	384	2,756	713	6,391	1,097	30,798	3,463	13,591	1,940	2,144	389	15,735	2,329

HOUSE OF COMMONS

First Session—Twenty-fourth Parliament

1958

STANDING COMMITTEE

ON

MARINE AND FISHERIES

Chairman: ROLAND L. ENGLISH, Esq.

MINUTES OF PROCEEDINGS AND EVIDENCE

No. 7

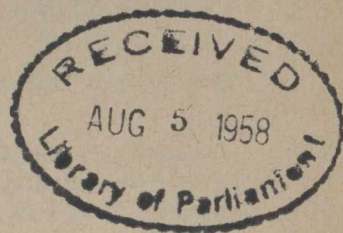
Estimates (1958-59)—Department of Fisheries

FRIDAY, JULY 25, 1958

WITNESSES:

The Honourable J. Angus MacLean, Minister of Fisheries; and Messrs.
G. R. Clark, Deputy Minister and I. S. McArthur, Chairman,
Fisheries Prices Support Board.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1958





STANDING COMMITTEE
ON
MARINE AND FISHERIES

Chairman: Roland L. English Esq.

Vice-Chairman: A. De B. McPhillips

Messrs.

Anderson,
Batten,
Bourget,
Browne (*Vancouver-
Kingsway*),
Carter,
Crouse,
Danforth,
Drysdale,
Gillet,
Granger,
Howard,

Keays,
Legere,
Macdonald (*Kings*),
MacLellan,
Matthews,
McGrath,
McQuillan,
McWilliam,
Michaud,
Morris,
Murphy,

Noble,
O'Leary,
Phillips,
Pickersgill,
Richard (*Kamouraska*),
Robichaud,
Speakman,
Stefanson,
Stewart,
Tucker,
Webster—35.

A. Plouffe,
Clerk of the Committee.

MINUTES OF PROCEEDINGS

FRIDAY, July 25, 1958.

(8)

The Standing Committee on Marine and Fisheries met this day at 9.30 o'clock. The Chairman, Mr. Roland L. English, presided.

Members present: Messrs. Anderson, Batten, Browne (*Vancouver-Kingsway*), Carter, Crouse, Drysdale, English, Legere, Matthews, McGrath, McPhillips, McQuillan, Pickersgill, Robichaud, Speakman, Stefanson, Tucker and Webster. (18)

In attendance: The Honourable Angus L. MacLean, Minister of Fisheries, and Mr. G. R. Clark, Deputy Minister; Mr. J. J. Lamb, Director, Administrative Service; Messrs. I. S. McArthur, Chairman, Fisheries Prices Support Board; O. C. Young, Vice-Chairman, Fisheries Prices Support Board; W. C. MacKenzie, Director, Economics Service; T. Turner, Director, Information and Educational Service; E. B. Young, Assistant Director, Conservation and Development Service; J. A. Albert and A. W. Abbott, Administrative Service; R. Hart and W. E. Snaith, Industrial Development Service; Dr. W. Carr, Economics Service; M. Ronayne, Information and Educational Service; and J. G. Carton, Director, Legal Service; Dr. W. M. Sprules, Special Assistant to the Deputy Minister.

The Committee continued, and concluded its examination of the Estimates of the Department of Fisheries.

The Chairman called Items 146 to 150—Extension of educational work, fisheries, prices, support board, assistance to purchasers of salt fish, etc. etc. and Items 562, 563, and 564 of the Supplementary Estimates.

On the question of privilege Mr. Browne (*Vancouver-Kingsway*), made a correction in the evidence of July 18th, Issue No. 4. (*See this day's evidence.*)

The Deputy Minister gave answers to questions which were unavailable at the last meeting and was further examined.

The Minister was questioned. He was assisted by Messrs. McArthur, Lamb and Dr. Sprules.

Items 146, 147 and 148 of the Main Estimates were adopted, as was Item 563 of the Supplementary Estimates.

Mr. Clark answered questions put to him by Mr. Crouse on behalf of Mr. Stewart on the above items.

Items 149 and 150 of the Main Estimates and Items 562 and 564 of the Supplementary Estimates were adopted.

Mr. Crouse, on behalf of Mr. Stewart tabled questions in respect of the above Items and Mr. Clark undertook to provide available answers and file them with the Committee. (*See Appendix I in this issue.*)

On motion of Mr. Robichaud, seconded by Mr. Legere.

Ordered, That the Chairman report the Estimates back to the House as a Second Report.

The Chairman expressed the Committee's appreciation to the Minister, his Deputy and the officials of the Department for their continuous attendance.

At 10.55 a.m. the Committee adjourned to the call of the Chair.

Antonio Plouffe,
Clerk of the Committee.

REPORT TO THE HOUSE

The Standing Committee on Marine and Fisheries begs leave to present its

SECOND REPORT

Pursuant to an Order of Reference of the House dated Wednesday, July 2, 1958, your Committee has considered items 130 to 153, inclusive, of the Main Estimates for 1958-59 and items 555 to 565 inclusive of the Supplementary Estimates for the fiscal year ending March 31, 1959, relating to the Department of Fisheries.

Your Committee recommends their approval.

A copy of the Minutes of Proceedings and Evidence relating thereto is appended.

Respectfully submitted,

ROLAND L. ENGLISH,
Chairman.

EVIDENCE

FRIDAY, July 25, 1958.

The CHAIRMAN: Good morning gentlemen. I see that we now have a quorum so we shall begin with a study of the third group comprising items 146, 147, 148, 149 and 150 along with the items 562, 563 and 564 of the supplementary estimates.

First in a question of privilege, I think Mr. Browne has something to say.

Mr. BROWNE (*Vancouver-Kingsway*): I would like to have a correction made to a statement attributed to me on page 17 of the first printed report of the minutes of proceedings of this committee.

The entire report seems to be wrong both in the wording and in the meaning. Further, I might just briefly say that apparently the report conveys that I think an effort has not been made to see whether we could have both fish and power on the Fraser river. What I wanted to convey is the opposite of that, that I was aware of the research that was being done in Canada and also of the research that was being carried on in the United States on the Columbia river, and that this whole principle considered in that view might help us a great deal, the research in that respect, and was continuing to do so.

The CHAIRMAN: Now, I will ask Mr. Clark to answer a few questions asked by members at the last meeting.

Mr. G. R. CLARK (*Deputy Minister, Department of Fisheries*): Mr. Chairman, yesterday during the discussion on the question of lamprey control in the Great Lakes Mr. Murphy asked a question in regard to the kill of lamprey at the electrical barriers. I have these figures now if I may be permitted to quote them.

In 1955 in Lake Michigan which, of course, was a United States operation, 46,268; in 1956 in the same lake, 54,932; in 1957, 64,455.

In Lake Superior in 1955 on the United States side, 10,639; on the Canadian side 2,131; in 1956 on the United States side of Lake Superior 24,084; on the Canadian side 2,311; in 1957, 57,820, on the United States side, and on the Canadian side 3,375.

