

Marine and Fisheries.

INTERMISSION.

NEW WESTMINSTER, B.C.,

25th February, 1892.

Afternoon Session.

The Commission re-assembled and was called to order at 1.30 p.m.

Present :

Mr. Wilmot, in the chair ; Mr. Sheriff Armstrong ; and the Secretary.

E. A. WADHAMS, a native of the United States, but a resident of British Columbia since 1858, a salmon canner, was duly sworn.

By Mr. Wilmot :

Q. Would you like to put any views before this Commission?—A. Yes ; I would like to put some with respect to what—(hesitating).

Q. General views as regards the salmon industry and fisheries of British Columbia?—A. I prefer first to speak of the weekly close time. As now arranged it is generally acceptable to canners and we think there are reasons why it should not be changed. I think it would be apparent to any one when we commence operations on Monday, to get them (the fish) we have to send out boats on Sunday evening. The close time from six a.m., Saturday, until six p.m., Sunday, is acceptable, and I think extending the close time further would be very detrimental to the canners.

Q. You think it detrimental to Sunday night at twelve o'clock?—A. Yes ; they would have hardly sufficient fish to go on with on Monday, and if we have no fish to go on with on Monday it introduces labour troubles, because the men don't like to lose time on Monday, and if extended to twelve o'clock there would be a great deal of illegal fishing that could not be prevented, and so still more if extended to six a.m. Monday, and aside from that trouble it would introduce labour troubles in the cannery and in this connection I would say that the fishery guardians should be provided with steam launches in order to do effective work—where they only have row boats to get among the fishermen they cannot perform their duties at all.

Q. Then you think the weekly close time a correct one both in the interest of the canners and the community?—A. Yes ; of course some may have conscientious views about going out on Sunday—but canners would respect that—I don't think any one would make any one to go though, of course, it is in their interest to go.

Q. The reason, Mr. Wadhams, why questions are put about Sunday to twelve o'clock is on account of views of persons that Sunday should not be broken—you think for all purposes, however, that it is better as it is?—A. I think so, decidedly.

Q. Have you any views as to an annual close season?—A. Well, I think canners would recommend it—that a certain part of the year should be kept as a close season—I don't think it very material in the interest of fish—that is, because most of them have gone up at mid-summer—I think that the recommendation of the canners was that the commencement of the season should be 1st March, ending 25th August, with a 5½ inch mesh, extension measure.

Q. That should be a close season?—A. No ; I have a memo. that I will give—

Q. You mean that would be the open season?—A. Yes.

Q. Then the annual close time?—A. The close season from first November to first March each year was the recommendation of the canners.

Q. For all fish?—A. For salmon.

Q. 1st November to 1st March—a close season for all purposes?—A. Yes ; of course they don't insist upon a close season at all, but that is our recommendation—1st March to 26th August—fishing to be allowed with mesh not less than 5½ inch mesh ;

that from 25th August to 25th September, both days inclusive, fishing be allowed with mesh not less than 7½ inch mesh—and from 25th September to the 1st November, fishing be allowed with nets not less than 5½ inch mesh again.

Q. Will you just explain, Mr. Wadhams, the object of the close season from 25th August to 1st March would it be for all fish? What fish would that cover, do you know, the spring salmon?—A. It would cover the spawning season of a great many of them.

Q. Of the spring salmon? Of the sockeye?—A. I think it would cover the spawning season of all the sockeye that would be caught down here on the lower river—now those that go into the interior on the head waters—it is not known—I would not venture an opinion as to what their spawning season is.

Q. But you think 1st November to 1st March would cover the operations of spring salmon?—A. Yes; and all sockeye that would be in the lower river.

Q. And Humpbacks?—A. Well, we don't consider them anyway.

Q. But they are here and may become an article of food?—A. Well, the close season at that time on the lower river would protect any fish.

Q. But would not 25th August to 1st November cover sockeye?—A. Yes; but that would be a period when we are fishing for spring salmon and not many sockeye would be going up at that time. The sockeye run is generally over on the 25th August.

Q. Then do I understand that spring salmon or "Quinnat"—you begin to catch them between the 25th August and 25th September?—A. Yes; we catch some before the sockeye run and some between the sockeye run and the "Cohoes"—of course they would not bear the use of the spring salmon at any time during the open season.

Q. Do you think that some spring salmon spawn after the first of September?—A. I don't know that.

Q. They usually do elsewhere—that is the reason I ask you?—A. Well, I know that some of them do, but whether all do or not, I don't know.

Q. Well, do you think sockeye spawn after 1st September?—A. A great many do.

Q. As regards the "Cohoe"?—A. They are still later.

Q. They would be protected after the 1st September?—A. Yes; I think protection then would cover the whole of them.

Q. Then why not say no fishing after 1st September for all these fish—would not that cover all? And on that basis the others would have opportunity to spawn—would they not?—A. I think that our view is that the fish that we would catch after the 25th August, although they would not spawn for some time later—they are hardly in condition.

Q. Yes; they are in a pregnant state?—A. Yes.

Q. Then these fish not good for eating, should they not be allowed to escape from all kinds of destruction to benefit the river afterwards? It would not effect the canner to stop fishing after 1st September?—A. Well, the only thing is "Cohoes" come in later—we think the close season of the month would allow of sockeyes that are laggards to go past.

Q. Then do you can large quantities of Cohoes?—A. Not usually—only when there is a scarcity of sockeyes.

Q. And for that purpose you want them free to be caught till the 25th September?—A. Yes.

Q. What proportion of canning establishments deal in Cohoes, or do they use them when sockeyes are plentiful?—A. Not many—last year I don't think any were canned at all.

Q. They are good fish for canning?—A. Ordinarily I don't think they are profitable to can, but with good markets and as we have the outfits we want to use them.

Q. Do they stand second in quality to the sockeye for commercial purposes?—A. Yes; about that—that is they are not equally as good.

Q. Is a large trade in regard to spring salmon done from 25th August to 25th September?—A. Not a large business, but some years they run more plentiful than others, and if plentiful several cannories usually pack them.

Q. Was it not the desire of cannors that the system of artificial breeding should be applied to "Quinnat" at first?—A. I think so, but I think views varied on that point

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—my own views were that sockeye were our principal fish and that chief attention should be given to them because of their uniformity of colour—I think some think more notice should be given to spring salmon.

Q. On the Columbia River is not spring salmon more highly prized?—A. Yes; I think that is the only fish of the kind there.

Q. And they come in competition with your fish in the English markets?—A. Oh, the Columbia River fish are superior fish.

Q. And more cans can be made from one fish?—A. Yes; they are larger and I don't think on the Columbia River they are troubled with white salmon, while here most of our spring salmon are white.

Q. Can you give any reason why some should be white and some red?—A. Well some have a theory.

Q. Well, what is the theory?—A. It is they change colour when coming into fresh water—it is supposed that the spring salmon come into the Gulf of Georgia and remain there so a time in brackish water and so lose their colour.

Q. But, would the Gulf of Georgia be brackish water—the Fraser River runs in there—the Columbia River runs out into sea, salt water—would not salmon play about the Gulf as at the Columbia River?—A. Well, I think the Gulf of Georgia would be more impregnated with fresh water than the mouth of the Columbia River.

Q. Well, I think the theory would hardly hold good?—A. Well, I would not be disposed to defend the theory myself.

Q. No; it is a peculiarity; and as this Commission is formed in order to get all information possible on the subject, and as canners, &c., have asked for a Commission for that purpose, you will not mind questions of this character. It is remarkable that spring salmon here are not taken on account of their colour, while in the Columbia River they are thought the best?—A. Yes; but fish on the Columbia River are all of good colour.

Q. Then you think that both white and red and the sockeye should be protected after 25th September?—A. Well, we recommend the fishing until November—that permits the catching of cohoes.

Q. If you fish until 1st November it will cover the exact spawning time of any fish you have mentioned—mostly of spring salmon, generally of sockeye, and wholly of cohoes? Either the actual spawning time or times when they are far advanced in pregnancy. Now the spawning time we are talking of would not apply to the river till spawning is done in fluvial portions of the river and lakes. Have you any other remarks to submit?—A. No; not with regard to that. The next subject I would like to speak of would be the hatchery. My views are favourable to it—I think that we have already received benefit from it.

Q. And do you think it would be a benefit to increase the number of hatcheries on branches of the Fraser and elsewhere in the province?—A. I think it would be desirable to establish branches in the head waters of the Fraser River and its tributaries and by so doing we would probably get an early run. The present method is we get the salmon that come into the river in September—well, that is practically the later part of the run, and it seems to me as though the experience of the last two years rather shows that. In '89 the run came in very late, so late that many of the canners were very much alarmed, and the same last year before the sockeye came in. I think if we went to the head waters and established hatcheries there we would be more apt to get the fish that come into the rivers earlier and so introduce the fish that come in earlier.

Q. Would not that apply to spring salmon as well?—A. Very likely it would. We have a run of spring salmon say from March until the sockeye come in, but in April and May they come in pretty plentiful and not so many white salmon among them.

Q. Then if earlier fish were caught and bred, you would probably get earlier fish again?—A. Yes.

Q. And you think more hatcheries should be constructed?—A. I do; now my catch in '91 was in the neighbourhood of 12,000 cases, fully fifty per cent more than before. Of course we consider the fish come into the river in cycles of four years.

Q. Would your name appear on the reports of '90 "Wadham" or the syndicate?—A. No; as "Wadhams" in '90, but I am referring to four years previous to '91. In '87, I think, I packed a few cohoes in that year—that was a scarce year—

Q. Did you pack as many in '91 as '90?—A. Well, not quite—I packed nearly 12,000 cases last year.

Q. In '89 you packed 17,000?—A. Yes, sir; that was a big year.

Q. And away back in '86 you packed 14,000?—A. Yes, sir; the cycles come every four years.

Q. And the same way in small runs?—A. Yes; that is our experience.

Q. In '88 your pack was 5,720 cases and you look forward then to '92 as a small run?—A. Yes; a small run.

Q. If it turns out you get as many as in '90 and '89, what conclusion would you come to?—A. Well, I think it would be conclusive evidence that it would be brought about by the hatchery.

Q. Well, although I may be said to be the father of this industry on this continent, I must say you are almost prepared to go farther than I am?—A. Well, I would not say it would be conclusive, but I think it would show good proof.

Q. What question next?—A. The matter of offal. The prevalent opinion now is that offal as now handled by the canners is not injurious to the salmon.

Q. How about the inhabitants?—A. Well, we think if it was deposited in deep water it would be the very best practical disposition that could be made of it.

Q. You think if put in deep water it would be less injurious than at present?—A. Well, of course a good deal of it is put in now in deep water.

Q. And you think if the Government would consent to your putting it in the channel of the river—the canners would be willing to put it there?—A. If it was just considered the channel of the river, of course, or put in deep water where there is a current—I think that would enable people—that is the canners—to extend shoots right from their canneries.

Q. The channel of the river is pretty well laid out for steam-boat navigation is it not?—A. Well, yes; but I would not meet their view of putting it in the channel—and that would be a long way from the canneries. We think it would be covered if we put it in deep water where there is a current.

Q. But six feet of water would not be either channel or deep water, or a strong current?—A. No; probably not at all points.

By Mr. Armstrong:

Q. Do you mean to put it in six feet of water, as near the canneries as you can get that six feet of water?—A. Well, yes; most of the canneries, or as many as I think of now, shoots could be rigged where they could put it in with that depth of water, or ten feet.

By Mr. Wilmot:

Q. But are not some canneries built where there are twenty feet of water?—A. Yes.

Q. And some six feet of water?—A. Well, I don't know if any have so little as that, most have twelve feet of water.

Q. What is the present system of dumping offal away now?—A. Well, it is by having shoots from the cleaning tables, the offal drops into those shoots and it goes into the water, these shoots are on an incline descending into the channel of the river. I don't say the canners would comply with my views. We might speak of a channel, but when we say the channel for a ship, they would of course select the deepest water, but very few canneries would comply with that.

Q. Then the putting in of offal, as described by you, would be somewhat similar to that you are doing at present?—A. At many places possibly there may be some canneries that could not comply with what I have suggested.

Q. They could not comply with putting it in a channel of six, eight, or ten feet?—A. No.

Q. Have you any knowledge with regard to the existence of an oil factory consuming a portion of the offal?—A. I know there is one.

Q. Do you know anything of its operations—successful or otherwise?—A. I would not undertake to express an opinion, because others will be able to speak on that point from the book, as it may be.

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Q. But, do you think it possible for canners to convey their offal to some factory that might be constructed for the manufacture of this oil?—A. I do not, except at great loss.

Q. How do you know unless it is tried?—A. Well, it has been tried on the Columbia River where fish are much more rich in oil than here, and I think if there were many oil factories established on the river there would be a great many more complaints than against the canneries at present.

Q. From what cause?—A. They are more offensive—from smell, &c.

Q. Are they more offensive from pollution of the water, &c.?—A. I never visited this factory.

Q. Is it not a fact that all animal and vegetable matters are extracted from the offal and made into marketable goods, oils, &c., and that what is left would be small, light, &c., in body, and not having those component parts that make them unhealthy to water and make it unsuitable for man?—A. I never visited this oil factory, but I have often smelt it at half a mile when going up river.

Q. Then you think it injurious to put offal elsewhere than the canneries do at present, and that if put in the centre of the river it would be equally unprofitable to canners?—A. If we had to take soundings and places in the deepest part of the channel, I don't think it would be.

Q. Oh, but the channel is not in one little line, on the contrary, it would cover many hundred feet, I am not wrong, am I?—A. Yes; the channel would be quite large, but I think that offal anywhere put in six or eight feet of water in a flowing stream would not be offensive from a sanitary view.

Q. But if put in the channel would not the current carry it away to sea?—A. Yes; but if put anywhere where a current, it would do as well.

Q. But would it not be much more slow in going out than if put in the channel?—A. Yes; in the lower river, some places.

Q. And if it took so many hours to go down in mid channel, where the current is strong, it would take just so many more hours in shallow water than in a deeper channel and do more injury and pollution in a long passage, would not that be reasonable?—A. Well, I don't know as it would be delayed more.

Q. It would be a longer time in becoming decomposed?—A. Yes. It would be a longer time in becoming decomposed?—But in all canneries down below, it would not be a matter of hours in taking offal down.

Q. Where is your cannery?—A. At Ladner's Landing, but it might be contended that the proper channel for me to deposit offal would be Woodward Slough, a mile from my cannery. Of course I could put my offal in the steam-boat channel opposite the Landing, but I would not like the department to say that I should put it in the channel at Woodward Slough. (Mr. Wadhams here proceeded to show the situation of his cannery upon a map and explained where in his opinion the current would carry offal from his cannery).

MR. WADHAMS.—Right at my cannery I could put it into ten or twelve feet at low water.

MR. WILMOT.—How wide is the river at your cannery?—A. About a mile. It would cost very much if I had to handle it out to the deep channel.

Q. Then you think there should be no great change from what you do at present?—A. Well as long as it is put in the current.

Q. And from that are we to draw the inference that some canneries are throwing it in where there is no current?—A. Well, there may be some canneries where there is no more water than that, not swift water.

Q. And the conclusion is that you think offal should be allowed to be thrown in?—A. I think that any cannery that deposits its offal in deep water, where there is a current, it is making as good a disposition of it as practicable.

Q. You are aware that a statutory enactment says offal shall be kept out of the water?—A. Well, of course, but I think it is for the department to think that the Fraser River is a large stream and that it takes very much offal to have any effect.

Q. Are you aware of how it acts on the Columbia River?—A. The Columbia River is a much larger river.

Q. And I suppose you are aware they forbid it there?—A. Oh yes; and that is all, well, I think that goes to show they don't consider salmon offal deleterious. I don't think it has been contended or claimed that offal of salmon is deleterious, although persons here consider it is. I don't think salmon offal is deleterious, now, I have been on the Columbia River myself some years and I never heard it claimed that salmon offal was deleterious to salmon.

Q. I don't think that is contented, but it does effect them to a certain degree, because when salmon come in to go to the breeding places they will go against every possible obstacle?—A. Well, of course I don't want to draw any unnatural inference.

Q. Well, I merely mention it to show that in Oregon and Washington they pass a law that no deleterious substances should go in?—A. Well, I cannot concede the point that salmon offal is deleterious. Now, the question of licenses, formerly cannery had 40 licenses each.

Q. Before the regulation? (limitation)?—A. No: under the regulation. Now, they have been reduced from time to time until last year it was 20. We don't consider that is enough for our industry. The cannery have asked that they shall have 25 and that that amount be a fixed number, so as not to be reduced on other years.

Q. Well, we will lead up to the question whether 20 boats are not sufficient for you?—A. I think not.

Q. Are you sure 20 boats would not suit your purpose?—A. Well, I know that ordinarily it would not begin to suit me—last year, as I said, I packed in the neighbourhood of 12,000 cases and I had 50 boats—that is cannery boats and outsiders. Of course that is not packing up to near one's capacity.

Q. What number of boats do you consider sufficient to carry on a legitimate trade and pack 15,000 cases?—A. Well, the run varies so in different seasons that it is hard to say.

Q. They have not varied much in last three seasons—have they?—A. Well, the last I don't think was half what it was.

By Mr. Armstrong:

I think you asked him how many boats would be necessary—could you answer that question?—A. Well, we consider that 25 boats, at least, are necessary—I think that ordinarily one season with another that would not begin to fill 15,000 cases. Of course, some individual fishermen make large catches—much larger than any fishermen I have ever had. Of course fishermen in cannery boats—we usually do it with Indians and they don't catch as many fish ordinarily as men who fish their own boats—now, formerly I had 40 boats and I fished them. That was before the limitation was put on and at that time I would employ 160, principally Indians. Of course, I think that it is desirable to look after the Indians somewhat and although they form habits of industry, save their money pretty well, &c.: I think they are just as worthy of encouragement—perhaps, not as much as another—but they are worthy of all encouragement, and I think we cannery having control of licenses throw a good deal of work to Indians which otherwise they would not get and when they very often would be a tax upon the province or Government, and if they work they are more apt to maintain good habits than if they are indolent.

By Mr. Wilnot:

Yes: you would encourage Indian labour altogether?—A. Largely at least, yes: but 25 boats would not give cannery all the fish they want—many contend it would, but they are mistaken, because last year I had 50 boats and did not get near enough.

Q. How many fish make a case, 8, 10 or 11, or what?—A. Well, it varies from a little less than 10 to as high as 13.

Q. Would 10 cover the average?—A. I don't think it would—I think it nearer 11.

Q. What is the average size of salmon?—A. Well, I never weighed many salmon.

Q. But you have handled them for many years?—A. Well, about six and a half or seven pounds, I should think.

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Q. But it is generally considered that eight pounds is the average, is it not?—A. Well, I think it an over-estimate—a man goes fishing, you know, and he tells big tales. We know the number of fish we catch in a season and the number of cans we make.

Q. Well, ordinarily speaking, how many cans will you get from a salmon—four or five? Or what number, usually speaking—give us rough figures?—A. It would not be in excess of four—sometimes it might be more but not much—on these “off” years, as they are termed, when we have fewer fish, they will average a little larger in size.

Q. And then they will average about five cans?—A. Yes: about that, and again in good years the fish will be smaller—fishermen and canners like to see fish coming in small.

Q. Well then, with a good run you can count upon eight pounds to the fish and you get five cans?—A. Well, I don't know whether they weigh eight pounds or not. We would get about five cans to eight pounds—in packing we always give a little more.

Q. How much more to the can?—A. Well, we put in a fraction of an ounce over the pound.

Q. Would it run two ounces?—A. Oh no: perhaps an ounce—even less—it is hard to say—we give good weight.

By Mr. Armstrong:

Q. You don't weigh them do you?—A. Well, I do myself.

Q. Do you?—A. Yes: we test it pretty thoroughly. I may say the canners think in all fairness they should receive 25 licenses and cannot conceive any reason why they should not have them. The canneries, of course they are the principal utilizers of the fish—they are the class, which if it was not for the canneries the outside fishermen would have but little sale for their fish, and outside fishermen, of course, personally, their only way of getting their fish utilized is by sale to them.

Q. Then if you gave an ounce on every can you would be giving away 160,000 pounds of fish?—A. Well, we want to give full weight and a little more.

Q. Well, I think you should advertise that—it would be a good advertisement—would it not? That you give away 160,000 pounds of fish? Well, you think if an eight pound fish it would give you five cans—the balance? this would be offal—would it not?—A. Yes, it would be. I would not want to estimate all this difference, &c.

Q. Yes: but you say yourself the average of fish would be seven or eight pounds?—A. My idea is the average would be from six to eight pounds.

Q. Well then, the average would be seven?—A. As I say, my average is 13 fish to the case and some years a little less than 10—on short years the fish will average larger than on big years—I have not weighed these fish.

Q. No: but if you take the eight pound fish for argument and you make five cans, there would be three pounds left, would there not?—A. Certainly: I would think so.

Q. What would be the average catch of your boats in a season—some fishermen have said they catch four or five thousand, and even as high as 10,000?—A. Well, my fishermen don't do as well as that.

Q. As 5,000 you mean, or 4,000?—A. I don't think they averaged 3,000; of course, if I were home, I could give you exact figures.

Q. Oh yes, but I was simply asking; fishermen have come here and stated they catch these big figures—4 to 10 thousand—and average at 3,000 would be small with all these big figures.—A. Well, take even a big year; an average of 200 fish to the shift where you employ day labour is a big average.

Q. Well, suppose there are 30 boats fishing and they catch 3,000 salmon each during the season, that would be 90,000 salmon and that would give you 18,000 cases, would it not?—A. Well, you have the figures; I don't know.

Q. Well, simply multiply 3,000 by 30, and we must take some standard, a 6 pound fish or 8 pound fish, call it 8 pounds, now with 10 fish to a case, that would be—oh, I see I am mistaken, I have made a mistake in your favour—yes; that would be about 9,000 cases not 18,000—yes, 9,000 cases.—A. Well, I don't ever go into such figures. Last year I had 50 boats and packed nearly 12,000 cases; there is no use going into any calculations.

Q. That you think a fair average?—A. It was my pack; my neighbours may have been that.

Q. And you had 20 boats, and you had to get the balance to make up fish for your cannery?—Well, I was one of the managers for the syndicate and I used for my special cannery 50 boats last year—that is cannery boats and outsiders.

Mr. ARMSTRONG.—Did you put up all fish that you could catch?—Yes.

Mr. ARMSTRONG.—Do you think that every person who has a boat and net, being a fisherman, who applies for a license should get it?—A. Well yes, of course, I think so, because I think it very hard for a man who has his own boat and net if he could not get it; of course with limitation there comes the difficulty.

Q. Well, but suppose there is no limitation, should cannery get less licenses?—No. I don't think the cannery should be reduced—I think if cannery have 25 boats they would want 25 outsiders—even in a big year they would want them most of the time because in these big years they don't run so as one could not take care of all the fish he wants; of course there may be one or two days when he would have to limit the boats.

Q. How many fishermen are there on the river; do you know? that is white men?—A. No. I don't know—Mr. McNab could tell you that: there are a good many.

Q. Do you know if there are many Indians that would fish if they had licenses?—A. There are some; I had some Indians fishing for me who had their own nets and licenses. Now, it has been stated that Indians were in the power of the cannerymen—that cannerymen took out licenses for them and then they had to fish for those cannerymen. Now, I think the parties are mistaken in one sense—of course any Indian that gets a license will require assistance, something to be advanced to them in way or of money, &c. If we consider an Indian is honest and will pay back in fish, why we credit him just the same as any other; but any Indian that has had his own license I have treated as an outsider and given the same prices as I would white men.

Q. With all Indians who have boats and nets and all white men fishing, would there not be sufficient fish caught to supply the canneries?—A. Well, I don't think canneries would want to be supplied by them at the prices they would want.

Q. Don't you think competition would be so great they would be glad to sell them?—A. Well, it is a risk I would not care to take. I don't think that the Indians—many of them—would take out licenses; most of them would rather work by day's labour and know what they were going to get; they are the people mostly supplied to the cannery; most of our labour are Indians; of course we employ some white men.

Q. Then you never made any calculation of the number of fish that came into your cannery in a season?—A. No. I could tell if I had my books—I imagine it took about 12 to a case last year, but then that is only a surmise; I have made those figures in previous years.

Q. Well, you think you could not do with less than 25 boats?—A. No. I don't think we could do business properly.

Q. What effect on ordinary fishermen would this have; would it restrict them?—A. No. I don't think so, as I say every cannery would want 25 more boats, if we could get them.

Q. There are 22 canneries on this river?—A. I don't know; McNab can tell you; there were several new canneries operated last year, I think, with the limitation on, of course, it is very difficult to satisfy outsiders anyway, because two men equally deserving apply and one cannot get it.

By Mr. Wilnot:

Q. Then do you think every British subject and fisherman should get a licence?—A. Yes; only very strong reasons should prevent it.

Q. Then you think that licenses to each and canneries getting 25, would be satisfactory?—A. Yes, sir.

Q. What would you do with freezers, salters, &c.?—A. I would give them all the fish they could use; of course I would not want to say anything that would deprive any one of a license, but during the run freezers get more fish than they can use and they sell them to the canneries; that is a question for the department, I don't want to say anything about it.

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Q. Well, but you should tell us what you think?—A. Well, when cannery first got only 20 boats and freezers got 10—that is half the number the cannery got—whereas the cannery get along with ten fish to the freezers' one, it certainly was not satisfactory to cannery while it might be to freezers.

Q. Then you think the number of licenses to freezers and others is a matter for the department, while cannery should get 25, and every British subject and fisherman should get one?—A. Yes, sir.

Q. Have you anything to say about persons getting licenses and selling them? Should not men who get licenses use them—the cannery do don't they?—A. The cannery do. Of course we consider that, as I said before, that when cannery were restricted to 20 boats and handed the fish from twice that, it was a hardship that another should receive ten boats and not use the fish from more than two or three, but, of course with limitation off it would not make so much difference.

Q. Then you dispute that new licenses should be given to cannery?—A. No, but the cannery don't like to have their own number of licenses reduced to bring all within that established number. Our view is if 20 more cannery are erected, you should extend the limit of the licenses.

Q. Then that means that you are willing that there should be as many cannery on the river as capitalists like to put up, but they should be established at a maximum number of boats?—A. Yes, I don't think that we have anything to say as to what the department's course should be towards the new cannery; we only object that our licenses should be taken from us to provide for them.

Q. Would it be wise for the department to discriminate as between the number of licenses given to an old cannery and a new one?—A. I don't think so; they should be put on the same footing. Now I am in business and I consider that my interest should be considered, but if I was not in business and wanted to engage in it, I think I would have the right to as many as others, but I would not want to take from his licenses to get mine.

Q. Well, as regards the fee for these cannery, should they be alike on one river as on another?—A. Well, we have the benefit of a hatchery and that would be one reason for us paying greater fees than those on a river that has no hatchery. I don't think the question of fees troubles the cannery.

Q. But on the Skeena it is \$5 and here \$20; if the Skeena fee was raised to \$20 would that be unjust?—A. Well, I think you should start a hatchery there before you raise the fee.

Q. Then you think starting a hatchery there would put you on an equality?—A. Well, that would be a reason for raising the fee.

Q. But do you think license fees should be the same all over the province?—A. My views on that matter—and I believe I would be in the minority—is that having advantage of the hatchery and which I believe will be very much to advantage of cannery and fishermen—I think it a good reason why we should have to pay more than on the Skeena.

Q. Then you think it sufficient reason for paying \$15, more than on the Skeena for every license?—A. I don't think it excessive.

Q. Do you belong to the Syndicate?—A. Yes.

Q. Have you any cannery on the Skeena?—A. Two.

Q. How many here?—A. Nine.

Q. And if the fee is changed on the Skeena two of these cannery would effect you?—A. Yes: but that would not matter.

By Mr. Armstrong:

Q. How many boats do you employ at the cannery on the Skeena?—A. We employ more up there.

By Mr. Wilnot:

Q. How would it stand as individuals then?—A. Oh well, I think they should pay equally as much as cannery, for they are equally benefited by the hatchery. I think it would be very unfair to charge a cannery more than a fisherman.

Q. Yes : but on the Skeena they pay \$5, and on the Fraser \$20 ; as a matter of justice between these different parties do you think a fisherman gets the value of that \$15 difference from the hatchery ?—A. I do—it will take but few fish at fair prices to soon make up that difference.

Q. Skeena River canneries pack is fully as high as on the Fraser River, I see (perusing B. C. Board of Trade Report). Yes, the average of those on the Fraser River is 13,400 cases, and on the Skeena 13,000 cases, so they are about the same, you see ?—A. Yes.

Q. The Skeena River packers—how many licenses do they get ?—A. Well, I cannot say that from my own knowledge ; but you can get that from Mr. McNab.

Q. And it would take as much labour and exertion to get a sufficient number of fish to put up 12,000 cases there, or more ?—A. They would average about the same.

Q. How do they fish there ?—A. Altogether with drift nets in deep water, no seining. But I don't know as my evidence should be taken on that for really I don't know—I would not state that is the only method of fishing on the Skeena.

Q. Have you any knowledge of the working of seines ?—A. Oh yes.

Q. Which is the most injurious, seine fishing or drift-nets ?—A. I don't think it would be wise to introduce seine fishing in the rivers.

Q. How then as to the mouths of rivers—would it mean some young and fish of all kinds would be taken ?—A. Very nearly—I think seines would interfere with the work of drift-nets.

Q. And their capacity of catching—would they catch greater number than drift-net ?—A. Well, if it was well situated probably it would—ordinarily, of course, seines catch a great many small fish that escape the drift-nets.

Q. Is it judicious to use seines with $3\frac{1}{2}$ -inch mesh when drift-nets are in use with $5\frac{1}{2}$?—A. Of course, with seines they want to use mesh small enough so fish will not gill, because if they gill it is difficult to take them from the seine, but it will catch a great many fish that should not be caught.

Q. Do you know the effect of seining ?—A. No : I never had much experience—of course I have had catches, large and small.

Q. When a seine is being hauled, is it not a fact that fish run towards shore and not against the net ?—A. Well, I don't know that—I would, however, expect that.

Q. And the consequence would be they would not run the chance of being gilled ?—A. Yes, I suppose so.

Q. At present seining is forbidden, I merely bring it up to see what you think of it—a seine has the effect of sweeping along the bottom as well as the top and therefore everything must be taken ?—A. Yes.

Q. Is there anything else, Mr. Wadhams ?—A. No. I thought you would like to discuss the matter. One party in giving evidence stated that he had caught fish in August, referring to sockeye that had spawned. It was just a query : of course I never thought that would be.

Q. I don't think it likely that fish caught in August would be spawned. In fishing your own boats you have relays ?—A. Yes ; we fish with four men.

Q. And ordinary fishing—two men ?—A. Yes.

Q. Would not cannerymen have the advantage over outside men ?—A. Well yes : but our experience is that outside fishermen generally get more fish than our men.

Q. Are the men you use in your boats as good as white men ?—A. Well, take some Indians they are pretty hard to beat.

Q. Well, take them all through ?—A. Of course a good white man is better than the Indians will average, but as I say, take a good Indian and he is a pretty good man.

Q. Oh, I know, but is the average fisherman a better man than the Indian ?—A. Well, Indians are more apt to knock off when they consider they have done a good day's work.

By Mr. Armstrong :

Q. How far out do your boats go to fish as a rule ?—A. Well, they go out as far as the sand banks sometimes, which is pretty near the lighthouse—not all of them you know.

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Q. Don't they go beyond the lighthouse?—A. Possibly, they may—they go as far as the sands extend.

Q. Perhaps you don't know exactly how far the fishermen do go?—A. No, I don't know exactly.

Q. Don't you think it detrimental to fish coming in the river to place large numbers of nets at the mouth of the river?—A. No, I don't—you might obstruct them for a short period, but when they strike the river, you cannot keep them out long.

Q. You don't think they would be headed off and go away?—A. No, I think they would seek these rivers—I don't think they would go away.

By Mr. Wilnot:

Q. Are there not improvements going on outside the mouth—will that affect the channel?—A. It will make it narrower.

Q. Is it by driving piles?—A. Yes, laying mattresses, &c.

Q. How will they affect your fishing?—A. Well, it will make it more difficult to fish there.

Q. Would it be possible to carry on your fishing within the limits of the channel?—A. Well, I would hardly expect to get a fish within that channel.

Q. And you would have to fish outside?—A. Yes.

Q. And then the fish would have a better chance to get up into the main river?—A. Yes; I suppose so.

Q. Is that work in progress now?—A. Yes; I think so. I think boats are at work at present.

Q. Well, I hope, Mr. Wadhams, in a joking sort of way, sir, that you have not lost anything in giving your remarks in the first place, I considered that the precedent would be a bad one, and that others would perhaps say they would not give their evidence, but would go to Victoria.—A. I meant no discourtesy.

Q. Oh no, Mr. Wadhams, we quite appreciate that. Well, is there anything further you would like to state?—A. No; I think not at present.

Mr. ARMSTRONG: Thank you, Mr. Wadhams, thank you for your information.

JOHNNY MORGAN (coloured), of New Westminster, a native of British Columbia, and a fisherman.

By Mr. Wilnot:

Q. Well, what is your grievance, or what do you want?—A. Well, I want to speak of ways of fish along the river at Harrison.

Q. Well, what do you want to say about that?—A. After they come up there—about a month after—the Indians catch them and dry them for their own use.

Q. Do you mean on the main river?—A. No; on the Harrison River; that is before they spawn—about two weeks—that is about November.

Q. Do they not spawn earlier than November?—A. Some of them do. After they find out they are going to spawn they don't catch them any more. The flesh gets white after a certain time, and they are poor.

Q. That is before and after, and at the spawning time?—A. Yes, sir.

Q. How long before the real spawning time do you see them getting white?—A. Well, about two or three weeks—about the beginning of November—some before and some after. More get up before. The sockeye get up first, then spring salmon.

Q. Spring salmon go there to spawn too?—A. Yes, sir; then the cohoes go—in fact all the fish, the cohoes, spring salmon and sockeye—they go up Morris Creek to the lake, except the spring salmon. They go up Siwash Creek and right along up to the lake. They don't go into Morris Lake at all.

Q. Have you fished up there?—A. I have both fished and speared. The principal way they have of catching salmon for their own use is by spearing.

Q. Have you ever got licenses to fish?—A. Yes, sir.

- Q. They give you permission to fish with a net?—Yes; down here.
 Q. Then you cannot complain because you don't get a license?—A. Well, I don't know.
 Q. You did get a license?—A. Yes; in my own name and paid my own money for it.
 Q. Did you catch many fish?—Yes; sometimes some years, and sometimes not as many as other years.
 Q. What average, about?—A. I caught 3,000 last year—that was my bad year—the year before about the same.
 Q. Then you generally averaged about 3,000 salmon?—A. Yes.

By Mr. Armstrong :

- Q. What did you get for them?—A. Last year 20 cents, the year before 10.
 Q. Have you been on streams or rivers where spring salmon spawn?—A. They spawn at Harrison right along the river.
 Q. Have you seen them spawning between the town of Harrison and along the river up to Harrison Lake—that is the spring salmon?—A. Yes, sir.
 Q. And spring salmon don't go into Harrison Lake—they go into Siwash River and Lake?—A. Yes, sir.
 Q. And how far is it from the mouth of the Siwash River to Siwash Lake?—A. About 8 or 10 miles.
 Q. And all along that river is it a spawning ground—rapid water?—A. Yes; rapid and with gravelly bottom.
 Q. What probable depth?—A. Well, about a foot and in other places a foot and a half.
 Q. And the fish that enter Morris Creek are principally all sockeyes?—A. Yes; sockeyes, steel-heads, cohoes, and dog salmon.
 Q. Well, sir, your information is useful in this way that some of the canners want spring salmon bred here and the information you are giving would lead to the belief that spring salmon go up Siwash Creek and could be caught there—what time was that?—A. Yes, in November.
 Q. Have you caught many of them there?—A. Quite a few.
 Q. Red or white?—A. They are mixed red and white, but after a time there they all get white.
 Q. Is that the case with Sockeye too?—A. Yes, sir.

By Mr. Wilmot :

- Q. Well, sir, I might state that the officers here have been seeking a place to get spring salmon to breed from, and this information you have given leads to what they require?—A. Yes, sir; there is another Creek—Silver Creek—I think it is—it empties into Harrison Lake—that they go up.
 Q. Do you know anything of Stave River?—A. No, sir.
 Q. What do you think of throwing offal into the river—good or bad for fish or people?—A. It might be bad for people, but I don't know if it is for fish.
 Q. Are many people fishing on the Siwash River?—A. Nothing but Indians.
 Q. And they catch them by spearing, you say?—A. Yes, sir.
 Q. But not when spawning?—A. Not just at spawning time, because the meat is not very good and for a while it is very poor. When the sockeye comes in numbers they die—many die before they spawn and many after.
 Q. Do spring salmon die too?—A. Yes.
 Q. As numerous as sockeye?—A. Yes, sir. I think very few fish get back again.

By Mr. Armstrong :

- Q. Do you reside up Harrison River?—A. Yes, sir.
 Q. Have you seen fish die when they got a short distance this side of the bridge?—A. Yes, sir; I have seen many of them.

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By Mr. Wilmot :

Q. Can you give us any reason why they die?—A. No, sir.

Q. Where are the Hot Water Springs?—A. About three miles above.

Q. And the outlet of the spring is right at Harrison Lake. Does it change the colour of the water in Harrison Lake?—A. No, sir.

Q. The fish dying are in Harrison River?—A. Yes, sir.

Q. Do you see them die in Siwash River?—A. No, sir; I have not seen them.

Q. The inference is the hot water has an effect—do you know anything of Nicomen Slough?—A. It is a part of the Fraser—it comes down just a little below Harrison.

Q. Do you know anything of the Pitt or Coquitlam Rivers.—A. No, sir.

Q. Is there anything further you would like to say?—A. No, sir.

Mr. WILMOT.—I am very glad you have given us the information you have; we have not had any one before giving us information as to these rivers, and it may be useful hereafter.

Mr. ARMSTRONG.—Thank you for your information.

The Commissioners adjourned at 4 p.m., to meet again at 10 a.m., on 26th February.

NEW WESTMINSTER, B.C., 26th February, 1892.

Seventh Day's Session.

The Commissioners re-assembled at the Court-house, and was called to order at 10.20 a.m.

PRESENT.—S. Wilmot, Esq., presiding; Sheriff W. J. Armstrong; Mr. C. F. Winter, secretary.

WILLIAM ARTHUR, of Delta, or Ladner's Landing, a native of England, a farmer, and resident of British Columbia for thirty-three years, was duly sworn.

By Mr. Wilmot :

Q. If you have any statement to make appertaining to the fisheries of the Fraser River, we will be pleased to hear it?—A. I wish to speak on the offal business. I don't know anything of the regulations about cannerymen or fishermen proper, but I wish to speak particularly on the offal business.