I think the other question that was asked yesterday, Mr. Chairman, was by Mr. Carter who asked for some figures in regard to the cod and haddock landings from George's bank in connection with the international commission for the northwest Atlantic fisheries.

These figures are in one thousand metric tons of round fish.

Cod in 1953 a very small quantity for Canada, 11,000 metric tons by the United States.

In 1954, no figures for Canada, 12,000 metric tons by the United States.

In 1955, no figures for Canada, 12,000 metric tons for the United States.

In 1956, I am sorry we have no figures readily available.

In 1957, a small quantity taken by Canada and 13,000 metric tons by the United States.

In haddock for the same years, none for Canada, 45,000 metric tons by the United States; 1954 none by Canada, 54,000 metric tons by the United States; 1955 none by Canada and 50,000 metric tons by the United States; in 1956 none by Canada and 58,000 metric tons by the United States; in 1957 none by Canada and 55,000 metric tons by the United States.

Mr. CARTER: What was that for 1953?

Mr. CLARK: 11,000 metric tons.

Mr. CARTER: What for the United States?

Mr. CLARK: That was the United States.

Mr. CARTER: Not for Canada?

Mr. CLARK: No sir. There was no fishing effort by Canada on George's bank.

Mr. LEGERE: Can you explain the expression "metric tons"?

Mr. CLARK: It is the long ton. This is the way these statistics are kept.

The other question, I think Mr. Chairman, was the location of the bait depots in Newfoundland which I shall read: Port aux Basques, Rose Blanche, Recontre West, Hermitage, Recontre East, Grand Bank, Lamaline, Oderin, Merasheen, Long Harbour, St. Mary's, Ferryland, Bonavista, Grenspond, Joe Batt's Arm, Change Islands, Twillingate, Nippers Harbour, Conche, Quirpon, Port aux Choix, Old Perlican, Burin.

In connection with Burin, this plant is owned by the United Cold Storage Company and is leased by the department and operated as a depot.

Thank you, Mr. Chairman.

Mr. CROUSE: Mr. Chairman, on behalf of Mr. Stewart who was called away today, he left a list of questions under items 146, 148, 149 and 150, which he would like to ask in the committee. Is it in order to list them now or individually?

The CHAIRMAN: Individually, item by item.

Mr. CROUSE: Well, on item number—

The CHAIRMAN: Shall we proceed now with item 146?

Mr. CARTER: Before we proceed could I ask Mr. Clark if Canada and the United States were the only countries fishing those banks or are those the only countries for which statistics are available?

Mr. CLARK: In those years Canada and the United States were the only countries fishing George's bank.

The CHAIRMAN: Are there any questions on item 146?

Mr. CROUSE: Under item 146 on behalf of Mr. Stewart of Charlotte, he would like the amount spent under this item in Charlotte county, New Brunswick and in what way or through what agency was this amount expended?

Hon. J. A. MACLEAN (*Minister of Fisheries*): Perhaps I may say a word here in explanation of this item and then Mr. Clark can add to what I have to say. On the basis of the recommendation by a royal commission on fisheries in 1927 and 1928 the extension department of St. Francis Xavier university at Antigonish in 1936 and 1937 was requested to undertake an education program of fishermen on cooperative methods and practices. This is the origin and basis of this vote. The extension program of education to fishermen has been continued since that time and the scheme has been extended to two other institutions besides St. Francis Xavier, the other two being the University of British Columbia and the social-economic service at Ste Anne de la Pocatiere in Quebec.

Mr. CARTER: Has any of this money been spent on Newfoundland, Mr. Chairman.

Mr. MACLEAN (*Queens*): No, I do not believe so, not directly.

Mr. ROBICHAUD: Mr. Chairman, in this connection I think that members of this committee would express their appreciation especially to those at St. Francis Xavier in Antigonish for the work which has been done in this field in the adult education and organization of the cooperative movement in

the Atlantic provinces. I say Atlantic provinces rather than the maritime provinces because it has been set up for the Atlantic provinces and not Newfoundland.

I feel that further consideration should be given to increasing these grants because we have in the maritime provinces other universities which are mainly and directly interested in the cooperative movement and in adult education.

In this case I have in mind the Sacred Heart University in Bathurst and also St. Annes University in Churchpoint, and I feel further consideration should be given to the extension of these grants which have done so much for the organization of the fishermen and adult education.

Mr. MACLEAN (*Queens*): Mr. Chairman, I appreciate the remarks of Mr. Robichaud and I want to say that the whole question of the adult education for fishermen is under extensive consideration by the department in cooperation with the provinces concerned, not only with regard to this type of education but also in regard to consideration of technical education as well.

This might be something similar to trade education that is given in other fields of endeavour—vocational training, in other words.

As far as Newfoundland is concerned I believe a few years ago that Dr. Coady from St. Francis Xavier did go over to Newfoundland but as members from Newfoundland know the provincial government there have a department which includes the question of the setting up of cooperatives and that is the reason there is no work being done directly by St. Francis Xavier in Newfoundland.

Mr. BATTEN: Mr. Chairman, what do we mean by "adult education" here? Are we talking generally or confining it to any particular area as far as the study is concerned? Are you talking about general adult education?

Mr. MACLEAN (*Queens*): For fishermen, yes, general in the sense that it is not . . .

Mr. BATTEN: . . .restricted to any field?

Mr. MACLEAN (*Queens*): Well, this particular grant is for the study of cooperatives and the encouragement of cooperative marketing by fishermen to encourage them to branch into this field.

Mr. BATTEN: Fine, thank you.

Mr. CARTER: Mr. Chairman, could that money be made available to cooperatives who spend their own money? We have marketing processors and producers in Newfoundland. Would they be eligible for that grant to extend their own educational program?

Mr. CLARK: The purpose of this vote is not related to the question being asked by Mr. Carter. This money is not available directly to cooperatives; it is available to the universities that have extension departments and who have a program of extension in the sense of the introduction of cooperatives amongst fishermen, but it is not made available directly to cooperatives as such. It is for the purpose of education in the field, rather than direct assistance to any individual cooperative.

Mr. CARTER: What I cannot yet get in my mind is what do the universities do with the money when they get it—do they pay field workers to go out?

Mr. CLARK: That is correct, they have a program in their extension departments and their own staffs of field workers go out among the fishermen on this education program and they use this money for that purpose.

Mr. LEGERE: I have a question further to this cooperative movement. This is through practical experience established during the war, probably it is still prevalent nowadays. It is a fact that I think should be investigated but those who do belong to these cooperatives before they can sell their product it costs them five cents to do so and I know during the war they could sell

to a local dealer and make more money than if they sold through their cooperative only.

They pay one cent per pound for unloading, three cents to the fellow who weighs the catch, they pay a quarter of a cent a pound to the man who keeps the books and one and three quarters cent for incidental expenses which comes to five cents a pound on fish.

Mr. CLARK: Of course that does not come under the department and has really nothing to do with this particular vote. I might explain when a cooperative is established it is under provincial legislation and it depends on the articles of the association as to the actual education itself so that it really does not, Mr. Chairman, come within our field in so far as that problem is concerned.

Mr. CROUSE: Mr. Chairman, I have been trying to grasp the basis of this question of Mr. Legere and I think what he was questioning was the reasoning behind continuing the extension of this type of help at a cost of \$90,000 to the taxpayer when the service provided not as much encouragement to productivity as that provided by individual initiative in private enterprise; in other words, why should we continue spending \$90,000 to set up a service that apparently is more expensive than that provided by the private operators in this field.

Mr. ROBICHAUD: Mr. Chairman, I cannot agree with all that statement. The maritime provinces, have done marvellous work for the fishermen and the same would apply to the Gaspé coast in Quebec and no matter what is being paid by the fishermen for the operation of their cooperatives the same is being paid for any business.

No business can operate unless it can see a profit and the cooperative cannot expect to operate these cooperatives without paying them for the services they render. The cooperatives in the maritime provinces have been the salvation of our fishermen and I think the associations deserve credit for it.

Mr. LEGERE: The object of the cooperative movement was to eliminate the middleman. This was through practical experience in New Brunswick that the middle man came and sold the lobsters to the different companies. This is something I know from practical experience.

Mr. CARTER: May I ask, Mr. Chairman, how many universities benefit from this grant?

Mr. MACLEAN (*Queens*): Three.

Mr. CARTER: Could we have a breakdown?

Mr. MACLEAN (*Queens*): It is in the details.

Mr. CLARK: Mr. Chairman, I do not think we have yet answered the question that was asked by Mr. Crouse on behalf of Mr. Stewart. I think the question was how much of the money granted to St. Francis Xavier University was spent in New Brunswick.

Mr. CROUSE: In Charlotte county.

Mr. CLARK: I am sorry, sir, we do not have a breakdown of that at all.

Mr. CROUSE: The second question, Mr. Chairman, was in what way or through what agencies was this amount expended?

Mr. CLARK: St. Francis Xavier University.

The CHAIRMAN: Are there any other questions on item 146?

Item agreed to.

Item 147.

Mr. ROBICHAUD: Mr. Chairman, this is a very important item as far as the future of the fishing industry is concerned although the vote is only \$66,000.

Our fishermen are now established in the last two or three years in a position where they need if not a price support; at least a price guarantee for their product. Now, one of the main fisheries on the Atlantic coast is the cod fishery. It is the oldest industry in this country and the majority of our fishermen on the Atlantic coast depend on code fishing for a living. This applies to a great section of Nova Scotia, it applies to the entire Magdalene Islands, to the Gaspé coast, Prince Edward Island, Newfoundland and the east coast of New Brunswick, more so in my constituency of Gloucester.

I think most of the members of this committee are aware that there is presently a movement in the United States to extend assistance throughout the entire New England states to their fishery industry and under date of June 10th, through a review known as "Washington through Canadian eyes" there was a report which had as its title "Canadian fishermen watch out" and it reads:

Serious consideration is being given in Congress to promoting aid to the American fishing industry which could spell plenty of trouble for us.

This was the headline of this article.

Now, it is a \$43 million program which is presently before Congress and it has been presented before Congress by William Bate, representative of the state of Massachusetts, calling for a \$43 million assistance program for the fishing industry and during the committee stage of this debate, strong words have been heard about Canadian fishermen taking markets away from New England fishermen and among the proposals put up by representative Bate, it included payment to fishermen of one cent a pound for ground fish which will be an additional grant to the price they will receive from the American fish buyers paying to the processing plants one third a cent a pound for fish they handle, and payment for boat and equipment improvements, a ten year loan at three per cent interest.

Now, the application of such a program by the American government could endanger our fishing industry of the Atlantic coast and we know that the basis of our industry—and perhaps it should not be quite as important in Nova Scotia as it is for the other Atlantic provinces—is the cod fishery, and when I say not as important to Nova Scotia, I mean because they have a much larger variety of deep sea fishing. They catch a larger quantity of haddock and flounder and more or less their operations are distributed over a ten or twelve month period whereas in the other provinces more so in Quebec and Prince Edward Island and New Brunswick our cod fishing industry is limited to a period of five or six months.

Now, I would ask the department and the minister to give their serious consideration to the possibility of having minimum price guarantee for the cod fishermen and here I would go further and suggest that under present conditions taking into consideration the cost of fishing gear, the operating expenses of the fishermen, the additional cost of fuel, the increased cost of fishing boats, fishing vessels, that our cod fishermen cannot carry on effectively unless they have a minimum guarantee of three cents a pound and I feel that very serious consideration should be given by the department to establishing a system which would guarantee our fishermen a price of three cents a pound for fresh cod based on the price paid for heads on and gutted. I leave this request with the minister but I am convinced that it will be given serious consideration.

Mr. MACLEAN (*Queens*): Mr. Chairman, I appreciate the remarks made by Mr. Robichaud. The fishing industry to a greater extent than almost any other industry in Canada with some exceptions, of course, is very dependent on export markets. Something like 65 to 70 per cent of our total fish production is exported and about 65 per cent of the total export is to be United States,

so, of course, that market is of very special concern and interest to us. We are doing everything possible to maintain our fair share of that market. I think we have succeeded, at least up until the present time. I have no special fears that we will not be able to continue to do that.

As far as domestic legislation is concerned in the United States, of course we have no control over that. I think Mr. Robichaud introduced the question to point out the effect that various subsidies and programs of such a nature in foreign countries may have on us and that it makes our position in respect of competition that much more difficult. This is certainly a very complex problem.

However, I am happy to say that generally speaking at the present moment the fish markets are stronger than they have been for some time and there is an upward trend in prices.

I am now speaking in generalities. Mr. McArthur, who is chairman of the Fisheries Prices Support Board and a member of the department is here. He would be in a position to give more detailed information to the committee at the present time on price trends over the last period, if the committee would wish him to do so.

Mr. PICKERSGILL: Mr. Chairman, before Mr. McArthur does that I have in front of me a report with which the minister is no doubt familiar. It is a report in the Toronto Daily Star of February 28 reporting a speech, which I think the minister heard, which was made at Charlottetown by the Prime Minister. The beginning of the report reads as follows:

Prime Minister Diefenbaker indicated here last night that the government will place a floor price under fish.

I wonder if the minister is yet in a position to tell us whether or not that undertaking would be implemented by the Fisheries Prices Support Board this year, and if so when and what the support would be.

Mr. MACLEAN (*Queens*): I think there are two phases to this question; one is that the legislation itself is under study having in view the possibilities of improvements. But I do not think that is the direct question which is asked. The question of price support for fish, especially certain types of fish, has been receiving very careful study over the last number of months. There was some doubt, in the minds of many people, as to what the market would be in this marketing year which is coming up. The Fisheries Prices Support Board was called into a meeting here which was held in Ottawa in the last couple of days. I have not yet had a report from them; when I do I hope to be able to make a statement in the house.