Q. Are you aware that offal is forbidden by law to be thrown in the river?—A. I have heard so, but I know it is always thrown into the river. My farm is just two miles from the Delta cannery, on a slough running in from Point Roberts. This slough is not navigable, except for very small boats, at high tides the water is bank high, but when it goes out it leaves the soil perfectly dry. It is ten feet wide at my place down to sixty feet at the cannery. The Delta cannery and Mr. Wadhams' cannery are not on the main Fraser, but they are on a slough; a sand bar runs down the river about two miles; steam-boats going to Ladner's Landing have to back down a mile to get back.

Q. What is the name of the slough?—A. Cohiluthan Slough.

Q. How far is it from—which cannery?—A. The Delta; it is right on the corner of the slough.

Q. How many more canneries are there between that slough and Canoe Pass?—A. Mr. Wadhams' cannery—before a steamer can get back into deep water she has to back about half a mile—now the offal is all thrown from the bottom of the cannery and the tide comes up this slough and takes it clean up to where I live. The offal is all thrown from a hole in the floor to the water.

Q. About how deep is the water?—A. Well, it is often dry; I have seen the offal from a foot to eighteen inches deep until the tide comes. When the tide runs up it goes with a pretty big current and takes everything up to where I live, but when it

recedes it leaves everything in the grass. It moves everything right up to the head of the slough, and then it stays there, not only portions of offal, but lots in front of my door. I invited some canners to go and see it, but they would not go. Since these canneries have been there we have had much typhoid fever; right along this slough we have had seventeen cases of fever this last summer; four cases in my own house alone; three I had to send to the hospital, and it cost me \$600 to get them out. And Mr. Calhoun—his farm is opposite mine—he had two of his sons and three of his hired men down with typhoid fever, and so Mr. Calhoun had five cases in his house. A quarter of a mile below my nephew lives, and he had three cases, and there were two others further down nearer the river, and they had two cases also that I know of. I think if the offal were taken out in the deep water where the current would take it off, it would be less liable to cause sickness, but I am fully convinced that this typhoid fever has been the result of offal being thrown in, because there has been no sickness either side of us all summer.

Q. What do you mean by "either side"?—A. A mile on each side of us. There is no current to take offal from either of those canneries—the tide comes right up. I refer to the "Delta" and Mr. Wadhams's canneries.

Q. Do these two canneries carry on a large business?—A. Yes, sir.

Q. To what extent—have you any idea?—A. I don't know; I have heard that the "Delta" put up two years ago 20,000 cases.

Q. You have reference to 1890?—A. Yes; I have heard in 1890 20,000—something like that.

Q. Have you any cause, or knowledge of your own, or could you give us any information as to the number of cases put up that year?—A. No, sir; I could not—I only speak from hearsay.

Q. The hearsay is 20,000?—A. Yes; I think those two canneries are situated worse than any others on the river, because there is no prominent point where the current strikes to take it off. I think the offal should be taken from those canneries especially.

Q. What about Canoe Pass?—A. Well, there is quite a bit of sickness along Canoe Pass as well.

Q. What canneries are there?—A. Well, I don't know, I think there are three. The Phoenix is one—I don't know all the names.

Q. Are there cases of typhoid fever on Canoe Pass?—A. There has been; it is a larger body of water than our slough. Canoe Pass is a very large stream.

Q. How wide might it be?—A. A quarter of a mile, I think.

Q. The effects of offal there would not be felt as much as in your Slough?—A. Not as much; there are little pockets in the sides of the Pass, little wash-outs, &c., and offal works in these, and people who were piling hay had to go and remove it.

Q. And they removed it? For what reason?—A. The stench was so bad they could not work.

Q. Is there an oil factory near there?—A. No; the oil factory is on an island in the river further up.

Q. Do you know the name of the island on which it is?—A. I don't know.

Q. Crusoe Island?

MR. LADNER (interrupting): Yes; you may call it that.

MR. WILMOT (to witness): You have resided for some time down there?—A. I have owned land for 15 years and have had my family residing there for the last seven years.

Q. Have you been selling land there?—A. No; I have not sold any, but I will have to sell very soon if there is continued sickness.

Q. Has it affected your land?—A. Yes; I think it has depreciated the value of land, in my estimation \$20 an acre, on account of the fever sickness being along that slough. I might say there was going to be a public meeting to-morrow at two o'clock for people to give evidence to send before this Commission.

Q. What municipality?—A. Delta.

Q. On the offal question alone?—A. Yes; on the offal question alone.

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Q. Are there many inhabitants in that municipality?—A. Yes; they are quite numerous there now—I suppose there are a couple of hundred people in about a radius of three miles there.

Q. All farmers?—A. Principally.

Q. What is the product of farming operations there, cereals &c.?—A. Yes; cereals, hay, fruit and general farming.

Q. Well, the island formed between the slough and Canoe Pass?—A. Well, it is an unknown island; it is a sand bar formed for about two miles long—at high tide vessels might go over it. The offal is carried into that slough and there is no current to take it out.

Q. Are you of opinion that means could be adopted for consuming this offal by making it into oil or adopting it for agricultural purposes—fertilizer?—A. Well, I have used some of the material from this factory as a fertilizer and I think it very good.

Q. What sort of constituents has it—the refuse?—A. Something like a brown snuff, quite fine, like powder—I used about 500 pounds of it last summer.

Q. And quite dry?—A. Yes, quite dry.

Q. If thrown into water does it float away or does it sink?—A. Well, I never threw it in, I throw it on the land—I think if thrown in might float away—there is no smell attached to it much.

Q. Have you been at the oil factory?—A. Yes, I have been through it.

Q. Is there much offensive smell coming from that factory?—A. At the time of working there is.

Q. Have they done much work there—have they manufactured much?—A. No; not a great deal—I have heard it did not pay for itself, but the offal could be taken from these canneries in scows with false bottoms like sand from dredging.

Q. Have you heard the reason why it did not pay?—A. No; I think it has been carried on, on an experimental scale—the Delta Cannery has taken some offal to this factory last summer, but I don't know if canners had any shares in it, &c.

Q. Do you think it would be any difficulty for canners to take offal to these factories if established?—A. No; it is a mere matter of towing the scows there.

Q. Could offal be easily caught from the canneries?—A. Yes, I think so—it would be merely a matter of dropping it down from a shoot into a hopper.

Q. What effect upon fish has it?—A. Well, I don't know what effect it would have upon fish.

Q. Do fish ever come up the slough you speak of?—A. I don't think any salmon run up there—nothing but small fish—dog-fish, suckers, &c.

Q. Have you any knowledge of what transpired there 20 or 30 years ago; during the time you have been there did any salmon come up?—A. Fifteen years ago there was no bar there and steamers could come in then. Formerly, I believe, the slough did run straight through, but I don't think any fish went through.

Q. Well, then this map is misleading, because it shows the water running straight through into Georgia Straits. (Referring to map by Albert J. Hill, in pamphlet form, printed at the office of "The Columbian," New Westminster, 1889).—A. Oh no; no water runs through—there is no opening and the offal backs up and comes through—I have never been in the fish business and so cannot say much about them.

Q. Of the inhabitants that form this municipality—were there many ordinary fishermen or are they fishermen at present?—A. No; most are farmers—there might be 15 or 20 fishermen.

Q. Is the soil good and productive?—A. Yes, very good. And the tendency would be that farmers would settle there, but if there is as much sickness again as last summer, it would deter people from going there, and I think it can be traced right to the offal.

Q. Are you aware of this sort of difficulty prevalent anywhere else, except just at Delta?—A. On Canoe Pass, as I have told you.

Q. Anywhere else?—A. No; not that I know of.

Q. Are you sufficiently acquainted with operations in a cannery to know what proportion of fish become offal and are thrown in the river?—A. No, I am not—I would suppose one-fifth or one-sixth goes into the river and very often there might be a scow load that goes—any unfit for canning are thrown into the river.

Mr. LADNER (interrupting).—Mr. Chairman, I will ask you to ask Mr. Arthur if he knows that, and can state it in evidence?

Mr. ARMSTRONG.—Order, order.

Mr. ARTHUR.—Well, I have known of fish to be thrown over from a scow.

By Mr. Wilmot :

Q. And have you seen this on more than one occasion?—A. Well, what I have seen myself and heard ; when there is a heavy pack it is done every season.

Q. Does it occur every season?—A. No, I don't think it occurred this season ; I know that last season it was, because I went to get some myself and the whole scow load was bad.

Q. What number might be in a scow?—A. From one to two thousand fish in a scow ; I should think that fully.

Q. And you say that when these are bad and unfit for canning they are thrown into the river?—A. Yes ; they are. I am not a canner myself, but state from hearsay, and what I have seen.

Q. And can you say you believe that if a large factory were started there this offal can be used in shape of a fertilizer and oil?—A. Yes ; I cannot say if it would pay, but I know the fertilizer is good, and I have used the oil and it is good. I should think about 2,000 gallons were used at the Landing last summer ; Mr. McNeely told me about 2,000 gallons were sold.

Mr. LADNER (interrupting).—I would ask Mr. Wilmot to ask Mr. Arthur if he knows that for a fact himself?

Mr. WILMOT.—No interruptions please ; when you were here you were heard attentively, Mr. Ladner.

By Mr. Wilmot (continuing) :

Q. So you think about 2,000 gallons of oil were purchased at Delta ; what value per gallon?—A. I think it is 50 cents.

Q. What use do they put the oil to?—A. Well, farmers use it for every shape in which they use oil.

Q. Is it good for lubricating machinery?—A. Yes ; and for oiling harness, and in fact everything owned on the farm.

Q. It takes the place of the kind of oil they formerly used?—A. Well, I have never heard of anything else but fish oil used there.

Q. Well, but it takes the place of what was formerly used and bought elsewhere?—A. Of course.

Q. You have been in the habit of buying oil other than this for lubricating, &c.?—A. Yes.

Q. And at what price?—A. Just the same price as offal oil from the factory.

Q. It stands then on the same footing, as it were?—A. Yes.

Q. Where is the nearest agricultural or farming operations carried on to you from Delta ; is it all around that section of the country?—A. More or less all over ; it is all taken up ; not an acre but what is owned ; of course it is not thickly populated as yet, but quite so around the river front.

Q. Is this oil much used?—A. Well, I don't think they use anything else, for a farmer goes and buys dog-fish oil.

Q. Is this oil used anywhere else ; do you find lumbermen using it on skids, &c.?—A. Well, I don't know.

Q. You know oil is used for that purpose?—A. Yes ; I know.

Q. And do you think this offal oil would be useful for this purpose?—A. Yes ; I think so.

Q. You must know, Mr. Arthur, the object of asking these questions is that in the event of the offal being made into oil, we want to know if it is possible for it to be used for these purposes?—A. Well, I think it preferable to dog-fish oil, because it is not so offensive to the smell.

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Q. You don't know anything about the fishing business, and don't care to make any remarks; you have no suggestions to make? What is your idea as to the close season—at present it takes in from Saturday morning at six o'clock until Sunday afternoon at six o'clock?—A. Oh, well, I think that is very good. I am not interested, but I think it would give time for fish to run up from Saturday morning to six o'clock Sunday evening.

Q. Now, from a moral standpoint, is it preferable to have any operations on Sunday used for fishing purposes?—A. I think not.

Q. Then you think it justifiable, not only to fish, but to inhabitants coming here, that the whole of Sunday should be kept?—A. I do.

Q. Now, a great many settlers complain that they cannot get licenses; do you think every man, a British subject, should get a license to fish if he wants it?—A. I do; I think that every man who is a fisherman should get it, but it should not be transferable, and I think one license enough for one man.

Q. From the point of causing immigration to the country, do you think it would advance the population here if every man got a license?—A. I think it would; I think if cannerymen get all the licenses they want, very few other persons would get the chance of fishing.

Q. You don't say cannerymen should not get any licenses?—A. Oh, no; I don't say that, but if cannerymen get a great number of licenses, why fishermen cannot sell their fish.

Q. Have you known of people leaving the country because they could not get licenses to fish?—A. They have told me so, that they were going away because they could not get a chance of a license or sell fish.

Q. Are you now satisfied in your own mind that offal could be converted into oil and fertilizers by the application of the necessary means from the canneries?—A. I do, and I don't think, even if it could not be used in the factory, I don't think it would be of but very little expense to take it out into salt water, because there is never a day but the canneries from Delta, take a steamer to the mouth of the river, they take the scows down.

Q. And you think it would be conducive to the benefit of the cannery, if they did this?—A. Yes; to the health of the cannery.

By Mr. Armstrong.

Q. Are there any cesspools and other stagnant recesses near your house to make a smell there, other than what comes from the slough?—A. No, sir; there is nothing to account for the sickness other than the offal; beyond a mile from the slough there was no sickness; around the slough there were 16 cases and three or four deaths.

By Mr. Wilmot.

Q. Where do you get your water, along the slough?—A. We have to catch rain water, my cattle have to drink the water from the slough.

Q. Well, if the cattle drink this, was there anything bad in the milk?—A. Well, a canneryman told me that—that the sickness came from the milk, but whether this is from the cattle drinking the water or not, we could not get water anywhere else, except away back in the woods—the cattle cannot get anything else.

By Mr. Armstrong:

Q. Are there not a number of persons down there who use water out of the slough?—A. Yes; they have to—they take it from the slough and filter it if the tanks run out. When we first went there to live we drank water from the slough.

By Mr. Wilmot:

Q. About 16 years ago?—A. Yes.

Q. Were there any canneries there then?—A. No, there were no canneries when I located there first.

Q. And you drank the water from this slough?—A. Yes, but we don't do it now—we are afraid to do it.

MR. WILNOT.—Thank you—that will do Mr. Arthur.

E. A. JENNS, of New Westminster, a barrister, and resident of British Columbia for 11 years, was duly sworn.

By Mr. Wilnot :

Q. Well, if you have any statement, Mr. Jenns, we are prepared to receive it?—A. I would prefer if you would ask me the questions in order.

Q. Well, in regard to the offal question?—A. Well, some seven or eight years ago when younger, I used to go fishing and shooting on the river, and I have seen the shoots at the canneries leading into the water continuously day after day, and I have seen the small fish around them in great numbers. No part of the intestines ever reach more than the water before being consumed by the thousands of small fish, and the larger parts, the heads and tails, are eaten up by sturgeon and the larger fish. I don't believe that the injury from offal is one half as much as from dead fish floating down stream.

By Mr. Wilnot :

Q. What effect has offal on fish and fish life?—A. It simply serves to feed the lower class of fish.

Q. Any effect upon the entrance of the commercial class of fish passing up?—A. I should think not ; I could not say whether or not, but I believe not.

Q. What effect has it, do you think, from a sanitary standpoint?—A. Well, the only place I have ever heard of it is from around the Delta, where lots are found, but even there, I don't think the smell would be as bad as above here,

Q. Then you think it has an effect?—A. It might have down there, but not here.

Q. What is the effect of water and air being pure, is it not better from sanitary effects than if not?—A. Well, yes, I certainly grant you that, but you have not proved yet that the water or air is made impure by offal.

Q. Then you think it has no effect upon water or air by throwing in large quantities of offal?—A. I think it has very little effect, because I think it is consumed at once.

Q. You think it is consumed as it falls from the canneries?—A. I have seen the water apparently to the eye rise three inches as the small fish rushed up.

Q. Or would it be from rising on top of the offal underneath it? (laughter)—A. No : it would be from the fish rising up to get the offal.

Q. Have you seen fish in shoal water with their backs out of the water?—A. Well, I have seen fish in the upper waters of the Fraser River in places where the water was shallow, fighting their way up—they laid back to back—the smaller fish don't come up that way—they go with a rush.

Q. Then you think offal is not injurious to man or beast?—A. No ; not if deposited in deep running water—on shore it may,

Q. Then if it lodges along the sloughs?—A. Well, I don't think it would be as bad as from death of fish. I know of one farmer in Chilliwack who took away 50 loads of dead fish.

Q. But Chilliwack is not down here?—A. Well, but it is just the same as here—Chilliwack is only 40 miles away—I have seen dead fish in great numbers 500 miles from here.

Q. But if you or your family were living along these sloughs would it not be offensive?—A. Well, not at the canneries—I am speaking of when there were canneries in the town here—Mr. Ewen had one, and I think there was another in town then, too.

Q. Then you would not mind living alongside a cannery?—A. No ; I would not, except for the Chinamen.

Q. Then Chinamen are worse than the offal are they?—A. Yes. I think so, a good deal. (Laughter.)

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Q. And you say the offal goes down from a shoot into the water and the little fish raise themselves out of the water to get it?—A. Yes. I have seen it time and time again.

Q. Do you know what fish these are?—A. They call them suckers.

Q. Do you know that suckers are a voracious fish?—A. They are a greedy fish I know.

Q. Do you think they eat the heads and tails?—A. No, I don't; but they eat the intestines—the heads and tails are eaten by the sturgeon.

Q. But these large quantities that are sent along the sloughs—is that what has escaped being eaten by the large fish?—A. If it is so, I suppose so.

Q. You spoke of large numbers of salmon coming down from the upper waters dead—have you ever seen them here?—A. No, but I have seen them in thousands between Boston Bar and Yale—I have seen a few here, but they don't appear on the surface as above.

Q. The place you speak of is several miles from here?—A. The place I speak of is over a hundred miles from here—I have seen a few floating here and have seen them along the shore here and there deposited.

Q. From what source were they deposited?—A. Well, I have simply imagined that they were washed up by the tide.

Q. Would you think they were from the canneries?—A. No, I don't think so—I didn't think there were any canneries above here.

Q. Were canneries not above here—what about the "Bon Accord" and Mr. Laidlaw's cannery?—A. Oh well, if you tell me there are canneries above here, of course, I suppose there is.

Q. Is it not possible that this offal which creates in the estimation of the public here so much offensiveness—could it not be made into oil or something?—A. Well, I don't know anything about that—it is a speculation—I would not care to go into it myself, it might not pay, though I don't know.

Q. You say offal from fish is not injurious to fish or to inhabitants?—A. That is my opinion.

Q. How about saw-dust?—A. I know nothing about that.

Q. About the limitation of licenses?—A. No. I don't know—I know the canneries must have fish to work with on Monday—the present close season seems to me to have been found the best of any.

Q. You are a legal man you say—if a man has business you think you should work on Sunday for him?—A. Yes. I would work on Sunday or any other day.

Q. And you have no fear of that which appertains to the christian world?—A. Well, I would not like to say that either.

Q. Do you know of anything about artificial fish-breeding?—A. I believe it is beneficial.

Q. Do you know anything of the distribution of licenses?—A. Well, that again I can only speak of from a business point of view—what number I cannot say, but I think every British subject should have a license. But from my experience I can speak of only some canneries—the canneries make arrangements in the spring to put up so many cases—fifteen, twenty, or thirty thousand cases as it may be—then they make a contract with intelligent fishermen to supply them with fish—if they get few fish their own boats are fully employed—if they get too many fish then their boats are first withdrawn—that is working with an established number of licenses—for if they execute a contract with outside fishermen, of course if they did not adhere to it, would be a matter of so much damages.

Q. And with an established number of 25 or 40 licenses they make these calculations—if they got one-half the number of licenses they would make one-half the arrangements?—A. Well, no, it would depend upon their capital and other things.

Q. And you think there should be an established number and every fishermen should get a license?—A. Certainly.

Q. And do you think there should be bartering and selling of licenses?—A. I simply think that the man who takes a license or licenses should use them for himself—it is not a matter of speculation.

Q. What are your views in regard to the license fee being the same for all canners in the province?—A. That I am not prepared to say.

Q. Well, sir, I think that is all the list of questions—if you have anything further?—A. I have one or two things I would like to suggest—I heard one witness speaking about the different runs of fish in the river. I cannot speak from personal knowledge, but the man who knew most about fish in the river was Mr. Charles Hughes—he is dead now, unfortunately—I give this simply as information. He was a man who knew about what he was talking and he told me when the Whites first came out here the stories they got from Indians were to the effect that there were five runs of fish in the river, and they didn't believe them. Then a man was sent out from England and stayed here a year—a Naturalist—and after studying the thing out they found there were really five different classes of fish in the river—then a man named Lord wrote a book about the salmon in British Columbia and telling of the different kinds. Another thing is, I don't think from what I personally observed, or from what I have heard, that any sockeye ever return to the sea after they enter the river.

Q. Have you any knowledge of that fact?—Yes; I have been travelling up and down the river since 1878.

Q. How do you think that the species would be kept up if all die?—A. Well, that I cannot say—there is one proof outside of what I have heard and that is this—salmon can be caught going up river, but I never heard of fish being caught going down.

Q. But fish are no use then?—A. But the experiments have been made—just like the experiments to catch them with a fly.

Q. Do you know the cause of that sir, why they cannot be caught? They never take the fly in the breeding season in any country in the world—they only take the fly when they first come in and in clear water?—A. Well, I know salmon will take either the spoon or fly in the salt water at the mouth of the river, and that salmon will take the fly and spoon in England.

Q. They do in some of the lakes and streams?—A. Then the effect trout have upon the salmon—they are not merchantable here but they are in Victoria. I have seen the salmon spawning and the trout following up and eating the roe almost as soon as it is deposited.

Q. Yes; that is a provision of nature—all fish live upon one another—either directly or indirectly. Large fish consume the smaller ones, but evidently they leave enough eggs to furnish these canners with enough fish to carry on their operations.—A. There is just one other remark—I don't know if it is of much interest—five years ago I was up to Coquitlam Lake, and I have seen salmon in great numbers there dead upon the water—some sockeye were, and I have seen them there dead after spawning. One of the Indians who was with me took one of the dead salmon out of the water and stripped it to get some of the spawn to fish with for trout.

Q. Then the consumption of water from this lake, would it not be hurt by the numbers of dead salmon? I understand that you are to draw water from this lake for the city—if large numbers of dead fish are there would it not be hurtful to the water?—A. Yes; certainly it would.

Q. Then would not this large amount of offal thrown into the river be hurtful?—A. Well, I don't think so—it is all eaten up at once. I have drank water myself from the river in winter and have been made almost sick from it. From what I have seen of Coquitlam Lake, I don't think the water would be very much hurt.

Q. You would only draw good water then for the city. You would not draw the bad water? (Laughter.)—A. Well, I don't know—I don't think it would be hurtful.

F. L. LORD, a native of the United States, resident in New Westminster—15 years in British Columbia—and a salmon packer, was duly sworn.

By Mr. Wilmot:

You prefer giving your own statement to answering questions?—A. Yes; I would prefer it for awhile anyway. It is my opinion that offal does no particular harm to fish

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or fish life—I cannot see where it does any. I would not undertake to say it does not actually do any, but I don't know that it does any particular harm—there might be, but I don't know anything about it.

Q. What further do you know then?—A. Well, from my experience in the salmon business we have been practising dumping it down through shoots into the water—that has been the practice.

Q. Have you been aware all this time that it was an illegal practice?—A. Well, there has been no law enforced to the contrary.

Q. The law is in force—it is only that your permission given to not observe it is revoked.—A. I suppose so.

Q. And the law was not revoked either this year or last year, therefore it must have been in force?—A. I am not an owner—my employers would be liable.

Q. What cannery would you be with?—A. I have been with Mr. Wadham's for a number of years past.

Q. What quantities of fish are brought in annually?—A. Oh, well, if a man packs 15,000 cases we calculate from eleven to twelve fish to a case, and that 15,000 cases would apply to some years while, 8,000 cases would better apply to some other years.

Q. What would be the weight of salmon of that kind?—A. Well, I could not say what proportion we throw away.

Q. That is not the question I asked.—A. Well, about four or five pounds after they are cleaned.

Q. But I asked you what are the average weights of salmon brought in by the fishermen?—A. I don't know.

Q. What time were you engaged in salmon business?—A. About sixteen years.

Q. And you don't know the average weight of the fish you handle?—A. Well, I don't know—I never weighed them; if you want me to guess, why of course—

Q. Oh, well, you guessed at these other matters, did you?—A. No, I know that; oh, well, I would say the fish would be in the neighbourhood of 8 pounds.

Q. Do you get any fish weighing 8, 9 or 10 pounds?—A. Well, probably 10 pounds would be too much.

Q. And what the average?—A. I would say from 6 to 7 pounds.

Q. And you guessed at that, too?—A. I am guessing it, of course, because I never weighed them.

Q. And if other canners make oath that it is 7 or 8 pounds would they be correct?—A. Well, I don't know; I don't like to be fastened down to a point; I should say the general average would be about 7 pounds.

Q. Cannery and others say about 7 and 8 pounds?—A. Well, I suppose I should say 7 or 8 pounds.

Q. And now there will be no guess work as to the number of fish that come in?—A. Oh, no, I know that.

Q. What number of fish would be brought in daily?—A. Well, it depends on the season; sometimes they will bring in two or three hundred, and perhaps next day you will only get 20 or 30.

Q. Is there any time in the season when large numbers are taken?—A. Oh, yes; it is very hard to say; some men will go out and catch between seven and eight thousand fish.

Q. Some will catch 10,000, don't they?—A. Well, I have heard so, but I don't know whether they do or not.

Q. Well, many of them catch 5,000?—A. Yes; I should think many of them would catch 5,000.

Q. And these fish are brought into the cannery?—A. Yes; they are all brought to the camps first. They are then brought to the wharf and then cleaned and put on tables for cutting.

Q. What is the first process in cleaning?—A. Taking off the head, then taking off the fins, and then splitting the belly and cleaning out the entrails. Then the tail is cut off and thrown out into the water.

Q. What is the next process then?—A. After the salmon is washed thoroughly it is cut into the right lengths by a machine with revolving knives, to suit the cans.

Q. Well, then, they are cut in so many pieces, and these are the pieces that make the cans, and each can takes one, and one fish will make how many cans of that size?—A. About four cans.

Q. An eight-pound salmon will make four cans?—A. Oh, I won't say the eight-pound salmon.

Q. Well, we started with an eight-pound salmon; we will say four cans?—A. Then they are thrown in the brine tank, and then thrown out and drained, and then they go on the filling tables, and then they are put in cans.

Q. A pound in each?—A. Yes; they do get a pound in each. The next process is, all dirt is thoroughly washed off the can, &c., and then they pass on to the soldering machine and then they are cooked. After steaming they are washed in the lye kettle, thoroughly washed off in a clean kettle and piled away.

Q. And they are then ready to be packed for market after being labelled?—A. Well, they are piled up in a pile—before this they are tested, and leaks fixed up, &c.

By Mr. Armstrong:

Q. After they are steamed, do you not put holes in every can?—A. Yes; they are punched with a hole, and after the steam comes out they are then closed up.

Q. And does any liquor come off?—A. Yes; a little liquor goes, too.

By Mr. Wilmot:

Q. How many hands are employed in a cannery?—A. Well, in the neighbourhood of 100, all told—that is, in a cannery with a capacity of 15,000 cases, because there are only a few days when all can be working fully.

Q. Of those 100 hands, how many are foremen generally?—A. I have been a foreman—there would be a foreman of the Chinamen—he would be a Chinaman.

Q. Yes; but how many white men in specified positions?—A. Well, then there is the foreman of the cooking; then there are firemen, and several other assistants.

Q. The firemen would be white men, and all the rest Chinamen?—A. No; there would be a white inspecting the filling, and white men would be in charge of the retorts, timing and keeping the proper temperature; then watchmen, &c., about eight white men.

Q. Would that be a fair average in other canneries?—A. Yes; there might be days when they would bring in one or two others.

Q. And the rest?—A. Klootchmen and Chinamen—the greater number Chinamen. The Indian women wash the fish, and pile the cans away, and such work as they can do.

Q. Are Chinamen paid by day-work, or on contract?—A. Well, some canneries are different. Some Chinamen contract to do the work at so much a case. Mr. Wadhams engaged his men by days' pay.

Q. Do you know how much the boss Chinamen gets per case?—A. About 50 to 70 cents a case. I don't know what it costs other cannerymen.

Q. A trifle over a cent a can?—A. Yes.

Q. And the Indian women, they are paid by the day?—A. In the case of a contract they would be paid out of that 70 cents, or whatever it might be.

Q. Oh, then the whole of the work is done by the Chinaman boss?—A. Yes; the whole thing; and of course these Chinamen pay the Klootchmen.

Q. And the only other white men would be the six or seven you mention?—A. Yes; that applies to some canneries.

Q. Well, it is the general thing, is it not?—A. Well, I think a number of canneries have been doing it by the day.

Q. Then the white labour employed in a cannery, turning out 15,000 cases, are some six or eight white men?—A. Yes; but I may say it would not pay any white to do the work the Chinamen do for the pay, or anything like what the canneries would be willing to pay.

Q. And if any class would do it for 35 cents, you would take legitimate work away from others for them?—A. Yes; we would all do that—we would get it as cheap as possible.

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Q. Have you any knowledge of the Columbia River?—A. Yes; I have been through there, and I have never seen a white man employed there in this work—a white man would starve to death.

Q. Then the canneries that are run by this work—the proportion of expenditure would be about the same—contract and days' work?—A. About the same, I think.

Q. What do you pay the Indian women?—A. 10 cents an hour. In Wadham's cannery they are paid 12½ cents—some less. Chinamen are paid \$30, \$32 and \$45 a month. Some few Chinamen are paid as high as \$45 a month, but very few, I think.

Q. Then on the whole, contract prices and day prices is about the same thing?—A. About the same thing. Speaking of my own experience, I had to run around and get all the white men I could.

Q. Do you try to get Chinamen first?—A. No, I don't; but we could not afford to take white men.

Q. Then a white man is better than a Chinaman?—A. Oh, yes. Of course I would prefer a good white man to a good Chinaman any time.

Q. Can you give us any description further as to the mode in which these people are paid—are they paid in money or in trade?—A. In money.

Q. Are there attached to the canneries, shops or business places, where cannerymen keep goods for sale to Chinamen and workmen?—A. Yes; most of them have their own shops in connection with the establishments.

Q. And in which the workmen trade considerably for their wants, &c.?—A. Yes; but I don't think they would get much except food and provisions. They have a few little things, dry goods, &c., but they don't amount to much.

Q. But there would be a considerable amount of goods consumed in the course of a year?—A. Yes; in places where they were away from stores.

Q. And do they import these things—do they get them from San Francisco or elsewhere?—A. No; I think they get them from Victoria, and in the towns here.

Q. Do the workmen—Chinamen, Kootchiees, &c.—get all the fish they want gratis for their own food?—A. Yes; usually they do.

By Mr. Armstrong :

Q. Do they get all the white salmon and other fish not canned?—A. Yes; I think there is enough white salmon caught during the sockeye run to supply the Indians with food. I might, however, be going too far in this, but—

Q. And are all given to the Indians?—A. Yes; as far as I know.

Q. Are they in good condition?—A. Yes; invariably in good condition.

Q. You know of no instance where salmon became unfit for canning purposes?—A. Well, there are cases of sun-burnt salmon, which would be unfit for canning, and they are thrown overboard.

Q. Are there any instances in your memory where a whole boat-load would be unfit—keeping over night too long, &c.?—A. No; I don't know of any such case—all boats deliver fish at the scows and none at the cannery. I don't mean that scows come in with sun-burnt fish on that scow. I mean that fishermen will catch fish and throw them in the boat, and when they are not properly covered over, they will get sun-burnt and damaged.

Q. Are these fish easily discerned?—A. Yes; the Kootchmen get them and they watch closely, because they get all these fish for themselves.

Q. But some are thrown overboard?—A. Sometimes.

Q. And these occurrences must occur more or less in a large business?—A. Yes.

By Mr. Wilnot :

Q. And these things cannot be avoided?—A. Oh, well, yes; if you watch every fisherman.

Q. And these white spring salmon that come in—are they kept separate?—A. Yes; they are kept separate.

Q. How many spring salmon does it take to a case?—A. About four or five to a case. On the Columbia River it takes a fraction over three.

Q. They average larger there?—A. Yes.

Q. And sockeye do not frequent the Columbia River?—A. No; I don't know of any. I don't know of any sockeye below the Straits, excepting in around Point Roberts.

Q. And when the sockeyes are coming in in the last of the season, the humpbacks are running, too?—A. Yes; but they are not fit for canning.

Q. What is done with them?—A. I think they are thrown overboard.

Q. And they cannot help catching them?—A. Oh, no; they cannot help catching them. After the second spring salmon run, we have the cohoes run.

Q. And you pack them?—A. No; we do not pack them at all—they don't come in sufficient quantities to pay.

Q. And their flesh?—A. Oh, their flesh is all right, as far as I have noticed.

Q. And they would be in at what time?—A. In the latter part of August. They follow right after the sockeye run. Some canneries have canned spring salmon, but only for one season. They didn't find it profitable.

Q. And there would be a greater number thrown away or given to the Indians, because they are useless?—A. Yes.

Q. And cohoes—what is done with them?—A. Well, they are very numerous, but we do not fish for them unless the freezers and market-men handle them. Cannermen leave them alone.

Q. Are cohoes increasing in numbers in the river to what they were?—A. Well, I cannot say.

Q. What effect would it have upon the river if you caught sockeyes continuously, and allowed the humpbacks and cohoes to come free—would they not preponderate?—A. It does not seem to have that effect; but, as I say, I don't know the first thing about salmon breeding.

Q. Have you had some experience in modes of fishing other than the modes of fishing called gill-netting and drifting?—Any of the mode of fishing by seines—have you found that a seine would be a more injurious net for catching fish?—A. It might be injurious in this way that it would catch ungrown salmon. I think gill-net fishing catches lots of fish. I don't think they would do any better with a seine. The seine is generally thrown around a shoal of salmon, and it takes them all in.

Q. But a drift-net would not take them all in?—A. Well, I suppose a seine would take them all in a shoal, but a drift-net will take more in the river than any seine will.

Q. But would a seine not be more likely to take more fish out of a shoal than a drift-net?—A. Yes; out of one shoal I think it would.

Q. Have you anything to say about the close season?—A. No; I think the way it was last year is about right.

Q. Would it seriously affect cannermen if extended to 12 o'clock Sunday night?—A. Oh, yes; they would never get a boat out at 12 o'clock.

Q. The reason I ask you is that many persons think Sunday should not be broken, but you think it should be left alone (i.e., the present season left alone)?—A. Yes; the season is very short, and I think it would not do to hamper us too much.

Q. Then, if the season was half as short you would take all Sunday?—A. Well, I don't think it hurts to use Sunday, and then it lets fish get up the river.

Q. What do you think of artificial breeding?—A. Well, if you estimate that catching lots of fish kills them out, and then we have good runs of fish, I would be willing to give the hatchery the benefit of the doubt.

Q. Do you think any man a British subject should have a license?—A. I think every man, a resident and British subject should get a license.

Q. Should it be transferable?—A. No; I think a man who gets a license should fish it.

Q. Do the cannery men have relays of men?—A. Yes.

Q. And a boat running all the time?—A. Yes.

Q. And ordinary fishermen have one boat and net?—A. Yes.

Q. And would not that be in favour of the cannery boat with four men?—A. Well, you would think so, but I know our experience is that with a good run of salmon they will pile them up, but with a poor run they don't do much; but if it was not for the canneries the four men in a boat would go hungry.

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Q. Do you think the fees should be the same on the Fraser, Skeena and Naas?—
A. Well, I don't know much about them. I think all should pay \$20 alike; I don't see why they should not.

Mr. WILMOT.—Well, sir, we have got some very useful information from you.

By Mr. Armstrong :

Q. I might ask you—you say there is nearly enough white salmon caught to supply the Indians who might be fishing?—A. Well, I don't want to be fastened down to that.

Q. Well, are these fish given to the Indians counted in among the number given as caught in the year?—A. Well, I don't think so; we don't pay for those fish to men fishing for so much apiece, but with a man working by the day of course they would.

By Mr. Wilmot :

Q. Nor cohoes, humpbacks, &c.?—A. No. Did I understand Mr. Arthur to say that he had seen scow loads of fish only fit to be thrown away? Because if he did, I can say that it is not true.

Mr. WILMOT.—No; I don't think he said that.

Mr. ARMSTRONG.—But you have no right to say that any man's evidence is not true; you can say that you have never seen such a thing.

Mr. LORD.—Well, I have never seen such a thing. I have seen fish thrown from the wharf, but not scow loads unfit for canning.

Mr. WILMOT.—Very well, sir, if that is all, and you have nothing more to represent to us, that will do.

It being 12.30 p.m. the Chairman declared the Commission adjourned, to meet again in the same place at 1.30 p.m.

NEW WESTMINSTER, B.C., 26th February, 1892.

Afternoon Session.

The Commission assembled in the Court House and was called to order by the Chair at 2 o'clock, p.m.

Present :—S. Wilmot, Esq., in the Chair; Mr. Sheriff Armstrong, and Mr. C. F. Winter, Secretary.

JOHN J. McDONALD, a native of Nova Scotia, a resident of British Columbia for over seven years, now living some eight miles above New Westminster and describing himself as a practical fisherman, was duly sworn.

By Mr. Wilmot :

Q. Do you desire to make any remarks upon the fisheries of the Fraser River or elsewhere in this province?—A. Well, I desire to inform you that I have been refused a license for the last three years, I think.

Q. You regularly applied for it?—A. I applied at the office here.

Q. Was any reason given why you should not have it?—A. Yes; there was a little reason why I should not have it—the first year I fished on the river with another man who had a license—the second year I didn't take the trouble to come to town to get a license of my own, not knowing there ever would be a limit. The manager of the British America Factory supplied me with a license.

Q. Was it written in your name?—A. No; not that I know of—my name was not on the books the following year when I applied for license.

Q. Then you do not know if it was in your name or not?—A. I think not—I am not prepared to say. Three years I applied for a license and they told me I should not have a license because I did not have a license the year before. I had to go to work in a cannery.

Q. In the cannery or with a boat and net?—A. No; I went to work net mending in connection with the cannery.

Q. Before going any further were you not a fisherman in Nova Scotia?—A. Yes, sir; I fished salmon in Nova Scotia and Newfoundland.

Q. What induced you to come here?—A. Well, I came here thinking there would be good chances of going into fishing or sailing on the coast.

Q. Well, you could not get any license and had to work in the canneries?—A. Yes, sir; I had to work in canneries, or at least the fourth year as I might say.

Q. That was in '91—last year?—A. In the year before—I was refused a license and had to go to Point Roberts.

Q. In the United States?—A. Yes; I went there and tried to get up a trap—I had no means to put out the kind of trap suitable for the place, so I made a failure of it.

Q. Is it trap-nets they fish at Point Roberts or pound-nets?—A. "Pound-nets" I think they should properly be called—pound-nets and seines.

Q. And you could not get on there?—A. Yes; for want of means I could not get on there.

Q. What then?—A. The following year again I could not get a license so I had to go up into the upper country to work.

Q. Lumbering?—A. No; I went up building a telegraph line. Last year I did not apply for license, thinking I would not get any, so I was appointed guardian on the river—I asked for the appointment and got it.

Q. Where were you working at on the river?—A. I was appointed for Coquitlam, but the inspector put me down on the North Arm.

Q. And your guardianship extends how far—the whole of the North Arm?—A. The whole of the North Arm—from Westminster down to the Sand Heads.

Q. The Sand Heads? How far out from Sea Island?—A. About a mile and a half or two miles beyond Sea Island.

Q. Well, that distance from Westminster is how many miles?—A. I call it 18 miles—that was my limit. I was living here in town with my family and I went over the route.