There will be a further meeting of the board in the early days of September and on that occasion it will meet in Halifax and in St. John's, Newfoundland. They will be on the site, so to speak, where there seems to be the greatest doubt as to the possibility of a strong market as far as codfish, in particular, is concerned.

Mr. CARTER: Is the minister speaking of fresh codfish or fresh and salted fish as a whole?

Mr. MACLEAN (*Queens*): Their responsibilities include both.

I might say, as I think all members of the committee know, especially as far as ground fisheries are concerned—and this applies with the greatest force to the salt cod industry—the fishermen have been caught in a price cost squeeze over the last number of years; prices have remained practically constant while costs have gone up continuously.

However, there are some other factors which should be included when considering the fisherman's position. His position is not as bad as it would be if those were the only factors operating. I am not saying his problems are

solved by any means; but there are factors which help to some extent to relieve the situation. One is salt assistance in the salt cod industry. There is an item on that and we will consider it shortly. I do not want to take up any more time on it at present than to mention it.

Another very important factor as far as the economy of the fisherman is concerned is that he is now qualified for unemployment insurance. However there is still a very great problem in trying to assure that the income of the fisherman is being kept at a level which can provide at least a reasonable standard of living. This is a very acute problem, especially where the fisheries are carried out in the old traditional way which is the only practical way in many areas, especially in the out-ports of Newfoundland where there are not ready markets for the processing of fish into fillets or where it would not be practical to modernize a fleet of draggers for every little cove where there are out-ports and where there are people, who are going to live and going to earn a living in the old traditional inshore fishing.

I do not think there is anything more I need say on this at the moment. Mr. Clark or Mr. McArthur can give you more detail on the situation as it appears at the present time.

Mr. PICKERSGILL: Returning to the remarks made by Mr. Robichaud, has the attention of the minister been drawn to an article in yesterday's *Financial Post* captioned "Now Our Fisheries are Threatened"?

Mr. MACLEAN (*Queens*): No. I have not seen that yet.

Mr. PICKERSGILL: There is one observation I would like to make. I do not think this is the place to have the political debate which I think will take place in the house on this item in relation to the quotation I have just read, and as far as I am concerned I am quite prepared, having given the minister notice, to debate this matter further in the house. I would not want the minister to feel because we let the item pass here in committee, with which I have no objection, that that indicates that we are satisfied about this particular question.

Mr. CROUSE: On this whole broad discussion of floor prices, I would be the last one to speak against it because I am very interested in the fisheries; but, for the benefit of the members of the committee who are not familiar with the practices carried out by the fish buyers, I have in front of me some recent, and not so recent, trip sheets which show the methods used by buyers in other sections of the country in respect of grading. There apparently is a wide range in the grading by certain fish buyers when buying fish in respect of the classes called No. 1 and those that are called scrod and they have many ways of lowering the price to the fishermen.

In speaking of the range in prices, they have not varied in the last ten years despite the fact that the fisheries department have carried on extensive experiments; they have improved the method of marketing fish and have assisted in establishing freezing plants. But none of these improvements have found their way back to the basic producer in the form of an increased price—not even by one cent per pound.

For example, in 1947, for large cod laid down at Nova Scotia the fishermen were paid $3\frac{1}{2}$ cents per pound, and for haddock at that time they received for the large haddock $4\frac{1}{2}$ cents a pound. To come up to 1957, ten years later, large cod had decreased from $3\frac{1}{2}$ cents per pound to $3\frac{1}{4}$ cents per pound. In other words, although the cost of shipping and every item which the fishermen must use in conjunction with the fishing has practically doubled—and I think that is agreed, from 1947 to 1957—the price of fresh cod went from $3\frac{1}{2}$ cents to $3\frac{1}{4}$ cents and the best haddock from $4\frac{1}{2}$ cents to a point where now, for 520,000 pounds of large haddock the dealer pays 5 cents for his first 50 thousand pounds and only 4 cents for the balance. Those are the methods the fish buyers use to

lower the price. There is no difference in the shipment when you compare the first 50 thousand pounds.

You may say, well it is not much of a variance; but I submit that if we had had 150 thousand pounds of haddock we would have received 5 cents for the first 50 thousand pounds and 4 cents for the balance of 100 thousand pounds.

Then we come to the difference between the price paid in Nova Scotia and the price paid in Newfoundland. On May 26, 1958, my own dragger laid down a trip of fish at Job Brothers in St. John's, Newfoundland. They had to go in there in distress because of high winds. They received for their codfish $2\frac{1}{2}$ cents per pound in Newfoundland. The haddock were apparently all scrod grade, although my captain informs me otherwise, and we received $3\frac{1}{2}$ cents a pound and under. That is a method they use to secure fish at the lower price. They paid $3\frac{1}{2}$ cents a pound for haddock, 3 cents a pound for flounder and hake at \$8 a ton. That was on the 26th. On the 17th they landed at Lunenburg, Nova Scotia, and received $3\frac{3}{4}$ cents for cod fish which is an increase of $1\frac{1}{2}$ cents within a period of 15 days. I give you these figures to show the wide variance between prices paid in Nova Scotia and Newfoundland.

Actually, the Newfoundland dealers could pay more for the fish because they are blessed with water freight between Newfoundland and Boston and New York where they are selling their product. All of us know that water freight is the lowest cost freight. Therefore, these prices in Newfoundland should be revised, because in Newfoundland fish dealers can land their product in Boston cheaper than can the dealers at Lunenburg or Halifax.

The dealers at Lunenburg and Halifax must pay the refrigeration service costs to Bar Harbour and down into Boston. Just how any government will cope with this great variation in prices and get the benefits back to the fishermen will be an interesting thing to me as one who has a large interest in the basic production of fish.

Mr. MACLEAN (*Queens*): This whole question is a very interesting and complex one, and one that has bedevilled governments and business for many years. Frankly, I do not know what the answer is, but on the face of it, it does not seem reasonable that when a consumer buys a meal, say in a restaurant, that the waitress that puts it on the table gets more as a tip than the primary producer who produces the food in the first place. That is often the case, but not always.

Mr. PICKERSGILL: It depends a bit on the customer.

Mr. MACLEAN (*Queens*): That is true. It may depend on the waitress to some extent as well. But this whole question comes within the purview of the investigation that is now being done by the royal commission on price spreads in food products, which includes fish. We are hopeful that they may come up with some recommendations that may be helpful, as far as guidance to the government is concerned, in any feasible action which might be taken.

Mr. CROUSE: In commenting, Mr. Chairman, on the American assistance, which will be of benefit no doubt to the American fishermen, I would like to give you a comparison. I gave you the 1957 price. At the time we were receiving three-and-a-quarter cents for codfish, the Americans on the same day were receiving for their codfish $12\frac{1}{4}$ cents a pound. While we were getting four-and-a-half cents to five cents, top price, for our haddock, the Americans according to this statement, dated November 9, 1957, which is comparative to the figures I quoted from the Canadian trip sheets, were receiving from haddock $12\frac{1}{4}$ cents a pound. The biggest difference seems to be on a fish called—well, in the United States they call it lemon sole. We, in Nova Scotia and Newfoundland apparently cannot get a lemon sole. We can catch flounder which is yellow-tail or plaice, which are all members of the flounder family, and we receive three to three-and-a-quarter cents a pound.

While I have the trip sheets here showing flounder at three cents, or sole at three cents a pound to Nova Scotia fishermen, on that same day American fishermen were receiving for lemon sole 31 cents a pound, which I submit is a terrific difference in price. If you ask fish buyers in Nova Scotia why they can only pay three cents for flounder, they will say that the return is only quarter of the net.

Mr. ROBICHAUD: I think that those figures which have been quoted should be explained further, because we know anyone can get the price of flounder or the price of sole on the American market whether it be New York, Chicago, Boston or elsewhere. We also must take into consideration that when a dragger lands at Cape Cod or Boston, Portland or Gloucester, that a large proportion of their fish, especially the fish which have been landed, and which has been caught in the last 72 hours, is immediately being processed and put aboard trucks and delivered right to the market, which we cannot do from Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island, Gaspé or at any Canadian point. This will also have something to do with the difference in price between Newfoundland and Nova Scotia.

Nova Scotia processors have the benefit of the fresh fish market, especially on account at the year-round operation, and with their proximity to the American market. They can handle fresh fish and process it more quickly than any Newfoundland dealer could and this has something to do with the price. The fish dealer who can dispose of 25, 30 or 50 per cent of his purchase on the fresh fish market is at a better advantage than the other dealer who has to buy fish, process it, pack it, fillet it, freeze it, put it in storage, and finance the whole operation. There is a much larger margin for those fish dealers who are in a position to handle fresh fish.

As far as the price of 30 cents being paid for lemon sole is concerned, that might be a very, very small percentage of the catch of that type or class of sole—whatever we call it—which might be a special flounder type for which they would get that price. Anyone who checks any American review, in newspapers, and sees what price is being paid for fillet of sole, which is a common trade name for plaice or flounder, will see that the average American price paid for that variety or that type of fish is far from being 30 cents a pound.

Mr. CARTER: Far be it for me to rush to the defence of Newfoundland processors because my interest is in the fishermen; but like Mr. Crouse, I too deplore the fact that the benefits that should have accrued from technological advances and subsidies and all the other assistance given by the federal government have never yet found its way down to the fishermen. But, I support what Mr. Robichaud has said concerning the invidious comparison which Mr. Crouse made between prices in Newfoundland and Nova Scotia. I think the committee should know that when Mr. Robichaud referred to fresh fish he was talking of unfrozen fish as compared with frozen fish. The unfrozen fish, of course, does not have the processing cost attached to it and it fetches a much higher price in the domestic market, which would allow a much larger margin of profit to the fish processor. This would in turn enable him to pay a little higher price for the fish he freezes.

I was wondering, Mr. Chairman, if there are any figures available, or a breakdown by provinces or by companies, to show us what proportion of the catch is sold unfrozen in Nova Scotia. I know in Newfoundland it is a very small amount. The only fish sold unfrozen in Newfoundland would amount to only a couple of million pounds, which is produced in my own riding. No frozen fish is sold down in the Avalon Peninsular or in the eastern part of Newfoundland at all. There must be some figures somewhere. I am interested in getting the proportion of the catch that is processed and sold as frozen

fillets and what proportion is sold without being processed and frozen—sold, as we call it, as fresh unfrozen fish.

Mr. MACLEAN (*Queens*): I do not think, Mr. Chairman, that we have those figures here but they could be made available, I think.

Mr. CLARK: I think the figures could be obtained. The Dominion Bureau of Statistics does keep figures along these lines showing the frozen and unfrozen fish, which in our language is referred to as "fresh and frozen". The only thing I would point out, Mr. Chairman, is that even with the fresh fish, or the unfrozen fish, most of it is filleted anyway; so there are some processing costs. It is very rarely that a whole fish nowadays is sent to market. So that there are processing costs even when the fish is not frozen.

Mr. ROBICHAUD: Mr. Chairman, I agree with Mr. Clark in a lot of cases, but not all cases. When a fresh cod is landed and is being shipped fresh, it is filleted and packed in large containers. You do not have individual packages. There is quite a difference in cost, when it is being shipped in ice directly to Montreal, Toronto, or the American market, which makes quite a difference. Far be it from my mind to come to the defence of the New Brunswick and Newfoundland dealers, because, at the time Mr. Crouse mentioned that they get three-and-a-quarter cents a pound for cod in Lunenburg, our New Brunswick fishermen were getting only two-and-three-quarter cents for the same quality of fish. The difference there is too great. There is something wrong somewhere because there should not be a cent per pound difference between what is being paid in Nova Scotia and Newfoundland. There is definitely a difference, but there should not be that much difference.

Mr. BROWNE (*Vancouver-Kingsway*): I might suggest that this might be a good place where a couple of union organizers and collective bargaining might be of some value in overcoming this variation in price, instead of the individual dealing for himself. It seems to me that the principles of trade unionism could be very well utilized in this particular case.

Mr. CARTER: In my personal opinion I do not think the reason for the disparity in price to the fishermen is all to be found on that end of the industry. I think that when it comes to marketing you find that there are monopolies operating in the fresh fish market just as there are in other industry. I would like to know what is being done, if anything, to investigate that.

Mr. MACLEAN (*Queens*): Well, the royal commission on price spreads is investigating that very problem. Its purpose is to determine why more of the consumer's dollar is not getting through to the primary producer.

Mr. CARTER: How soon do we expect to hear from this commission?

Mr. MACLEAN (*Queens*): I cannot say at the moment.

Mr. ROBICHAUD: On the other hand we should also admit that the difference between the price paid to the fishermen and the price the consumer has to pay for fish is not excessively high. When you go to any store in Ottawa and buy frozen cod fillets in a nice, one-pound package, you pay 28 or 29 cents a pound; flounder is in the vicinity of 41 or 42 cents a pound, and haddock fillets, for instance, you may have to pay from 36 to 38 cents a pound. And, when that is packaged it only represents about 35 per cent of the fish landed—the fresh fish landed. The margin may not be as high. But, what I cannot understand is, is it the fault of our fish dealers or of someone else that we only get 29 cents a pound for fillet of cod. Now if we had to pay say 31 cents instead of 29 cents, the difference could go to the fishermen, which would solve the problem of the fish industry.

Mr. LEGERE: Further to this spread of price between Newfoundland and Nova Scotia, you have been speaking mostly about fresh fish. But I cannot

seem to put two and two together and make four on why they cannot pay the same price as they do in Nova Scotia for that cod.

Mr. CARTER: There is a good explanation; because the people in Nova Scotia have the benefit of a special freight rate from the Nova Scotia market down to the Cuban market which amounts to around \$1.50 or more quintal of fish.