Q. Daily or nightly?—A. I generally went down one day and came back next, or as it happened I generally got towed back and forth by tugs and steam-boats.

Q. Do tugs come up the North Arm to Westminster?—A. Yes, sir.

Q. How many canneries are there on the North Arm?—A. Two in operation.

Q. Where situated?—A. One on a small island between Sea Island and Lulu Island.

Q. Whose cannery is that?—A. It is called the Sea Island cannery—I think it is also called "Munn & Co."

Q. Where is the other one situated?—A. On a small island between Sea Island and the mainland.

Q. Near the North Arm road?—A. Yes; it is not far from the North Arm road coming across from Vancouver.

Q. Whose is that?—A. I understand it belongs to Todd & Sons, or "Todd & Co." I am not sure which.

Q. What else do you wish to represent before we ask any questions particularly?—A. Well, I don't know as I have any grievance of my own particularly.

Q. As a guardian on the river, was the law carried out?—A. Well, I have only had occasion to take one boat and net.

Q. What for?—A. Fishing two boats under the one license.

Q. Had both of them numbers on?—A. Yes, they had.

Q. Then, they were improperly numbered?—A. Yes, sir.

Q. Is that the only case of that kind that occurred?—A. Yes, the only one I knew of.

Q. It is very possible there might be others?—A. Well, I don't know—I watched them pretty well. It might be possible there were cases I didn't know anything about.

Q. And the extent of territory you had to go over would almost forbid you seeing everything going on?—A. Yes, it would forbid me from seeing unless I made more trips up the river.

Q. Now, as to the canneries—were there any violations of the law by them?—A. No violations that I have seen.

Marine and Fisheries.

Q. Do you know that it is against the law to throw offal into the river?—A. I was not informed of it.

Q. Was offal from these canneries thrown in?—A. Well, they let it slide into the river.

Q. Are these canneries built upon the land or on piles out in the river?—A. Well, they are partly on piles and partly on the land—the greater portion is on the land.

Q. Where the offal slides down, is land underneath or water?—A. Water.

Q. How deep may the water be there?—A. Well, I could not say—I never happened to sound it; probably there would be 8 or 9 feet or there might be 18 or 20 feet.

Q. There might be 6 feet?—A. I don't know as there is any of them that has as low as 6 feet—it might be 10 feet or more.

Q. Is there much current or a rapid flow of water?—A. Yes; a pretty rapid flow.

Q. As strong there as out in the middle of the channel?—A. Well, at Sea Island Cannery I would say it was; the tide strikes towards the land there.

Q. How wide is the river at the North Arm?—A. It might be approximately one-third of a mile.

Q. And does the principal channel of the river run in the middle?—A. I could not say which side of that island is the principal channel.

Q. Have you noticed if offal put in there is carried away at once or eaten up by little fish?—A. Some possibly might be carried away and some remain and be eaten up. The current is very strong and might carry it away.

Q. Have you been in a cannery when the offal is slid down?—A. Yes.

Q. Have you noticed if the offal stayed there or was carried away?—A. No, not particularly. A few years ago they used to have cribs made to hold the offal. I think that was very injurious to the fish.

Q. What fish?—A. The salmon.

Q. In what way?—A. Well, it was left there to rot.

Q. How are these cribs or bins constructed?—A. Well, they are constructed by having a large box-like place made of one by four lumber and with a vacancy of one to two inches between the slats.

Q. What might be the size of these bins—10 feet square?—A. Well, I am not prepared to say exactly.

Q. Would they be one foot square?—A. Well, I suppose they would be about 10 feet square.

Q. What depth?—A. Well, they were generally built along the bank; they might be 6 or 10 feet at the outside. They were made to suit the bank and bottom of the river, and I think it was injurious to salmon, because it remained there and became rotten.

Q. Then, why was it kept in these bins?—A. Because it was thought better, and would not annoy the fish or the nets.

Q. Then, if it floated out in the river they thought it would affect the run of fish there?—A. Yes; in some cases there might be some little parts of offal that the air gets in, and it will blow up and float like a small nautilus on the water, and it prevents the fish from coming.

Q. And cribs were put there to prevent this?—A. Yes.

Q. Had both canneries you speak of these cribs?—A. No; at Sea Island Cannery I don't think there was any; at the other cannery they had made a shoot. I don't know how they worked it, but it was so as to run, in case the law was enforced, to run the offal into a canoe and have it carried away.

Q. Was it ever run into canoes and carried away?—A. No, sir.

Q. Then the canoes were not used and the offal went into the river?—A. It went into the river.

Q. Then, from what you know of the matter it was the impression of cannery men there that its going into the river would affect the fish and the nets?—A. Well, I don't know what their opinion is. It was my opinion.

Q. And what do you think as regards health—any settlers there?—A. Yes.

Q. What occupation?—A. Farming.

Q. Were any complaints made to you as an officer that offal was injurious?—A. No, sir.

Q. What is your own opinion on the subject?—A. Well, when offal is thrown in—when the tide backs up the river, it may go on places and rest there at high water when the tide falls, but I think if let go when current and tide are running strong out, it would not injure anything—it would go away.

Q. Then the effect of bins underneath canneries would be to prevent that?—A. Yes; in my opinion the bins were a very bad system.

Q. And this offal that floats back and gets on the land does it decay there?—A. Yes; some will dry and decay and then float.

Q. What effect on the inhabitants has it—is it offensive?—A. Yes; it smells pretty bad when it rests on those shore places.

Q. You have never heard the opinion of settlers living there?—A. No.

Q. If you lived there yourself what would you think?—A. Well, I would think that what was thrown out when the tide backs up would be a little offensive—it would be only a small portion that would get on those shoals. I have drunk the water every night a number of seasons now and never found it affect my own health.

Q. Do you ever put anything in the water you drink there?—A. No sir (laughter).

Q. Could it (the offal) not be conveniently carried off in scows to a reasonable distance or out into deep water in the Straits of Georgia?—A. If the law was enforced they intended, I know, to carry it away.

Q. But you received no instructions to enforce the law in regard to offal?—A. No, sir.

Q. But you were aware it was the law?—A. No; not particularly.

Q. Are there many Indians fishing about Sea Island?—A. Yes; quite a number.

Q. What are the fish principally caught there?—A. Sockeye are the principal salmon caught there.

Q. Do you know anything about the usual catch in a day or season?—A. Oh, I don't go in there of a day—but as many as a boat would carry, say two, or four hundred fish—I think some of them carry that.

Q. Have you any idea what the average catch of a boat would be during a season there?—A. Well, I have never heard.

A. Would it be 1,000, 3,000 or 10,000?—A. Well, I have heard but I really forget, but I think some went over 4,000.

Q. Had you ever heard of any catching as many as 8,000?—A. No; I have not heard, but I would say if they were allowed to fish all the time and canneries take the fish from them they would catch that number—some do catch 8,000.

Q. And you say if they could sell their fish—are the canneries filled up sometimes that they would not take fish?—A. Yes; I have heard they were—that is for a short time.

Q. And the fish that are caught in that way and brought to the canneries and the canneries cannot take them—what are done with them?—A. They are generally salted—the fishermen are only supposed to fetch in so many.

Q. Yes; but if a man catches 400 salmon when he goes away?—A. No; but they generally get away with the first catch and then they are generally limited to 400 for a boat, that is those who are selling to the canneries, and then they (the cannery) very often keep in their own boats.

Q. And are all salted—do you know of any thrown away?—A. Oh, not many—a few.

Q. What do you call a few?—A. In a poor time I would call a couple of thousand a few. (Laughter.)

Q. This is done by whites and Indians both?—A. Well, there are few licenses on that route given to Indians. I could not say how many.

Q. Have you anything to do with issuing licenses?—A. No, sir; I have nothing to do but guard the river.

Q. This excessive quantity of fish are generally of the sockeye family, are they?—A. Yes, sir.

Q. In June and July?—A. The latter part of June, July and August.

Q. And is the North Arm a good place for spring salmon?—A. No, it is not good for spring salmon.

Marine and Fisheries.

Q. Are cohoes caught?—A. Yes; quite a few.

Q. What is done with them?—A. They are packed sometimes, but I don't know of it, myself.

Q. The principal business is with the sockeye?—A. Yes.

Q. What size of mesh do you fish with there?—A. Six-inch, extension measure.

Q. And the length of the net?—A. Oh, they have all lengths—the regulation length is 150 fathoms.

Q. How many meshes deep?—A. Thirty generally on the North Arm—some may have forty meshes.

Q. The fish you have known to be thrown away—would they be from Indians and others who have licenses, or from cannery boats?—A. From both. In some cases I have known the cannerymen to have bought the fish and then could neither salt them or pack them, and have thrown them away; but I never knew but of one case to my own knowledge.

Q. Was this a pretty large quantity, then?—A. Something like 2,000.

Q. Do fish come mixed—red and white?—A. Yes, sir.

Q. What is done with those caught red and white?—you say the canneries do not work them?—A. The Indians generally take them and prepare them for their own use. The Indians generally have liberty to take the white salmon and dry them for their own use.

Q. What season of the year would that be?—A. Oh, all parts of the year—there has been a few white salmon canned, but they are not considered marketable.

Q. Have you known any white salmon to be thrown away because not marketable?—A. I have thrown away a few myself, so I suppose others would do so.

Q. And the few you threw away—what number would it amount to in a season?—A. Forty or fifty during a season—I would not have time to salt for my own use.

Q. But you would not throw red ones away?—A. No, sir.

Q. What is the difference in the quality of the flesh—white and red?—A. In the early part of the season they are just as good.

Q. Neither is red later on in the season—are they?—A. No, they are not; but there is not so much difference. There is greater difference between spring and fall in white salmon than in red salmon.

Q. Have you heard complaints on the river of fishermen being unable to get licenses to fish?—A. Well, I have known half a dozen—approximately, there might be more who could not get licenses. They were people who came into the country—principally Scotchmen. They were fishing for canneries and fishing cannery boats—on shares, I suppose.

Q. Were these good, deserving men?—A. Yes, sir; they were all good, deserving men, and were doing very good work fishing for the canneries, as far as I know.

Q. Is it more profitable for a man to fish with his own boat than for a cannery?—A. It is more profitable for him to fish his own boat.

Q. What number of boat licenses would keep each of these canneries running in your section?—A. Well, I would say, in a very poor season when the fish strike in probably for a few days, fifteen or twenty boats would keep them going.

Q. I mean the season through?—A. Oh, well, taking the season through, with the exception of those few days, I think they would get away with forty or fifty boats—some of them more, according to the capacity of the cannery.

Q. Have you an idea of what the capacity of a cannery is—say those down near you—15,000 or 20,000 cases?—A. Something like that, I suppose. If there was a good market, they could put up quite a few more than they do.

Q. Ordinarily, how many boats are required to get a fair catch?—A. Oh, ordinarily, forty boats.

Q. They could not supply their canneries with twenty-five boats?—A. Not unless they got outside fishermen.

Q. Are you aware of the law regarding the weekly close time?—A. Yes, sir.

Q. Is it well kept?—A. I don't find any people encroaching.

Q. Did you ever find any violation of it?—A. None last summer.

Q. And the year before when fishing yourself, did you violate it?—A. No, sir.

Q. Are all fishermen that you now have jurisdiction over content, or is there any discontent among them that they would rather not fish on Sunday?—A. I never heard any. I think some would like to fish on Sunday if they could. I never heard any complaining of having to go out on Sunday night.

Q. There are some men who would rather not go?—A. Well, I have not come across them yet.

Q. As an officer on this river, what are your findings as to the hatchery on the river—beneficial or otherwise?—A. My opinion is that it has been beneficial.

Q. Do you think it should be increased, remain as it is, or enlarged?—A. I think, in the interest of the fisheries, it should be enlarged, so as more canneries should get in operation.

Q. What is your idea as to the class of people who should get licenses?—A. I think anybody should who got into a boat and fished. They should be entitled to fish, provided he is a British subject and resident fisherman.

Q. All entitled to one license?—A. One license, if they wish to get it.

Q. What do you think of a man selling his license to his neighbour?—A. I don't think that is correct—it should not be transferable.

Q. Have you had anything to do with the coast fisheries?—A. No; I was only employed for three months. I have fished in Cowichan Bay, on Vancouver Island.

Q. What were you fishing for?—A. Salmon.—I fished with a seine.

Q. What sort of a seine—what length?—A. I think about eighty and 100 fathoms.

Q. And what depth?—A. I think the "pound" would be about ten fathoms.

Q. And the arms?—A. Would be less.

Q. What sized mesh did you use?—A. I think the smallest in it was three and a-half inches extension.

Q. Was the bag portion any different?—A. The bag was three and a half.

Q. And the arms?—A. Five to six inches—the nearer you go to the arms the larger the mesh.

Q. And the working of the seine—would the lead-lines drag on the bottom?—A. Well, in some cases they use drag stones when the lead-lines go to the bottom. In other cases they fish in deep water, and they purse them in, and the lead-lines never get to the bottom.

Q. Then you know of purse seines in the Atlantic?—A. Yes.

Q. What view is entertained of purse seines on the Atlantic?—A. Well, by those fishing along shore, that it breaks up the schools of mackerel and interferes with the run of fish.

Q. If the purse seine were used on the coast here would it be more dangerous here than drifting, and catch more salmon?—A. Well, as a rule, they cannot be used in the mouth of rivers, or near the mouths of rivers.

Q. Why not?—A. So many drift logs and things of that kind.

Q. Then, where are they used?—A. Out in the estuaries.

Q. And would drift nets or seines be more injurious—which would catch more fish?—A. Oh, the seine would catch more fish.

Q. And if the seine were drawn across the mouth of a river would fish come up?—A. Oh, that would injure the run of fish.

Q. With regard to the mesh of a seine and a gill-net—would $3\frac{1}{2}$ inch mesh take more fish than $5\frac{1}{2}$ inch mesh?—A. No; a 5-inch mesh in the "pound" of a seine would not be strong enough—the idea is to have them so as to let the fish mesh.

Q. With $3\frac{1}{2}$ inch mesh, they would not, but would with 5-inch?—A. They would not—or at least not many of them.

Q. You think, upon the whole, that a seine is more destructive than a drift net?—A. Yes; salmon as a rule will not gill into a net in clean water outside.

Q. And therefore you use seines to get around them and they are more destructive?—A. Yes, they are more destructive.

Q. And you think also that the use of seines at the mouth of a river or its estuary would be injurious to the passage of fish up river?—A. To a certain extent some say than a drift net—a drift net will not pay in clean water.

Marine and Fisheries.

Q. What other fish do you catch besides salmon in your seine?—A. A few dog-fish, a few trout, a few rock cod.

Q. What do you call "trout"?—A. They are like young salmon.

Q. What weight?—A. $2\frac{1}{2}$ to 4 pounds.

Q. Is there anything else caught in the bag of the net less than 4 pounds?—A. I think there has been a few.

Q. Do you know what a smolt is?—A. Yes.

Q. Do you know what a "parr" is? It is much smaller than a "smolt."—A. No; we don't get any of these.

Q. What are done with the little fellows when caught?—A. They were salting them—some were sent to Vancouver market.

Q. Were any thrown away on shore as being useless?—A. No; the Indians take them.

Q. Were they caught in considerable numbers?—A. Oh, it depends upon the season.

Q. Some seasons you would catch considerable numbers?—A. Well, I never fished there except the one season—I may have caught a couple of thousands of them.

Q. Would you catch herring, too?—A. No, sir; I never caught herring.

Q. You have no mackerel here?—A. No, sir.

Q. Then having fished on the coast you could give some idea as to the relative value of the fishing in the Northern Rivers and on the Fraser River—is it just that \$20 should be paid here and only \$5 on the upper rivers?—A. Well, I would say like this—there is a better market for fish here, and the fishermen can better afford to.

Q. But can a canneryman better afford to pay \$20 here than he could on the Skeena?—A. Well, I don't know.

Q. But a man who runs 40 boats on the Skeena, could he afford to pay more—there should be equality?—A. No; I think not—it is more expensive to get up north and labour is harder to get.

Q. Then you think the present system about right?—A. Well, I am not posted enough on these northern rivers to give an idea. I have only fished a while over in Cowichan. I am not prepared to give an opinion as to whether the license fee is too much or not, not being aware of the disadvantages up the coast.

Q. What is the average weight of fish caught down the river?—A. When they first come in they are smaller than afterwards—I think one-half a pound less; the second run would be larger.

Q. What right through would be the average of sockeye salmon?—A. I would say six and a half pounds.

Q. Right through the season?—A. Yes; of course I am not very sure.

Q. If another said seven and a half or eight, you would not say he was wrong?—A. Well, if a man said eight I would say he was wrong.

Q. I suppose you are not well acquainted with the internal working of the canneries?—A. No; not the particulars inside.

Q. Do you think, as an officer, that the limits on which you have to perform your duties are too large for you to efficiently do those duties?—A. Well, no; there is not a great number of boats; I think a change should be made now and then; another officer should take my place; the fishermen generally get their eyes on to an officer, and it would be well to change the officers now and then.

Q. But would a new man know the boats at a new place as well?—A. Well, but he would have better chances of catching offenders.

Q. Well, have you anything else to offer?—A. Well, there are streams up the river and people living along there who destroy fish in the fall of the year.

Q. What creeks have you reference to?—A. Well, those I know of are: The Serpentine, flowing into Mud Bay, and the Nicomekle.

Q. The fish go up there to breed?—A. Yes; in the head waters.

Q. What are they principally?—A. Cohoes principally.

Q. Any sockeyes?—A. No, I think not.

Q. And the inhabitants catch them late in the season? How late? In the month of October, or when?—A. In the month of October—that is, I think, the spawning season. Then there are other little branches coming into the Fraser—Salmon River, at Longley.

Q. You speak of the spawning season of cohoes being in October and November—have you any knowledge of the spawning season of sockeye at other places?—A. No; I have seen them up country the season before last, going through the Quesnell River up in Cariboo; I have seen them pass under the bridge there in October.

Q. Have you seen them actually spawning?—A. No; I think they go up farther than that.

Q. Do you know when spring salmon spawn?—A. No, sir; I am not prepared to say.

Q. Then you draw attention to the propriety of having these smaller rivers looked after during the spawning season?—A. Yes, sir.

Q. Is there anything else you would like to refer to? As an officer, you are generally supposed to know more of the fisheries than other people?—A. Well, it is generally supposed that salmon here is the same as that on the Atlantic coast, but I think different.

Q. What difference is there between the spring salmon here and the salmon on the Atlantic coast?—A. The most particular difference is that salmon on this river are longer in proportion to their size than fish there, and they have a different taste, and are more substantial food than Atlantic salmon.

Q. How do you make out more substantial food?—A. Well you can eat a larger quantity, larger than of Atlantic.

Q. Well, that would not be more substantial, because you would have to eat two salmon here then to one there. (Laughter.)—A. Well, probably I made a mistake in the word.

Mr. WILMOT.—Oh, well, we are all liable to that. What rivers have you fished on on the Atlantic coast?—A. I never fished on rivers; I have fished in St. George's Bay, and have caught salmon, also in Port-au-Port Bay in Newfoundland.

Q. And you cannot say anything about other portions of the Atlantic Provinces, except where you have fished?—A. Well, there is the same difference between all the fish there in different places.

Q. Well, but would that make a difference here wherever they are different grade in different rivers?—A. Well, the feel of the fish is different—what I mean to say is that fish there are more substantial.

Q. Oh, I see you reverse it—you said these salmon were more substantial?—A. Yes, I mean the reverse.

Q. Do you know of any other difference?—A. The tail of the salmon there is not so broad as here.

Q. But if I tell you that the salmon's tail will vary with the river in which they have to travel?—It is a fact that the tail of the salmon will be firmer for this river than for a slower stream—if salmon have to go up a muddy sluggish river its tail will be different to that of the fish that has to go up a rapid clear water. So you see that is no real difference in the fish. And is that the only difference you know of?—A. That is the only difference.

Q. Is there any salmon resembling sockeye on the Atlantic coast that you know of?—A. I never saw any.

Q. Have you seen the grilse—young salmon of 3 and 4 pounds weight?—A. Yes, sir.

Q. Would they resemble sockeye?—A. Well, I don't think they would resemble them so much.

Q. Would they not be silvery and bright?—A. Yes, they would be—they resemble what the fish caught here in winter are more than any other—they are called "silver sides," but I have never caught them—they come into the markets in winter.

Q. Are "silver sides" red-meated?—A. They are a little paler.

By Mr. Wilmot:

Q. Then they would resemble more the grilse of the Atlantic. Have you anything further?—A. No, nothing further.

Mr. WILMOT.—Well, we are much obliged to you—that will do, thank you.

Marine and Fisheries.

JAMES A. LAIDLAW, a native of Scotland, living in British Columbia since 1862, a salmon canner, and at present residing in New Westminster, was duly sworn.

Mr. LAIDLAW.—Mr. Chairman, I am not well enough to answer questions, but would prefer putting in this statement as my evidence, and I will be willing to answer any question you may wish to ask. (Mr. Laidlaw thereupon handed to the Chairman the following statement which was read and ordered to be inserted in the Minutes):—

To the Royal Commission now being held in New Westminster.

GENTLEMEN.—“Many thanks for allowing me to give my evidence in writing, instead of verbal, on account of my health.

“*Re* placing offal in the river: I do not think it can be of the slightest injury to the salmon running in the river.

“1. The greater part of the offal is eaten by scavenger fish in a short time after it is put in the river.

“2. I think feeding the scavenger fish here, keeps them from going to the spawning grounds to destroy the spawn there.

“3. We know that millions of the salmon die up the river and lie putrifying in the small streams and shoals, which must be worse than the small portion of the salmon that the canners return to the river. In a good season the canners and their employees must use from eight to ten thousand tons of good fish, besides the offal. If those 9,000 tons were let pass, the great majority of them would be lying putrifying the same as those that do reach the spawning grounds.

“4. So, for the same reasons, I do not think that from a sanitary view the present manner of disposing of it can be injurious.”

Re Licenses:

“Formerly the canneries had forty boats, then they were cut down to about twenty-four—last year cut down to twenty. With twenty-five boats each cannery would still have to employ quite a number of outside licenses to run their canneries so that unless it is the intention of the department to make the capital invested in canneries non-productive, they surely will not place us entirely at the mercy of the fishermen.

“2. By having twenty-five boats, each cannery employs a number of Indians, and their women and their children help in the cannery. Those Indians, by getting employment in the canneries are self-supporting, and, though wards of the Dominion, get little, if any support from them. Without licenses we cannot help the Indians.”

Re Hatchery:

“For my part I have not the slightest doubt that the hatchery is a benefit and will be a benefit. I am only sorry to see the money raised here as a special tax on fishing licenses to assist in propagating salmon here, should be taken back east to bonus eastern fishermen, or perhaps worse, instead of using it here to build more hatcheries. And any other manner that may assist in propagating the fish where the special tax is raised for the purpose, as I believe. I can only think that any one asserting that the hatchery is no use, must do so from prejudice. Certainly, the salmon were more plentiful last year than on former poor years. There were parties that said it was no use before it was a year built, and some of them, as usual, are of the same opinion still. I am very sorry that more are not being built. I think we might then have enough of fish and stop this squabbling.”

Re Close time—Sunday:

“1. Several close times have been tried, but the present close time, I think, far the best for both the Indian and the employer. With a long lay-off it would be hard to get them in their boats before Monday noon, and then many of them of little use, as there are plenty of men ready to provide them with whiskey. A change from the present would, I believe, be very detrimental to all concerned.

“2. That a local commission or local advisory board should be appointed for the province. That they should acquire as thorough a knowledge as possible of the habits of the salmon and all requirements to propagate and continue the industry, was strongly recommended by a committee of the Canners' Association, 4th February, 1891.

"I thoroughly endorsed the report of that committee and have seen no reason to change my mind but would like to add that all the money raised from licenses should be spent in the province to build more hatcheries and propagate salmon generally.

"Yours respectfully,

(Sgd.) "J. A. LAIDLAW."

(Representing with T. E. Ladner and R. P. Rithet, seven canneries on the coast—five on Fraser River, one on Skeena and one on Nuas Rivers.)

By Mr. Wilnot :

Q. You say about throwing offal in the river—you say it is not the slightest injury to salmon running in there?—A. I do. I have been fishing here for fifteen years, and certainly the fish are not fewer now than when we started, and for that reason I certainly can not think the offal is injurious that is run in.

Q. What effect has it from a sanitary standpoint?—A. Well, I suppose, as far as sanitary considerations go—as I state they take out 7,000 or 8,000 tons of fish from the river, and if we didn't take them out, they would lie putrifying like the rest of them do, or most of them.

Q. Was the river very much polluted when you came here or before?—A. Well, I cannot say, as I cannot tell any difference between then and now.

Q. But if all went up and died, the river would be in the same position as then?—A. I don't say all die.

Q. Well, but would it not be in the same position as before?—A. Well, the difference is this: The offal is seen down here and the people think it offensive, but if they would only go up there and see the thousands putrifying like they do, they would think it very little.

Q. Then if not caught, the fish would take their entrails and other offal up with them?—(Laughter.)

Mr. LAIDLAW.—Then most of the offal we put in the river is eaten up by the scavenger fish in the river.

Q. Then you think if these fish went up the river these scavenger fish would follow them and eat the dead?—A. Well, I don't know. I have thought that by feeding these scavenger fish, we keep them from going up to eat the spawn up the river.

Q. Then you also keep them from eating the dead fish up there?—(Laughter.)—A. Well, I know they eat up the spawn at the canneries very voraciously. I have seen them often.

Q. Well, I cannot see this 9,000 tons of fish as you do?—A. Well, if you will figure it you will see this 9,000 tons of fish are good fish—not offal, but good fish.

Q. 9,000 tons of whole fish?—A. Yes; 9,000. You think it does not come in the river? Any man can figure it up in two and a half minutes—I well know that, of course.

Q. Then you think offal not injurious to either fish or the human family?—A. I do not.

Q. You say that millions of salmon die up river and in small streams, and which must be worse than the offal put in? There are few inhabitants there, are there?—A. Well, but do not all those putrid matters come down this river, and though they don't see it, they drink it?

Q. Then what a man don't see, he knows nothing about?—A. Well, there is something in that. Certainly rotten matter on the banks and washing into the stream, it all goes down.

Q. But it has been shown that disease is created in some sloughs, and when left on the shore by the tide it must be worse than the essence coming down the river?—A. Well, I have seen reports from a doctor who says it was not an injury.

Q. Doctors differ and patients die, you know?—A. Well, I am not a doctor and, of course, I leave that point for the department to decide. In my opinion, it is not injurious either to fish or the human family.

Q. In your establishment do you drop offal right down under the floor of the cannery?—A. No; we use it in an oil factory.

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Q. Did you think it advisable to use it in an oil factory?—A. No, we didn't think it anything of the kind; but the Department said they were going to enforce the law, and we went into it and had a loss. The Department then acted like fools—they neither enforced it or anything else, after putting us to all this expense.

Q. Then, you went into it because the Department wanted you to?—A. No, but because we understood it was to be enforced—we had to build another cannery just through the vacillation of the Department.

Q. How did the oil factory turn out?—A. It was not a success. I heard that a party came in this morning and reported that Mr. McNeely had bought a quantity of the oil—some 2,000 gallons or something of that kind.

Mr. WILMOT.—Well, I don't know as that was what he actually said—perhaps, if the secretary will turn back to his minutes of Mr. Arthur's evidence, it may be explained.

The secretary thereupon read from his minutes of Mr. Arthur's evidence regarding his reference to the oil and Mr. McNeely, to the satisfaction of the chairman and witness.

By Mr. Wilmot:

Q. You have made oil, then, from refuse, and it has not been profitable?—A. No; it has not been sold for 50 cents a gallon—not from our factory.

Q. Or anywhere else?—A. Well, I could not tell you that.

By Mr. Armstrong:

Q. Could you tell how much it sold for?—A. About 35 cents a gallon.

By Mr. Wilmot:

Q. And the quantity you manufactured?—A. Well, I could not tell you—you must ask Mr. Ladner about that.

Q. Cannot you come near the quantity—5,000 gallons or 10,000 gallons?—A. Oh, something near 100 barrels.

Q. Each barrel would hold how much?—A. About forty gallons, as near as I can state to the best of my knowledge.

Mr. ARMSTRONG.—How many canneries did you take offal from to manufacture this?

By Mr. Wilmot:

Q. And from what canneries?—A. I did figure it up, but I have forgotten just the number of boats we took it from.

By Mr. Armstrong:

Q. But that is not what we want—we want to know how many canneries you took this offal from to make this oil?—A. If you will wait a moment, I will give you both answers—(consulting papers) We took offal from about 160 fishing boats—from about six canneries.

Q. Could you name the canneries, Mr. Laidlaw?—A. Well, there is one of them that was not running; still, I had the boats for them.

Q. But the names?—A. Delta Canning Company, Harlock Canning Company, Findlay, Durham and Brodie, and Wellington.

Q. Did Wadhams?—A. I don't think he did—any one was welcome to send it.

Q. They didn't send all the offal, did they?—A. I think so—we wanted more at the factory.

Q. But did all these five canneries you refer to send all offal down to the factory?—A. I think so—I could not swear to it—the factory wanted more, consequently I suppose they got all was there.

Q. How was the offal conveyed to the factory?—A. We sent it in steamers and scows—we were in our own business at the time and sent it down—the offal went down in our own boats.

Q. Well, how much more could your factory have manufactured if they had got the offal?—A. I could not answer that—I could not even give it approximately.

Q. But could you have consumed as much again if you could get the offal? Five canneries sent their offal down to the factory which was made into oil and other products—could the factory have made up the offal from five others if it had been sent?—A. That I cannot tell you now—but they could have manufactured a good deal more.

Q. Could they have manufactured as much again?—A. Well, I cannot tell—they could have manufactured more.

Q. And in manufacturing the oil you did make—from a financial stand-point did it pay you?—A. No.

Q. Did you ever make an estimate of the loss?—A. Mr. Ladner was in charge of that part of the business more than I was—I cannot give a definite answer.

Q. From the experience you have had in connection with this one oil factory consuming the offal of five canneries, could other establishments be put up that would consume all the offal?—A. Well, you know there is nothing that cannot be done.

Q. Then it is a mere matter of expenditure and trial to do it?—A. Yes, but the question is—is it of any value or benefit to any one—it is a loss to us I can tell you that.

Mr. WILMOT.—It is the first year you have tried. Is it not a fact that many industries fail the first year and afterwards succeed? Was the first year you went into the cannery business profitable?—A. No, sir; it was not.

Q. And the following year it was more profitable?—A. Well, I think if some of those extraordinary witnesses you had here knew how we were the first year we started they would not have given evidence they did. I will tell you, Mr. Wilmot, it is very easy when you have made \$30,000 or \$40,000 or \$50,000 out of it—are you going to leave it? I have lost \$10,000 in a year—no one knew anything of that—every man got his pay—nobody knew of my loss—that was no one's business but mine. I know that in some years we made more than we can now.

Q. And those profitable years were more profitable than you can make now?—A. Well, some were, but I certainly understood the business just as well then as I do to-day, but the thing was this—there was a surplus in the market—the demand was not equal to the supply and the price went down to \$3.50, and you know how much money you can make out of it at \$3.50?

Q. Then on the whole the oil factory has not been profitable?—A. No.

Q. You say in regard to licenses that 25 licenses would not be enough but that each cannery would still have to employ outside licenses to run their canneries, so that unless it is the intention of the Government to make the capital invested in canneries non-productive, they surely will not place us entirely at the mercy of the fishermen. This may bring up some other questions.—A. All right, sir; as long as I am able to speak I am ready to answer.

Q. Can you give the average number of fish taken by each boat during the season?—A. No, I have no notes for that, but I can get them from the books for you if you wish.

Q. You had one year 40 boats—would they average 3,000, 4,000 or 6,000 salmon?—A. No; I will tell you—I saw a report from some witness you had—

Mr. WILMOT.—I don't think you should refer to witnesses who have testified here under oath.—A. Oh, well, as to averaging that number, we cannot do anything of the kind. I was told by one man that he could go out with a bottle of whiskey and a boat and get more fish than with a net; but we never could get any catches of fish like you have been told.

Q. Then you cannot give the numbers of fish delivered by boat—the average delivery?—A. No; there are two good years, you know.

Q. Well, take two good years—what average then?—A. Well, I cannot tell; in poor years I have seen men come in without fish in their boat, and we had to pay them \$2 and \$2.25 for doing it, and these same would come other times with 300, or 400 sometimes—generally 200.

Q. And how long would the average season last?—A. Between four and five weeks—you can count on four weeks, perhaps more; but you must not take 300 or 400 as the average fish to a boat: I never got such an average, neither from contractors or others.

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Q. Well, some have stated they could catch 3,000 and 4,000 during a season, and some as high as 10,000—then your average of 300 and 400 would not hold good on the whole?—A. Certainly not, certainly not; that would be for a single day.

Mr. WILMOT.—Have you any recollection of taking 700 or 800 in one day?—A. From contractors I think I have taken as many as that—that would be in 24 hours. You know our own men fish for ten or twelve hours; two men go into a boat and go out, and as soon as they come in and get the boat cleaned out, etc., two other men get in and they go out.

Q. And do ordinary fishermen fish 24 hours?—A. No; they generally fish on what we call "tides," you know.

Q. Then four men in one boat would have opportunity of fishing longer than two men in one boat?—A. Well, if two men go out in the night, cannot they fish till morning, and if two men go out in the morning cannot they fish till night?

Mr. WILMOT.—Yes; but if ordinary fishermen (2 men) go out, can they fish day and night?—A. Not very well.

Q. Well, then, won't they have an advantage over outside men?—A. Well, I think we get fully as much from our own men as from contractors, taking it for the full 24 hours.

Q. What is the usual size of fish?—A. Well, that is very hard to answer.

Q. If you get 10,000 fish in a day, will they vary very much in size—Sockeye?—A. Well, in a good season it takes eleven or twelve fish to make a case—at least that is my experience—the fish are then smaller; in a poor year I have seen nine salmon make a case—the fish are then larger.

Q. What is the usual calculation of cans from a fish as an average?—A. Well, you see a case is 48 cans; you can very easily figure on that.

Q. Are any of these fish brought in to you when a heavy rush of fish is on hand—can you convert all the fish into use without any loss?—A. Yes; almost invariably, and for this reason: we have put up as much as 20,000 salmon in a day in each cannery. We can put up 100 barrels of salt salmon in addition to what we can; 1,360 cases and 100 barrels is the most we ever put up in a day.

Q. How many fish in a barrel?—A. Oh, about 50—I cannot tell exactly—it is in the vicinity of 50.

Q. Well, that would make very nearly 14,000 fish in a day?—A. Well, there you are away out in the pack of salmon canned.

Q. No; I just take what you have said—taking 10 fish to the case?—A. I don't say 10 fish to the case, I said 12 fish.

Q. That is, 12 would be in a good year?—A. Yes; do you suppose it would be a poor year?

Q. Then, 12 salmon to the case in that year?—A. Yes.

Q. And 100 barrels and 50 salmon in a barrel—well, that would be upwards of 16,000 fish?—A. Well, yes; that is all right—we have been caught sometimes like that when we get 20,000 salmon on the wharf. As soon as we do, every one of our men knows that with three blasts of the whistle we have all the fish we can use, and they at once come in with what fish they have, and what fish we don't put up that day we do so the first thing in the morning.

Q. And they are always fit to put up?—A. Well, we never put up all the fish; it would not pay.

Q. Well, those that would not be suitable—do you ever give them to the Indians?—A. Oh, we do—oh, yes; they come and take them away. Whatever the Indians don't take away we shove overboard. They are not fit for our purposes.

Q. Do you call them "short" then, or what is the name?—A. Well, I don't know any name; I can tell them when I feel them.

Q. I thought perhaps you had a name for them?—A. Well, I can tell them when I feel them.

Q. They feed the little fishes I suppose?—(laughter)—A. Oh, no; do you know they never touch them; they have far better things—they eat the spawn.

Q. Well, then, don't they eat the other parts then?—A. Well, afterwards they would, but they never do that until the other is done.

Q. Do you think all *bonâ fide* British subjects and regular men who come here should get a license if they want one?—A. I have nothing in the world to do with that; that belongs to the Dominion Government.

Q. Well, do you think canners should get all the licenses they want?—A. I think the canners ought to get 25 boats as a kind of protection. They have spent their money and have invested heavily in the business. They then will have to get outsiders to catch the fish they want.

Q. Then, should they have licenses?—A. Well, it is a matter for the Dominion Government. I have no objection to outside fishermen getting licenses; still, it is a matter that does not belong to me at all.

Q. And is it a matter for you as to what licenses canners should get?—A. Oh, certainly; it is self comes first.

Q. And you think fishermen should get licenses, and all that apply for them?—A. Well, that is a matter for the Dominion Government.

Q. Well, do you think all canners who put up new canneries should get licenses?—A. Well, I know nothing about it; that is not a matter for me. I put up a cannery myself.

Q. But don't you think they should get licenses?—A. Oh, yes; they should be given licenses.

Q. But this Commission was appointed to look into these matters and report to the Government on them and we want to get all the information we can so as to post them?—A. Well, we have time and time again given our views, and they don't pay any more attention to them than to the bark of a dog. I am tired giving my views to the Dominion Government.

Q. Do you belong to the syndicate?—A. Well, no; we don't belong to that syndicate. I don't know as you can call us the syndicate—we represent seven canneries on the coast—five on the Fraser River and two up north.

Q. These other two are on what rivers?—A. One on the Skeena and one on the Naas River.

Q. When did you form this syndicate?—A. I don't think it is a syndicate.

Q. When did you form this company?—A. Well, it is pretty hard now to say—we started in fifteen years ago.

Q. Then these canneries have been working together for fifteen years?—A. No; about a year ago.

Q. Is the capital wholly amongst the seven canneries, or is there outside capital connected with it?—A. Oh, no; there is no other capital connected with it except the seven canneries joined together.

Q. No English capital or other outside capital?—A. No; we simply united together for—well, protection.

Q. Have you found it more profitable?—A. No; we haven't made a cent (laughter) and we don't expect to make a cent next year—I am telling you facts.

Q. Have you sold all the pack of '91 yet?—A. No; not yet.

Q. Then you don't know if you have made a cent?—A. No; we don't expect to—we have not sold all.

Q. If there is to be an established number of licenses given to cannerymen, what would you consider a fair and just maximum number?—A. We have already stated that twenty-five would be a fair limit. You see, as it was before we had forty—with twenty-five we leave a fair margin for outsiders that we would have to take in.

Q. Then you would think twenty-five satisfactory if a limit is to be made?—A. Yes.

Q. And you think that less than twenty-five would not be satisfactory?—A. No, it would not—perhaps, Mr. Wilnot, you have not followed up matters on the Columbia River—on account of the fishermen having control of them there they had to close down half the canneries there.

Q. But you must be aware the labour organizations now are a ruling power in the world?—A. Well, that is a matter for the Dominion Government.

Q. Well, but that is the very reason why this Commission is here, and the questions put to you here are for no other reason than to gain information for the guidance of the Government?—A. Oh well, that is all right, Mr. Wilnot, but there has been so many

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restrictions and taxes put on us that I am really astonished they have the cheek to ask for capital to come forward to develop the deep-sea fisheries—you cannot get a man in Victoria to spend a ten-cent piece on it.

Q. Then you think it an advantage to advocate the canning industry?—A. Certainly.

Q. And it is not advantageous to bring in desirable immigrants to work them?—

A. Well, do you mean in numbers?

Mr. WILMOT.—Well, I mean that the class of men who will come and help themselves and you too?—A. Oh well, there are no idle men here in the fishing season.

Q. Well about giving licenses to Indians—do you think they should have licenses?—A. Well, I don't think it would be of much use to them.

Mr. ARMSTRONG.—I think Mr. Wilmot, licensed Indians should have their own boat and net.

Mr. WILMOT.—But if they haven't they will go to the cannerymen and get a boat and net.

Mr. LAIDLAW.—Well, I will tell you I had to pay \$50 for a boat last year, yet the Government gave one to a saloon-keeper!

By Mr. Wilmot:

Q. Now, you think the hatchery is beneficial?—A. Certainly. I think they should build more—the idea of raising a special tax here and taking the money back east!

Mr. WILMOT.—Let me dispossess your mind of that—there is no special tax here—they pay license fees for fishing in all parts of Canada.—A. But the Government draws from here some \$10,000 away from us.

Q. If you found that in other provinces it was more than that what would you say?—A. Then I want the money spent here—I don't want it taken back east.

Q. And you don't want any money from there?—A. No, not a cent.

Q. I am afraid you would not get on very well then. Now take the other provinces—this is the departmental report for 1890—now on page 13, the revenue derived from the fisheries of the various provinces is given—Ontario, \$23,666.96, and on page 10 you will find the expenditure also given by provinces, and you will find that in Ontario only \$14,539.87 of that \$23,666 was expended in the protection of the fisheries of the province.—A. Now, how much does it cost to run the fisheries?

Mr. WILMOT.—That is not the question—I want to show you that there is no special tax.

By Mr. Armstrong:

Q. And you are under a mistaken idea, Mr. Laidlaw, when you say that you are paying a special tax and that this should go to the province of British Columbia specially. I pay taxes and you pay taxes and all this goes into the general fund for the whole country.—A. But the Government said they required a special tax.

By Mr. Wilmot:

Q. How long is it since you have been paying special fees?—A. I cannot tell you from memory.

Q. Then you think hatcheries are good things?—A. Yes, and we want more of them; if they put up more hatcheries, I am perfectly willing to pay my share.

Q. No, if you got more hatcheries you would not pay for it. It would come from the general fund of the whole country without any more additional taxes being levied—your idea is not the right one. Now, do you think hatcheries should be built down at the foot of the rivers or at the head of them?—A. Well, I would leave that to the department—at present the spawn is gathered at Harrison River and taken down here to the hatchery—why not have a hatchery up there? I think both spring salmon and sockeye should be cultivated, and I have not the slightest doubt in the world that the spring salmon will become sufficiently plenty to be used by canners.

Q. But what about the white spring salmon?—A. Well, that is a thing I can't tell.

Q. But we cannot discern in taking eggs from them?—A. Well, an expert can nearly tell in taking the white salmon or the red one.

Q. You think the present close time is correct?—A. Yes; I don't think it could be improved—in fact, it would be injured, if changed any, and be very detrimental to all.

Q. Should license fees be all alike?—A. On this river? Oh, as far as this river is concerned, all licenses should be alike; but up north they have not the benefit of the hatchery or anything of that kind, and I don't think they should pay the same as we down here.

Q. Then, you think the benefit of the hatchery worth the difference. —A. Yes; we never had such a good poor year as this last one, and I cannot but give some benefit to the hatchery. I am perfectly willing to pay my share, if another hatchery is to be built here. But on the Skeena I don't know it would be necessary, as we get plenty of what we want.

By Mr. Armstrong:

Q. Is there a canners' association in existence at the present time?—A. Certainly.

Q. Well, it has been said, you know, that it is not.

By Mr. Wilnot:

Q. Is what you mean by association this advisory board—as you say in your written evidence submitted, it was strongly recommended by a committee of the Canners' Association, 4th February, 1891.—A. Yes, and that recommendation was made to Ottawa before—I thought you had a copy of it. I will send one down here for you. I would only add—build more hatcheries.

Q. But if you think it is an extra tax paid here, we would have to put another tax upon you to build it?—A. Well, I would be quite willing to pay my share. There is only one thing else I would like to say—that Mr. Armstrong said that a man could with \$5,000 build a cannery and make \$25,000 a year. I am astonished that Mr. Armstrong would say that in evidence, because no one but a fool could give such evidence. I am perfectly willing to run every cannery that we have got, if they give me \$25,000. I will run them all for twenty years. You see it costs us \$5,000 for solder. Another thing is, one man said in evidence here that ten licenses were worth \$10,000. Why in the world won't he come to me, or why did he not come last year? He would be as rich as possible—why, we would give him the canneries to run them.

Q. One question more—what is the value of fish?—A. Well, that I cannot tell you.

Q. But you bought a lot of fish, did you not?—A. I had three men—contractors. I had to pay 20 cents for them. I had ten more on contract. Then I paid 15 cents, and then I got all the boats I could possibly get.

Q. You put it down, then, as very ludicrous that ten licenses were worth \$10,000. Now, many fishermen say they have caught 6,000 fish, and at 20 cents apiece these would be what?—A. \$1,200, I suppose.

Q. Then, ten licenses would be more than \$10,000. I think, judging from what you have said here, that a license is worth \$1,000 to a man. You packers have made \$20,000 in a year?—A. Well, I am under oath, and I have stated that I didn't make a cent.

(After a few desultory remarks which were not relevant.)

Q. There is nothing more then that you wish to say?—A. No; nothing more, I think.

The Chairman declared the Commission adjourned at 5.15 p.m. to meet at 10 a.m. on the 27th February, 1892.

Marine and Fisheries.

NEW WESTMINSTER, B.C., 27th February, 1892.

Morning Session.

The Commission assembled in the Court House at 10 a.m. and was called to order at 10.20.

Present :—S. Wilmot, Esq., in the Chair; Mr. Sheriff Armstrong, Secretary Winter.

CAPTAIN G. N. COOPER, a native of England, 14 years in British Columbia, master mariner, and resident of New Westminster, was duly sworn.

By Mr. Wilmot :

Q. Now, sir, what do you wish to present to this Commission?—I have first of all some complaints to make.

A. Against whom?—A. Against the Dominion Government and its agent. I have been a fisherman since my boyhood up and I have been engaged at the fisheries in different capacities ever since in this country—also in the United States and in England as a boy.

Q. So you are thoroughly conversant and able to give a pretty good view on all fishery questions?—A. Yes; last year I equipped the steamer "Dreadnought."

By Mr. Armstrong :

Q. Just give us what you want about fishing?—A. Well, I built and equipped the steamer on purpose to engage in the fisheries and to put her in service as a fishing steamer. I applied for license.

By Mr. Wilmot :

Q. For fishing where?—A. All over the coast—I applied for license to fish all rivers.

Q. Any especially?—A. None especially—my object in building the steamer was to catch fish and bring them to wherever I had a chance best to dispose of them.

Q. That would take in Fraser River, Naas, and other rivers?—A. Yes; I applied for license to Mr. Mowat to fish on the Fraser River and was refused. The only reason Mr. Mowat gave was that I was well enough off now and had a steamer and should not have a license. I told him then that perhaps if I had spent all my money for whiskey I would get a license. I had a license the year before, but he said as I had not fished for a year I had lost my chance for getting one. I also asked him if it was possible for me to obtain permission from the Dominion Government to select a stream on the coast where fishing operations were not carried on, to stock it, and to get the river for 5 or 10 years myself. He said I could not do that.

Q. You made the proposition that you would stock it yourself?—A. Yes; and he said he could do nothing in the matter. I told him I thought it was pretty hard after spending all my life in the fisheries, and being a British subject, and had spent my money in fitting out a steamer to engage in the fisheries—deep-sea as well as in rivers—and then those who were spending their money in whiskey could get licenses.

Q. How long did you fish under license?—A. One year—in 1884—excepting, of course, on the other side. I fished on the Columbia River over a license.

Q. A license then had to be obtained there?—A. Yes; for \$5.

By Mr. Armstrong :

Q. And were you a British subject there, and a license granted to you?—A. Yes, sir; it was customary at that time when all could get licenses.

Q. And from the Federal Government or the State Government?—A. That I cannot say. Well, I think it must have been from the Federal Government, because the Columbia River flows between the two States.

By Mr. Wilnot:

Q. And you are sure it gave you permission to fish on the Columbia River in the two States?—A. Yes.

Q. What was this license for?—A. For salmon—there is no other fishery there.

Q. And then you came here?—A. Yes; that was in '78, I have remained here ever since.

Q. What is the capacity of your steamer?—A. Well, unfortunately I had to sell her.

Q. Would it be out of the way for you to state the value of the steamer?—A. \$5,000.

Q. Then you have been fishing on the Fraser and elsewhere since—in what way?—A. I have only lately sold the steamer. I have not been fishing since.

Q. When did you sell her?—A. About six months ago. I had to go towing, as I could not get a license; I had to go towing instead.

Q. Since you could not get licenses on the river, have you fished?—A. Yes; I have been foreman of fishing camps for canneries; besides that I have had boats and nets at different times belonging to the canneries.

Q. What do you mean by camps?—A. The canneries don't fish all their boats at one place—they establish camps along the river. The fishermen catch the fish in the river and carry them to the camps, where they are put in scows. Each cannery has from two to three or four camps.

Q. What company were you foreman for?—A. I have been foreman for four or five companies.

Q. Then you are thoroughly conversant with the system carried on?—A. Oh, yes.

Q. Well, will you just relate—when boats come with fish to the scow, what would be a fair average number of the fish?—A. In a good season 300 to 600 in a day.

Q. And how many days is the usual period during sockeye season?—A. Well, that would last from two to three and it has lasted as long as four weeks. I don't mean continuous fishing—sometimes they run better than others.

Q. But the usual run is how long?—A. From two to four weeks. When the run is light, they are in much smaller numbers.

Q. Do you count the fish as they are brought in?—A. Yes; the foreman counts the fish. It is usually entered in books, and the fishermen, if they have a book, would do so, too.

Q. Would this book belong to the foreman?—A. Oh no; to the cannery. There is also a printed form with the numbers of the boats, and the fish brought in are entered opposite each number.

Q. Fish caught by No. 18 would be entered opposite No. 18?—A. Yes.

Q. What is the largest number you have known to be brought in?—Oh, a boatful. 700 to 800.

Q. And do you total up the total at the end of the season?—A. Oh, no, the canneries would do that.

Q. And what is the average catch in a season?—A. In a good season 8,000 to 12,000 fish in a boat.

Q. And are any of these injured that are brought in?—A. Oh no; practically not.

Q. And how long will the boat remain there?—A. As a general rule men come in and discharge the fish from the scow after coming in.

Q. How many fish would a scow hold?—A. A small one would hold 3,000.

Q. And a large one?—A. Well, some used to hold 10,000; some were larger than necessary; the larger ones would hold about 6,000 or 7,000.

Q. Do these scows generally leave the camps with fish all in prime condition?—A. Generally; almost without exception.

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Q. Have you known any instances when they were not?—A. I have known one or two instances; I have known half a scow load thrown away from it being injured from the weather when hot.

Q. Have you any term "short," or otherwise, to indicate these fish?—A. No; there is no special name.

Q. When scows arrive at the canneries—you know of the process?—A. Yes, I am thoroughly conversant with the whole process.

Q. What plan—are they then pitched up on the wharf?—A. They are generally put up in boxes or cranes and often with an iron-pointed fork; the point is put in the head and the fish are thrown up. They are then cleaned at once. The wharves are always covered and the cleaners are right at the edge of the wharf, and they clean them right there.

Q. What is the process of cleaning?—A. They cut off the heads, fins and tails; these are first cut off, and then the fish is cut in pieces to fit the cans.

Q. And the offal is taken out too?—A. Yes, I consider that all offal.

Q. And then?—A. It is cut in suitable sizes to fit the cans.

By Mr. Armstrong :

Q. How many pieces will a fish make?—A. Four or five.

By Mr. Wilnot :

Q. Well, now, take the sockeye—what is the average weight?—A. They usually go from 10 to a case when fish run large and when smaller 11 to 12; the average weight of the fish would be a trifle over six pounds.

Q. In both short and long seasons?—A. Yes; that is a general average from one season to another.

Q. And would fish not lose during a heavy run?—A. I never noticed any difference.

Q. One fish will then make from 4 to 5 cans, you say?—A. Yes.

Q. Then the next process is, I suppose, put through until they get in the boxes?—A. Yes.

Q. Well, take the average of establishments—how many hands are there employed altogether, including Indians, Chinamen and foremen, not boatmen?—A. Well, from 300 to 400; that would include boatmen and all persons employed about the cannery.

Q. How many persons would be employed in the cannery alone?—A. Probably from 100 to 200 inside.

Q. You are taking a fair average?—A. Yes; I think it would be nearer 100—say 120 or 150—it depends on the season and run of fish they get and the men they get to work. Of course that applies to a big season; in a small season they will not require as many.

Q. How many white men would there be inside?—A. 5 to 7 or 8; the rest would be all Chinamen and Indians.

Q. Have you any idea of the usual price paid per diem to Chinamen and Indians?—A. It is done generally by contract—if Chinamen are on day work they get \$1 to \$1.25 a day—I think that is all they get under the Chinese contractor.

Q. During your time and to your knowledge, a contractor will take in, clean, and pack the fish at so much per case?—A. Yes.

Q. Have you any idea of how much per case?—A. No, I have no idea.

Q. And if he hires Indians or Chinamen by day work—how much?—A. I have an idea, as I told you before, \$1 to \$1.25.

Q. And you have knowledge that some fish would be spoiled on top of the scow, and thrown off into the water?—A. Well, that is unusual—I have not seen it—I have seen a few fish thrown off that were exposed to the sun.

Q. A few were thrown off but that is exceptional?—A. Exceptional.

Q. And if large numbers are brought to the cannery and they cannot get through, would they be canned next day?—A. Well, they generally can get them in cans next day or if they have too many fish they can stop their boats and not get any more.

Q. What is a fair average of the number of cases turned out of a cannery—15,000?
—A. Yes, I think that would be the least—that is when the factory is working at full capacity.

Q. I mean all the year through?—A. Oh, yes; that would be a high average I think.

Q. How many boats would it take to fairly supply a cannery turning out that number?—A. In a good season twenty boats.

By Mr. Wilnot:

Q. Some seasons there would be a great many more cases turned out?—A. Oh, yes; in a big run it would be the full capacity of the cannery whatever that might be—some might go as high as 30,000 cases.

Q. And in a low season that might be reduced?—A. Yes, to 5,000 or 6,000.—I think there is only one cannery that could turn out the highest number. I don't know exactly what his capacity is, but I think quite as high as that in a good run.

Q. I understand last year he turned out 25,000 cases—was that a good year?—A. I was away towing on the coast and so am not well posted as to what last year was.

Q. With regard to the offal business—the fish you say are cleaned, heads and tails, and entrails taken out, and then it falls into the water?—A. Yes.

Q. What do you think—is it injurious to water, fish, or anything at all?—A. It is not injurious to the river at all unless through carelessness it is allowed to remain on the banks of the river.

Q. How would it go on the banks of the river?—A. As a general rule the canneries are near the bank—40 or 50 feet from the bank—there is so much offal thrown into the river, some must get on the bank when it is not all eaten up. If the offal were put in deep water I don't think we would hear anything of the offal. I have seen the offal eaten so fast we could not find a trace of it at all. I think though the Chinese should be prevented from catching these small fish—suckers we generally call them, though there are several kinds—The Chinese frequently dip up buckets full while they are eating the offal—I think they should be stopped from doing this.

Q. But would not that be preventing men from catching food—just like they say canneries should be prevented from catching so many salmon?—A. Well, but let them eat salmon—it would be much better.

Q. Have you seen offal lodge along the banks and sloughs?—A. Not as much as dead fish—I have seen thousands of dog-salmon and humpbacks left on the banks by the Indians and they have been much worse than all the offal put together.

Q. Then you think offal not injurious either to the river or to the people who drink the water?—A. No, for this reason—there is nothing but a few heads that ever decompose in the river, and the quantity is so small that it cannot hurt this river. All the heads put together from New Westminster to the mouth would not be as much as I have seen in one hour of dead fish on the Harrison River. I do not think as much injury can be made from this offal as from the dead fish on the Harrison River.

Q. Have you seen many dead fish coming down the river?—A. Yes, I have seen millions strewn on the water from Harrison to the mouth of the river—floating on the water. I would suggest that canneries be compelled to discharge all offal into deep water and not let it remain around the shores—it is very offensive to the smell.

Q. Not to the health?—A. No, I don't think to the health.

Q. But if you think the smell from dead fish would be so great, would not offal be as bad?—A. Well, I think the offal should be put into deep water.

Q. What is your idea of it being converted into oil or fertilizer?—A. I think it a good idea if it would pay—there were two factories over at Astoria and they were run successfully.

Q. Is it not possible for the same to be done here?—A. I think, if in the hands of the right parties, it would pay.

Q. Would it be more expensive for canneries to put the offal in the river or to put it in the factory?—A. Well, on the Columbia river the oil factories sent for the offal.

Q. Then it would be more expensive to put offal in the deep channel of the river?
—A. Well, yes it would be well to have arrangement made—over on the other side they have a frame work made to catch all the offal and it runs from that into scows, and it was taken away by the oil men.

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Q. Could not that be done here?—A. Well, it could be on the lower part of the river, but I don't think it could be on the upper portions.

By Mr. Armstrong :

Q. But have not cannerymen all steamers of their own?—A. Oh yes, but they have no time to look after that.

By Mr. Wilmot :

Q. What number of factories would be sufficient to utilize the offal here?—A. One would be sufficient.

Q. If the offal was thrown into scows from the canneries would it not pay?—A. I doubt if an oil factory could keep a steamer—if they got the offal for nothing they could make something out of it.

Q. Would it not be better for cannerymen to pay the cost of this among themselves, instead of being under the penalties of the law as at present?—A. Yes, I suppose so—I think that would be far the cheapest way. I have heard of putting offal in the ground but it could be done cheaper, because after you have the offal there you would have to turn up a hole to put it in.

Q. And you think the only feasible way would be by making some use of it as fertilizer or oil?—A. Well, I don't know as a fertilizer would be needed here; it is a new country.

Q. Well, but neither do you consume the fish here, do you?—A. Well, I worked once in a fertilizer factory myself, and it don't pay.

Q. But they made oil, as well, did they not?—A. Yes, but what would they do with the fertilizer?

By Mr. Armstrong :

Q. In Astoria what do they do?—A. Oh, they threw the fertilizer away—they did not use it.

Mr. ARMSTRONG.—That was almost as bad as the offal.

By Mr. Wilmot :

Q. What is this fertilizer like—is it a powder?—A. Well, yes—like stuff you sweep up from the house; it is very light stuff.

Q. Then you think, after all, a factory for utilizing the offal might easily be carried out here, and that one factory would accommodate the whole of the canneries, and that oil factories on the Columbia River were a success?—A. They were a success. I know that one of the partners told me that he clubbed \$125 a month. He had a quarter interest, and he had made that besides his wages. He told me that himself.

Q. What do you think of the close season?—A. I think the Sunday close season is all right now; that is the only feasible close season I know of. As to the other, there is one month now in which there is no fishing done at all.

Q. Well, I think that is an understood thing among the canneries. Is it a fact that spring salmon are more white than red?—A. Yes, they are more white than red—fully 75 per cent of them are white. There are four or five varieties here of quinnat, but all are called spring salmon—any fishermen can see the difference, though we have no name for them.

Q. Are they like Columbia River salmon?—A. No, none are like Columbia salmon.

Q. What is the distinctive difference?—A. Well, you can only see the difference—they are much larger over there than here.

Q. And are there any white salmon in the Columbia River?—A. No, all are red—the question of white salmon was never raised.

Q. And here 75 per cent are white, taking the season through?—A. Yes.

Q. Which are more merchantable?—A. Oh, the white are worthless.

Q. What are done with them?—A. Oh, Indians take all they want, and the rest are thrown away.

Q. And the probable weight of these?—A. About twelve pounds.

Q. Why do you say "different species" here?—A. You can see the difference—in the larger ones the distances between the extreme of the back and the belly are greater than others.

Q. The early runs of them here in April and May, when they come in here first, as regards flavour of flesh, are they equal to Columbia River salmon?—A. Oh, yes; equally as good. In spring time they can be eaten, but not in summer. I have been made sick myself; but the red ones are always good.

Q. It is remarkable. We have been asked by many to breed spring salmon, but you say they are not fit to eat?—A. Except in the spring; but then there are no other fish in the market.

Q. And if other fish were in the market they could not take at all?—A. Oh, no.

Q. What run of fish comes after the sockeyes?—A. The cohoes, but they are worthless.

At this point of the examination, Capt. Cooper stated that his business engagements would prevent him from continuing his evidence at present and requested that he might be allowed to continue his evidence at 3 p.m. Both Commissioners assenting, the witness left the stand.

Mr. Commissioner Higgins arrived and took his seat as one of the Commission, at 11.30 a.m.

THOMAS CUMMINGHAM, a native of Ireland, living in British Columbia since 1859, a resident of New Westminster and describing himself as a fruit-grower, stock-breeder and farmer, was duly sworn.

By Mr. Wilmot:

Q. Do you wish to make any statement?—A. I feel deeply interested in this question of disposing of the offal, and the welfare of the fisheries generally. I differ from all the evidence I have heard as to its value as a fertilizer—I think it very valuable.

Q. For the purpose of producing cereals or fruit?—A. Fruit especially and in the event of our going into beet-root growing.

Q. Your knowledge—is it from experiment or on good authority?—A. Oh, I have the best of authority.

Q. What effect has it from a sanitary stand-point?—A. I should think it very good.

Q. From what cause—its putridity or offensiveness of smell—or does it create disease?—A. I think it apt to create disease.

Mr. HIGGINS.—Not what you have heard, Mr. Cunningham, we don't want hearsay evidence.

By Mr. Wilmot:

Q. What of your knowledge, do you think it creates disease?—A. Well, I think it would taint the water and I know if it lodges upon the beach or shores it becomes offensive and deleterious to health.

By Mr. Higgins:

Q. That is your opinion—have you any practical knowledge?—A. Well, that is my opinion—I know it has a bad effect upon dairy stock if they drink the water. I was through Chilliwack and through Sumas last fall and saw hundreds of thousands of dead fish there.

Q. And is there no way of stopping fish from dispersing themselves dead in the river?—A. There is a way of catching them and grinding them as a fertilizer.

By Mr. Wilmot:

Q. What is the effect on dairy stock?—A. Well, the cows drink the water and it taints the butter.

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Q. Have you any knowledge of its effects on the milk?—A. I have heard farmers say so.

Q. How does it effect hogs—does it show the effects in the pork?—A. Yes; it gets unmarketable.

Q. Then as a fertilizer and oil—you think the fertilizer would be valuable for agricultural purposes?—A. Certainly; there is fish guano made in Norway sells in London for £6 to £10 sterling a ton.

Q. Have you had any trial of its effects as a fertilizer here?—A. I have seen it tried in the raw state.

Q. Have you used any made in the factory here?—A. No; I have not. There is an unfortunate opinion prevailing that our lands in this district are sufficiently rich as to not need a fertilizer—it arose because this neighbourhood is very rich—but in other places it is not so there—Mr. Higgins will know in Vancouver Island the trees are withering for want of a fertilizer. I think the fertilizer would be useful for both agricultural and horticultural purposes, and when we get the knowledge how to make it properly we will ship it away to England and other places—but we don't need to ship it—we need it here. I expect in a few years from now I will be able to use 50 tons of fish guano a year, and if we go into the raising of beet-root we will want every pound we can get.

Q. If it were made, you would consume a lot of it and you think others would do the same?—A. Yes, I would and I think others would. I think too that steps should be taken immediately to utilize the humpback salmon—they are poisoning the small rivers and streams in this country and it is a very small matter if bins were made. A ton of green fish will make 400 pounds of dry fertilizer.

Mr. HIGGINS.—Suppose this offal, Mr. Cunningham, were towed out into deep current of the river would it taint the water as now?—A. Oh, no; I think it would not, but I think it would be a gross waste of very valuable material.

Mr. WILMOT.—Well, then, why don't you go into this profitable business?—A. Well, that is not my business—I am a consumer.

Mr. HIGGINS.—Well, but we will admit there is no way of utilizing that offal?—A. But, I don't think so.

Mr. HIGGINS.—But suppose there is no way and there is no factory—what would you do with it?—A. I think I would tow it out to deep water—that would be better than leaving it around the canneries.

Mr. HIGGINS.—About these hundreds and hundreds of salmon you see in Chilliwack—they would taint the water too, would they not?—A. Yes.

Q. And for years back this has been done?—A. Yes.

Q. And if there had been no natural law to thin them out they would have choked up the river long ago with their numbers would they not?—A. Well, I have no doubt that much of the land in this district has been enriched by dead salmon.

By Mr. Higgins :

Do you think that salmon die after spawning?—A. Well, a great many.

Q. Do you think, with the late Mr. Mowat, that 25 per cent get back to sea?—A. Well, I don't know.

Q. What do you know of this sickness said to be derived from offal?—A. I know nothing except what I have heard from Delta and other places.

Q. Well, but that might have come from other causes?—A. Yes, it might.

Q. Have you any practical suggestion to make for disposing of this offal?—A. I don't know.

Q. Has anything been tried?—A. I think there is an oil factory down the river.

Q. Using offal?—A. Yes.

Q. You say dead fish at Chilliwack have an effect on the milk?—A. Yes.

Q. Do you throw away the milk?—A. Oh, no; I do know this, that where hogs pasture and eat these fish we keep them for another year to get rid of this fishy taste.

Q. And if they ate many dead fish, you would have "fishy" pork?—A. Yes, I suppose you would.

Mr. WILMOT.—Have you seen this article in the "Colonist," Mr. Higgins, about the analysis of samples of offal?—A. Mr. Higgins.—Oh, yes; I have seen that.

Mr. CUNNINGHAM.—If you wish to see authorities as to value of fertilizers I have them here.—A. Mr. Higgins.—Oh, no; never mind—we know it is a good thing, but the question is simply how to do it with success.

Mr. WILMOT.—Q. Have you anything to make mention of, with regard to the limitation of nets?—A. Licenses?

Mr. WILMOT.—Q. Yes.—A. I think it would be unfair if you place cannerymen at the mercy of the fishermen. I saw the effects of that on the Columbia River. I had a friend who dropped \$175,000 just through such a thing.

Mr. WILMOT.—Q. Have fishermen control of the Columbia?—A. They had then—the fishermen forced the price of fish up to 60 and 65 cents.

Mr. HIGGINS.—75 one year—I had a friend who lost money too.

Mr. WILMOT.—Q. Would it be equitable if each fisherman, a *bona fide* British subject, should be entitled to one license?—A. It depends on the number applying.

Q. Would you limit the number?—A. Yes.

Q. What number should that limit be?—A. I think 500 about right.

Q. The fishermen say they cannot get licenses to fish and consequently are labouring under difficulties—now with 500 that is the case. You are not prepared to say then, whether they should—all practical *bona fide* British subjects—be given a license or not?—A. Well, no; I think the number should be limited to a certain number—they should not be transferable by any means.

Mr. WILMOT.—Q. What are your views on the Sunday close season? Should Sunday be kept as a close season?—A. Yes, I believe in the observation of the Sabbath—I think when we try to amend the Divine Law we get into difficulties.

Q. You mean the whole of Sunday?—A. Yes, I mean the whole of it—I don't see any reason why a man should fish on Sunday night when other men don't do other work on that day.

Q. What are the effects of the hatchery on the river?—A. Decidedly beneficial I think.

Q. With regard to your views on licenses—you appear to be an intelligent man—do you favour any discrimination of fees in obtaining licenses—should the fee be alike, to fishermen and canners?—A. I think there should be uniformity.

Q. With regard to this river and all other rivers in the Province?—A. Well, I think in order to permit the northern rivers to compete with Alaska a discrimination should be made in their favour. The northern coast is dangerous to navigation and the reverses heavier.

Q. Have you any knowledge of the quantities of fish taken by canneries and their size?—A. Not very much.

Mr. HIGGINS.—Q. What is your opinion as regards the increase or decrease of fish in the river? Do you think the river over-fished?—A. I think it has been, but the hatcheries I think have supplied the difference.

Q. Then you think with a hatchery, intelligently carried out, there is no danger of decrease of the fish?—A. No, I think not.

Mr. WILMOT.—Q. And if the hatchery produces so many more fish the hatchery is making more offal. (Laughter.)—A. Well, we will get more fertilizers. I do hope the Government can do something to utilize these humpbacks—anything that can be done to utilize these fish and make them into fertilizers would be a good thing.

Q. But should not this offal be utilized first?—A. Well, I don't know—I think one just as bad as another. If any gentlemen will pay a visit to Chilliwack, they will see for themselves.

Mr. HIGGINS.—Mr. Chairman, has any medical evidence been taken as to the effects of this offal?

Mr. WILMOT.—Yes; we have had medical evidence.

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Mr. HIGGINS.—Well, I think subpoenas should be at once issued to all medical men within reach and get their opinions on this matter—also the mortuary statistics and record of deaths, &c.

Mr. ARMSTRONG.—Yes ; I think the city health officers should be summoned, too. You cannot summon a man and get him here this afternoon—you cannot expect a man to be here before Monday.

Mr. HIGGINS.—Well, I cannot wait here for all time—I think you should get these men. We have lots of evidence waiting in Victoria and I must go back Monday.

Mr. WILMOT.—Well, if you will just give the names of persons you want, we will try and get them.

Mr. HIGGINS.—Well, Mr. Armstrong knows them—he knows all the doctors in town.

Mr. ARMSTRONG.—Then you think we should prove it is not healthy.

Mr. HIGGINS.—Whether it is unhealthy.

Mr. ARMSTRONG.—But it is not health alone—it is also the destruction of a lot of good material that otherwise could be made use of.

Mr. WILMOT.—Well, summonses have to be signed by all three Commissioners, but we have not used any owing to your (to Mr. Higgins) absence, but as the Board is now full, and it is desirable to issue summonses we might send Mr. McNab down to ask any one you would like to be here.

Mr. HIGGINS.—Well, I think Dr. Wilson should be summoned.

Mr. WILMOT.—Do you think that it is necessary to issue a subpoena to Dr. Wilson?

Mr. ARMSTRONG.—I do.

Mr. HAGGART.—I do.

A summons was thereupon issued to Dr. Wilson to appear before the Commission at 10 a.m. on the 29th February at New Westminster ; and at the request of Mr. Higgins, letters were written requesting the attendance of Drs. De Wolfe Smith, Fagan and McLean before the Commission at 2 p.m. this day.

The Commission adjourned at 12.30 p.m.

NEW WESTMINSTER, 27th February, 1892.

Afternoon Session.

The Commission re-assembled at the Court House at 2 p.m. Full Board present. CAPTAIN COOPER, being present, was permitted to resume his evidence.

By Mr. Wilmot :

Q. Then you gave your opinion in regard to offal being non-injurious, and that it might be made use of beneficially by making it into oil and fertilizer?—A. To make oil. I don't see my way clear to make fertilizer.

Q. Have you any knowledge of the injury of saw-dust?—A. No direct knowledge, but I think it would be injurious for this reason—I have often noticed fish nibbling at any little thing in the river—I don't think that was with salmon—the saw-dust in going into a fish's gills would lodge in passing out. A salmon is a very delicate fish and I have known salmon to die after slight injury.

Q. You have seen saw-dust in their gills?—A. I have not seen it, but I think if it lodged it would injure fish.

Mr. WILMOT.—I may say that it is a fallacy which has much predominated in the eastern provinces that saw-dust killed fish by getting in their gills ; but we never find saw-dust in the gills of living fish, but when fish are dead, saw-dust may get in their gills, but never in the gills of living fish. The saw-dust is injurious by stopping vegetable growth in the beds of rivers, &c., and that is where the injury comes in, and though salmon may go through a lot of saw-dust, they would never get it in their gills.

Mr. HIGGINS.—But this witness thinks saw-dust does injury to fish—he thinks it gets in their gills.

By Mr. Wilmot :

Q. What do you think of the limitation of nets?—A. I think the present size of net sufficient.

Q. But the number of licenses given to fishermen and cannerymen?—A. I think myself that the licenses can be readjusted—I think it is not fair and equal as it stands at present—the cannerymen have almost enough licenses to get along with Indian labour alone, and an independent fisherman cannot get the chance of making anything at all, except in a poor season, when the independent fisherman is much in demand. I think the cannerymen might be allowed one-half the number they require. The condition of things is quite different here to what prevails on the Columbia River. There they are white fishermen, but here it is not the same. I think if a limit is placed on the river, the cannerymen should be given about one-half and the independent fishermen the other half—I think that is but fair.

Mr. WILMOT.—But would you give one license only?—A. One license—not more.

Q. What number would you give to cannerymen, then, on the supposition that there was no limit?—A. Oh, as many as they like.

Q. If one license were given to each *bona fide* fisherman, there should be also a limit, should there not, to the licenses given to cannerymen?—A. If licenses are unlimited to fishermen, they should also be unlimited to cannerymen.

Q. Then, would it not have the same effect then as that which you have referred to, viz. : that one would master the other, if unlimited to cannerymen? The fishermen only get one—would not the fishermen be kept out of service?—A. Well, I don't look at it in that light; my object is to say if we give licenses in unlimited numbers to fishermen, we must also do the same to cannerymen.

Q. Then, unlimited to cannerymen?—A. I would say, if cannerymen are limited, also limit the number of licenses issued on the river, as well—for instance, if 600 are enough for the river, give cannerymen one-half and fishermen the other half—if the department considers 600 too small, give both parties the same, no matter what number.

Q. But if 600 was the limit and 300 the number given to the cannerymen, there might be enough cannerymen put up to make it almost useless to continue work?—A. Well, that is a matter which the cannerymen would arrange among themselves, for no business man would go into a business unless he thought he would get a license.

Mr. HIGGINS.—Pardon me, Mr. Chairman, I would suggest that Captain Cooper might give way for Mr. McNeely, a gentleman who has come here to give evidence and has but a short time at his disposal—Capt. Cooper can come again on the stand, if he will be good enough to give way for the present.—A. Oh, certainly,

Mr. WILMOT.—Very well, then Capt. Cooper we will conclude with you afterwards.

THOMAS MCNEELY, a resident of Ladner's Landing, and in British Columbia for twenty-nine or thirty years, describing himself as a merchant, was then duly sworn.

Mr. MCNEELY.—What I came here for is to correct a statement made in the paper—I will show it to you if you wish to see it.

By Mr. Wilmot :

Q. A statement made by yourself sir?—A. No, by another party. The witness here read an extract from the report of the proceedings of the Fisheries Commission in the *News-Advertiser*, of 27th February, 1892, re evidence given by Mr. W. Arthur on the previous day. (Continuing) I wish to state that I did not buy this oil. I tried this oil in 1890—I used a barrel or so—last year I didn't use any of any account. It is not good as a lubricator and I have no use for it.

By Mr. Armstrong :

Q. You didn't buy any of it in 1891?—A. I did not.

By Mr. Wilmot :

Q. Did you sell any of it?—A. No, I did not. I just wanted to correct that statement—that is my reason for coming here.

Marine and Fisheries.

By Mr. Higgins :

Q. Perhaps Mr. McNeely can give some views about the health of [the community down the river?—A. There were some deaths from typhoid fever down there last summer during the fishing season.

By Mr. Wilnot :

Q. Have you formed any views of the probable reasons for this sickness?—A. I have not.

Q. Have you ever drank the water?—A. No.

Q. Why don't you drink it?—A. I don't like drinking water at all.

By Mr. Higgins :

Q. Does Mr. Ladner drink much of it? (Laughter.)—A. I don't know.

By Mr. Wilnot :

Q. What is the impression of the injury derived from offal there?—A. Well, I could hardly tell that.

By Mr. Higgins :

Q. Have you ever known of any case of illness traced to drinking Fraser River water?—A. I don't know.

Q. Did you ever live in a large city?—A. No.

Q. Any town where large streams ran by?—A. No.

By Mr. Armstrong :

Q. Do you think oil from offal is as good as dog-fish oil?—A. Not for lubricating purposes.

By Mr. Higgins :

Q. Do you know of anything as to its use as a fertilizer?—A. I believe it is considered good as a fertilizer.

By Mr. Wilnot :

Q. For general purposes?—A. Well, I think more for vegetables.

Q. Is there a ready sale for fertilizer?—A. Well it has never been introduced enough—I could not tell.

Q. But it has been used?—Yes, small quantities of it, but as to whether it would pay, I don't think any one has experience enough to tell.

By Mr. Higgins :

Q. There are quite a number of Chinamen employed during the canning season about Ladner's Landing?—A. Quite a number.

Q. Could their labour be dispensed with?—A. I don't know how.

By Mr. Higgins :

Q. Could they not get white men?—A. I don't think they could.

Q. Nor Indians?—A. I don't think they could.

Q. And they consider Chinese labour most effective?—A. I think so.

By Mr. Wilnot :

Q. Do you think every *bona fide* fisherman and British subject should get a license to fish?—A. Well, I could not say—I never paid any heed to it.

Q. But should resident fishermen, in your opinion, be placed in such a position so they could get a license?—A. I think so.

Q. If that were generally known, would it add to immigrants coming to the country?—A. Well, I don't know—there might be fishermen enough in the country to take all the licenses they could use.

Q. Any inducement would be good that would induce immigrants to come and take the place of Chinamen, would it not?—A. Well, yes, if they could give labour when they got here.

Q. But would it be an inducement, if an immigrant knew he could get a license if he wanted one?—A. Yes, I think so.

Mr. WILMOT.—Very well, that will do, sir; unless, gentlemen, you have something further to ask the witness.

Mr. ARMSTRONG.—No, nothing further.

Mr. HIGGINS.—Oh, no; that will do.

CAPT. COOPER was recalled and continued his evidence.

By Mr. Wilmot:

Q. We were last speaking something about licenses, I think?—A. I stated that I had made application for a license—one license to fish salmon—that is, one on any river on which I wished to go—I wanted one here, and if I went to the Skeena or Naas, I wanted one for each river, and in each case I was refused.

Q. But if you got a license for the waters of British Columbia, would not that cover all?—A. Yes, if there were licenses of that description; but I was willing to pay for a license on each river.

Q. And you could get neither?—A. I could get none. The only reason that was given me was that I was well enough off and had a steamer and had no need to do fishing. I told Mr. Mowat that was the very reason I built the boat, but I had to go towing, and afterwards sold the boat.

Q. You attribute it to this cause that you could not get a license to fish?—A. Yes.

Q. You were away for a season and then could not get licenses to fish?—A. Yes, you see some seasons are poorer than others, and then I went steam-boating.