Mr. CROUSE: They have, Mr. Carter, and they have not. Today in Nova Scotia—to leave the fresh fish industry and go to the salt fish industry—these very factors that we are talking about, the low return to the fishermen over the years and the fact that none of the benefits of the research has found its way back to him, have taken away a large number,—as I said before and say again,—of men from the industry. Now this applies to Nova Scotia apparently for you stated it is not true in Newfoundland. I can only speak in this regard regionally. But today in Nova Scotia 75 per cent of the salt codfish that is exported to the British West Indies is first imported or bought from Newfoundland.

The Nova Scotia industry depends for its base product on the green or wet codfish of the Newfoundland producers so I would say the Nova Scotia salted fish industry is living on borrowed time, they are skating on very thin ice today because once Newfoundland decides it is in a position to dry its own wet salt codfish and decides they will not sell to Nova Scotia those exporters will not have a product to ship to the West Indies.

They must, before they ship that product, go to Newfoundland and purchase it and so the cost of bringing in salt cod in its wet state offsets any advantage that they may have in the short freight from Halifax to the British West Indies.

Mr. CARTER: Oh no, Mr. Crouse, you evidently have not a clear picture of the situation.

The CHAIRMAN: Gentlemen—

Mr. CARTER: Might I just say a word.

The CHAIRMAN: One minute please. I do not think it is appropriate to question one another; you should address your questions to the chair.

Mr. CARTER: Well, Mr. Chairman, I am sorry. In reply to what Mr. Crouse has said, for the benefit of the committee, the salted fishing processors in Newfoundland have to collect fish from all around the coast from the fisheries at the Grand Banks continuously all around the coast to Labrador. And it costs as much to bring that to the plant on the Grand Banks as it does to bring it to Nova Scotia, so the cost of bringing fish to the plant in both cases is about the same.

Mr. CROUSE: It may be the same to bring but the Nova Scotia buyer has to purchase a schooner and equip it with a crew and go to Newfoundland and then return with a cargo, all of which adds to these expensive costs a very great deal.

Mr. CARTER: The Newfoundland man has to do that too.

Mr. CROUSE: You mean the Newfoundland fishermen, Mr. Chairman, do not bring their fish to the Newfoundland plants?

Mr. CARTER: Oh no.

Mr. ROBICHAUD: There are too many outposts.

Mr. CARTER: That is what I wanted to clear up.

Mr. CROUSE: That might apply in some areas but I would not think it would apply in all.

Mr. CARTER: Mr. Chairman, in about 90 per cent of the catch, it would apply.

The CHAIRMAN: Shall item 147 carry?

Mr. WEBSTER: Have Job Brothers got a fleet of schooners or do they have to wait for the fleet to come in?

The CHAIRMAN: Shall item 147 carry?

Item agreed to.

Item 148, any questions?

148. To provide, subject to such terms and conditions as the Governor in Council prescribes, for payment of assistance to producers of salted fish on products designated by the Governor in Council, in the amount of 50% of the laid down cost of salt used in their production, including authority to charge administrative costs to the Vote in these Estimates which provides for administrative expenses of the Fisheries Prices Support Act \$600,000.

Mr. CROUSE: Mr. Chairman, on item 148 on behalf of Mr. Stewart he would like to know were any amounts expended under this item in New Brunswick and if so can the amounts be given by counties?

Mr. CLARK: Mr. Chairman, we do not have the figures broken down by counties. I might give the figures on salt assistance for New Brunswick. The latest figure in 1957: there were 41 claims for individual fishermen amounting to \$1,264.86 and claims from processors in New Brunswick were 120 for an amount of \$45,055.68.

Mr. BROWNE (*Vancouver-Kingsway*): Mr. Chairman, do you have the figures there for British Columbia?

Mr. CLARK: It does not apply to British Columbia, Mr. Chairman.

Mr. LEGERE: Mr. Chairman, in this salt assistance program I would like to know why one cannot receive assistance when he ships his salted fish to the United States. Is there some ruling?

Mr. CLARK: Yes, Mr. Chairman, the situation in regard to some of the products particularly the ones that go to the United States is that on the advice of the Department of Trade and Commerce certain products were excluded on the ground that there should be no suggestion that products entering the United States market are being subsidized and therefore open to countervailing duties or other retaliatory action.

Mr. CARTER: May I ask why the increase this year is expected in salt fish production?

Mr. MACLEAN (*Queens*): What was your question again?

Mr. CARTER: There is an increase this year over the last year of around \$50,000.

Mr. PICKERSGILL: There is also a supplementary estimate.

Mr. MACLEAN (*Queens*): I will ask Mr. McArthur to fill you in on that.

Mr. I. S. McARTHUR (*Chairman, Fisheries Prices Support Board, Department of Fisheries*): Mr. Chairman, the increase in the amount is due to the fact that this has been increasing by about \$50,000 a year since the program was started. Since 1953 the price of salt has increased slightly but also the use of salt has increased because of greater production, particularly in heavy salted fish production. The supplemental is to catch up with the backlog. The fund ran out about January and a lot of payments had to be paid out of the 1958-59 vote after April 1. And the supplementary estimate is to get the vote back to its original form.

Mr. CARTER: May I ask one more question? The way this fund is administered now indicates a heavy production of heavy salted fish as compared with light salted fish. Is anything being done to offset that?

Mr. PICKERSGILL: Mr. Carter anticipated my question because I could see a smile on the face of the deputy minister because I remember trying to get the benefit of paying 75 per cent of the cost of light salted fish as compared with \$50,000 for heavy salted fish in the hope of getting more light salter fish produced. However, I think the department's view was that it was not practical. I wonder if they have changed their mind.

Mr. CLARK: It has been considered as a result of representations made from a number of sources. However, in actual amount the salt involved does not help much in increasing the fishermen's return. It is still the basic product, the fish itself, which I think would be more appropriate for the fishermen to go to increase his return.

Mr. BROWNE (*Vancouver-Kingsway*): On this question of British Columbia, Mr. Chairman, I think that there are some very small plants out there which do a little of this type of production but there are some salted herrings out there I think which have been shipped out in the last few years. Is it applicable to them?

Mr. CLARK: It has not applied to British Columbia. As to the production of dry salted herring in British Columbia for the past number of years the amount of dry salted herring produced in British Columbia is very, very small.

Mr. BROWNE (*Vancouver-Kingsway*): Do you not think that might help to increase the market if that were available out there? It has started now and I believe there has been some shipped to China in the last year or so and it might help to develop that market if we had that assistance.

Mr. CLARK: I doubt if the salt assistance would greatly affect the sales of dry salt herring to the oriental market.

Mr. BROWNE (*Vancouver-Kingsway*): Do you not think the individual packer out there who is packing would be in a comparable position to someone who is packing salted fish on the Atlantic coast and that it should be extended to him on that basis?

Mr. CLARK: One thing, Mr. Chairman, I think should be pointed out is that British Columbia salt herring, even the small quantities which are now being shipped, not to China, but to Hong Kong, are at much a higher sales price than dry salted cod.

The CHAIRMAN: Shall item 148 carry?