By Mr. Higgins:

Q. Were you willing to go in the deep-sea fisheries, too?—A. Yes, I was ready for all kinds.

By Mr. Armstrong:

Q. But there was nothing to prevent you going out in the deep sea?—A. Yes, but that is only in winter; I wanted to fish in the rivers. The second year I had to go towing and eke out the expenses in that way, instead of fishing, as I wanted to. I considered that it would not justify me in equipping a boat for deep-sea fisheries, unless I could fish anywhere I chose.

By Mr. Wilmot:

Q. Your view of the deep-sea fisheries is within three miles of the coast?—A. Yes, certainly, and I also asked Mr. Mowat if he would communicate with the department and let me stock a river and then let me have it for five or ten years; but he would not do it for me.

Q. And did it never go any further?—A. Well, that is what I want to know—if he did not I want to make that application now. My reason for wanting 5 years is that the time for the sockeye returning to spawn is from 3 to 4 years, so if I placed a limit of 10 years I would only then have 6 years to fish.

Q. You spoke of being on the Columbia—are there fish hatcheries there?—A. I have read that there are—there were not when I was there.

Q. And you draw the conclusion that by starting a hatchery?—A. I didn't intend starting a hatchery but wished to stock it after a plan of my own.

Q. Will you not tell us this and give us information?—A. Well, that is a secret—I would rather not tell that. I wished only to have the privilege of controlling the fish I had hatched out myself. I wanted to stock the stream for myself and then after my time it would belong to the Government.

Q. Then you intended hatching fish?—A. Yes. Oh, well, it is the same way—there is no secret about that.

By Mr. Armstrong :

Q. I think it would be well if Mr. Cooper would give us this information.—A. Well, will this information go through the Commission to the Government?

Mr. WILMOT.—Every syllable will go to the Government along with the report from the Commissioners, etc.

Mr. HIGGINS.—Oh, well, if Capt. Cooper has some process of his own I don't think he should be pressed for it. The last question you asked Mr. McNeelly—about 300 licenses being issued and about hurting their business—I said I thought it was equitable if a limit was placed on the number of licenses on the river, if fishermen should have half and canners the other half. I meant to say that if not enough fishermen to take them up the canners should take up the balance.

By Mr. Wilmot :

Q. If 300 were given to canners and 300 to fishermen it would bring them down to 15 licenses each—i.e., the canners—now, if there were more canneries built it would bring down the number to even less.—A. Well, the business will adjust itself—no canneries will be closed unless they are going to pay. In a poor season, 600 boats will be well enough.

Q. Then you think the river can be over-fished?—A. Yes; the river can be fished out.

Q. What is the experience on the Columbia River?—A. Well, the boats were so thick—there were 1,000 boats on the river—the boats on the bar were so thick that hardly a salmon could get by.

Q. Would you consider that an over-fished place—too much fishing at the mouth of the river?—A. Yes; I think fishing should be kept within Garry Point and the bar outside in this river. In three seasons over there after they got so many boats—the year before I went there they had probably 500 or 600 boats at the outside—that was in '76 or '77 I fished first—and they doubled the number of boats. Fish were fairly plentiful, but after that—well, the result will show—there are nearly a quarter of the canneries there now as were there some years ago.

Q. Is the mouth of the Columbia River much the same as the Fraser?—A. Oh, yes: except that the Columbia River is on a much larger scale.

Q. If 300 or 400 boats were fishing at the mouth of the river here, it would be in proportion to the 1,000 boats at the mouth of the Columbia?—A. Oh, yes: it would be a great deal more.

Q. And are you satisfied that too much fishing at the bar is prejudicial to fish?—A. Yes, it is, I have observed since I have been here that fish have run later and the quality of fish has depreciated very much.

Q. Then do I understand you that the proportion of fish caught in the later seasons—probably due to over-fishing—is not in as good condition for canning as those earlier?—A. No, they are not—I think they are outside too long as they come later—I think fishing on the bar has caused that—I would not feel sure about that only that I have noticed that after the close season—Saturday and Sunday—the fish afterwards come in in greater abundance and drop off at the latter end of the week. If it was only on Sunday night when fishing commences I would say it was because the fish have come in Sunday, but I have noticed they run thick on Monday and then run thinner through the week.

Q. It is you think the constant fishing at the mouth keeps fish from coming into the river and that excessive fishing there would more or less affect the general fisheries of the river?—A. Yes, I think so.

Q. And do you say then that your views are that excessive fishing there has caused a tendency to have later runs of fish in the river afterwards?—A. I think so—they are getting later all the time.

Marine and Fisheries

Q. The earlier fish come in and are caught and that late fish are in worse condition than earlier ones?—A. Yes; I would not undertake to say that in one or two years or more—I would not say fish would come in earlier—it would take time—it is gradual—we would not see the effect in one or two years.

Q. Then that would be apparently borne out—all the canners say they would desire fish for canning from the first run?—A. Do you mean that fish from the first run should be hatched out?

Q. That fish from the first run should be taken and their eggs hatched out?—A. Oh, yes; I would agree with that because the first fish in are the most favourable by far.

Q. Is it your experience that sockeye are the most valuable?—A. Yes, it is sockeye we are discussing. I am more in favour of hatching out red spring salmon if possible for the reason they bring more money into the country, because a fisherman catches a spring salmon and gets from two bits to 50 cents and that money is left here while the money for canning mostly goes out of the country. The money a Chinaman gets we get no benefit from that—then money goes for tins and very little is left here.

Q. Then you think shipping fresh fish is more desirable than the canning business?—A. Yes, certainly; it is a question which will benefit the community more and if we can get a \$1 left for each fish instead of a few cents it is so much better.

Q. Do I understand you to say the catching of fish for shipment fresh would be much more desirable for the employment of white labour than canning?—A. Oh, yes; there would be no use for Chinamen there.

Q. And no offal?—A. None whatever.

Q. While one-third of the sockeye goes in the river?—A. Yes, about that.

Q. Do you know what freezers get for their fish?—A. Yes, from 10 to 15 cents per pound.

Q. And how much do canners get?—A. Well, I think all the canneryman gets the benefit of is 2 cents, probably not more.

Q. Do you think the freezing of sockeye fish would be profitable?—A. Probably not because there are such great numbers we could not get away with them. There is a limited market for fresh fish while there is practically an unlimited one for canned goods. I don't wish to prejudice the department against the canneries as against the freezers, but I simply state what I think would be most beneficial to the country.

Q. What advantage has a cannery where a canner has a boat with four men and fishermen have but two?—A. Oh, outside fishermen will catch more fish every day.

Q. Why?—A. Well, for the simple reason that the fisherman gets so much for every fish he gets while the other gets \$2 a day. I know all about it—I have been there. I have had many camps and have had to fire men who were engaged and had sold their fish to fishermen.

Q. If two men fish twenty-four hours they would in all probability be likely to catch more than two men would in twelve hours?—A. Well, yes; of course—it looks that way I know.

By Mr. Armstrong :

Q. But as a rule the men who fish for themselves fish more hours than those employed by the day?—A. Yes, I have fished for the twenty-four hours myself.

By Mr. Wilmot :

Q. You would not be much use then to yourself or anybody else would you?—A. Well, I slept in the boat on the end of the net as it drifted down.

Q. Well, if you have nothing further Capt. Cooper, I think that will do—I think that we have gone pretty well over the ground.

MR. THOMAS LADNER, of Ladner's Landing, B.C., who had previously given evidence before the commission requested permission to be heard further and was duly sworn.

MR. LADNER.—What I wish to say is this that in giving my evidence I went on to say that I was simply representing the Wellington Cannery. I omitted to say that

with Mr. Laidlaw and others I represent seven canneries, and I wish to say that I represented the seven canneries in my evidence.

By Mr. Wilmot :

Q. And you are one of the representatives of a company with others of seven canneries? How many on the Fraser?—A. Five, and one on the Skeena and one on the Naas.

Q. A company formed for mutual interest?—A. A company formed for mutual interest.

Q. A syndicate?—A. No, merely our own capital.

By Mr. Armstrong :

Q. Well, Mr. Ladner, it has been stated here that you had principal charge of the oil factory for this company—now, would you kindly state to the commission the capacity of the canneries and the quantity of oil, &c., and what you did with the offal?—A. Well, this year according to instructions from the department, or the representatives of the department here, we went to the expense of building an oilery at a cost of \$3,000 or \$4,000.

By Mr. Wilmot :

Q. Do I understand you to say that the department asked you to build an oil factory?—A. No, but the Government said they intended to enforce the law.

Q. That was in existence?—A. Well, I don't know. I don't know. I don't read the law, as a rule—we leave that to persons who are paid to tell us.

Q. Did you have to ask that it should not be enforced? I may say that the minister rescinded it for the one year only, therefore last year the statute would hold good, and the law should have been enforced.—A. I understand it in this way, from the man who had charge of the business here—Mr. Mowat—that they were going to enforce it, and we went to work to provide against it, though much to our regret.

By Mr. Armstrong :

Q. Did they enforce it?—A. No, they did not. We complied with it, while every one else was allowed to go free.

By Mr. Higgins :

Q. What did you do?—A. We built an oilery at a cost of \$4,000.

Q. Did you make anything?—A. No, we did not; and yet Mr. Wilmot wants us to build another.

By Mr. Wilmot :

Q. No; I may mention that what I said was that your Provincial Government here were inducing Crofters to come here, and that a company was being formed for disposing of fish offal by erecting oil factories, &c., and what I also said was that from accounts given by scientists and others, it would be beneficial for these projects to be started?—A. You are speaking on theory, Mr. Wilmot. I am speaking from practice. During my experience, Mr. Wilmot, I have found a man can make any amount of money on paper, but when it comes down to practice, it is a very different thing—that is the trouble with your scientific men: on paper they are all right, but when it comes down to practical application and hard facts, they are wanting. Now, your scientists have spoken on paper about making this offal into guano, and that it was worth so much money—\$30 a ton, or even more, I think they said. Now, we have manufactured this fertilizer, but it is worthless. We are willing to take \$20 a ton, yes, anything for it, to get rid of it. I have heard parties state here that the fertilizer could be shipped and the oil sold, but I am speaking with practical knowledge acquired from practical experience in the matter.

Marine and Fisheries.

By Mr. Higgins:

Q. Have you ever planted it—ever tried it in the ground?—A. It has been tried—Will Rich tried it at the Landing in a small way, but he did not find much out.

Q. Well, you have good land there, Mr. Ladner. Suppose it was put on the poor land?—A. Well, perhaps it would be good there, but it did not seem to make any difference. We are quite willing to sell it to any one very cheap—to any one that wants to experiment on it. I am going to send some to Westminster for sale and am going to have some tried this year.

By Mr. Wilmot:

Q. Did you make any calculation at that factory what it would be to you as a fertilizer?—A. No; we reckoned the guano as nothing—that is our loss.

Q. Well, if guano is worth \$34 a ton down east, would it take all that to take it there?—A. Well, there is no query at all, because you cannot reduce it to such a dry state that you could take it there—the crews would not take it, because there would be such a stench nobody could remain near it.

Q. I suppose you know what coal oil is?—A. Oh yes, coal oil is the very essence of Eau de Cologne compared with the fertilizer. (Laughter).

By Mr. Armstrong:

Q. I see Dr. Fagan is here now, and as he may have very little time we might go on with him, if Mr. Ladner will give way—no doubt he has covered what he desired to say?—A. Oh yes, I am willing to make way for the doctor—if there is any other matter occurs to me I can let you know of it again.

Mr. Ladner thereupon retired.

— CHARLES FAGAN, M.D., of New Westminster, a native of Ireland, living in British Columbia about five years, and practising medicine in New Westminster and its surroundings, was duly sworn.

By Mr. Higgins:

Q. I would like to ask Dr. Fagan whether he is aware of any bad effect among his patients from drinking Fraser River water?—A. I think so.

Q. Is it marked?—A. Yes, decidedly marked.

Q. In what way?—A. Typhoid fever, and it is increasing every year.

Mr. Wilmot:

Q. Do many cases prove fatal?—A. Yes they are the worst cases we have in this province.

Mr. Higgins:

Q. You say many prove fatal?—A. Yes, a fair proportion.

Q. Traced directly to the water of the Fraser River?—A. Yes, that was my opinion.

Q. Any cases on the higher levels?—A. No, none.

Q. And during the fishing season?—A. Yes, during the fishing season.

Q. Not from waters, etc., around their own doors?—A. No, not that I am aware of.

Q. Does a stench arise from cess-pools or cisterns?—A. I have not noticed that.

Q. Have you ever been up as far as Chilliwack?—A. Yes.

Q. Have you ever observed the numbers of dead fish on the water there?—A. Yes.

Q. In great numbers?—A. Yes, in great numbers.

Q. Then a person drinking water impregnated with dead fish would have the same case?—Yes, but at the mouth of the river where the tide ebbs and flows and the offal is left there and then the sun plays upon it, and of course the effect would be much greater.

Mr. ARMSTRONG.—We are very much obliged to you doctor for coming here—we don't want to detain you any longer than necessary. There is nothing further I wish to ask.

Mr. WILMOT.—Anything else Mr. Higgins?

Mr. HIGGINS.—Nothing more.

Mr. WILMOT.—That will do Dr. Fagan—thank you.

Mr. THOMAS LADNER, of Ladner's Landing, who had given way for Dr. Fagan, the previous witness, was now recalled.

Mr. LADNER.—Dr. Reinhardt, of Vancouver, could give you important information on that point—he is the doctor down at the Landing—also Dr. Wilson.

By Mr. Armstrong :

We have summoned Dr. Wilson. (Continuing.) Q. I want to find out how many gallons of oil you made and from how many canneries you took offal?—A. We made about 100 barrels, each barrel containing on an average about forty-five gallons—we took offal from about 160 boats—five canneries.

Q. Did you get the whole of the offal from five canneries?—A. Yes, we took all except on one occasion—the Delta one day was staging the bins and the whole of the offal dropped down—with that one exception the whole of the offal was taken.

Q. You had the product from five canneries in this factory to use and you produced about 4,000 gallons?—A. Yes, about that—4,500 gallons or 4,000 gallons.

Mr. ARMSTRONG.—Q. What did you get for it per gallon?—A. A portion of it sold at 30 cents and some at 40 cents—average about 35 cents and half of it we have still left. We are refining it and trying to make it better.

Mr. WILMOT.—Q. To what class of individuals do you sell it—for local or export purposes?—A. Oh, well; it is used for skid purposes.

Q. Do farmers use it?—A. No, not at all—I have used it myself for lubricating purposes but it is no use—it gums up.

Q. Is there any process of refining it for that purpose?—A. No, I don't think so—the more you refine it the worse it gets, unless you put something else with it—it seems to get more gummy—they use crude oil for skid purposes where if you take the refined article it will be no good.

Q. Then it is better in the crude state for skid purposes?—A. Well, I would say that if we sold more.

Q. Is your establishment a large one?—A. Pretty large—last summer we had four men employed. When you speak of actually running it, it would be necessary to have four men, or five, or perhaps six, and a steamer and two scows for every cannery.

Q. And that complement of work would run the factory satisfactorily as far as quantity is concerned?—A. Yes, as far as quantity is concerned, but not provide the steamer you use, the more unsatisfactory it would be.

Q. If it would prove satisfactory it would be a convenient way for canneries to get rid of offal?—A. By all means.

Q. Do I understand you to say that the fertilizer produced is in a liquid state?—A. Yes, it is not in a dry state.

Q. But it could be dried?—A. I don't think so—it has been tried before at Burrard Inlet and they could not make it dry enough to ship it.

Q. Would not the process of heat make it fit for shipment?—A. No.

Q. Could not it be sent in barrels or tanks?—A. Well, I don't know—it is not exactly a liquid—it is a pulp, but the expense would be so great to make it fit for shipment that it would be of no use.

Q. That is only theory too.—A. That is theory—paper.

Q. It is unfortunate, sir, your first trial in making oil?—A. Very unfortunate. I would recommend one more thing before I quit. According to my ideas of the matter it would be well for us to have here appointed in British Columbia a local Advisory Board, and which would save the Government all the expense of sending our friend Mr. Wilmot over here, for I think if we had a Board here of good level-headed men we could look after the business better than at present.

Marine and Fisheries

CHARLES STANLEY, a native of England—18 years in British Columbia, residing along the Fraser River and describing himself as a fisherman, was duly sworn.

By Mr. Wilmot :

Q. Well sir, what do you want to say?—A. Well, I think the licenses are issued very unfairly, and I think there should be a limit of licenses on the river—about 600—but canneries to have half and the fishermen half—such freezers, such as Port and others, should have no licenses, because they hand them over to the canneries in July.

Q. And if they don't hand them over?—A. They should then have licenses—they should not be transferable in any way—they should be entitled to licenses if they deal legitimately in fish, but selling them to canneries is wrong.

Q. Would one license be sufficient for each fisherman?—A. Yes; they are not entitled to more.

Q. And on those terms you would be satisfied?—A. I would be satisfied—in regard to offal—I think it should be taken from the canneries and thrown in salt water.

Q. Why do you come to that conclusion?—A. Because it remains around the water and effects the water and you cannot drink it—it makes you sick.

Q. Have you had any experience of the effects of sickness from it?—A. Yes; it made me sick several times.

Q. A permanent sickness or for a few days?—A. For a few days.

Q. Have any of your neighbours been effected except for a few days?—A. Well, many have been affected—the Indians won't even take the water from the shores—they go out in deep water and get it. The factory below is not built to get rid of it. It could be easily taken out to the Gulf and other fish would soon eat it up.

Q. Have you ever fished under license?—Yes, sir; I have both fished and ran camps for the canneries. I don't think Indians should have licenses.

Q. Why?—A. Because the Government gives them ploughs and cultivators, &c., and allows them to fish all the year round—the Government don't give me any ploughs or cultivators.

Q. The Indians, though, claim to be the rightful sons of the soil before you came here?—A. Yes; but they have the right to fish the year round.

Q. What about the license fees?—A. I think fishermen should pay less than cannerymen do.

Q. Why?—A. Because the cannerymen employs daily labour and has the whole profit out of the fish—he gets them cheaper.

Q. Have you ever fished on any other rivers?—A. Yes; on the Columbia and Skeena.

Q. Should there be any difference between the fees on the Skeena and the Fraser?—A. No, nor in any other river in the province.

Q. How do you fish on the Columbia River—under license?—A. No, sir; I never knew of any man having to get a license while I was there—you don't require any.

Q. Was your average catch of salmon pretty good?—A. Some years it was—some years it was not.

Q. What was your average catch under your license?—A. The average for those three years was about 4,000 fish.

Q. And the average price you got for them?—A. About 10 cents.

By Mr. Wilmot :

Q. What are your ideas as to the close season—the prevention of fishing on Sunday?—A. I think that about right—I think I would let it remain as it is—from Saturday morning to Sunday night.

By Mr. Higgins :

Q. And suppose this offal was towed out into the current, would that relieve you?—A. No, I think if thrown anywhere in the river it would be taken back by the tide.

Q. Would it not go out with the tide if thrown out—there is quite a current, you know?—A. No, I think the incoming tide would bring it all back.

By Mr. Wilmot:

Q. Does it effect your nets in fishing?—A. Yes, it gets in among the meshes and gives a fellow much trouble to get it out.

Q. Do you ever get any entrails in the meshes?—A. Yes, often.

Q. If all the offal were put in the river a large portion would be taken out by the tide would it not?—A. Yes, a large portion would, but a large portion would come back with the tide.

Q. And get in your nets?—A. Yes, it gives a good deal of trouble getting them out.

By Mr. Higgins:

Q. Do you ever see any dead fish in the river?—A. Yes, a good many.

Q. Would they not be as much harm as offal?—A. Well, no doubt they would but they should be taken out.

By Mr. Higgins:

Q. It may be an obligation of the Government to take them out. Are fish floating down in comparatively fresh state or not?—A. Sometimes they are—sometimes they are not.

Q. Have you been far up river, Mr. Stanley?—A. Yes, I have been up the Harrison River.

Q. Many fish dead there?—A. Yes, I have seen many of them.

Q. Are fish in Harrison River the same as here and do they go back? The late Mr. Mowat said that only 25 per cent ever got back?—A. The farther they go up of course it is harder for them to get back.

Mr. HIGGINS.—There must be a great number of those fish and they must have an effect upon the river.

Mr. WILMOT.—Well, they get them in the nets.

Mr. HIGGINS.—A few—but they dissolve, most all of them—the bodies of fish dissolve very fast in salt water—they soon disappear.

By Mr. Wilmot:

Q. What is the average weight of fish you catch?—A. About six pounds.

Q. Have you any experience in seine fishing?—A. Yes, I have done some seine fishing.

Q. Where?—A. In Mud Bay.

Q. Would you consider seine fishing or net fishing with drift nets, more injurious?—A. I think a seine is—it would take more fish.

Q. Do you think seines should be allowed at the mouths of rivers?—A. No, sir; I think it decidedly injurious.

Q. Have you formed any ideas or views in regard to the hatchery on this river?—A. I think the hatchery is good.

Mr. WILMOT.—Very well, sir; that will do if you have nothing further to state.

DR. W. DEW. SMITH, M.D., of New Westminster, a native of Canada, and a practising physician and surgeon in New Westminster for 6 years, was duly sworn.

By Mr. Wilmot:

Q. The object, Dr. Smith, in having you come here is to ask you for your views from a sanitary stand-point in regard to offal being thrown into the river?—A. Do you mean as regards its effect upon the population?

Q. On man, or on fish, as far as that is concerned.—A. Well, I hardly know just where abouts to start—if you will just give me some idea.

Q. Well, are you aware that offal is thrown in from the canneries?—A. Yes; I know that for a fact—I have seen it.

Q. Do you think the offal thrown in would effect the water in any shape?—A. Yes; I think it would—more particularly where there was slack current.

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Q. Where there were slack currents would it be more injurious to the health of persons—residents?—A. Well, I may say there is no uncertainty as to that—a large number of authorities say that sewage does not effect the water—in fact some people say people get fat upon it. There was a Royal Commission sat in England some time ago which found that it did not effect the water injuriously, so it is a point not settled yet.

Q. Well, from your own knowledge—can you say injurious effects are arising from offal?—A. I have no personal knowledge.

Q. What are your personal views as to the correctness of offal being thrown into the river?—A. Well, that is a question which I have given too little interest to—of course we are above the offence here—but I think in a river like we have here it does little hurt.

Q. Does it do any harm?—A. Well, as I have told you I have been here 6 years, and I have seen none of it.

Q. Have you been down the river yourself to see?—A. Well, I have had practice down as far as Ladner's, and I have had no experience in its bad effects—if deposited in the channel it would be better than in shallow water where it would lie and decompose.

Q. Then from your personal knowledge you know of no bad effects from throwing offal into the river?—A. No, none at all.

Q. Are you one of those who think that throwing offal into the water would cleanse it or purify it?—A. No, it would not cleanse it.

Q. It would change it somewhat from the normal state?—A. Yes, but when I say "not injurious" I mean if it is flowing water—if in stagnant water or in a place where it would decompose, it certainly would be injurious.

Q. Then if making a lodgment along the shores of the river or in shallow water it would be injurious?—A. Yes; if the water was consumed from that immediate neighbourhood it might produce disease like dysentery and such like.

Q. Would it have a tendency to produce typhoid fever?—A. No, typhoid fever is a thing which only comes from another case of typhoid.

Q. But, would typhoid be produced from deposits on the shore which would produce miasmatic effects?—A. No.

Q. Then you don't know of its having produced any injury to health?—A. No, I do not know of any it has produced.

Q. But it would if deposited in bays and sloughs where it would be exposed to heat?—A. Yes.

Q. But not in flowing water?—A. No, because in flowing water it would be carried away and eaten up by scavenger fish.

By Mr. Higgins :

Q. Doctor, you are Health Officer of this town?—A. Yes.

Q. What is the state of the general health of the inhabitants?—A. Good.

Q. Any sickness in the summer?—A. Yes, a little.

Q. Any cases of enteric in summer?—A. Well, they usually start in September or October.

By Mr. Wilmot :

Q. Is that after the fishing or during its continuance?—A. It is generally after the fishing season.

By Mr. Higgins :

Q. You practice outside this town?—A. Yes, sometimes—in cases where parties would be patients of mine.

Q. Any cases of typhoid fever in town?—A. Yes.

Q. And on the higher levels where people would not drink water supplied from the river?—A. Oh, yes; above that.

Q. Have you ever been called to Ladner's for typhoid or enteric fever?—A. No.

Q. Have you ever had any cases that you would attribute to offal?—A. No—not at all.

Q. Do you ever drink Fraser River water unadulterated?—A. Yes, it is not worse than Ottawa River water—I have had some of that.

Q. Have you ever been up to Chilliwack?—A. No—not above Mission.

Q. Have you ever seen any dead fish in the river?—A. Well, I have seen some floating in the water and along the bank.

Q. Then you think if any typhoid fever in this town it is not attributable to drinking the water of the Fraser River?—A. No, I would not say that, but I do think it would be attributable to the water being contaminated higher up—typhoid is produced always by a previous disease—it produces microbes—that we hear so much of now (the newspapers of the day being full of accounts of "Koch's lymph") and these microbes are in the intestine canal and the way they spread is by evacuations.

By Mr. Wilmot:

Q. Typhoid must produce typhoid?—A. Yes.

Q. Where was the first case of typhoid from then—A. Well, (Laughter) I cannot tell that.

Q. It is not contagious?—A. No, it is not.

By Mr. Higgins:

Q. A healthy person coming in contact with a person with typhoid fever—would they get it?—A. Well, if they inhaled the evacuations—it is generally dispersed by inhalations from stools where they are thrown away.

By Mr. Wilmot:

Q. Would effects from diarrhoea produce typhoid fever?—A. No.

Q. Then you say this enteric fever—it is comparatively in the fall of the year?—

A. Yes, they start in the fall and go on through the winter.

Q. What is enteric fever?—A. That is simply another name for typhoid.

Q. Then from your knowledge of offal by being deposited in the bays and sloughs, the effects would be in the fall would it not?—A. Yes, I suppose it would.

Q. And these lodgments of offal would be after the fishing is over, and results would then follow?—A. Yes, that would be the results then.

Q. And enteric diseases are most in the fall and winter?—A. Yes.

Q. Well, we are much obliged to you, Dr. Smith, for your coming from your duties, but it is one of those matters about which we wished to derive knowledge, you know.—

A. You are quite welcome, sir.

No more witnesses presenting themselves to give evidence the Chair declared the Commission adjourned at 4.10 p.m. to meet again at the same place at 10 a.m., on the 29th February, 1892.

Mr. WILMOT.—I wish to inform the public that the Commission will wind up its business here, if possible, on Monday morning.

NEW WESTMINSTER, B.C.,

MONDAY, 29th February, 1892.

Morning Session.

The Commission assembled at 10 a.m.

Present:—Mr. S. Wilmot, presiding; Hon. D. W. Higgins, Mr. Sheriff Armstrong, Mr. C. F. Winter, secretary.

Marine and Fisheries.

JOHN IBBOTSON, a native of England, resident of New Westminster district for thirty-four years, describing himself as a fisherman and farmer, was duly sworn.

By Mr. Wilmot :

Q. Well, sir, what do you wish to represent to this commission?—A. Well, what is it you want?

By Mr. Higgins :

Q. But you volunteer your evidence, do you not?—A. Well, what I think about the fishing business is this:—I started in New Westminster about twenty-seven years ago, when first I went fishing, as near as I can recollect. Four years ago about, I was working for Mr. Wadhams for wages—running camps and taking charge of Indians, and the like of that—and I was told there that I had better get a license for myself, but it was an off year like this one—we have two good years and two off years—I have never known it to fail. We may not catch the fish that run up this river always corresponding—

Q. You think a crop of eggs laid down this year will produce a crop four years hence?—A. That is my experience without fail—there was only one year there was a failure, but there is as many fish as ever there was.

Q. Yes, that is your knowledge as to these alternate run of fish?—A. Yes: well, they told me that year at the cannery that there was going to be a limit to the licenses and any one who had not a license that year would not get one.

By Mr. Wilmot :

Q. What year was that, sir?—A. It was four years ago.

Q. 1888 then?—A. I guess it would be—it was four years ago, because it was a year like this. I was told that the licenses were going to be limited and I would not get a license unless I had one, but it seemed so unreasonable to me that one should get a license and another not that I put no confidence in it. The consequence was that next year which I thought would be a good year, when I made application for two licenses—I had two since—I found that although I had been raised in the country I could not get a license.

Q. In 1889 you could get no license?—A. I could get no license.

By Mr. Higgins :

Q. Why?—A. Well he said he didn't know me and I had not any the year before—at the same time I had a fish market in town rented from other business—Mr. Armstrong knows me very well.

Q. Well, you did not get any that year?—A. No: I didn't get any.

Q. Did you get any next year?—A. Well, I thought next year would not see people getting licenses that had no more right than I had and I thought it must be through influence and I went to a man in town here that I knew and he has some little influence and he gave me a little piece of writing.

Q. That was in 1890—who got you the license?—A. Well, I don't know whether it would be right to tell—

Q. Well, you have taken the oath and should tell all you know.—A. Well, if I must tell—it was Mr. Cunningham—I don't know what he put in the note.

By Mr. Wilmot :

Q. To whom was this note addressed to?—A. To Mr. Mowat, the Inspector of Fisheries.

Q. Did you get licenses this last year?—A. Yes.

By Mr. Higgins :

Q. One or three?—I got one—I didn't get any for the boys. The fish seem to be as plentiful now as ever before, and the way I account for it is this way: when we

came here first and started fishing, we caught as many as now—well, I think the capacity of the fishing grounds they will engage produces so many fish anyway, and if it was not, the fish produced—you could almost wander over them.

By Mr. Wilmot:

Q. Do you think it possible to reduce fish by overfishing?—A. Well, there is a remedy for that, and what I believe in is justice and equality, and I think every man who is a British subject should be able to fish—you should give every one who is a British subject a license, and then there is the close time at the end of the week, and if fish are being reduced, you could put on more time forward at night, but there is enough in the day time.

Q. Do fish run more at night or day time?—A. Well, I don't know. If you have any close time, have it in day time—let them fish at night always.

Q. Are not the most fish caught in night time?—A. Well, I don't know. We catch most of the fish at the rise of the tide—sometimes it is night, sometimes day.

Q. Then, you think every British subject should get a license?—A. Yes, I think so.

Q. What about canneries—should they get all the licenses they like?—A. Well, I don't think there is any other way but to give canneries one license, because they will get them anyway.

Q. If you gave canners 100 licenses, would they employ outside fishermen?—A. Well, they always do get them.

Q. But if canneries got 100 licenses each, would it not stop regular fishermen from selling their fish?—A. Well, I don't see any more justice in giving fishermen a monopoly over cannerymen than in giving cannerymen the monopoly over fishermen—but suppose you gave cannerymen no licenses at all—well, they would be obliged to either shut up their canneries or give fishermen just what they ask for their fish. Then, suppose canneries only have ten licenses—the fish are often so numerous they cannot get away with them, and when they have licenses of their own, they can put these boats out and take the men to work in the cannery to take care of the fish.

Q. Would ten be enough to run an establishment, with what they could get outside?—A. Yes, I think so.

Q. What about the offal?—A. Well, my opinion is that offal in water does not hurt anything, unless where it gets on the shore. The water is very cold—I have been to the bottom twice, and I know it is very cold.

Q. Did you see any offal there? (Laughter.)—A. I didn't wait to see. (Laughter.)

Q. Then, you think offal on shore is injurious—in what way?—A. Well, it becomes offensive.

Q. Do you think, if thrown in deep water, would it be carried away?—A. Oh, well, it gradually works away. So long as it is covered with water, it is all right, but, of course, on shore it gets offensive.

Q. What are the injurious effects when it gets on shore?—A. Well, I suppose its disagreeable smell—that is about all I know of.

Q. Do you think it would be injurious to health?—A. Well, I don't think it is any benefit to health—it ought to be kept off shore.

By Mr. Higgins:

Q. Do you know of any one getting ill from drinking Fraser River water?—A. Well, I have drank the water for many years—I never found any offence, but it is the way when you get a change of water. If you go to Victoria you will find the water has offence.

Q. Then a person coming from Victoria would find a change in the water—would you think it from the dead salmon in the water or otherwise?—A. Well, I have drank water from the Fraser River for many years—there is always a quantity of dead salmon in the river.

Q. Do you think salmon all die in the river?—A. No I don't—I think many get to the sea.

Marine and Fisheries.

By Mr. Wilmot :

Q. You have been fishing about twenty-seven years?—A. Yes, off and on.

Q. And probably have been employed by canneries?—A. Yes; by contract a good deal of the time, and a good deal of the time I have run a store here like Vienna.

Q. But as soon as you got licenses of your own, you fished all the year round?—A. Yes.

Q. Do you think, is the close season beneficial—how many days in the week?—A. Oh, twenty-four hours are plenty at the present time.

Q. What time should that be?—A. I don't fish on Sunday in day time but go out Sunday night. They have hardly anything to do in day time on Monday, and if you say, close all Sunday, some will go out Sunday night just the same.

Q. You think the Sunday close time should be made so as to not affect canneries or fishermen—why not run it all day Sunday, then?—A. Well, you asked me what time would be best for a close time, and I am telling you.

Q. And what time would be best then?—A. What I meant on Sunday night is—we go out at six o'clock in the evening and fish till Monday morning. We would go out from Saturday night until Sunday morning if the close time in day was Saturday and Sunday, twelve hours.

Q. What about the transfer of licenses? If a man had eight or ten should he be permitted to sell and not use them himself? If you got ten licenses on the understanding that you were to fish for yourself should you be able to stop at home and sell to other fishermen?—A. Why no; I think he should use them himself, but I don't think he should get them any more than others for I think every one should get all they want.

Q. But would it be just to other fishermen if I could sell mine to others?—A. Why no; they should not be transferable, but you should make it so there would be none to transfer—make the law so there is no need to break it.

Q. Where have you fished—at the mouth, or up river?—A. I have fished all over the river, from Ladner's up.

Q. Ever from Ladner's down—on the Sand Banks?—A. No; I have had contracts, and men could go where they like.

Q. Do you think there cannot be too many boats fished down there?—A. You cannot keep the fish from coming in.

Q. What is the usual average of fish that you would have caught during your fishing period annually?—A. Well, in a big year about 12,000 to 14,000, and the next year 7,000 or 8,000, and the next probably 2,000 to 3,000.

Q. What might be the average size of salmon in weight—would they be 6, 7 or 8 pounds?—A. Well, I think about 7 pounds—the more numerous the salmon are the smaller they are in weight—I think about 7 pounds, and I think they won't fill more than 5 tins—about 4½ to 5 tins.

Q. Could you give us an idea as to whether there should be any discrimination in the fees charged for licenses—should all be alike?—A. Why, of course; one man should not pay more than another.

Q. Should Fraser River men pay more than is paid on the Naas and Skeena?—A. No; I think they should be equal; I believe in justice and equality in everything. I don't claim because I am a fisherman that I should be allowed to fish because I have been fishing so long and raised a family in the country; I think any man should be allowed to fish as well as me if a British subject.

Mr. HIGGINS.—Well, then; you say you never fished at the mouth of the river?—A. No: I never fished outside of the sand heads.

Q. What do you consider the mouth of the river?—A. Well, I would consider the mouth of the river below Garry Point.

Q. Would you consider the sandheads the mouth of the river?—A. Well, I would consider the mouth of the river where the water falls off.

Q. Where the sand heads disappear?—A. Yes.

Q. Would you prevent fishing on those sand heads?—A. No.

Mr. WILMOT.—And you think it does not prevent fish from coming into the river: have you never caught salmon elsewhere—in Columbia River or in Mud Bay?—A. I have caught fish in the Columbia River.

Q. But if nets are put across the mouth would fish have a chance to get up?—A. Yes, I think so; they will go under, and in all shapes; in slack water the fish run more regularly—in swift water they run straighter.

By Mr. Higgins:

Q. What are the depth of nets, then?—A. There should be no special depth; the way to regulate fishing is by close time.

Q. Then you think fishing on the sand heads would not be detrimental—it does not drive fish away from the river?—A. No; it does not drive them away; when fish are ready to come into the river they will come or else be caught: For instance, here (illustrating his meaning on the table) are the nets, one right behind the other—the man down the river will not probably get many fish, and the next one will get lots of them; they are on their way home.

Q. What do you mean by a salmon going home?—A. To the spawning beds, of course.

By Mr. Wilmot:

Q. Well, if there is a barrier across the river, can they go?—A. Well, you are worrying me. (Laughter.) Of course, if it was a natural barrier, they could not get past.

Q. But if there was a barrier across, would it not prevent them from going home?—A. Oh, well, you cannot stop them like that—many will go home.

Q. Have you ever fished with seines?—A. No, sir; I don't know anything about seines; I never fished them.

Mr. WILMOT.—Thank you, sir; that will do.

Dr. W. REINHARDT, M.D., a native of Germany, residing in British Columbia about 3 years, and living at Ladner's Landing, B.C., for about 2 years, a practising physician and surgeon, was duly sworn.

By Mr. Wilmot:

Q. Have you anything to offer with regard to the river—with regard to the pollution of it, or injury done to man or beast by the throwing of offal in the river?—A. Well, of course, I have formed an opinion about that. There has been a good many cases of typhoid fever there, and it is an important question. That is the prevalent disease there.

Q. Have you formed an opinion as to the cause of that disease?—A. Yes; but it is not offal; it is the bad drainage there; there are no drains; every farmer can make ditches and cess-pools as he likes; there is no law whatever; they can do just as they like. Now take the Slough on which all these typhoid fever cases occurred. This slough has produced no typhoid fever during the big runs. Last year there were hardly any on that slough, while we had many cases of typhoid fever. I have been living right over the slough; it runs under my house, and I ought to know something about it. There was no offal thrown in last year, and I attribute the typhoid to bad weather and drainage. You cannot produce typhoid by decomposing animal matter. You know the Frenchmen and Germans eat Limburger cheese and other decomposed matter. You cannot produce typhoid fever by simply decomposed organic matter. The simple fact of organic matter being in a state of decomposition, does not say it is poisonous.

Q. You say there is want of drainage down there?—A. Yes; and I have talked over it with the Board of Health. I have told farmers not to drink the water. Now, with the Chinamen you have no typhoid fever, because the Chinamen do not drink the water, but boil it like tea—and in the old country, in big cities, would the people think of drinking the water? No; they put in a little whiskey or something to kill these germs. I call that slough nothing more than a ditch. Last year they put a dam in the slough—

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By Mr. Higgins :

Q. What is the name of the slough?—A. Cohiluthan Slough. You see all the closets run into that slough—they have no right to drink it ; they should boil it.

Q. But has everybody to boil the water before they can drink it?—A. I moved away because I could not get good water.

Q. You moved away because you thought it unhealthy?—A. Yes ; I didn't want to bring my family there ; there has been typhoid fever there for some time ; it is not properly drained ; now, for instance, they want to widen the road there ; they simply throw up a dike and that settles it ; there is no law ; they do as they like.

Q. Where do the people throw their kitchen slops?—A. Into the slough—everything goes into it.

Q. But if they want drainage at all—a man must have drainage to carry his water, etc., down into the slough?—A. Yes ; but there is nobody to look after any—there is no board of health—the farmer can drain just as little or just as much as he likes.

By Mr. Wilmot :

Q. Then you think offal has no bad effect at all?—A. Well, I don't think so—I think it will be a very unhealthy place, but not on account of the canneries.

Q. If no offal were thrown in, would it be better?—A. Well, there was very little thrown in.

Q. But, if, none were thrown in, would it not be better for health—would not water in its normal or healthy state be injured by throwing offal into it?—A. Certainly ; I suppose it would be, but they have no right to drink it—whether the slough now is healthy or unhealthy—typhoid fever or not—I would not drink it.

By Mr. Armstrong :

Q. But do you think offal in previous years impregnated the slough there that fever could come after?—A. Well, you see, the germs must be formed—they are not formed except by the offspring of another egg and the germ is the origin of the being no matter how small it is.

Q. But may they not be increased by other foul matter?—A. Certainly ; but you find decomposing organic matter everywhere—in big cities you have cess-pools, closets, etc., and the germ is increased from them.

Q. But would not throwing offal in increase these germs? You say foul matter in cities has the effect of increasing germs of typhoid fever or sickness?—A. I can hardly answer the question like that. If you have a typhoid fever patient, in the wash excrement are these germs. Now, instead of destroying these germs it goes into the closet, and it goes into the soil, and as soon as it gets into the river I believe it will get destroyed.

By Mr. Wilmot :

Q. Will it get in the land?—A. That is where it most lodges.

Q. Well then, this offal lying on the soil, will it produce germs?—A. Well, everything will produce germs—it is like living on a volcano—that is why it gets away over—from the turning up of the land—now in Germany it is proved by the rise and fall of surface water—as soon as the water rises there is no danger, but as soon as it goes away, then there is danger.

Q. Then as long as offal is in water it does not produce germs?—A. No.

Q. But as soon as the water leaves, it produces them?—A. Well, yes, of course, all things like that produce them.

Q. Then you think if put in rivers it does no harm?—A. Yes.

Q. You know pretty much what that soil is composed of down there? It is sedimentary deposit, is it not?—A. Yes ; most of it is peat.

By Mr. Higgins :

Q. Have you ever lived in an ague country, doctor?—A. No ; but I have been in New York—and when practising up country I have seen this sickness come on—but they should get fresh water there.

Q. Where could they get it?—A. Well, they could get it from the timber—they are 4 miles from the timber, but instead they prefer putting in a little whiskey.

Q. Would whiskey destroy these germs?—A. Well, no; not altogether, but to a large extent—now I may say that all these persons who were typhoid fever patients were all temperance people—I don't mean to say that whiskey did all the good in the cases of others who drank it, and did not have typhoid fever, but I would prefer taking bad whiskey to bad water.

LOUIS MACAVERI, a native of Italy, in British Columbia for eight years, a fisherman, and resident of New Westminster, was duly sworn.

(Being unable to speak English plainly his statements and the questions put to him were interpreted by John Stevens.)

By Mr. Wilmot:

Q. Well, what do you want to say?—A. He says he has been here for eight years and has applied for licenses these last four years and gave \$20 to Mr. Mowat's brother last year, and Mr. Mowat told him if any license was issued for him he would have it—he waited some time and then got his \$20 back.

Q. Is he a British subject?—A. Yes: here are his papers, (handing in certificate of naturalization).

Q. You have no other complaint except that you could not get a license when you applied for it?—A. He says that in his opinion he should have a license the same as any other persons who are British subjects—he has been here in New Westminster eight years and he has done nothing else but fishing.

Q. Has any one else got licenses since he put in his application?—A. Yes: two or three after he paid his \$20—one an Austrian and one a Spaniard.

Q. Were they British subjects?—A. Yes: they were naturalized two years ago—he says that he had to give his fish for 4 bits (50 cents) apiece while the rest had \$1 and \$1.25—he had no license but had a net, and consequently he had to take what was offered.

By Mr. Wilmot:

Q. How could one get \$1.25 and the other 50 cents?—A. Because he had to sell his fish to Mr. Port and Mr. Port had given him a license.

Q. Then if he had a boat of his own he would be able to deal with Mr. Port direct?—A. Well, that is what he thinks if he had a license.

Q. A boat was furnished by Mr. Port?—A. No, he owned a boat and net, but did not own a license.

Q. Well, I do not see how he was refused if he had a boat and net——?

By Mr. Higgins:

Q. Well, he had no license—he could not have fished at all?—A. I know a case where Mr. Low was fishing and he got one pass only out of six.

Q. Then what he claims is that being a British subject and fisherman, he should get a license like any other man and he only wants but one?—A. Yes: one license and one boat.

Q. What number of fish may he have caught, of the sockeye family, when fishing for Mr. Port?—A. He says he didn't fish sockeyes for Mr. Port.

Q. Well, for anybody?—A. He says he took 1,000 fish for Mr. Ladner.

Q. Did he fish all the while?—A. No, about two weeks.

Q. And what did he get for the sockeye from Mr. Ladner?—A. Twelve and a half cents.

Q. Divided between himself and partner?—A. Yes.

Mr. WILMOT.—Very well, that will do—we understand his grievance—we are obliged to you for interpreting for us.

Marine and Fisheries.

On the question of adjourning to Victoria, raised by Hon. Mr. Higgins, it was unanimously resolved that the Commission would be kept open in Westminster till 12 o'clock noon, if evidence is forthcoming, and if not, that an earlier adjournment would be made to Victoria to meet there, at 10 a.m. on the day following departure from Westminster, and that Mr. Higgins be authorized to obtain a suitable room for holding the meetings of the Commission.

Dr. J. R. WILSON, M.D., of Ladner's Landing, a native of Canada, and living in British Columbia between 6 and 7 months, a practising physician and surgeon, was duly sworn.

By Mr. Wilmot:

Q. I presume the sole object in having Dr. Wilson brought here is in regard to this offal question. Now, from your knowledge of matters at Delta can you give any light upon the good effects or evil effects of the lodgment of offal along the shore?—A. Offal thrown into the middle of the river with the current running at four or five miles an hour may not be injurious to the health of people living along the shores, but I think if it is thrown or lodges along the shores or is driven in the sloughs, I think it would be injurious to health.

Q. Have you any evidence as to injurious effects upon the health of people?—A. Well, about 75 per cent of the cases I was called upon to treat were typhoid fever and with persons residing along the slough. I don't mean to say that decomposing fish is the cause of the fever unless parties were predisposed by using the water.

Q. What was the nature of the diseases you attended?—A. Fevers and diarrhoea—by the action of the water on the intestine canals it left a suitable soil for the germs to act upon, i.e. germs producing typhoid fever.

Q. Have the cases been numerous during your experience?—A. Yes, I never had so many during my practice of seven years as I have had in the months of September and October when the fishing season was over last year.

Q. Is it more apparent then than in earlier spring?—A. Well, I was not there until last August—that is the time though for typhoid fever, in the autumn the microbes are greater then.

Q. Are any special reasons assigned by the medical fraternity why the autumn months produce fever?—A. Yes, after the hot dry summers and springs running dry, there is so much ground exposed to the sun, the evaporation, etc., is more likely to produce this effect.

Q. Will soil absorb injurious matter so that it is thrown off when the water recedes?—A. Yes, absorption of decomposing vegetable matter along the shores is the theory.

Q. What about animal matter?—A. Well, I cannot say—as well as decomposing vegetable matter—there is said to be some of it.

Q. But the animal matter, if added to it, would it be worse?—A. It might.

Q. Were the cases malignant?—A. The most malignant cases I have ever been sent up to treat were there.

Q. Is typhoid contagious?—A. Indirectly; the poison must go through a change before it enters the system—the germ that produces disease undergoes a change before it is fit to set up another disease.

Q. Are germs produced from decaying vegetable and animal matter?—A. The germs grow and multiply in vegetable matter.

Q. Is the origin of the germ known?—A. It feeds upon the vegetable matter—we don't know the beginning—these germs exist, and if they have anything to feed upon they multiply and increase.

Q. Are you of the belief or opinion that the deposition of quantities of offal in the river and its floating back upon the shores of the river are injurious to human health?—A. I am.

Q. And do you attribute in a degree—let it be large or small—that the seventy-five per cent of cases you have treated would have for their origin more or less of the

effects from this offal or not?—A. I am not prepared to say that—all I am prepared to say is that I believe it injurious to human health, and that it may have something to do with these cases.

Q. Have you any knowledge of its effects upon the brute creation—cows, &c.?—A. Well, that it would be injurious—it would be injurious through the milk—milk is a conductor of disease.

Q. And the more healthy the fluid the cows may drink, the milk would be the more healthy?—A. Yes.

Q. Have you any knowledge of its effects upon the flesh of animals—pigs being unfit for food, &c.?—A. I cannot say—I have heard it was, but I don't know of my own knowledge.

By Mr. Higgins :

Q. Doctor, is there only one slough in the vicinity of Ladner's Landing?—A. There are a number.

Q. But the one slough?—A. Well, that is the one which I think affects the health. Q. But is it any different to the others?—A. Well, there is a cannery situated at the mouth of the slough.

Q. Are there any at the others?—A. No.

Q. Are you aware of any trench or system of dykes in the vicinity?—A. Yes.

Q. Are they stagnant or not?—A. Well, I think some of them are stagnant.

Q. Where are the closets drained to?—A. Into the ground.

Q. Would the land be over-flowed unless it was for the dykes—have you ever seen the land over-flowed?—A. Well, no, not since I have been there—I have seen a little of it over-flowed by the dam at the slough.

Q. Have you ever lived in a fever and ague country?—A. No.

Q. Do you think cattle that drink from this slough alone are affected?—A. Oh, well, I cannot say if only these are affected. I only say the milk would be affected if they drank of the water.

Q. Are you aware that dead fish come down the river in numbers?—A. Well, I know there are numbers in this slough.

Q. And would the effect from them be just as bad as from offal?—A. Yes ; just as bad.

Q. And do you attribute to the fact that there is a cannery at the mouth of the slough, that there is typhoid fever there?—A. No, not necessarily—I think, though, it is because of offal being washed up.

Q. And do you say that good would be got if the cannery was not there?—A. No, the sanitary condition of the place is not good.

Q. Is there any board of health—any sanitary officer—any one to report to the Government that typhoid fever exists there?—A. Not any one that I know of—there are two police there whose duty they say it is, but I don't know.

Q. What is the condition of the bottom of the slough when the tide is out there?—A. I don't know—there is nothing particular.

Q. Does it look slimy?—A. Yes. I have seen dead fish also there.

Q. They would render the land around more slimy, would they not?

By Mr. Wilnot :

Q. Well, I was just going to ask the doctor were those fish whole fish or did they look decayed?—A. Some were whole fish, some were not.

By Mr. Higgins :

Q. But what I want to get at is this : If dead fish are brought down by the current and deposited there, they would have just as bad an effect as offal?—A. Just as bad.

By Mr. Wilnot :

Q. All decomposing matter would be just as bad?—A. Just as bad.

Marine and Fisheries

By Mr. Higgins :

Q. If offal were thrown out in the current, do you think it would be washed out to sea?—A. Well, I cannot say—it might be brought back into the sloughs.

Q. There is a current of four miles there?—A. Still, I think in fishing time they say the influence of the back tide is not much felt.

Q. Then, if the tide is running at six miles, they would have six hours to take offal out?—A. Yes.

Q. Are you aware of lots of offal lying around the shores of the slough?—A. No, I have not seen it.

Q. You have seen dead fish?—A. Yes ; sometimes too I have seen the offal.

By Mr. Wilnot :

Q. What is the population of your village?—A. Three hundred or four hundred or so.

Q. Do you ever find that, as a rule, medical men recommend sanitary matters or measures in a small village like that?—A. No, I don't think they do.

Q. Was illness produced in the village or along the shore out among the farmers?—A. It was along this slough among the farmers.

Q. Are they fairly cleanly, industrious people, along that slough?—A. They are.

Q. Would you attribute any amount of uncleanness on their part to induce this typhoid?—A. No, they are not so uncleanly as to produce this.

Mr. HIGGINS.—Well, I don't think the doctor understands that question. He has already said that all kitchen slops and deposits from closets go into the slough.

By Mr. Wilnot :

Q. But those conditions apply everywhere in the world—they are generally deposited just on the ground. Are the conditions there so adapted more than other places for the extension of the disease?—A. No, most of my patients were at the head of the slough.

By Mr. Higgins :

Q. But any place where the tides sweep back and raises the deposit from the bottom up, I think, would be fine conditions for typhoid. Do you ever drink that water at all?—A. No.

Q. What do people drink down there?—A. They catch rain water and mix it, generally.

By Mr. Wilnot :

Q. If any dead fish or offal were not carried into that slough, would the water be palatable—drinkable?—A. No, I think not.

Q. From what cause?—A. From water closets along the shore.

Q. What inhabitants are there along the slough?—A. Twelve.

Q. And the deposits from these twelve persons would therefore pollute the slough?—A. No; they are mostly living back from it.

Q. Some medical men have told us the deposits from these kind of things would purify the waters of the slough; do you agree with that idea?—A. No, sir, I do not.

Mr. WILNOT.—It might not be amiss for me to read a few extracts from a report of the Ontario Agricultural Department, and see if you agree with them.

(Mr. Wilnot then proceeded to read from an article in the Victoria "Colonist" of 20th February, 1892, and in which the following conclusions were made :—)

1. It will utilize a bye product that otherwise is a total loss.
2. It will prevent the waters from becoming contaminated.
3. Its proper management must tend towards a more healthful surrounding.
4. Its return to the soils of the farm will partly offset the waste of our cities by sewage carried to the lakes and rivers.
5. If properly handled it will pay well.

Q. Do you agree with those sentiments?—A. I do ; I cannot say as to the expense of manufacture.

Q. No; but as regards the health?—A. Yes; I quite agree.

Q. Do you know of Professor James?—A. No, I don't know him.

Q. I may mention that you will find this in the "Colonist" of a few days ago, where the whole matter is laid down, and these are the conclusions that are come to.

Mr. T. LADNER (speaking from the audience).—Will you excuse me for a moment. As a person who is deeply interested in land at Ladner's Landing, I would like to suggest a question to be asked Dr. Wilson.

Mr. WILMOT.—Mr. Ladner, we have extended to you more than to any person opportunities to make statements.

Mr. LADNER.—I have heard several doctors make statements here; now I would like to say that there is a saw mill from which—

Mr. WILMOT.—Then you wish me to ask the Doctor if mill refuse will not affect the public health?—A. Yes; it will aid towards it.

Q. And the combination of sawdust, offal, and other matter would produce greater effects than any one of them alone?—A. Yes.

Mr. WILMOT.—Very well, Doctor, that will do.

Dr. Wilson asked if his expenses would be allowed him, and was informed by the Chair that if he would submit his account for the same it would be forwarded to the department for consideration.

Mr. McTIERNAN, Indian Agent, who had previously given testimony, again presented himself.

Mr. McTIERNAN.—Mr. Wilmot has made a statement which I wish to contradict, in that he said that the Indians only come here and stay a little while and then go away again.

Mr. WILMOT.—Mr. Wilmot made no such statement—it was simply given in as evidence—I did not say it at all—some one else did. If you want proof, I have no objection in saying that I think Indians should have licenses as well as other men.

Mr. McTIERNAN.—Thank you, sir.

Mr. ALEX. EWEN, who had previously given evidence, asked permission to say a few words as to the pollution of the waters, and was again sworn.

Mr. EWEN.—We are all aware that during a freshet the river is very muddy—vegetable matter, &c., coming down, and we have a flat bank or beach, that is a ledge of banks, and about eighteen or twenty years ago it was very offensive here in New Westminster. Mr. Armstrong and a great many people know it just as well as I do. About the 1st of July the water begins to recede again, and leaves about a foot or eighteen inches of this deposit lying upon the bank—with a cane you will go down a foot or eighteen inches—that raises a very offensive smell when you are going through it, and turns up a very black offensive matter, and some days you will feel effects of it very bad, and in the early days when the effects were felt more than now, there were a good many hogs lying around, and it was good ground for them to work upon, and when they came down they raised a great stench. Late in the fall this all washed away, and in a few days the banks became firm again. You have a great deal of this along the Fraser River. It is a great deal worse, more hurtful to the stomach rather than the stench from the sawdust. Every person who has been living here upon the banks knows it, and it has been for every one to see, and it would be a good thing if the fishery inspector would take notice of it and see if it is not one of the causes that makes health bad upon the river, and you might get evidence to confirm that: and I have no hesitation in saying that it must have come under the observation of Mr. Armstrong.

Mr. WILMOT.—I may state, Mr. Ewen, that when sawdust is in a decaying condition, it is a very disagreeable substance and throws off a most offensive smell, and the Dominion Government is endeavouring to prevent its deposit in the water. At Ottawa we have a lot of it, and I know it is considered very offensive. However, about the river here, you say it deposits black sedimentary matter?

Marine and Fisheries.

Mr. EWEN.—Yes; it leaves a black matter and when disturbed it raises a very offensive smell, and directly after the lodgment of this matter the Oolachans come up the river, and many come upon the beach, and when hogs used to root there, it was for the Oolachans they were after.

● Mr. WILMOT.—After this black matter becomes decayed and throws off an offensive smell and aids sickness—now could it not be increased by the deposit of a great quantity of offal?

Mr. EWEN.—Yes; but there is no fishing when this is gathered. Of course it would increase it—"every little makes a muckle" (laughter)—and everything added to the deposits will make matters worse.

The Commission adjourned at 12.10 p.m., to meet again at the same place at 2 p.m.

NEW WESTMINSTER, B.C., Tuesday, 29th February, 1892.

Afternoon Session.

The Commission reassembled at 2 p.m., in the Court-house.

Present:—Mr. Chairman Wilmot, Mr. Sheriff Armstrong and Mr. Secretary Winter.

No evidence being forthcoming the Chairman declared the Commission adjourned till 4 p.m.

The Commission reassembled at 4 p.m.

Present:—Mr. Chairman Wilmot, Mr. Sheriff Armstrong and Mr. Secretary Winter.

No evidence being forthcoming the Chairman declared the Commission adjourned until 10 a.m., 1st March, at the same place of meeting.

NEW WESTMINSTER, B.C., Wednesday, 1st March, 1892.

Morning Session.

The Commission assembled at the Court House at 10 a.m.

Present:—Mr. Chairman Wilmot, Mr. Sheriff Armstrong, and Mr. Secretary Winter.

In the absence of witnesses ready to proceed the Chairman at 10.15 declared the Commission adjourned until 11.15 a.m.

At 11.25 a.m., the Commission was called to order by Mr. Chairman Wilmot and proceeded to hear evidence as follows:—

Mr. HENRY D. BENSON, a native of St. John, N.B., but a resident of British Columbia for the past twenty-one years, now living at Ladner's Landing, and representing himself as engaged in lumbering and farming, was duly sworn:—

Mr. BENSON.—We had a meeting at Ladner's Landing on Saturday afternoon, in regard to fish offal as it affects the Delta people, and I was chairman of the meeting and have been delegated to hand in this petition to your Commission.

By Mr. Wilmot:

Q. Are you Reeve of the municipality?—A. I am Reeve of the municipality and was chairman of the meeting, and I am here to hand in to you the petition re offal and the minutes of the meeting.

The Chairman took the proffered papers and read from them aloud as follows:—

LADNER'S LANDING, B.C., 27th February, 1892.

A meeting was held in the Delta Town Hall, to discuss and protest against the action of the canners in casting fish offal into the Fraser River.

Chairman H. D. Benson, reeve of Delta municipality, opened the meeting by saying that fish offal was a great nuisance and hurtful to the bulk of residents of the municipality and that action should be taken to send a petition to the Fish Commission now sitting in New Westminster.

Mr. W. H. Ladner then arose and said that fish offal was a nuisance in the river, but thought it would make very good manure. Messrs. W. Arthur, E. S. Brown, Hy. Trim, and several others gave evidence that fish offal had to their certain knowledge caused many cases of sickness and a number of deaths. Mr. John Kirkland said that filth of any kind is detestable, and Mr. Glassford thought it advisable for the Delta Council to appoint a board of health. The chairman asked Dr. Wilson to state his opinion, but Dr. Wilson thought it unnecessary as he was to give his opinion before the Commission in New Westminster.

After a lengthy debate whether it would not be advisable to protest also against the sewage of the city of New Westminster from draining into the river, it was decided that the fish offal only should be protested against. Messrs. H. D. Benson, John Kirkland and W. H. Ladner, were appointed delegates to wait on the Fish Commission in New Westminster with the petition from the people.

After a vote of thanks to the chairman and secretary the meeting came to a close.

PETITION.

To the Fishery Commission now in session in New Westminster :

GENTLEMEN,—We, the undersigned residents of Ladner's Landing and vicinity, do hereby vigorously protest against the action of the canners in casting the fish offal into the river and vitiating the water which we drink, and not only is the water rendered impure, but the tide casts the offal on the low-lying lands along the sloughs, which decaying causes a most disgusting odour, making our locality unhealthy and undesirable to live in, and depreciating the value of our property. (Except what ruin-water is caught in cisterns, the Fraser River water is the only water which we have to drink.)

(Signed.)

H. L. BENSON,
J. F. WADDELL,
C. S. FERGUSON,
CHARLES R. LORD,
THOS. THIRKILL,
G. A. WATSON,
S. B. BURR,
JOHN KIRKLAND,
HARRY TRIM,
WM. ARTHUR,
WM. H. LADNER,
WM. ALEXANDER,
A. E. TORRES,
W. J. LEARY,
E. HUTCHESON,
H. S. BROWNE,
STANTON & SHAY,
FRANK McCULLOUGH,
D. M. MILLER,
D. B. GRANT,
J. McLEARN,

R. P. ALEXANDER,
Rev. T. S. GLASSFORD,
W. T. ARTHUR,
A. PORMITER,
F. PORMITER,
S. T. ELLIOTT,
JOHN GILCHRIST,
W. H. BURR, Jr.,
WM. ANDERSON,
E. S. BROWNE,
JOHN SIMSON,
H. C. RAYSON,
JOSEPH JORDAN,
ALEX. GILCHRIST,
W. J. WATSON,
R. WATSON,
JOSIAH BATH,
W. A. MCCALLUM,
ALEX. E. CONNOLLY,
A. CASULICH,
W. MCINTYRE,

Marine and Fisheries.

F. KIRKLAND,
JOHN PEHRAM,
H. HICKS,
W. B. PARRY,
E. GOUDY,
A. R. LEARY,
T. CURTIS,
E. D. OAKLYN,

THOS. ADSETT,
GEO. DENNIS,
BAKER WESTEMARK,
H. E. FALCONER,
D. GILCHRIST,
G. ADAMS,
W. WRIGHT,
F. F. RAITH.

LADNER'S LANDING, 27th February, 1892.

Mr. WILMOT.—This gentlemen, you desire to put before the Commission, and which will be filed with the papers of the Commission—it will be necessary to call upon some of the delegates for evidence?—A. You will see that Mr. Kirkland and Mr. Ladner are delegates with me.

Q. Yes; I think then, Mr. Benson, we will take the ordinary course with you and before asking questions will swear you as other witnesses.

The usual oath was then administered to Mr. Benson.

The CHAIRMAN (continuing)—Would you like to make any voluntary statement of your own in regard to this matter?—A. Yes; I would like to make a little statement in regard to the location, &c., and people in the Delta.

Mr. WILMOT.—Very well, afterwards we may ask some questions?—A. I may state in the first place that at the Delta there are two sloughs running into the Delta—the Crescent and the Cohiluthan slough. The Crescent is some three or four miles, but it is dammed in and is open for some three or four miles. At Ladner's, Cohiluthan Slough enters and is somewhere in the neighbourhood of two miles in length.

Q. These two sloughs—one is above and the other below Delta?—A. Oh, both are in the Delta District—one above and one below—the people living along the banks use water from both. In these two sloughs the tide rises and falls and at Ladner's the water is very shallow, and in fact for quite a piece below. There is only a small channel about 100 yards wide or so at low water. There is a bar in the river and all the way up from Ladner's it is shallow water and in these sloughs the tide runs up. There is a cannery just at Cohiluthan Slough—they carry offal in in summer time and it lodges on the shores and gives off a frightful stench and which is considered a bad thing. It was always considered so in New Brunswick, and below Cohiluthan Slough the tide brings a lot of offal in and it lodges there, and in Canoe Pass there are many small sloughs.

Q. May I ask is this an island between Canoe Pass and Ladner's Landing? (scanning map)—A. No; that is the mainland—the slough is dammed now at Mr. Arthur's—when I first went there the water at times went through, and it is open at both ends—both at the east side and at the Fraser River side. As I said before, the current sets close to the bank from Ladner's down to Canoe Pass and the prevailing wind is from New Westminster in summer season, which sets drift of any kind towards the shore and a great deal of offal lodges there, and when you get to Canoe Pass—that is a shallow passage anyway—there is always water in it, but at places it is very shallow, and there are small sloughs or rough places where the offal lodges—for instance at Mr. H. Trim's—Mr. Trim said on Saturday there was a slough there which caused a great deal of this offal to lodge and which caused much sickness—there had been two cases of typhoid fever and two deaths in his family and he laid it to the offal. There are two canneries close to his place.

Q. Would Mr. Trim live about midway to Canoe Pass?—A. Near the shore—yes about midway. Now, as I said before the people all along the river have to use the river water and the offal makes it very unwholesome and unfit for use—it tastes very disagreeable.

Q. Are there no other means of getting water?—A. No; they use rain water at this season, but in summer season they are obliged to go to the river for water. Some miles back there is water, and they are now trying for artesian water.

Q. Then, this trying for water is caused by the river water being impure?—A. Well, I may say I have been on the river many years, and if there had been any sick-

ness formerly, I would have known of it; but the sickness was some distance away, and on the whole shore I have never known of any cases of fever in other parts of the municipality.

Q. And the sickness is wholly on the shores of Westham Island, and along Cohiluthan Slough and by the Canoe Pass and portions of land adjoining the Fraser River?—

A. Yes, sir. I suppose you are aware there are quite a large number of people there—the village of Ladner's Landing—and all are depending upon the water of the river.

Q. What is the population of the village of Ladner's Landing? About 200, I think we have heard?—A. Yes, about that.

Q. How is the village laid off?—A. In town lots; the farmers live very close to the slough. Formerly there were no roads—all boating—and they live on both sides of the slough.

Q. And along the shores of the Fraser River and on both sides of Canoe Pass?—A. Yes, along Canoe Pass.

Q. Is the land level there?—A. Yes, pretty level—it is what we call marsh land in New Brunswick.

Q. Are there many persons living along Crescent Slough?—A. Yes; it is well settled up all along there—good farms.

Q. Within the territory formed by Crescent Slough it is a sort of island that is there formed, is it not?—A. Yes, all along there.

Q. And how many years have you lived there, Mr. Benson?—A. Seventeen years—most of the time.

Q. And the locality where you live has not been troubled with fever—typhoid?—A. No, all the eastern end of the municipality has been as healthy as any other part of British Columbia, but in places where offal lodges along the shores, sickness has prevailed.

Q. Is this sickness of many year's standing, or is it of recent growth?—A. Well, it seems to be getting worse lately—the last year was the worst we have ever had.

Q. Is this all the time or in the spring, or when the fishing is over?—A. The sickness generally commences in August.

Q. That would be the time when offal would be lodging largely?—A. Yes, about that time.

Q. Well, offal that lodged the year previous—would it be wholly gone before the following year—that is, fish heads, tails, &c.,—would they remain?—A. Oh, no; most would wash away, and then there is a sedimentary matter that covers this offal up—it settles largely into the land.

Q. And are you quite satisfied in your mind, so far as your knowledge goes, that the sickness which prevails there so largely is attributable to offal making a lodgment there?—A. Yes, I think so. I may say I have seen reports here that some men have called your attention to salmon that have died in the Fraser River after spawning, and have tried to make out that is worse than or as bad as the offal. Now, there is no fisherman on the Fraser River who has been up and down the river more than I have, and before the canneries were established I have been up and down the river very often. I was in the lumbering business before, and in the summer of 1883 furnished all the lumber for the bridges for the Canadian Pacific Railway, and was up the mountains and on the Harrison River, and on the spawning beds a good deal, and was also on the Columbia River years ago. Now, I don't think there are many salmon die in the river nor on the spawning beds. I don't think there is much difference between the flesh of the salmon on the Atlantic coasts and here. I think the salmon's nature is to return to the sea, but in British Columbia the rivers are so rugged and rough, you see fish with pieces knocked out of them and in all manners of shapes, wounded, etc., and what fish get into the Fraser River and die before they get to the spawning grounds are very few.

By Mr. Armstrong:

Q. Are there not extensive spawning beds on the Fraser River?—A. Yes; but I don't suppose the fish that die at Fort George have anything to do with the water in the Fraser River. The fish that die in the Canyon, etc., may, but if any man will go up and watch them there is a great deal of difference. Now, in Silver Creek, that is

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comparatively speaking, for the first mile or two it does not run very fast, and there are some bars, &c., and it is a great place for salmon to spawn, and there are not near as many salmon die there as in other parts. You take the salmon where there are many rocks and boulders—they seem to have hard work to get up, and they wear themselves out and many die there in trying to get up.

By Mr. Wilmot:

Q. You think the habit of salmon is very similar to salmon in New Brunswick—you think each river will have its own family of salmon?—A. Yes; each stream has its own salmon—the Fraser has its own kind, but also every stream that enters into the Fraser will also have its own fish.

Q. You are acquainted with the St. John River?—the same thing takes place there?—A. Yes; the same thing takes place there.

Q. And the fish that go up farthest will become more protracted and exhausted?—A. Yes; and in those places that are more rocky and have more boulders, &c.

Q. And you think a greater amount of deaths will occur there and you think the greater prostration, etc., causes their death?—A. That is my opinion.

Q. And you are acquainted with the fact that the same thing occurs in the east?—A. Well, the rivers in the east cannot compare with these here in impediments for the salmon to get up.

Q. Then if there are a great many coming up do you think that more would die?—A. Oh, yes; certainly.

Q. And the few comparatively coming up in the eastern rivers makes it appear as if few die whereas here on account of the immense numbers passing up the river it would seem that a correspondingly large number died?—A. Yes.

Q. And you think the fish that die do not affect the water as much as offal?—A. Oh, no; the dead fish do not affect it as much.

Q. Have you seen many dead fish in this Cohiluthan Slough?—A. No; I have seen very few—they appear to have died in the Fraser River.

Q. They appear in better form than if they had died from rough usage?—A. Yes.

Q. How do you account for that—were they thrown away?—A. Well, I don't know—many have been thrown away in former years, but I don't think a great many are now.

Q. But these fish—you could tell by their appearance—would you think they were thrown away from the canneries or by fishermen?—A. Yes.

Q. You have been here many years and know the inhabitants—did the inhabitants before the cannery business being carried on drink water from the river?—A. Yes.

Q. And were there any unhealthy effects?—A. No.

Q. And you think the offal has caused it now?—A. Yes; and there are certain things that convince me in my opinion. Now Cohiluthan Slough is not as long as Crescent Slough and there has been three times the sickness there as on Crescent Slough, but there is a cannery right at the mouth of Cohiluthan Slough.

Q. Whose cannery is that?—A. The Delta cannery. Now there has been more sickness on that slough and around that slough than at any neighbourhood—there, and at Canoe Pass.

Q. And you attribute it to what cause?—A. To the offal from that cannery—if the sickness was general it would be different, but it is not. As I told you, over towards the bay and all the east end of the municipality has been as healthy as anywhere else.

Q. And you think the tide carries offal up the slough and it rests there and contaminates water in the neighbourhood—that is your opinion?—A. Yes.

Q. Now, since you have given information about the unhealthiness of offal and heads of fish, might I ask you this: You are acquainted thoroughly with the fish they call here the spring salmon or "quinnat"?—A. Yes, sir.

Q. You have caught and seen great numbers of them?—A. Yes, sir.

Q. Have you studied their habits, etc.?—A. To a certain degree; I have noticed them in the spawning beds and outside.

Q. Have you done the same thing on the St. John River?—A. Yes, sir.

Q. What do you think of the great similarity in the shape and size? For instance, there is in the St. John River a salmon caught very much like them, and in the Shubenacadie River in Nova Scotia I have caught salmon very like sockeye, and then again on the Restigouche there is a larger salmon. Do you know the Restigouche salmon very well?—A. Not very well; I have seen many of them. I think there is not much difference in salmon in the east and here as some people think.

Q. Are you aware that even on the Atlantic coast the fish are a little different in colour and shape according to the river where they go?—A. Yes; the same thing is here.

Q. And you think Shubenacadie salmon very like sockeye?—A. It is very like sockeye.

Q. And the meat, is it the same?—A. Yes; I ate some three or four years ago, and I thought it much the same.

Q. What do you think about the humpback salmon, sir?—A. Well, they are different fish from others, yet of the salmon family. They are decidedly different, and an inferior fish. I have always thought, though, they were made for the Indian (laughter.)

Q. A very wise provision of nature I must say, if sockeyes are for canners and humpbacks for Indians. What do you think of cohoes?—A. Oh, the cohoes are very good salmon.

Q. And you are satisfied that a fair proportion of the salmon that go up to breed return to sea again?—A. Yes.

Q. An impression seems to prevail here, and has been handed down, that the salmon all die, but from the evidence we have received I think that idea has been abused?—A. A great many of course die, but not all.

Q. Have you noted the spring salmon at the time of spawning?—A. Many of them—yes.

Q. Does the male have that peculiar hook on the jaw like Atlantic salmon? I am asking this for information, and because so many people contend they are quite different?—A. I think they have, but I have not handled any only to see. You see it is 26 years since I caught salmon in the St. John River.

Q. Yes; well, it is a well known fact that all male salmon have a projection on the jaw, and I have asked you so as to show that if so the fish here are virtually the same but changed by climatic effects. Have you any suggestions you would like to make to avert these effects you complain of?—A. Well, I don't know, except it (the oil) was made into oil or manure.

Q. And has anything in that direction been carried out in your neighbourhood?—A. There is a small factory started down near us, but I never went over to see it.

Q. Have the products been used from it?—A. Well, I don't know much about it.

Q. There is a good deal of oil used in the lumbering business: have you ever used the oil in skidding, &c.?—A. When I was lumbering there was none of this fish oil used; we used dog-fish oil.

Q. Is there much used in this country?—A. Yes.

Q. What is the usual price of the dog-fish oil that you use?—A. I used to pay about 35 cents for it.

Q. Do you know enough about dog-fish oil and oil made from offal, to say if it is as good?—A. I think the salmon oil ought to be as good, but I have never used it.

Q. About the fertilizer—have you used it?—A. I have not used it, but fish manure of any kind is very strong and ought to be good.

Q. Do you know anything of its value here?—A. No; I don't know.

Q. If a large factory were put up, do you think the products could be utilized?—A. Well, it would not perhaps at first, but I think it could be done when introduced.

Q. What say you in regard to the close season for fishing on the Fraser River? Men like you are supposed to speak pretty well the tone of those under you?—A. I think there should be a close season.

Q. And the Sunday—do you think it should be kept?—A. Yes, I think so—I think the whole of Sunday should be kept.

Q. For the reasons that it would not only have a moral tendency towards the people over whom you rule, but also would allow the fish to get up the river?—A. Yes, sir.

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Q. Have you ever taken notice of the hatchery and its effects on this river?—A. Not since it has been established. I have not been much on the river—I have been more around home and cannot give an opinion.

Q. Now, as an old resident, what are your views as to giving licenses on this river? Should they be given to every British subject and resident fishermen?—A. I think so, and for this reason—it has been very hard to regulate licenses on this river. A man may come here from Nova Scotia or Newfoundland with his family to start fishing and then be unable to procure a license. They should get licenses, and I think if every British subject got a license, it would regulate itself.

Q. If he got a license, should he be allowed to transfer it?—A. I think he should be the real owner, and I do not think it right to transfer licenses.

Q. Could you give us an opinion as to the average size of sockeye?—A. I think, about six pounds.

Q. Do they vary in size—some years over others?—A. Yes, sir.

Q. And would that be the average size of weight, then?—A. I suppose it would be about the average size.

Q. Are you prepared to give an opinion as to whether canneries should get all the licenses they want to fish. Suppose a cannery wanted a hundred should they get them?—A. I don't think it.

Q. What are your views as to how to equalize this between canneries and fishermen?—A. I think ten licenses would fairly equalize matters.

Q. Do you mean by that, if a canner got ten licences he could always do a fair business with his own boats and could rely upon fishermen for the rest?—A. Yes, I think so.

Q. Do you think the number of canneries should be established on a fixed number, or should any man get licenses therefor that wished it?—A. I think any man who wished to put up a cannery should have the privilege of doing so, and he should at least get ten licenses—they should, however, run the canneries put up and not put them up to get licenses.

Q. *Bona fide* for carrying on work?—A. Yes, an actual place of business for carrying on the work intended.

By Mr. Armstrong :

Q. Have you any rivers in the east, inhabited by salmon, that have a number of streams and lakes emptying into them, which would form the spawning grounds for salmon anything in like proportion to what the Fraser River has?—A. No, sir; for instance, the St. John River is perhaps the greatest river we have. There are many lakes, but the fish cannot get beyond the falls. The Fraser River has the greatest facilities of any river I know of, even greater than the Columbia River.

By Mr. Wilnot :

Q. Have you any records of what took place on the St. John River 100 years ago?—A. Only what my folks have told me.

Q. What is it?—A. That salmon were very plentiful years ago.

Q. Have you not heard that the salmon were so thick 100 years ago that you could not cross the stream on account of it?—A. I have been told they were extremely numerous and plentiful.

Mr. ARMSTRONG.—Are there any salmon in the St. Lawrence?

Mr. WILNOT.—I may say that some years ago the whole of the St. Lawrence and Lake Ontario were teeming with salmon. In my lifetime, sir, I have known the salmon so plentiful in the streams running into Lake Ontario, that on my own farm near Newcastle, Ont., I have known the pigs to go down to the stream and catch them and eat them, they were so plentiful.

Mr. ARMSTRONG. Yes; well, I have heard from a friend of mine that in the place where he came from the hogs used to go down and catch the fish without wetting their eyebrows. (Laughter.)

Mr. WILNOT.—You think that a fish story, eh? Oh, yes; we had plenty of salmon, but there are none there now.

By Mr. Wilmot :

Q. Well, Mr. Benson, I think we have gone over the ground pretty well with you. Is there anything further you would wish to state?—A. No, nothing further. I have told you, I think, all I wish to say.

It being 12.30 p.m. o'clock, the Chairman declared the Commission adjourned, to meet again at the same place at 1.30 p.m.

NEW WESTMINSTER, B.C., 1st March, 1882.

Afternoon Session.

The Commission was convened at the Court-house at 1.30 p.m.

Present :—Mr. Chairman Wilmot, Mr. Sheriff Armstrong, and Mr. Secretary Winter.