Item agreed to.

Item 149.

Mr. ROBICHAUD: Do you want to take 563?

Mr. MACLEAN (*Queens*): Yes, I suggest we do. That is the supplemental.

The CHAIRMAN: Item 563?

Item agreed to.

Item 149?

149. To provide for assistance in the construction of vessels of the dragger or long liner type, subject to such terms and conditions as may be approved by the Governor in Council \$350,000

Mr. ROBICHAUD: Mr. Chairman, item 149 is also an important item in so far as the fishermen on the Atlantic coast are concerned. The system of subsidy was established 12 or 13 years ago as it had a lot to do in modernizing our fishing fleet on the Atlantic coast. I think this program has reached a point now where there should be some substantial changes made.

In 1946, for example, a 55 or 60 foot dragger could be built for \$23,000. In 1953 the cost had gone up to \$39,000. In 1955 it cost \$46,000 and in 1957, although the boats were extended by four or five feet, the cost had gone up to \$53,000 in New Brunswick and up to \$65,000 in Nova Scotia.

Now, during the same period in 1946 to 1948 the subsidy of \$165 per gross ton amounted to about 25 per cent of the vessel. In 1955 this cost was down to 18 per cent and in 1957 it only represented from 14 to 16 per cent of the cost.

As those figures which I have just quoted will show, the price for construction of a dragger equipped with modern equipment has practically doubled in the last ten or twelve years.

The same subsidy of \$165 had also applied to the construction of long liners, certain types of long liners built under that plan. Now, in 1956 the subsidy, we will see by these figures that the picture is a little different. In 1950 the subsidy amounted to about 25 per cent of a cost of a long liner, in 1952 it went up to 30 per cent of the cost and in 1955 in the province of Quebec, for example, it represented 23 per cent, while in New Brunswick it was only 20 per cent. In New Brunswick for the same year 1955 it was 23 per cent, which will show that the cost of long liners has not gone up in proportion with that of draggers and in view of the use which has been made of this program and as it only represents, I would say, a small amount per year even this figure of \$350,000 I doubt—and I would like Mr. Clark to give us a list of the subsidies for the last three or four years—I doubt if it has ever reached this amount and in view of what I have just mentioned I would ask the minister and the government to give very serious consideration to increasing the subsidy to \$265 per gross ton instead of \$165 and by doing this we will maintain the proportion we had when the program was instituted in 1946 and 1948 and I would certainly place that with the department for their consideration.

Mr. MACLEAN (*Queens*): Thank you, Mr. Robichaud. I might say that this is not quite the first time that similar representations have been made to the department. It is receiving serious consideration and the facts of the matter are that costs of construction are going up and have been going up very rapidly.

The main problem, of course, is one of cost. It is pretty well purely a financial question as to how much money a government is justified in subsidizing a particular type of operation in one part of the country because there have been not only demands for an increased rate but demands for a much wider application and demands for an increase in the range of equipment and if one were to satisfy all these demands it would increase the whole cost several times. But nevertheless I do appreciate the very sound point that has been made in this regard.

Mr. CROUSE: Mr. Chairman, apropos of what has been said, there are many mixed feelings on this matter of increased subsidy and in discussing the item with some of the fish buyers they have raised the point that if we in Canada increase subsidies we must still sell 70 per cent of our catch to the United States and there will be a hue and cry raised to increase the tariff on our fish which are sold in the United States.

We already heard read by Mr. Robichaud a statement of which I have a copy here of action which is contemplated in Washington at the present time to provide a \$43 million program and if we increase our subsidy we will get the American fishermen going to their government asking for a further increase and it is the case of which government has the most money and finally instead of the fisheries being the home of the fisherman it will be up here in the hands of the government.

I was wondering if the first thought mentioned by Mr. Robichaud would have been a better one if there was some way to add that extra one cent. You must realize on the poundage landed at that price if they could get one cent a pound more on their catch, there would be no need of any subsidy, not even the \$165.

Mr. ROBICHAUD: They might be satisfied with half a cent.

Mr. CROUSE: Well, the catch of a dragger for the benefit of the members of the committee will run between $4\frac{1}{2}$ million and 5 million pounds of fish in one year and if the dragger is landing 5 million pounds of fish at one cent a pound, it means a gross of \$50,000 of which 40 per cent approximately would remain in the hands of the company or group of fishermen who own the ship and 40 per cent of \$50,000 is quite a tidy sum of money even after the Department of National Revenue is satisfied.

Mr. CARTER: I thought that one cent was going to be passed on to the fishermen.

Mr. CROUSE: Well, Mr. Carter, you know that the bulk of the boats in your area and I think in Nova Scotia are today owned by the fishermen and groups of fishermen and they are fishing as share men and therefore regardless of the method used if the price increased they are at least sure of half of that providing a good proportion of them own their own boats or are in a group which own their own boat.

Mr. DRYSDALE: As a west coaster— and this may be a naive question— what was the justification to start with of the original subsidy of \$165 and what, for instance, was the objective? We keep talking of the trawlers and draggers employed and I would be interested in knowing the number of trawlers and draggers employed, the number of crews employed and the total average catch per year and in doing that, I wonder if I could get any information on what the cod catch per year would be for the last ten years upon any basis so that on the over-all picture I can ascertain whether with the technological advances we are making whether the productivity per man and the number of fish caught has increased. In view of the subsidy being granted is any consideration being given to the question of whether or not we have perhaps too many fishermen in the fishing business? Also in connection with the cod catch, when they are looking at this over-all problem of the prices in Newfoundland, Nova Scotia and New Brunswick, that is the differentiation, I am wondering whether or not that could be attributed to the ordinary laws of supply and demand and perhaps more boats are landed in Newfoundland than in New Brunswick and Nova Scotia. In other words, the buyers had a greater selection and could demand a lower price. I would be interested in comparative statistics of landings in Newfoundland as compared to Nova Scotia and New Brunswick. This is a west coaster's attitude to the east coaster's problem.

Mr. MACLEAN (*Queens*): Mr. Chairman, I do not think we have all the figures here. They could be obtained.

Mr. DRYSDALE: Basically, what is the justification for the subsidy?

Mr. MACLEAN (*Queens*): This is a program which got started during World War II in order to increase the production of food at that time. It was brought into being under the War Measures Act, and the program is an endeavour to modernize the east coast fleet.

As you well know, the traditional fisheries on the two coasts are quite different; not perhaps as different now as a few years ago. On the east coast the fishery for the most part, as far as codfish is concerned, is carried on in the tradition of centuries; inshore fishermen using hand lines and very little

capital equipment. This program was introduced as a stimulus to modernize the methods of fishing, especially for ground fish on the east coast, to make it more possible for individual fishermen or groups of fishermen to acquire the capital investment necessary to use larger and more efficient units and to produce fish at a lower cost with the greatest return to themselves.