JOHN KIRKLAND, of Ladner's Landing, a native of England, living in British Columbia for some 20 years, having moved there from Ontario, a farmer, and one of the Delegates to the Commission from the Municipality of Delta, was duly sworn

By Mr. Wilmot :

Q. Well, sir ; anything you would like to communicate to the Commission we will be very glad to hear.—A. As to my knowledge of fish I might tell you something, but I wish to speak in regard to what I have seen as a resident at Cohiluthan Slough and the Delta. Ever since the canneries have been established on the river, we who reside on the Slough have been put to very great inconvenience by the offal which with the tide ebbs and flows up the slough. The water from the slough we have had to use for culinary purposes, and I have frequently in going to the slough for water have had to stir the water for some little distance to get away the oily substances and it was sometimes impossible to dip up water without getting some entrails of fish. I may say prior to the establishment of canneries we were free from typhoid entirely as far as my memory serves. It was not long after the establishment of the canneries before the typhoid came amongst us. One of my own family was amongst them—he didn't die but was taken down with typhoid. Last year though has been the worst we have experienced and during '91 some deaths have occurred there. The water in flowing up the slough flows up for about one and a half miles and then the flood-gate prevents it from going any further and it recedes more slowly from the upper end than from the lower end and often the whole bodies of the fish and entrails will be caught on brush at the sides of the slough and be retained there and create a bad stench.

Q. Offensive to the smell as well?—A. Oh yes ; offensive to the smell and injurious to the general health of people living there.

Q. And that appears to be the unanimous opinion there?—A. Yes, the unanimous opinion—our petition would indicate that. It is the general opinion of parties living along there that it is detrimental to the general health.

Q. You are not living there now?—A. No, not exactly, but I am there all along—my family is in Victoria.

Q. And was it on account of this illness you moved your family away?—A. Oh, no ; my wife's illness was such I was obliged to take her away for the benefit of her health.

Q. Were there any cases of other diseases, dysentery, &c. ?—A. Usually we are not troubled with such but there were some cases last summer.

Q. Was it assigned to the cause of using foul water in the neighbourhood, stench, etc. ?—A. That was the impression settlers had.

Q. Then upon the whole you are satisfied that the casting in of offal in such quantities that make lodgments along the slough are prejudicial in every way to health?—A. I am satisfied as to that.

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Q. Has it prevented immigration and settlement there that otherwise may have taken place?—A. Well, we had so many cases last summer that it is beginning to tell and I think it would be injurious in more ways than one.

Q. Is there any evidence of families leaving on account of it?—A. No, I cannot say any ever left on account of it.

Q. Has it any effect on the disposal and value of land there?—A. Well, that is what I mean by saying injurious in more ways than one—there have been no sales taking place there lately, but I cannot express any definite opinion on that.

Q. All along the slough where the inhabitants live—is it far up from the edge of the slough?—A. No, when first settled the people built close to the water for purposes of getting to the water.

Q. Then the water was very convenient there was it?—A. Yes, we had tanks to keep water and then it was convenient to go with scows, &c.

Q. And that convenience as far as water is concerned has been very materially effected by the cause you have assigned?—A. Oh, yes; we do not use the water any more than we can help now.

Q. Have you ever noticed the effects of this water upon cows—upon the milk at all?—A. I cannot say that it has.

Q. We have had it stated that it affected the milk and that hogs are affected by it?—A. We do not allow our pigs to run down to the slough.

Q. Do you know that pigs will be affected by the matter they eat? Have you ever had pigs that fed on beech nuts?—A. Yes, it makes the meat soft and if pigs eat fish it will destroy the marketable value of the pork.

Q. The reason I ask about the cows is because it is well known by medical men and others that milk is often a means of carrying disease?—A. I may say, as far as I am individually concerned, we do not keep a dairy at all—we merely milk cows for our own use—but if I kept a large number of cows my attention would probably be drawn to it more fully.

Q. Have you thought of any means of getting rid of this offal by manufacturing it?—A. I have not given it much attention myself—there is a small establishment near by where they manufactured fertilizers and oil from this offal. I think it would be a good thing if it could be manufactured.

Q. It is an experimental thing—that is as yet?—A. Yes,—I think if it was manufactured to any extent they would probably be obliged to seek a foreign market—the land here hardly needs it.

Q. But it would be a good fertilizer would it not?—A. Oh, I think so—Mr. Spratt, of Victoria, I think received a medal from one of the exhibitions for his product from fish offal, etc. He made it at Vancouver.

Q. Where the herring was pressed?—A. Yes: of course a similar quality would be made I should think from the offal of the salmon.

Q. I notice that some of the authorities of Ontario have been experimenting on this same offal and are quite of the opinion that it could be made quite a very useful fertilizer?—A. It seems to me that failing to utilize it for fertilizer purposes, it would be better to cremate it rather than dump it in the sea.

Q. That is as showing that it was injudicious to put in the water?—A. Yes, it pollutes the air and is a very nasty thing to have cast upon the shore anywhere.

Q. Has an attempt been made at cremation here at all?—A. Not that I am aware of.

Q. It is the first time that we have heard of the cremation of the offal and it strikes me as a very feasible way of getting rid of it.

By Mr. Armstrong:

Q. Have you any idea of a case or way of doing this?—A. No: but the sawmills here, they burn up the sawdust and refuse. I think the heads, etc., would help in purpose of cremation.

Q. Do you think the close season in taking in the whole Sabbath a judicious plea for upholding morality and religious views as well as letting the fish pass up?—A. Oh certainly, yes.

Q. Have you formed any opinion of the effects of artificial breeding of fish on this river?—A. No sir, I have not thought much about that.

Q. Should every individual British subject and resident get a license?—A. I have never given the subject any particular consideration—I should think though, were I a fisherman and had brought my family here, that it was a great hardship if I could not get licenses.

Q. And would you apply that same view to a man who came here and put up a cannery—should he get a fair proportion of boats?—A. Oh yes, if not, it would be a monopoly.

Q. And you think there should be no monopoly but an equalization as much as possible?—A. Yes.

Q. Would whole fish come in the slough—would they be partly decomposed or whole fish?—A. I have seen whole fish come in but not so much as some years ago.

Q. Regarding the fish that die far up the river have you any knowledge as to whether fish dying in such numbers would affect this slough of yours?—A. Well, I think not, because before the canneries were established it was uncommon to see them in the slough at all.

Q. But since the construction of the canneries you have seen whole fish as well as offal?—A. I have seen them, but not so much of late years.

Mr. WILMOT.—Well, Mr. Kirkland, I don't know as we have any more to ask you—your object is mainly to petition against the continuance of offal being thrown in the river.

By Mr. Armstrong :

Q. The present close season from 6 o'clock Saturday morning to 6 o'clock Sunday evening—now do you think that should be changed?—A. Well, I never really gave much consideration to that subject.

Q. Well, this is a matter seriously effecting the canneries. The cannerymen claim that unless they are allowed to fish on Sunday night they would have scarcely any fish to work with on Monday morning, and so would have their employees idle and would lose much time. We would like to have your opinion as to what people think generally?—A. Well, it is hard to make a cast-iron rule—speaking generally I think the Sabbath should be observed as much as possible.

By Mr. Wilmot :

Q. Then you think the whole Sabbath should be kept if possible?—A. Yes, I think so; I should like to see it if possible.

Q. Have you anything further to ask, Mr. Armstrong?

Mr. ARMSTRONG.—No, nothing more.

Mr. WILMOT (to witness).—Thank you, sir; that is all.

W. H. LADNER, a delegate *re* offal nuisance from the municipality of Delta, a native of England, resident of Ladner's Landing, B.C., since June, 1868, and living in British Columbia since May, 1858, a farmer, was duly sworn.

By Mr. Wilmot :

Q. Well, Mr. Ladner, if you have any suggestions to make upon this question, upon which you have been sent here as a delegate, or any other matter, we will be glad to hear you.—A. Well, I may mention, as regards the offal question, I have been as great a sufferer as any other in the country. I lived there for years before there was a cannery, and we considered we were living in as healthy a place as anywhere. Then we had no sickness to speak of, but since the canneries were established it has been increasing. I have read evidence given here as to depositing offal in deep water, but it will not do to put it in the water, because the tide ebbs and flows and the matter will

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be brought back. The tide ebbs and flows twice in twenty-four hours; if the offal could be kept in deep water, I don't think it would affect us very much, but its floatability is such that it must rise to the surface sometimes; and then there is so much scum rising from it.

Q. Then, do you think the deposition of offal as at present practiced is injurious to the health of your neighbourhood?—A. I most certainly think so.

Q. Well, then if thrown in deep water—it would sink? Well, suppose it did sink, and all the canneries threw it in the river, would it cleanse the water down at your section?—A. A great deal of it would even then come in—not as much as if in the immediate neighbourhood, but some would come.

Q. And throwing it out affects your neighbourhood seriously?—A. It does.

Q. What diseases?—A. Typhoid fever, particularly.

Q. And is this fault just at one slough, or are persons living farther away affected as much as persons living along the slough?—A. I have not heard of a single case of typhoid fever except along Canoe Pass, Cohiluthan Slough, and what we call Woodward Slough.

Q. And how about Crescent Slough?—A. I have not heard of any complaints from that one; I live a mile and a half from it, but have not heard of any complaints from there.

Q. Then do I understand you that unhealthiness prevails from this offal, and it is unwholesome and injurious to have it put in the water?—A. I do think so. Now, we are differently situated to almost any other place in the country. I have tried to drive an Abyssinian pipe down there to get water, but I was not successful; we have had to take the river water.

Q. What effect have you noticed on your stock?—A. Well, we only keep just enough for the house, but if we had good water I think we would have gone into dairy work, but those who have gone into it have given it up.

Q. What kind of ground have you there?—A. It is all alluvial deposits entirely.

Q. Do you think this offal could be made into oil or fertilizer?—A. I have seen some barrels of oil, and also some of the dry stuff, and I have thought it quite equal to the foreign guano we used to get in the old country.

Q. And you think fertilizer manufactured at this factory quite equal to fertilizer you have seen in England?—A. Yes, I do; and you have spoken of cremating it—now, do you not think it would be unwise to burn up all that valuable matter when good fertilizer could be made for use in this country?

Q. Yes; but the law says it must not be thrown into the river, and it is for the canneries themselves to say how they will best dispose of it; it is for this Commission to find out if the throwing in is prejudicial or otherwise.—A. I think Mr. Commissioner Armstrong, sir, might give you some information as to what his opinion is, by and by, because he has been visiting my house during the fishing season, and his evidence would be more valuable than mine as to the effects of throwing in this offal into the river.

Q. I am afraid we would not have a quorum if he left his place at the board.—A. What I meant to say was that at some future time he would be able to give you valuable information on this question.

Q. Have you ever considered the question of close season? Whether fishing on Sunday is a judicious movement or not?—A. Well, I think it is the general opinion that a certain time in the week should be observed as a close season.

Q. For what purpose?—A. Well, in both the cause of morality as well as the interests of fishing and those engaged in it.

Q. Then from your long residence here, experience, etc., and the difficulties that have arisen here lately between the canners and fishermen—what are your views as to an equitable adjustment of the licenses? Would it be right for every British subject and fisherman to get licenses?—A. Yes; I think every fisherman who can equip himself and is a resident British subject, should get a license.

Q. And as between the canners, should they get licenses too?—A. Most certainly, sir.

Q. Then as between the canners and the fishermen—what would be an equitable arrangement as between them?—A. I would not like to express an opinion on that.

Q. Do you know how many boats are required to run a cannery?—A. No; it is not in my line of business—I do not know except from hearsay.

Q. Have you ever noticed many dead fish floating down the river or coming into this slough?—A. A few, sir.

Q. Would they be fish that died far up—up as far as Harrison River or above?—A. Well, I think they are spent fish—they have spawned and are making their way to sea again.

Q. Those would be living fish—I mean dead ones?—A. I have seen a few, sir.

Q. Then about the fish that go up—do they all die?—A. Well, I could not say—I have not given that subject much consideration—I have seen many coming down. I would ask whether the Commission has power to take into consideration the pollution of rivers.

Q. Why, are we thus far and our object not known? As I said before, the Government has thought proper to appoint this Commission to investigate the question of throwing offal into this river?—A. Does that refer only to fish offal?

Q. No; everything relating to the fisheries, in British Columbia.—A. Well, then, in the case of sewage being thrown into the river, what action would the Government take?

Q. Well, I would think if it was brought before this Commission we would be bound to take it up—the river is, I suppose, affected by this sewage—also the fisheries.—A. Yes: I happened to notice the other day when I was in Victoria, they were digging a sewer near the Hudson Bay stores, and that sewer could have been taken in two rods into the harbour of Victoria whereas they were taking it out some two or three miles, so there must be some reason for not running that into the Bay and instead taking it away out.

Q. Then you mean that there must be some reason for not letting it go into the harbour on account of it fouling the waters, etc.?—A. Yes, sir; I don't think perhaps that it is a matter of very great importance, but we may not have a man here again for some years, and I have thought it might be a matter for consideration.

Q. Yes, sir; the matter has been taken down, and I have no doubt it will receive the consideration of the Commission.

CHARLES F. GREEN, a native of England, a resident of Ladner's Landing and living in British Columbia since 1862, a farmer, and Fishery Guardian for the District of the Lower Fraser during the summer season, was duly sworn.

By Mr. Wilmot:

Q. Well, Mr. Green, what may you have to say upon the fisheries question?—A. Do you wish my views as guardian or as a private individual.

Q. As a private individual, but if you have anything as guardian you may put it in besides.—A. Well, of course the way I got mixed up with the offal business is through reports—reporting it to the Inspector at his request. In 1887 there was a disturbance made about the offal, and I was asked by Mr. Mowat to report—it is in the Blue-book for 1887.

Q. As concisely as possible what were your views then?—A. That it was detrimental to fish, and to try to establish an oil factory, the credit for which I take some to myself.

Q. You have heard the evidence of the three delegates—do you corroborate that evidence?—A. Yes, sir; the Delta cannery being immediately on a corner of the slough, when the tide comes in the offal must come up the slough—it cannot go anywhere else. An oil factory was started and I tried to help the man all I could, so much so that I sent samples to Ottawa and had it analyzed—this is his reply (handing document to chairman)—I sent as good a sample, about 5 pounds, as I could get a hold of.

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Mr. Wilmot then read from the document handed him as follows:—

LABORATORY OF THE DOMINION EXPERIMENTAL FARMS,

OTTAWA, 5th Sept., 1889.

C. F. GREEN, Esq.,
Ladner's Landing, B. C.

DEAR SIR,—I now take pleasure in sending you my report on the fish waste or refuse from the salmon canning factory forwarded by you for examination in June last. Chemical analysis affords the following data:—

Water.....	5.19
Organic matter.....	46.99
Ash or Mineral matter.....	47.82
	<hr/>
Nitrogen in organic matter.....	100.00
Mineral matter soluble in water.....	3.47
do do dilute acid.....	1.14
do insoluble in acid (clay and sand).....	40.98
	<hr/>
	5.70
	<hr/>
	47.82
	<hr/>
Potash.....	.69
	<hr/>
Phosphoric Acid, soluble.....	.12
do reverted.....	9.29
do insoluble.....	8.19
	<hr/>
Total Phosphoric Acid.....	17.60
	<hr/>
Valuation per 2,000 lbs.:	
Soluble Phosphoric Acid (7½ cts.).....	\$ 1 80
Reverted do (7 cts.).....	13 00
Insoluble do (5 cts.).....	8 19
Nitrogen (15 cts.).....	10 41
Potash (5 cts.).....	76
	<hr/>
	\$34 16
	<hr/>

"This is evidently a very valuable fertilizer and one of special value as a manure for wheat and other grain crops, or for application to soils poor in Phosphoric Acid and Nitrogen. The 'Reverted' Phosphoric Acid, though not immediately assimilable by plants, is more or less easily rendered so in the soil, hence its value is but little below that of the 'Soluble' form.—The notable quantity of Nitrogen this fish refuse contains makes this fertilizer one of general application—the Nitrogen being in a form very valuable as plant food."

I have the honour to be, &c.,

(Sgd.) FRANK T. SHUTT, M.A., F.I.C.,
Chemist, Dominion Experimental Farms.

By Mr. Wilmot:

Q. Have you anything to do with the present oil factory?—A. I never had anything to do in a money way but I took great interest in it.

Q. Have you any experience in the use of the fertilizer made from this offal?—A. I have watched experiments.

Q. Well, what was the result?—A. It is very strong—it will burn through a piece of paper unless diluted.

Q. Well, but do you use it in a dry or raw state?—A. Well, the trouble with this man is, he cannot dry it properly—he has no kiln. I have asked him how many fish it takes to make these products and it takes 1,800 sockeye offal to make a forty gallon keg of oil, and then as to the fertilizer—he took the offal from four canneries all season, from the proceeds of that to make 3,500 gallons of oil, and the manure from the same is equal to thirty-five tons. This is his own statement to me. The oil factory is at present I am sorry to say a failure—he cannot get rid of his oil. I have sent samples to all the logging camps in the country and acted as sort of agent for him, but they will not have it at all—it has not body enough. It will not grease the skids except for once or so—they use the dog-fish oil mixed with other matter. They say the dog-fish oil is better than this offal oil, and at present the oil factory is comparatively a failure. And I may say that it is just opposite my house and I get the full benefit of it—the smell is frightful—a skunk is almost *eau-de-cologne* to it.

Q. It does duty in giving aroma instead of strength I expect?—A. It is a frightful place—I could not stand it.

Q. But, from what you know do you think an oil factory established on the best possible principles as now known, that it could be made to pay?—A. Well, you see there is so much common oils, and if they say this oil is too thin, why I don't see how it could do.

Q. How is oil from dog-fish made?—A. They simply take the liver from them and it makes a thicker oil that has more strength than this oil.

Q. Are dog-fish so numerous they take only the livers from them to make oil?—A. Well, it is generally made in small quantities.

Q. What are the size of these dog-fish?—A. Oh, about as big as spring salmon. This man at the oil factory used to work on the Columbia River and he tells me that there it takes only ten heads of spring salmon to make a gallon of oil—they only use the heads there—and after the 10th of June it would require at least one-third more to make the same quantity—but I believe they have given it up there as they found it would not pay either.

Q. Then do you consider it judicious that offal should be thrown into the river?—A. No, I don't; I think there are some canneries on the river where it does not hurt, but at others I think it does.

Q. Well, take the question on its general merits—is it injurious to fish and health?—A. Well, I would certainly say that around Ladner's Landing it is injurious; personally, I may say I am not affected at all, as I am out of reach of it, but I get all the benefit of the oil factory. I am sorry to see this industry does not pay, as I have taken much interest in it.

Q. Well, but many industries do not pay at first; I suppose his operations are just experimental yet?—A. Well, he has been at it 3 or 4 years I think.

Q. What do you think of the Sunday close time?—A. Well, if the close time is altered from being other than at present, the canneries would have to work just the same; if altered from Saturday morning the canneries would have to put up fish on Sunday.

Q. Well, if the close time were made from 6 o'clock Saturday morning to 12 o'clock Sunday night?—A. Well, that would be the worst of all from a guardian's point of view. No man living could look after these outside fishermen.

Q. But you must leave aside the guardian's view; do you think it advisable for all concerned that all of Sunday should be kept?—A. Well, that would concern me too, and if I remain an officer there I would certainly not want to see the close time extended to 12 o'clock Sunday night.

Q. Oh, throw yourself aside; do you think it advisable that the whole Sabbath should be kept or only half of it?—A. From work in canneries or from fishing?

Q. Any way you like to put it, sir?—A. Well, if you give me the other end of it I may get at what you want.

Q. Well, it is at present from 6 o'clock Saturday morning to 6 o'clock Sunday evening; now, if put at 12 o'clock Sunday night would it not be for the best interests of the fishing industry?—A. Well, that is very hard for me to answer, because I know so much about it.

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Q. Well, all the more reason why you should answer it?—(Laughter)—A. Well, I know how the morality point is looked at under the present 6 o'clock system, and I know what it would be like if the 12 o'clock were made.

Q. Have you never met men who would not fish on Sunday?—A. Only four of them, sir; they came from Newfoundland; they are the only ones I ever met on the Fraser River. I say, keep Sunday as far as going to church, etc., but I know I have to work most all of Sunday anyway.

By Mr. Armstrong :

Q. You think it should not be changed, then?—A. No; I think the present time quite right.

Q. But how about making it to 6 o'clock Monday morning?—A. No; that would be too long a close season; I prefer to keep it as it is now.

By Mr. Wilnot :

Q. Who should obtain licenses—every British subject and actual fisherman?—A. Yes; my opinion is just something like this—that the canneries should have a certain amount, and then if the river is thrown open I think the matter would regulate itself.

Q. And what number would you give canneries?—A. Well, about the same as now.

Q. Then, with 20 licenses for the canneries that will be in existence this year—that would be 500 licenses?—A. Well, I would throw open the whole river to the fishermen; the matter would regulate itself—it would be a case of "the survival of the fittest."

Q. But which would it be, the cannery or the fishermen?—A. Well, nearly all the canneries employ a certain number of outside boats now—the matter would regulate itself.

Q. Is there anything else, sir, you wish to say?—A. Well, I have heard many state about the average of the sockeye. I have weighed some and find the average weight about 7 pounds and that I think would make about 4 or 5 cans. From a large pile of sockeye I picked one that weighed 7 pounds out of thousands and after cleaning it weighed only $4\frac{1}{2}$ pounds, and the same style of fish that was there took $11\frac{1}{4}$ to the case—of course they do not all run alike—some run 9 to the case—I found $11\frac{1}{4}$ —sometimes as high as 13—in some years the fish are larger and it goes 9 to the case—perhaps this year they will go about 9—they are always larger in a poor season.

Q. Have you been up the Harrison River?—A. Not as a Guardian.

Q. What about fish dying—do all die?—A. Well, that I think is practically unknown.

Q. Have you ever seen fish coming down in a dying condition, etc.?—Well, last year I took a boat out and tried with a net to see if there were any fish in the river and I did not get a sockeye at all—there were a few cohoes but no sockeyes.

Q. When the sockeyes are coming in plentifully have you ever seen them on the surface of the water?—A. Well, I have seen a few; on the moonlight nights you will see them just on top of the water.

Q. Might there not be thousands of fish down in the water going back?—A. Oh, there might be, but as I said I tried it this time and could not get any—I would rather not give an opinion as I really don't know.

Q. What do you think of the hatchery?—A. I think it a perfect success as far as it goes.

Q. As far as it goes greater than the oil factory?—A. Yes.

By Mr. Armstrong :

Q. How many miles are you supposed to guard?—A. About 20 miles.

Q. What have you to do it with?—A. Nothing but a boat.

Q. And nobody but yourself?—A. Nobody—and if I hire help I have to pay him myself.

Q. And do you think one man can protect that stretch of river?—A. Oh, no; not at all—I have had men turn round and fish after I have passed them.

By Mr. Wilmot :

Q. Then the guardianship is no use?—A. Oh, no; I would not say that.

By Mr. Armstrong :

Q. Are there many violations of the law down there?—A. Yes, they go away out and fish, but what can I do with a little boat—it is very hard work and I have been 7 hours getting from the mouth of the river back home.

Q. Do you think the river could be well guarded if you had an assistant?—A. Of course, it would always help—I can go down the river but the trouble is to get back.

Q. Well, what do you think necessary to properly guard the river?—A. A small steam launch—just a little thing that you could get around to the canneries and see that all was right—especially if the offal law is to be enforced.

ADOLPHUS PEEL, a native of England, a resident of New Westminster, and of British Columbia since 1863, and describing himself as a chemist and druggist, was duly sworn.

By Mr. Wilmot :

Q. Have you anything to state to this Commission, sir?—A. Only what little observation I have seen of these fish in studying them during the last 15 years.

Q. What is your opinion as regards offal?—A. Well, if put in deep water I do not think there is any deleterious effect.

Q. If put in shallow water or it lodges along the edges of the water, what then?—A. It would be very deleterious—it would destroy your appetite for one thing.

Q. And you think it injurious to health?—A. Most certainly, sir.

Q. In your capacity as a chemist do you know of any sickness at Delta or anywhere else?—A. Well, that is a moot question—it has not been settled.

Q. Then you are not prepared to give any opinion upon that?—A. Well, my opinion is that typhoid fever does not come from that at all—it is a malarial fever and comes from the flats they live on down there—then fevers come from decayed vegetable matter.

Q. What decayed vegetable matter, do you think, is there?—A. Well, there is swamp gas.

Q. What do you think of the effects of saw-dust upon fish?—A. I think it gills every fish it comes in contact with.

Q. What do you think of the limitation of nets—whether the inhabitants generally who are British subjects and resident fishermen—should they have licenses to fish?—A. I think every one is entitled to licenses—they should be as free as air.

Q. Should they be transferable?—A. No, they should not be transferable.

Q. What do you think of canners—should they be restricted?—A. They should to a certain extent—you should strike a balance—they should not be at the mercy of the fishermen who would withhold the fish.

Q. And how many licenses should they get?—A. Well, that depends upon the capacity of the cannery—if a man puts in more capital he should have opportunities to catch the fish.

Q. Are not all canneries of about the same capacity?—A. No, I think not—I think many put up more than others—then there is a great deal in the management of a cannery too. I have heard also that you don't get any sockeyes in the Fraser River before the temperature is 55 or 56.

Q. And do you think, if it did not get to that, they would not come here at all?—A. It must be an even temperature.

Q. How about the fish away up in the mountains?—A. Well, the fish there come in at a different time—they come in earlier.

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Q. And if the water there was of a different temperature would he go back?—A. He would play about until the water reached the proper temperature and then would go on.

Q. What is your idea in regard to the hatchery?—A. I think the hatchery is but a small matter. If I have 500 children and take care of them I will have more out of them than if I let them run in the gutter.

Q. Then you think the fostering care of the Government is beneficial?—A. Certainly, sir.

Q. What do you think of the Sunday close season?—A. I think it good—I would take the whole Sunday. I would make it end on Monday morning because the fish that come in would get a chance of getting out of the fishing grounds entirely—take one day and you may catch them before they get away.

Q. Do you think all fish die that come in the river?—A. I think ninety per cent do, because as far as I know the fish coming in to spawn develop death—they change their colour—they lose their tails—they lose their fins—they get hook bills and we have no information that these fish can grow new tails, nor new fins, from new hooks, etc., and when we catch fish next year they have new tails and fins, etc.

Q. Then you think that all fish that don't lose their heads, tails, etc., go to the sea?—A. My opinion is that fish cannot swim down this river because of the quantity of silt in it. There is eighty grains of silt to every 1,000 grains of water in this river and when a fish comes down he has got to go like lightning, and then to turn up again he has not strength to do it.

Q. But when he goes up what does he do with the silt?—A. Oh, he has strength then. I have seen fish coming down—they may get to the sea, but we do not know enough about them. I think fish that spawn very near to the sea may get back—then some do not go within Pitt Lake at all—you will catch them in the back end—barren sockeye I call them.

Q. Well, doctors differ and patients die?—A. Well, but we have to hear the difference yet—then I have seen fish die—then as the offal question, I do not think it is so injurious.

Q. Do you know that a petition was made by this city against it?—A. Well, I know there is an ordinance against putting refuse into the river, but if the people along these sloughs had sense they would boil the water before drinking it. The Chinamen never have typhoid fever and work eight hour shifts. Why don't they get typhoid? They work along and drink Fraser River water, but they boil it before drinking it—these people along the sloughs should do the same thing.

MR. PETER BIRRELL, a salmon canner, who had previously given evidence, was recalled on the desire of the Chairman to elicit evidence touching the reported objections made by the city of New Westminster, against the presence of Salmon Canning Establishments within its limits, and the deposit of offal in the river, etc., and was duly sworn.

By Mr. Wilmot:

Q. Were there any canneries built in the town or in front of the town since you have been here?—A. Oh yes, there were two of them—Mr. Ewen had a cannery within the town and Findlay & Lane had one in 1877.

Q. On a smaller scale than now a days?—A. Oh no, they were both large canneries—of course they were not capable of putting up so much fish as now.

Q. Well, was there any difficulty arose between the municipality at New Westminster and Mr. Ewen and Laidlaw regarding the offal being thrown in the river?—A. Oh no, I think not—when these canneries were established here it was thought very desirable for the amount of money they would spend here—I have asked if there was any trouble but have been told that there was none whatever. The municipality of New Westminster gave special inducements to establish these canneries here.

Q. Did you ever hear or know of any case in which either Mr. Ewen or Mr. Laidlaw were fined for impropriety in connection with their canneries in throwing in offal?—A. I have never heard of it; I don't think there was ever such a case as that.

Q. Not within your knowledge?—A. No, not within my knowledge.

Q. There might be and you not know it?—A. There might be, but being a canneryman I would have heard of it. There might have been complaints against these local men—I mean Mr. Herring, who used to salt fish, and Frank Gee; they used to throw offal in the river, and it got stranded and became very offensive to the city.

Q. Have you any recollection of Mr. Herring being fined?—A. No, I have not. There were complaints made against him.

Q. And you have recollections of complaints against canners, but no convictions?—A. No; I believe there were complaints by individuals, but I think Mr. Ewen withdrew because the property was getting more valuable—the railway coming here, and so on—and he thought he would move away where he had more freedom, etc.

Mr. WILMOT.—Thank you; that is all; it had been said that some of the canners had been fined for throwing offal in the river.

HUGH W. GOSSETT, a native of the United States, now a naturalized British subject, resident in British Columbia since 1868, living five miles down the South Arm, New Westminster District, describing himself as a farmer and stock raiser, etc., was duly sworn.

Mr. GOSSETT.—Well, it seems to me very improper that such men as "Dutch Bill" and W. B. Port, and some others, should have a monopoly of the licenses; I should like to see them deprived of licenses and let the boys around town get a license, because you see they have not the courage to go into an office and ask for one.

By Mr. Wilmot:

Q. What do you mean by "boys around town"?—A. Well, half-breeds and "boys" that are growing up here; and you know it requires a certain amount of courage to go in and ask for a license—they have not the business capacity, I might say, to look after the license.

Q. Why should Mr. Vienna and Mr. Port be refused licenses?—A. Well, they have their business—Mr. Vienna buys and sells fish and has his grocery store, and he is not entitled to license, I think, because he does not go into a boat and fish, but merely holds his boats in abeyance until the sockeye run, and then he takes them and sells them to the canners. He has a great monopoly in this way with his licenses.

Q. Do these men ship and freeze fish and send them away?—A. I think they do in the spring:

Q. You think they should have licenses then to fish?—A. I think they should have.

Q. And canners?—A. They should have licenses to enable them to fish.

Q. Why?—A. Because they have their capital invested in the business.

Q. Have not the freezers?—A. Well, not in the same way.

Q. Then these boys about town—should they get licenses as long as they are British subjects and residents?—A. Well, yes; they must commence some time, you know; they cannot get licenses because they have not fished before, which has been the rule heretofore; I rather think he should be a British subject, but that is a matter I never paid much attention to.

Q. You are a British subject?—A. Yes, sir; I am a farmer, living on the muddy bank of the river, and keeping cattle and horses.

Q. What is your view as to the large amount of offal thrown into the river—does it affect your cattle or anything else?—A. Well, not appreciably; I suppose if a mosquito were thrown in here it would affect the water some, but as now I don't think it hurts me any; there are only two canneries above me.

Q. But if there were several canneries, would there not be an appreciable difference?—A. Yes, it could be measured then.

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Q. Then you think freezers should not get licenses, but the boys about town should get them instead?—A. Yes, that is what I wished to say; there is nothing else that I know of.

Mr. WILMOT.—Thank you, sir, then, that will do.

ROBERT HARPER, a native of England, living in British Columbia for five years, a resident of Lulu Island, and a fisherman, was duly sworn.

Mr. HARPER.—I live at Lulu Island, down at the mouth of the river; I have been there four years now, and I think there are too many licenses on the river.

By Mr. Wilmot:

Q. Do you know how many there are?—A. Something over 700 I think.

Q. And you think that too excessive fishing for this river?—A. Yes, sir; there is one thing now—we cannot keep sufficient distance apart from one another—we are all within 50 yards of one another.

Q. What number do you think sufficient if 700 is too many?—A. I think 500 to keep it in good fishing order—I think the river can be fished out.

Q. You think so?—A. Oh, yes; I think we have sufficient proof of that. The Columbia River has been almost fished out. I know because some years ago where oysters were fished out in the old country, now you cannot get any native English oysters—they are all Dutch laid.

Q. And you think over-fishing can be done on this river?—A. Yes; I think so.

Q. And 500 licenses would be enough?—A. Yes; and thus make it a permanent thing on the river.

Q. And who would you give these licenses to?—A. I would divide them—give half to cannerymen and half to fishermen.

Q. And British subjects?—A. Yes; but I would not object to a foreigner as long as he could speak English and be here long enough—many of them cannot speak English now.

Q. Would you give a license to a Chinaman?—A. No, sir; he is not a British subject.

Q. And then you think a resident and British subject should get licenses?—A. Yes.

Q. Well, suppose you had 50 Chinamen living here—would not they be entitled to them as much as other residents?—A. Most certainly not—they don't help the country, and most of them cannot speak English. I would not stick at a foreigner if they were here long enough—now for instance there are Swedes here who are good fishermen and good subjects; I would give them to them, for instance; but I would not to people coming here just to get a license; many men come here who have not seen a license before. And I think there should be a difference in the price of those licenses; I think cannerymen and others who do not fish their licenses themselves should pay more than a fisherman who fishes it himself, because they don't fish until the sockeye come as a rule, but as soon as they come plentifully they get two men and send them away—as soon as they come in they put in two more men, and they fish all along the same license. Now, I cannot work the whole 24 hours.

Q. And then you think the canner gets double out of his license because he puts in 4 men?—A. Certainly they get double value—then if I snag my net I have to lose half a day to mend it, whereas the cannerymen have a net man, and as soon as they come in they put him to mend it.

Q. Then the value of the license is more to the canner than to a fisherman?—A. Yes; certainly.

Q. And a canner should pay double—if you pay \$20 they should pay \$40?—A. I don't say exactly double, but it should be more.

Q. What do you think about this quantity of offal that is thrown into the river?—A. I think it is a great disgrace to the country and very injurious to health, too. Now, where I live there is nothing but the water you get from the river unless it is rain-water, and in the summer we do not get much of that. There is nothing but the river water to drink—I don't know the population, but in the summer there are many

more than in the winter, for then the Siwashes and Japs come, and I suppose there would be 2,000 or 3,000. And then to drink of the water in the summer lays many people up—I have been laid up several times.

Q. What is the complaint?—A. Well, it is a kind of fever—a sort of bilious stomach trouble.

Q. And you attribute this to the offal?—A. Well, yes; I think so—you go along the river when the canning is going on—it is more like a cess-pool; the offal lies there and rots and then at the close of the fishing season you are eaten up by flies; they breed from it, I think.

Q. Do you believe that offal can be all eaten up then at the factories where it is thrown out?—A. Oh, no; not nearly all of it—you can catch it in your net several miles out—I have caught offal in my net out half-way between the lighthouse and Garry Bush and plenty more too have done this than me.

Q. What effect has this on the nets?—A. Well, a smut rots the net. If fish are running you can use a net up in a part of the season, but if less fish are running you will sometimes use a net for the cohoes also.

Q. Is it usual for fishermen to get new nets every season?—A. We have two nets, sir—one for spring salmon and one for sockeye, but most people here are not genuine fishermen—they simply get a license and go in for the sockeye. Now, with ten boats any cannery can be run easily. To give these canneries twenty boats each—it is simply wiping off the fishermen altogether.

Q. Then, if twenty licenses each are given to canners, it is tantamount to running fishermen off the river?—A. Yes, sir; even now, when you sell to the canneries, they will give you a limit—they will not take all the fish from you.

Q. Do you not think canneries should have some limited number of licenses?—A. Yes, I do; because if you don't give them a number, the fishermen will run the price of fish up to more than the canners can pay.

Q. What is about the average catch of salmon?—A. Well, I cannot tell you the average—I have caught 507 salmon in one tide.

Q. Well, but the daily catch in the sockeye season?—A. Well, that will depend upon what kind of a run it was.

Q. Well, suppose we take a big run?—A. Well, I suppose about 350 or 400—probably 500 in the twenty-four hours. Well, now, their own boats might catch a great many more than that—sometimes their boats may come in twice in the twenty-four hours.

Q. Well, then, how many would canners average per boat per day?—A. Well, I should think they would catch more, but still you know the men only get \$2 and \$2.25 for going out all night, and they often make their boat fast during the evening.

Q. Cannot you tell us how many fish you get in a season?—A. Well, I cannot say exactly—I got something like 3,000, I think, last year. I worked for a man who had three licenses. He had three men in a boat and I was one of them. We worked sixteen hours in the boat and eight out—one relieved the other and we worked all the time, but I cannot say exactly how many fish I caught. I can get the numbers and send them up, if you like.

Q. Well, do you catch 1,000, 5,000 or 10,000?—A. Well, I cannot tell you exactly how many I caught. You see, there was a book and it got muddled up, for we all three were catching the fish.

Q. Are there any other remarks you desire to make?—A. Yes, I wanted to make another remark, though I don't know as you are the proper person for me to speak to about it. You see, if you give me a license now and there are no canneries open, I have to take my fish to the markets, and there is only one person to whom I can sell.

By Mr. Armstrong:

Q. Two?—A. Well, we will put it at two; and I cannot sell my fish to any one else, and they pay me just what they like. Now, if I pay a license fee of \$20, should I not be able to sell, too? You see, I cannot sell a fish unless I pay another license, and if I go out of town I would have to pay another; and if I take it to Vancouver, I will have to pay another there.

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By Mr. Wilmot :

Q. But if you were a farmer and grew potatoes, would you not have to pay a license to sell them in the market?—A. Well, I am not a farmer. If a man has a license, why can't I sell to whoever I like. Then, there are a lot of people, farmers, etc., who get licenses, but they cannot use them—they put Japs or Siwashas, etc., in it to work it, or whoever comes along—they would give it to me, if I caught on, I suppose.

Q. Then, you think the system wrong that prevents a fisherman selling his fish where and how he pleases?—A. Yes, I do think so. Now, I think the market-men selling fish should not have licenses to catch fish. If he is a fisherman, let him catch the fish; but if he is a market-man selling fish, let him sell them. I would like to get a little shop and sell, too, if I could.

Q. Then, what do you think of the hatchery on the river?—A. Oh, I think it is a great success.

Q. And you think there should be more of them?—Yes, certainly.

Q. And what do you think of the close season?—A. Oh, that is a good thing—you must have some time to let fish get up. Why, if you were down the river and saw the numbers of boats that are there, you would think very few fish got up river.

Q. Then, do you think there should be any fishing at the mouth of the river? Would not more fish get up, if there was not so much fishing?—A. Why, yes. I don't think there are any fish get up at that time—the nets are all strung across. Why, they get on top of one another almost, and get crowded up and tangled on everything. Why, last summer I saw a lot all tangled up on that "Noah's Ark" that brings snags up the river.

Q. And you think the close season a proper one?—A. Yes, I think so.

Q. What about those people who keep the Sabbath wholly?—A. Well, don't they keep it holy, sir? (Laughter.)

Q. Oh, you think it is all right after you go to church?—A. Certainly, sir.

By Mr. Armstrong :

Q. Suppose we extend it from Saturday morning at six o'clock to Monday morning at six o'clock?—A. Well, I don't think that will do, because you want to get as much fish as you can while the fish are running—you can get them at no other time.

Q. Why not fish on Sunday then?—A. Well, you want some time to let the fish get up.

Q. Then would you extend the Sunday close time to 12 o'clock from 6?—A. Well, I don't know; it depends a good deal on the tide. More fish would come up as a rule, but I don't think there are a great many fish caught in that time.

Q. Then fish keep Sunday, do they?—A. I would not like to say that. (Laughter). You see it is a broken day anyway.

Q. Well, but suppose we made it a whole day up to 12, would it not let more fish get up?—A. Yes, I think it would, and then if you made the boats 500 I think it would give good chances to let fish get up.

Q. Well, have you anything more to say, sir?—A. Well, I don't know as I have. I suppose you know that cannery employ more Japs and Chinamen than they do white men on the river, and the more licenses they would get the more of those people they would employ.

Q. Then if they got more than twenty boats you think they would not want white fishermen?—A. Not if they had twenty; they would not have any use for white fishermen.

By Mr. Armstrong :

Q. Now, you say 10 boats would supply a cannery; you have been fishing for five years—in how many out of those five years would 10 boats have supplied a cannery?—A. Three out of the five, I think—of course you gentlemen have more opportunity of going into figures than I have—I am only giving you my opinion.

Q. Well, that is just what we want—opinions on the various points?—A. Yes; of course you don't want opinions on matters you don't want to know. Well, sir, is there anything more I can do?

Mr. WILMOT.—No, sir, thank you ; you have given us quite new information, and which will interest us very much.

No further evidence being forthcoming, the Chairman declared the Commission adjourned at 3.45 p.m., to meet again in Victoria, B.C., at 10 a. m. on Thursday, 3rd March, 1892, the place of meeting having been left to Mr. Commissioner Higgins to arrange.

Representations made by representatives of the New Westminster Board of Trade to Mr. Commissioner Wilmot prior to departure of Commission for Victoria.

NEW WESTMINSTER BOARD OF TRADE,
NEW WESTMINSTER, B.C., 2nd March, 1892.

A delegation from the New Westminster Board of Trade, consisting of Messrs. D. S. Curtis, C. J. Major and W. A. Duncan, called upon Mr. S. Wilmot at his rooms, in the Colonial Hotel, at 10 a.m., and were introduced to the Commissioner by Mr. Major.

Present :—Mr. Wilmot and Mr. Secretary Winter.

Mr. WILMOT.—Well, gentlemen, anything you have to state I will be glad to hear, and we will incorporate it in our proceedings.

Mr. CURTIS.—In taking evidence here we thought that there was one important matter forgotten, and in a nutshell it is this: The canners and fishermen are very anxious that any change made in the regulations will be communicated to them as soon as possible. We had a meeting of the Board of Trade last night, and it was agreed that this should be done ; it is most important for all parties that this should be so.

Mr. WILMOT.—Well, gentlemen, I may say I have thought of this matter and the importance it is to the fishermen especially, and I have written to the Minister about it to issue *interim* licenses. Of course the canners don't need licenses until July.

Mr. DUNCAN.—Well, Mr. Wilmot, I may say the canners have to make their cans over two months before they get a fish, and there is always this risk until they know how many boats they can fish. The cans are not of an use another year, as they rust, and it is necessary they should know how many boats they can fish and how many fishermen's boats they can get—it is most important.

Mr. CURTIS.—This, Mr. Wilmot, is a copy of the resolution of our Board. (Handing in document).

Mr. WILMOT (reading) :

"NEW WESTMINSTER BOARD OF TRADE, 2nd March, 1892.

"At a meeting of the Board of Trade, held on the 1st instant, the following resolution was passed :—

"That in the event of any change being made in the regulations governing the Fraser River fisheries this year, this Board urges the Commission to take such steps as may be necessary to make known the nature of these changes at the earliest possible moment, so that the fishermen and cannerymen may make arrangements to adapt themselves thereto."

"Certified correct,

"(Signed.) D. ROBSON,

"Secretary."

Mr. WILMOT (continuing).—Well, I may mention, when in Victoria some days ago, Mr. Earle and some of the canners met in his office, and this matter was talked over, and I suggested their writing to the Minister and ask for the issue of *interim* licenses, and they thought it would be very important indeed for the fishermen, but that it would not effect the canners so much. When he wired the Minister, the reply was to the effect that he was quite satisfied with the present regulations on the matter.

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Mr. DUNCAN.—Well, it was thought that after the Commission got through with their work and made their report, etc., a great deal of time would elapse, and it would be better to have some arrangement made beforehand.

Mr. WILMOT.—Well, I think myself, individually speaking, that it would be injudicious to make any decided change before another season. This, of course, is my own individual opinion.

Mr. CURTIS.—But it is intended though, Mr. Wilmot, for the Commission to make a report on this season, is it not?

Mr. WILMOT.—Well, I should think there would not be any trouble in deciding about the number of licenses, for instance, and that, I think, we could settle when we get back from Victoria.

Mr. CURTIS.—That is the important thing. There are but three important questions in this matter—the number of boats to be fished, the close season, and the offal question.

Mr. WILMOT.—Oh, yes; those are the important ones.

Mr. MAJOR.—We wish to have it placed upon record—the resolution of our Board in this matter—so it will not be overlooked in any way, as if anything very different is done without due warning, it would upset their whole arrangements for the season; and, as Mr. Curtis suggested, if there is to be any material change it would be well to have it laid over for another season.

Mr. WILMOT.—Well, when do the canners commence making their tins?

Mr. CURTIS.—In May or in the latter part of April.

Mr. WILMOT.—Then, if the matter were decided by the latter end of March, it would be all right would it not?

Mr. CURTIS.—Oh, yes; that would do very well. It is important that we should know a little time beforehand. Now, in 1890, when I was in the business, the canneries got according to the pack put up in previous years, and we got seventeen licenses, but we did not know of it until quite late.

Mr. WILMOT.—Why in 1890, I thought, there was an established number of, I think, twenty.

Mr. CURTIS.—Well, there were four canneries got only seventeen licenses.

Mr. WILMOT.—Well, you were entitled to twenty in 1890. However, it is immaterial now. At present the number stands at twenty for each cannery, and if no effects take place from this Commission, it will stand at twenty.

Mr. CURTIS.—Well, we only got seventeen, and yet had a capacity for putting up 20,000 cases.

Mr. WILMOT.—Well, now as you say, the three important points are—the number of licenses, the offal, and the close time?

Mr. CURTIS.—Well, the close season is all right as it is now.

Mr. WILMOT.—Well, I may say that all over the Dominion it is felt that the whole of Sunday should be kept without work—that it be made until 12 o'clock—now, it was the canners themselves who asked that the time should end at 6 o'clock—the Department desired to make it 12 o'clock, and now I think there is a disposition all round that the whole of the Sunday should be kept—many of the fishermen here we find would like to keep all Sunday—several have stated their desire to have all Sunday.

Mr. CURTIS.—Well, it is like this—if fishing is not done on Sunday night they will have nothing to work with on Monday morning.

Mr. WILMOT.—But if you fish from 12 o'clock Sunday night?

Mr. CURTIS.—Well, of course we would have some.

Mr. WILMOT.—But the fishermen tell me they catch more fish if they do not fish on Sunday night—the fish having a rest, as it were, gives them the better chance.

Mr. CURTIS.—Well, we had fishermen in our establishment who would not fish on Sunday—Newfoundlanders, etc.

Mr. WILMOT.—Well, that is just a good reason, Mr. Curtis, why it should be made to 12 o'clock—we want to encourage such citizens to come into the country and run out these Greeks, Italians, etc., for they are good citizens after the fishing season is over. Then we have thought from the way it has been represented to us that it would be much better to have a good fishing community who would keep Sunday and be good citizens

in every way. Now in regard to the Indians they tell me that up on the Skeena and other rivers they do not like to fish on Sunday and it makes things better in every way.

Mr. CURTIS.—Well, that is very well, but I do not think you should have more than 36 hours of a close season.

Mr. WILMOT.—Well, let them fish on Saturday then.

Mr. CURTIS.—Then they will have to work on Sunday to get rid of them.

Mr. WILMOT.—Well, there is only six hours and I think the benefit of the fish getting up the river should weigh against the wishes of the canners.

Mr. CURTIS.—And if the canners do make a few dollars more what does that matter to the others? I must say, however, in all fairness that some of those men who would not fish on Sunday had the greatest number of fish caught to their credit.

Mr. WILMOT.—Then you see there does seem to be some kind of providence looking after the good fishermen (laughter.)

Mr. DUNCAN.—I may say, Mr. Wilmot, there is a great deal of talk about the fish decreasing in this river—now I don't think there is any sign of that at all.

Mr. WILMOT.—Well, it has been handed down from time immemorial that fish run in cycles, and yet look at the returns—you can pick them out from the reports.

Mr. DUNCAN.—Well, but you cannot judge by the reports—it depends so much upon the amount of plant for catching the fish and conducting the fishing operations, the facilities for doing the work, etc.

Mr. WILMOT.—Well, these questions have been asked so as to obtain information as to habits of salmon, etc., as well as to elicit opinions upon matters in connection with your canning business—some say there is an "off" year every four years, etc., and when we put these altogether, you see we will be able to get some valuable data.

Mr. MAJOR.—Yes; there is another point too—about the hatchery.

Mr. WILMOT.—Oh yes; now you gentlemen of the Board of Trade what do you think of the hatchery—has it been a success?

Mr. DUNCAN.—Yes, it has—and I think the other gentlemen will agree with me in the same.

Mr. CURTIS.—Well, I attribute the less number of "off" years to the hatchery.

Mr. WILMOT.—Well, I could not give the same amount of credit to it that many others do, because it has not been upon a sufficiently large scale, but still, of course, I believe in artificial breeding as a supplementary aid to the natural, but I do not think if the natural breeding grounds are not cared for the hatchery will make up for it.

Mr. MAJOR.—You must remember, Mr. Wilmot, that this is a specially productive country.

Mr. DUNCAN.—I certainly believe that the hatchery has been beneficial—now, take the number of fish caught on the Fraser River in a whole season—I do not suppose they would be more than two or three millions—now if you put out many millions of young ones, even if but a small number escape, they must aid the supply very much.

Mr. MAJOR.—Well, I must say I expected more information on this head to come out before this Commission—I may say I have been somewhat disappointed at not hearing more, but the time will not I presume permit of going extensively into the question of the habits of salmon on the Pacific coast—I fancy they vary somewhat from the habits of salmon on the Atlantic!

Mr. WILMOT.—No, not the habits, but you have a great many more families of salmon here than we have in the east.

Mr. MAJOR.—Well, there are a great many other questions—now it is held that the young fish from this river come back again to the Fraser River.

Mr. WILMOT.—Yes.

Mr. MAJOR.—But why? There must be a reason—why, in passing the Columbia River do not they go in there?

Mr. WILMOT.—Well, salmon go in families—they all know their own rivers.

Mr. MAJOR.—Well, if you notice them at the mouths of rivers you will see them in thousands away at the mouths of the rivers all along the Pacific coast and they will wait there until a certain time before they will come in. Now do you think the young salmon from the hatchery will come into this river again?

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Mr. WILMOT.—Yes, certainly; now I have had much experience in this matter—in the eastern provinces the same thing prevails—in the St. John River the fish come in and the fish belonging to the different streams running in can be told to which they belong.

Mr. DUNCAN.—Well, I think there is no doubt about that—fish here have been marked with silver rings in the tails and have been caught coming back.

Mr. WILMOT.—Oh, yes; they have been marked at different places—that has been done frequently and the fact of their return is altogether beyond question.

Before we part, gentlemen, I may say I was asking Mr. Robson if there was any time in your city when complaints were made about the effects of offal in the river and if there was any convictions?

Mr. MAJOR.—Well, yes; there were complaints about the offal from English's Cannery here and we made a row about it.

Mr. WILMOT.—Do you know if it is on record?

Mr. MAJOR.—Well, I don't know of that, but I may say that with our water here there comes down a silt and sedimentary matter which after it stands a little time has a disagreeable smell and becomes offensive.

Mr. WILMOT.—Well, gentlemen, in conclusion I may say that I do not think the Department desires to hamper the canning industry in any way, but many complaints have been made on this point and we desire to arrive at a correct conclusion as to its effects. I may say too that I was quite struck with the complaints of the people from Delta the other day. Delegates from the Municipality came here and represented that the effects were most injurious, not only to their stock but to the general health of the community, and you, gentlemen, will readily see that when the public health is threatened the convenience of a few who do not reside, except in one or two solitary instances, in the neighbourhood effected, cannot bar the way to change and remedial measures for the bettering of things for the safety of the community. My own opinion is that a valuable product can be made from this offal in the shape of both oil and fertilizer.

Mr. DUNCAN.—Oh, yes; has anything been done upon that point?

Mr. WILMOT.—Well, we have got considerable information on this subject, but as yet it seems to be in an experimental stage. In the papers recently there appeared an article upon this very matter—in the "Colonist" of 20th February last, I think it was—giving an account where samples were sent down to the Ontario Department of Agriculture and an analysis was made which showed that a most valuable fertilizer could be made from the offal—I think they placed its values at about \$34 a ton.

Well, gentlemen, if there is nothing else you desire to represent, I will now ask you to excuse me—we are leaving for Victoria to-day, and have not very much time just now to spare. Your request shall have the best attention of the Commission and your statements will be placed on record with our proceedings.

Mr. CURTIS.—Thank you, Mr. Wilmot, we will not detain you longer—the importance of the industry and the injustice of giving our people fair warning of any change or intended change in the regulations must be our justification for coming to you at this late hour.

The delegation then withdrew at 10.30 a.m.

VICTORIA, B. C., Friday, 3rd March, 1892.

Morning Session.

The Commission met in the Board of Trade Rooms, Victoria, at 10 a.m.

Present:—Mr. S. Wilmot, in the chair; Mr. Commissioner Higgins, Mr. Commissioner Armstrong and Mr. Secretary Winter.

At 10.15 a.m., the Chairman called the Commission to order.

Mr. WILMOT.—This meeting having adjourned to Victoria, till 10 a.m. to-day, I now declare this Commission open for business.

Mr. ROBERT WARD.—May I enquire Mr. Chairman, as to the scope of this Commission? Most of the gentlemen present to-day have had no chance of being at any of the previous meetings, and would like to know the scope and powers of this Commission.

Mr. WILMOT.—The sphere of the Commission is to take in all matters relating to the fisheries of British Columbia—if there are any gentlemen present desirous of submitting anything to the Board we are open to receive it.

Mr. STEPHEN SPENCER, a native of the United States, and resident of Alert Bay, B.C., living in British Columbia for some 35 years, by occupation a salmon canner, was then duly sworn.

By Mr. Wilmot :

Q. Now sir, what have you to submit?—A. In regard to seining operations in the Ninkish River—I do not think, of course, as established for the last 10 or 11 years, and always using seines, we can catch fish in any other mode except with seines. As very likely the Commission is not aware how we use those seines, perhaps it would be better for me to explain, so you may judge. We have seines with meshes according to law, and fish have access to the river at all times. We can only fish at certain times—we never fish at night time, because we cannot see. When we extend a net we never extend it across the river—we put it out merely to get them but we never fish at night time—that is not in consideration, because we cannot see and there is therefore uninterrupted chances for the fish to get up the river for nearly eighteen hours out of the twenty-four. There is no possibility of gilling them, because there is no water and only one or two places where we can haul the seines so to speak. The first year we were canning the fish were very plentiful.

Q. What year was that, sir?—A. Some eleven years ago, I think—the first year they were plentiful, the second they were not, and it was with great difficulty we got 4,000 cases—some years since they have been plentiful and some not.

Q. The Ninkish River—the “Alert Bay” Canning Co.?—A. Yes sir.

Q. How long ago is it since you commenced fishing there?—A. Some eleven years ago—the runs varied from year to year. In 1890 for instance—that was the year of the most plentiful fish on the river and when our cans were all full.

Q. 1890 was the biggest year on the river?—A. Yes; 1890.

Q. What in 1889?—A. Fair—6,000 cases, I think, we put up, but still we never fish after we put up a certain number of cases—we calculated the capacity of the cannery at some 6,000 cases and could have canned much more that year but we only calculated to fill a certain number of cans, but for some weeks after that the fish were plentiful but not one fish was taken out of the river.

Q. Can you estimate how many you might have taken out?—A. Well, I don't know; I think we could have taken some hundreds more cases. In 1890 our pack was about 7,200 cases; last year, it was just the reverse. I only packed some 700 cases. The last year was about the worst since I have been a canneryman.

Q. Are facts as recorded that in 1887 you packed 4,200 cases?—A. Well, I don't know. I don't recollect ever giving anybody the correct number, but I don't doubt that it is correct.

Q. No; I am not referring to the departmental account; I am simply taking it from the report of the British Columbia Board of Trade.—A. Of course, I give the figures into the department, but I cannot tell from memory.

Q. How do you account for the great falling off in these years?—A. Well, I don't know. I think it a freak of nature, that is all. Perhaps there was not food there for them to induce them to come.

Q. Do you think there could be too much fishing and not enough left to breed?—A. No; I don't think so. There has never been any abnormal fishing there. I have heard that the Indians do fishing that is injurious, but there has not been any change at all in the mode of Indian fishing. There is always a clear road for the fish to go up.

Q. Then you think it must be some other mode of fishing, or something else than Indian fishing?—A. Yes; something else.

Q. And are these sockeye?—A. Yes.

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Q. And they have fallen off in quantity?—A. Yes; they have; but it is not because fish have not had opportunity to come in to spawn, for every year they have had plenty of time, even after our cans were filled. And it cannot be said that it is on account of the seine fishing; they are not as bad as gill-nets, for we can only fish at certain times, and there is plenty of chance for them to get up.

Q. Is it a fact that there are small lakes at the head of this river?—A. Yes; there are small lakes some sixteen miles up from the mouth.

Q. And these are the breeding places of the sockeye?—A. I suppose so—yes.

Q. How wide is the mouth of the river at low tide where you draw your seine?—A. Well, probably it is more than 200 or 300 yards, but we fish in salt water at low tide. We haul on the little island, but it is covered at high tide and is right in salt water.

Q. How do you pitch your seine—go out in a boat?—A. We go out on shore, and the fish show themselves on the surface; then we go out with the seine and make a water haul.

Q. When you see the fish?—A. Yes; we have a good many water hauls.

Q. Then your system is—when you see fish showing on the surface, you try and surround them and bring them in. Sometimes you get fish and sometimes not?—A. Yes; we frequently get water hauls. Last year they were very frequent.

Q. What kind of seine do you usually use—one with corks on top and leads at the bottom?—A. Yes; the usual seine; not a bag-net, by any means. The meshes are those regulated by law.

Q. The lead lines sweep the bottom do they?—A. Well, it all depends on the current—sometimes no current will take them down.

Q. How many boats do you fish with?—A. Two; there are only two licenses on the river; I have fished under special licenses from the department; formerly it was \$25 for each seine.

Q. And what is the length of the seine?—A. 150 fathoms.

Q. And the depth?—A. I cannot tell you.

Q. Well, how many meshes is it deep?—A. Well, I can't tell.

Q. If you fished in 30 feet of water it would be 30 feet deep, I suppose?—A. No; it varies.

Q. How deep is it where you usually haul your seine?—A. I cannot tell you because it shoals off, and you may get them in deep or shallow water.

Q. But the tendency of the net if shallow is to go to the bottom?—A. Certainly.

Q. And it will sweep the bottom as far as it goes?—A. Yes; that is the purport of it, as far as it goes.

Q. Could you tell us the number of fish you have taken at one haul?—A. Well, I cannot tell exactly, but I think possibly 1,000 at one time; we once filled nine boat loads with the result of one haul, somewhere about 8,000 fish; that was the biggest haul at one time ever made on the river; that was last year, and the day after I could have taken a much bigger haul from the look of the fish.

Q. You say you can fish only in certain places, what is the reason?—A. There are many snags there and you have to keep clear of them.

Q. What is the radius of water where you usually sweep your seine?—A. About half a mile.

Q. Could you not use gill nets there?—A. No; I have tried it, but it was not successful.

Q. How do others use gill nets at the mouth of the Fraser River?—A. Because the water is not clear; it is muddy.

Q. Well, how about in the eastern provinces where it is all clear water?—A. Well, I do not think it would do here.

Q. Do fish stay at the mouth of the river awhile before they go up?—A. Yes; they do not go up for a few days. I contend no fish go up until they are mature and ready to go up; in other words until ready to spawn.

Q. How early do you commence fishing there?—A. About the end of June.

Q. Do any fish spawn in June, to your knowledge?—A. No.

Q. Then they are waiting there to go up and you catch them while they are waiting to go?—A. Well, I do not say they are all waiting to go to spawn, and then the Indians catch many.

Q. What are the meshes of your nets?—A. $3\frac{1}{2}$ inches. I think the law requires $3\frac{1}{2}$ to $3\frac{3}{4}$ inches.

Q. Are the meshes in the bag of the net any different?—A. No; all one measure, $3\frac{1}{2}$ inches extension measure.

Q. What is the average size of sockeye salmon there?—A. Well, the average year will take about 12 to a case.

Q. Making your salmon about 7 pounds?—A. Something like that; some years larger and some smaller.

Q. And about 12 to a case?—A. Yes; about that on the average.

Q. How many cans to a fish, four?—A. Four cans.

Q. And the difference between four and seven and eight would be offal?—A. Yes.

Q. What do you do with the offal?—A. It is deposited in salt water; you perhaps are not aware that the canneries on the Ninkish River are on a little island, about two miles from the mouth of the river. The fish are caught in the river and brought over to the cannery and cleaned there; we have a shoot that takes offal out into salt water and it is carried off; in a week's time after we have done fishing there is nothing seen of it.

Q. Have you any exclusive right by lease or otherwise to the river?—A. I don't own any portion of the river, but I have a claim there. I applied to the Government for a lease and the Government agreed that I should have the right to fish for \$150.

Q. Do you take out boat licenses?—A. I don't need to take license; I was fishing under lease. Before having the lease I paid \$25 a year for a net.

Q. How many persons are employed in your cannery?—A. Between fifty and sixty.

Q. Principally what?—A. Indians principally.

Q. How many white men will you have in that establishment?—A. Eight or nine; we don't have a large number.

Q. What number inside the cannery for all purposes?—A. About three; the balance are principally Indians and a number of Chinamen.

Q. How many Chinamen?—A. About eleven; last year I think it was eleven; sometimes I have had more but I have tried to utilize the Indian labour.

Q. Are your boats fished by Indians or do you buy your fish from Indians?—A. I have bought them from Indians.

Q. Where do they fish for them?—A. Up the river in the narrow passes chiefly.

Q. Does not your employing them make them catch more fish than before you went there?—A. No; I don't think so.

Q. Then they deprive themselves of food?—A. No; you mistake the habits of the Indians altogether; they don't want the sockeye at all.

Q. What are the fish in your river?—A. There is the blue-back, as we call them; then there comes the sockeye; then the satsum.

Q. Is that the same as the cohoe?—A. No; they are a large fish, twenty pounds or so.

Q. Are they not spring salmon?—A. Well, some say so, but others do not.

Q. Then the Ninkish River is inhabited by much the same fish as other rivers along the coast?—A. Yes; I think so.

Q. But your principal fish is sockeye and that has decreased of late years?—A. Yes; sockeye is the principal one, but I don't think they have really decreased; some years there are less than others.

Q. And you say the Indians will not eat sockeye, but will eat others not as good; the humpback for instance?—A. Well, they will not use them, but they want the humpback for drying.

Q. But you don't use the humpback for your work?—A. Not at all. I contend that it was only a freak of nature that fish did not come last year.

By Mr. Higgins:

Q. Where do these fish go to spawn?—A. Well, as far as I know they have been seen in the lakes above.

Q. Have you ever ascended the river or been up to the falls?—A. I have never been to the falls.

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Q. Have you ever heard of obstructions being put in the channel to prevent fish from going up—Indians put rock in so as to dam the channel?—A. I never knew anything of the kind—the Indians have a reserve and they simply put the regular net there but in no case obstructing the river.

Q. Do fish go up river in large quantities?—A. They do.

Q. Have you any experience in regard to the life of fish after going up to spawn?—A. Well, I have some knowledge—everybody varies.

Q. What is your experience?—A. I think fish go up and return—of course a certain percentage die.

Q. Have you ever seen any dead fish up there?—A. I never have—I have heard of dead fish being seen up on the lake—Capt. J. McAllister who has prospected up there has told me he has seen them—then I have tagged fish—have marked them and have caught them the following year.

By Mr. Wilmot :

Q. In good condition?—A. Just as good as others.

Q. Do you think Indians have any object in preserving the fish?—A. Well, I don't think they care—it is the hardest thing for me to induce those people to go fishing for me—they are a happy-go-lucky people.

By Mr. Higgins :

Q. You say you throw offal in the water—is it in deep water?—A. It is thrown in salt water and goes out to sea.

Q. Have you seen scavenger fish eat it?—A. Yes, lots of them.

Q. And if offal lies at low water would the tide take it all away and would the little fish eat it all before the next low tide?—A. Well, they would not eat it all always, but it would soon go—sometimes it might lay for 24 hours.

Q. Regarding the failure of fish last year, have you any hatchery up there?—A. No, none.

Q. 7,000 cases was the largest number of cases you ever put up?—A. Yes, by about 1,000 cases.

Q. Do you think putting up that number of cases had an effect on the run of fish?—A. No, not, at all.

Q. Fish are very erratic?—A. Very erratic—look at Skenna River.

By Mr. Wilmot :

Q. May I ask you, Mr. Spencer—you say that in '90 your catch was greater than in former years—you mean your pack, not your catch—did you not pack from other places?—A. No, not to any great extent.

Q. Then your pack in '89 and '90 was lessened and you resorted to other places to make up the amount?—A. Not at all, sir.

Q. But in 1888 your pack was 5,000, and in '90, 1,280 cases, and you have supplemented your pack by getting them from other places?—A. Not at all—I was prospecting, as we say, to get fish and to see where they were, but I didn't make it up—I got a few, but not many—I could have caught plenty in the Nimkish River if I had wished to can them.

Q. But you did supplement your catch in '89 and '90?—A. Not at all—I do not consider that at all in that way, because I could have filled more cans out of the Nimkish River, but as I had the fish caught from prospecting around, I put them up, but I could have caught plenty of fish in the Nimkish River.

Q. Well, what I want to get at is—a complaint has been made that fish have much decreased in that river and it would go to show that from your catch—now in 1887 you put up 4,200 cases, in 1888, 5,000, in 1889, 7,140 and in 1890, 7,280 cases—therefore in 1889 and 1890 there must have been some aid from other places?—A. Not at all—I don't consider it aided me in one can—I always cease when I get a certain number of cans.

By Mr. Higgins:

Q. You always stop when you get a certain number of cans?—A. Yes.

By Mr. Wilmot:

Q. In 1890 you took the usual number of cases?—A. I filled 6,000 cases—all the cans I had.

Q. In 1891 you got only 600 cases?—A. This year was different—I had tins left over then.

Q. You say all salmon do not die?—A. Yes; my opinion is a certain percentage die but not all—I would like to put a man on the stand who is a practical man and who knows all about the river and can tell you all about the fish, etc., there.

Mr. RITHET (from the audience).—Mr. Chairman, I would like very much to put a question to Mr. Spencer before he leaves the stand, or if you will ask it for me?

Mr. WILMOT.—Well, we objected to that before, but if the other Commissioners are willing, I of course will not object.

Mr. WARD (from the audience).—I may say, Mr. Chairman, that it is the usual practice in courts to allow questions being asked.

Mr. WILMOT.—That would be tantamount to counsel, would it not?

Mr. WARD.—Yes; I think it would.

Mr. HIGGINS.—Well, I think that we should permit this question being asked—I am of opinion that the fullest possible scope should be given to this enquiry.

Mr. WILMOT.—Well, if gentlemen like Mr. Spencer, or any other gentlemen, comes forward he should have prepared his statement on any matters and then let us question him.

Mr. HIGGINS.—Well I think a question like this should be allowed—when I was over there in New Westminster, I saw questions allowed.

Mr. WILMOT.—Only in one instance, sir.

Mr. HIGGINS.—But he had it nevertheless.

Mr. ARMSTRONG.—Well, that is one of the questions that I feared would cause trouble from the commencement—we found after allowing one man to come forward everybody wanted to do the same—now if we allow Mr. Rithet to ask questions it would be tantamount to counsel—now I do not think that counsel is at all necessary at this stage of the proceedings—if counsel were necessary it should be where the preponderance of the evidence was taken—I think Mr. Higgins is wrong in saying he heard questions put at Westminster.

Mr. HIGGINS.—Well, I heard a man put questions when there—now the Chairman has stated that the question should be allowed.

Mr. WILMOT.—Well, If I agree to allow this, I will do so only if we are not to have it again.

Mr. HIGGINS.—I won't agree to that at all.

Mr. WILMOT.—Well, if Mr. Rithet wants to put a question it will be heard with all attention possible, but we made certain rules when we commenced this Commission—Mr. Higgins has said he heard questions put in New Westminster, but I must say it was only as an exceptional case.

Mr. RITHET.—Well, gentlemen, I very much regret indeed if such a simple request of mine is to be the cause of so much trouble. I am sorry that I attempted to put any questions, but I came to this Commission under the idea that it was open to the public and that every bit of evidence bearing upon the fisheries would be admitted, but if I am mistaken—

Mr. WILMOT.—Pardon me, sir, are you making a statement on your own account, if so we must swear you the same as all other persons.

Mr. RITHET.—Well, excuse me, I was apologizing. The matter about which I wished to speak arose out of the evidence given by Mr. Spencer.

Mr. ARMSTRONG.—Still, if we allow you to be heard in this way, Mr. Rithet, we will have every one else asking the same.

Mr. WARD.—Well the reason, Mr. Chairman, that we wished to speak was because we understood this Commission was for the sifting of all facts, and if they simply sit there and arrogate to themselves—

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Mr. WILMOT.—What is that, sir? If you say *arrogate* I will request you to withdraw it.

Mr. WARD.—On request, I will withdraw it—but (impressively), I do not think the evidence is being taken impartially.

Mr. WILMOT.—Pardon me, sir, I must call you to order; as Chairman I call you to order.

Mr. WARD.—Well, sir, I bow to your decision, but it is the first Commission ever I have attended under any Government where the Chairman acted in so extraordinary a manner and where matters were not represented by counsel.

Mr. WILMOT.—That is beside the question.

Mr. ARMSTRONG.—Well, Mr. Ward, I must tell you that most of the evidence is now taken, we have examined some 70 witnesses in New Westminster, and I think if counsel was to be allowed it should have been done there.

Mr. WARD.—But we have not had an opportunity of going before the Commission.

Mr. WILMOT.—Well, I think if Mr. Rithet wishes to ask this question we will allow it in this one case, but on condition that none other comes up.

Mr. HIGGINS.—I object to that ruling, Mr. Chairman.

Mr. WILMOT.—Well, if you object to my ruling I will withdraw my ruling, and I will now rule that the question may not be put.

Mr. HIGGINS.—I will ask for a vote on that point.

Mr. ARMSTRONG.—Well, gentlemen, I think you are all wrong in thinking these questions should be allowed; in a court, no one in the audience is permitted to get up and ask questions of a witness who is under examination; it is absurd; no one but practitioners are allowed to ask questions and they have to do it in a proper manner. I would suggest that Mr. Rithet should hand up any question to me for the Chairman that he desires to put and it will be put properly through the Chair.

Mr. RITHET.—Excuse me, but I consider that you are all wrong. A Commission of this kind is entirely different to a court; a good deal of latitude is allowed and greater scope in any Commission of this kind than in any court.

Mr. ARMSTRONG.—Certainly, Mr. Rithet, but we cannot allow these questions to be put by counsel.

Mr. WILMOT.—I think if Mr. Rithet had gone to Mr. Spencer and asked him any question on matters that had occurred it would be quite right, but to come as counsel, I do not consider it is correct.

Mr. RITHET.—I am told even if I had handed it in to witness, that I would have been checked.

Mr. ARMSTRONG.—Who told you that?—A. Mr. Munn.

Mr. MUNN (from audience).—Yes; I have seen it in Westminster. I declare I have seen persons objected to because they handed in questions to the witness on the stand.

Mr. WILMOT.—I may say that such did occur in one case, but it was quite different to this. At the time objections were taken to hearing a man, he was questioning and making interruptions while the witness was speaking, and, of course, such could not be allowed. We must maintain order.

Mr. J. H. TODD (speaking from the audience).—Will the Commissioners allow me to say a word? I must say, in regard to the statement made by Mr. Spencer, that—

Mr. ARMSTRONG (interrupting).—You cannot be allowed to dispute any witness's statements.

Mr. WILMOT.—Mr. Todd can come on the stand, under oath, like any other person, but we will not hear him in any other way.

Mr. TODD (indignantly).—Well, we will retire, and not come back.

Mr. WARD (from audience).—Yes; we have rights, and we want them respected.

Mr. WILMOT.—Sit down; don't get excited.

Mr. WARD (scornfully).—We are not excited. We are not going to be sat upon by anybody. We have our rights, and we are going to be heard.

Mr. TODD.—If we are not heard, we can leave the room.

Mr. HIGGINS.—I will suggest that Mr. Rithet put his question through any of the Commissioners. You come and sit along side of either of us, Mr. Rithet or Mr. Ward, and put your questions.

Mr. RITHET.—No; I will not put questions unless I can state them direct.

Mr. WILMOT to Mr. WINTER.—Mr. Secretary, you will take down those words from Mr. Rithet, and mine, in reply. He said he was not allowed to ask questions.

Mr. RITHET (emphatically).—I have not, sir; I deny that.

Mr. WILMOT.—Why, certainly you did, and that is your impression of the whole matter: that you were not allowed to ask questions at all, whereas we offered you a mode of doing so, which you would not accept.

Mr. RITHET.—I did not say that I was not allowed to ask questions.

Mr. HIGGINS.—Oh, never mind. It is all right. Don't bother. I, for one, am willing that you should put your question. Mr. Rithet, do you wish to put the question?

Mr. RITHET.—No, thank you, Mr. Higgins, I do not. I have nothing more to say.

Mr. WILMOT.—Well, if there is any other gentleman desirous of giving evidence, we will proceed with the examination of witnesses.

THOMAS BOGART, of Rock Bay, a native of England, eleven years in British Columbia, a fisherman, was duly sworn

Mr. BOGART.—I have fished for Mr. Spencer seven seasons, and the nets we use there only enclose a little part of the river, and are only in the water about half an hour at a time. To my knowledge, in the seven years I have worked there, I have never seen the river closed to stop fish from going up. There was one season there was plenty of fish, and more were netted than required for the cannery, and we marked some, and we caught them the next year and the next year, and in the third year. We took little pieces off the tail, and could see them easily.

By Mr. Wilmot:

Q. Were fish that were marked larger or about the same size?—A. Well, we could not tell; they all were about the same size; there seemed no difference.

Q. That was in three years in succession?—A. Yes; that is all I have got to say.

Q. What conclusion did you come to, that they were fish returned from the waters above?—A. They must have returned from above, because they came in and must have got back from above.

Q. Then your impression is that a certain proportion of fish return?—A. Yes.

Q. How many fish would be caught at one haul?—A. Six, seven and eight thousand in a good run.

By Mr. Higgins:

Q. Do you know where these fish go to spawn in Nimkish River?—A. I think they must go to the lakes at the head of the river.

Q. Were you ever up to the lake?—A. Yes; I have been up to the rapids; I never was in the lake.

Q. Are there any artificial means to obstruct fish going up?—A. No, sir; I have seen little traps on each side, but there was always room for many to go up.

Q. How wide are these channels?—A. Some five, some six, some nine hundred yards.

Q. Pretty swift water?—A. Yes; very hard to pull up.

By Mr. Wilmot:

Q. Did you ever see fish returning in any number?—A. No, sir; but we do not stop there; we come back as soon as the fishing season is over.

By Mr. Higgins:

Q. Have you ever noticed what becomes of offal?—A. Well, some floats away and some is eaten by fish.

Q. Are there plenty of dog-fish around there?—A. Yes; all kinds.

Q. Have you done any fishing in any other river?—A. In the Fraser River one season.

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By Mr. Wilmot :

Q. In a big or small run?—A. It was a big run that year.

Q. You say about offal; some floats away, and then does some remain on the shore?—A. No; it all floats away; I never saw any along the beach.

Q. How long have you fished there?—A. In '88, '89 and '90.

Q. Were any other fish brought to the cannery from places?—A. Yes; a few were brought over, but they did not amount to very much.

Q. Have you any idea why the decrease was so much greater there for some years?—A. I have no idea; I cannot tell.

Q. What time of the year do you commence to fish?—A. About the middle of June, 12th, 16th, and so on.

By Mr. Armstrong :

Q. You have heard what Mr. Spencer says in regard to nets, is all correct?—Yes; that is correct; it is 165 meshes in the middle and tapers off to the end.

By Mr. Wilmot :

Q. That is, you mean to say the wings and two ends of the net are narrower?—A. Yes; they are not so deep.

Q. And that forms a kind of bag does it not?—A. Yes; when you haul in on the lead lines.

By Mr. Armstrong :

Q. Are any other kind of fish caught there?—A. No; a few flounders, that is all.

By Mr. Wilmot :

Q. Any halibut?—A. No; not of any account; there is nobody fishing halibut there; it is too far from market; we have caught a few for ourselves.

Q. Have you ever fished with a gill-net?—A. We have tried it in day time and at night, but we never could catch any.

Q. What was the reason?—A. The fish see it; the water is as clear as June; I don't think there is any other way to catch fish there unless by seines.

Q. How far does the net go out in the river?—A. Well, we start and go out about half way, and then from there fetch the net ashore.

Q. And consequently it would take everything in front of it?—A. Yes, of course.

Q. And would the lead lines be on the bottom?—A. Yes; we fish from half tide up to a little near the flood.

Q. What is the height of tide there—the usual rise and fall?—A. About 16 feet—between 15 and 16 feet.

Q. How far does the tide go up the river?—A. About 3 miles—between 3 and 4 miles.

Q. What is the size of the river?—A. About 3 rods; in some places not so wide; some places not over one rod between the rocks; three rods is about the broadest where we fish.

Q. And on that three rods you take your net out half way?—A. Yes.

Q. Any times more than that?—A. No; just about half; we hardly ever go any farther; we have to go back to shore with the net or you lose your fish; they go out again.

Q. Is there any possibility of fishing with a gill-net up the river where you speak of?—A. I don't think so, sir; and then it is not very deep water, and you could not use your gill-net; it is all rocks and shallow water.

Mr. HIGGINS.—Do you ever see many dead fish in the river?—A. No, sir.

Mr. WILMOT.—Have you ever been up in the lake itself?—A. I have just been to the last rapid; I have not been in the lake.

Q. Then you do not know if there are any small streams running into the lake?—A. No; I don't know.

Mr. WILMOT.—That will do, sir; thank you.