Mr. DRYSDALE: But is there no consideration given as to the number of fishermen involved? I think the trend, as predicted by the Gordon report, will be that the number of fishermen involved in the fishing industry, over the 25-year period, would tend to decline. I am wondering whether that has been considered at all by the government. In other words, if you are holding out the bait, shall we say, of subsidies all you are succeeding in doing is continuing to keep fishermen in the fishing business where the catch is increasing per boat and the prices apparently are going down. Has that fact been considered or is it just a case of where if anybody wants to get into the fishing business they go ahead?

Mr. MACLEAN (*Queens*): This is one of the basic problems. In a situation to help someone who has always been in the fishing industry and is anxious to have, and capable of having, higher production and therefore a greater return to himself and a better standard of living, you may also encourage other people in the industry who are less efficient and in the end you only change the boundary and still have a fringe element.

Mr. DRYSDALE: It appears that this type of subsidy would tend to perpetuate the difficulties. I am wondering whether or not the department is giving any consideration to the long-term effect?

Mr. MACLEAN (*Queens*): Yes; very much so.

Mr. ROBICHAUD: I think it should also be taken into consideration that even with the subsidy an individual fisherman has to build or purchase a boat which costs \$60 thousand and there are also other factors which are important. Even with the subsidy they have to get money through the local fishermen's loan boards and those boards keep a very good control over these loans. The fisherman has to qualify for the loan and he must have enough himself for the initial deposit. So, I think from the angle of having too many boats and the angle of retaining the balance which is required in the fishing industry, I do not think in the too near future we will reach that point for the reasons which I have just mentioned.

Mr. DRYSDALE: Is there any group which is interested in the figures and the matter of whether or not there are too many fishermen in the business?

Mr. ROBICHAUD: I think that also can be answered. We have been able to dispose of our catch year after year. When this program was instituted it was during the war and after the war it has been continued for the very reason that our fishermen in most of the areas on the Atlantic coast had outmoded fishing gear—they used the same type of equipment as their forefathers had used—and if we did not modernize our fleet we would not be able to compete in the world markets.

While perhaps 75 per cent of our fish today is in the fresh, frozen or filleted state, the reverse was the case about fifteen years ago when it was practically all going out in salt. There was a limit in the market, but we have not reached by far the limit of the market for fresh and frozen fish.

Mr. PICKERSGILL: Before I say what I intended to say, I would like to make an observation in respect of what Mr. Drysdale said. It is quite true that up until last summer there was a diminution in the number of people engaged in fishing because up to that time there were, for many people, more attractive opportunities elsewhere. But, since the middle of last year, there has been a trend back into the fisheries and I would think this would be a

rather poor time to do anything which would discourage people staying in the fisheries until such a time as there is alternative employment elsewhere.

My main point is this: the Minister of Fisheries in Newfoundland, I understand, made certain representations to the department concerning certain other types of vessels which are perhaps as urgently needed as those now receiving a subsidy. I just wanted to say that I feel he has given very careful consideration to this problem and I would like to support his representations.

Mr. CROUSE: Again, on behalf of Mr. Stewart, I would like to ask how many long liner type draggers are now based in New Brunswick? Also what is the number by counties or ports of registry, and the number built in Charlotte county, by whom, the contribution of the provincial government, the contribution by the federal government, and the total cost of the draggers.

Mr. MACLEAN (*Queens*): We do not have these detailed figures.

Mr. CROUSE: In the interest of the committee could these questions be tabled and the answers put into the record?

Agreed to.

Mr. CLARK: So far as we can answer them.

Mr. CROUSE: The second question has to do with item 150: how many bait freezing and storage facilities in the province of New Brunswick were built under this item; where are these plants located; what was the total cost to date of the plant at Beaver Harbour, Charlotte county, New Brunswick; how much was contributed by the federal government; how much by the provincial government of New Brunswick; how much by Connors Brothers, Limited?

Item 149 agreed to.

Item 150. To provide for assistance in the construction of bait freezing and storage facilities, subject to the regulations established by the Governor in Council \$30,000

Mr. PICKERSGILL: What is this item about, Mr. Chairman?

Mr. MACLEAN (*Queens*): This is an item under which grants are paid to certain fish plants on the condition that they supply certain accommodation for bait and on the condition that they are willing to provide this bait to fishermen concerned. They have certain requirements to meet, over a period, before their commitments are discharged.

Mr. CARTER: Could there be some way developed which would expedite payments of these grants? A fish producer who might wish to take advantage of this grant would need to know what are the specifications and so forth before he starts to build the plant at all in order to incorporate them into his plant. I understand at the present time he cannot get this worked out soon enough to start and therefore he starts without it. After he gets it done he then tries to meet the specifications to the satisfaction of the inspector who inspects it and it may be a period of two years before this is accomplished. It seems to me that something should be done to expedite payments under this grant.

Item agreed to.

Supplementary item 562

To provide for a contribution towards the cost of a building for the Nova Scotia Fisheries Exhibition, Lunenburg, Nova Scotia, in accordance with an agreement entered into by the Minister of Fisheries, with the approval of the Governor in Council, the total cost to be borne in equal shares by the Government of Canada and the Nova Scotia Fisheries Exhibition Association (Revote) \$19,481

Mr. PICKERSGILL: I am very much in favour of this item.

Item agreed to.

The CHAIRMAN: Shall I report the items back to the house?

Agreed to.

The CHAIRMAN: I wish to thank the hon. Minister of Fisheries, the deputy minister, the officials from the department and all other witnesses who were kind enough to answer the very interesting questions which were put to them by the members of the committee.

I also wish to thank the members of the committee for their cooperation and I wish to inform you that these sittings which I have had here with you have allowed me to acquire an experience which I am sure will prove useful to me in the future.

Thank you all again.

APPENDIX I

On Item 149. (Reply to Mr. Stewart)

1. How many long-liner type draggers are now based in New Brunswick?
The number of vessels assisted under this Vote and now based in New Brunswick to March 31st, 1958:—

Draggers	68
Long-liners	nil.

2. The number of counties and ports of registry?
Counties—2 (Gloucester and Charlotte).
Ports of Registry—2 (St. Andrews and Bathurst).

3. The number built in Charlotte County?
Four vessels.
 - (a) By whom?
Connors Brothers Limited, Black's Harbour, N.B.—3 vessels.
G. E. Richardson & Sons, Richardson, N.B. —1 vessel.
 - (b) The contribution of the Provincial Government?
Information not available.
 - (c) The contribution by the Federal Government?
\$28,193.55
 - (d) The total cost of said Draggers?
Information not available.

On Item 150.

1. (a) How many bait freezing and/or storage facilities in the Province of New Brunswick were built under this item?
None.
- (b) Where are these plants located?
Answered by 1 (a).
- (c) What was the total cost to date of the plant at Beaver Harbour, Charlotte County, N.B.?
Information not available.
- (d) How much was contributed by the Federal Government?
\$81,920.43 under the Cold Storage Act administered by the Department of Agriculture.
- (e) How much by the Provincial Government of New Brunswick?
Information not available.
- (f) How much by Connors Brothers Limited?
Information not available.

