

The Terrace-Lakelse district was increased this year to take in the area along the Skeena river from Cedarvale to the headwaters. This includes the Bulkley river up to the Hagwilget canyon, the Kispiox river system and all smaller streams entering the Skeena.

A Guardian, Mr. G. F. Ironside, was employed from June 1st to October 31st, to patrol the area in the vicinity of Hazelton. Mr. Ironside, using his personal car kept in close touch with the Indian Fishery at Kitsegucia, Skeena Crossing, Hagwilget Hazelton, Glen Vowel and Kispiox as well as doing the Spawning Surveys in this area.

During the winter there was a very heavy snowfall and transportation at times was difficult. During this time weekly trips were made to Lakelse lake to obtain information on water temperatures, water levels, and ice conditions as well as to take plankton samples.

The first week in February was spent at Lakelse lake examining Sockeye redds as a check on survival of last season's spawning. It was found that there was an average of about eighty percent survival in the redds examined.

All this winter work was done in cooperation with the Fisheries Research Board.

On March 19th a trip was made to Prince Rupert to meet Mr. G. S. Reade, New Acting Supervisor of District no. 2. and to talk over the general management of Terrace-Lakelse area.

The period between April 3rd and April 19th was spent in the Butedale area on herring spawning patrol on board F. P. L. Babine Post.

A trip was made to Vancouver office April 22nd to April 30th and the control of Harbour (Hair) Seals in the mouth of the Skeena river discussed. At this time an experimental hunt was planned for later in the Spring.

This hunt was carried out with the help of L. J. Gelley, a Fishery Guardian, between May 11th and June 21st. We were accompanied by Supervisor Tate of Nanaimo for the first few days of the hunt. Flood waters in the Skeena river restricted operations to some extent during the first two weeks, but with lowering of water levels and the advent of the pupping season after the first of June the hunt was more successful. In all 132 seals were killed and several probably killed. Fifty eight of these were recovered from the water and measurements and stomach samples taken for the Fisheries Research Board.

During the flood in the latter part of May some concern was felt for the migrant fry and yearlings that were in the river at this time. Inspections were made throughout the area and no dead or stranded fry found. This flood only effected the main Skeena river in this area and although tributary streams were fairly high very little damage was found on spawning grounds.

Indian fishing Permits were issued towards the end of June when the main run started in the Skeena river. From this time until the end of the runs, patrols were made over the district from Salvus to Hazelton as often as transportation would permit.

Two Spawning ground inspections were made to the Gitnadoix river. The first in which a start was made by canoe from Lakelse lake and in which the whole length of Lakelse river was inspected enroute to the Gitnadoix ended unfortunately when the canoe used was upset about three miles from the mouth of the Gitnadoix and all supplies as well as a good deal of personal equipment lost.

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This trip had to be abandoned and only the lower Gitanadoix river was inspected at this time. The second inspection was made October 12th to 16th and the whole area as far as Allistair lake covered. A late Sockeye run was found on the streams entering Allistair lake in good numbers. It was thought up until this inspection that only an early run went into this area.

Two inspections were made to the Kitsumgallum spawn areas. The first trip was made on September 16th and 11th and it was found to be a little too early for the Sockeye run to this area.

The second trip was made to this area on September 30th to October 4th. During this inspection the Beaver river was explored for about 25 miles by canoe. A good run of fish was found on the area at this time.

An inspection was made of the Kitwanga river area Sept. 24th and 25th. A good run of Pinks and chums were on the river at this time. Sockeye run was over and reported by the Indians to be light. The Coho run was light at time of inspection.

A trip of exploration was made on the Exchamsiks river October 19th and 20th. A run of Coho was found on the river at this time but weather conditions prevented an accurate estimate.

An inspection trip was made to the head of the Kispiox river on September 22nd by plane. Landings were made on Swan and Stevens Lakes. A Heavy run of Sockeye was found on the area at time of inspection. Coho run was light.

An inspection trip was made to Morrice and Nanika Rivers by plane in company with Inspector Elliott. This inspection was made on September 5th.

#### General Spawning ground Summary.

##### Sockeye.

The sockeye seeding for the whole area has been good. Lakelse lake and tributary streams was not heavy, but there has been an average escapement.

The Swan lake, Club lake and Stevens lake area at the head of the Kispiox river had by far the heaviest seeding that I have seen in 1946-47-48 inspections.

Kitsumgallum lake area was heavier than last year.

Allistair lake for the size of the spawning area was very heavily seeded.

Without counting the Kitwanga river area on which I have only Indian reports, an estimate of 59,000 spawners can be considered a conservative figure.

##### Springs.

As Spring salmon spawning is scattered over the area and perhaps the heaviest takes place in the Kitsumgallum river where owing to glacial silt, visibility is very poor an estimate of spawning fish has not been made. From Indian catches and the few streams that could be inspected for this species it would appear that there has been a good average spawning.

##### Pinks.

Pinks throughout the area showed a decided increase over the cycle year. An exceptionally heavy seeding was found on Lakelse river. Kispiox river had the best seeding since 1944. All small streams that support only small numbers of pinks showed an increase.

##### Chums

This species is not found on any of the streams in very large numbers. The heaviest individual spawning was found in a small cont.

Chums

slough near Extu. Taking the area as a whole an average medium spawning was found this season.

Coho.

The first of the coho run started very well, but it tapered off sharply through the season and resulted in a medium run. Small streams around Hazelton received a medium seeding. Streams at the head of Kispiox river were lighter than either 1946 or 1947.

Gitnadoix river had a medium spawning but as this stream was not visited last year or during the cycle year, the run can only be judged by the number of fish and the extent of spawning area.

Kitsumgallum lake and River with tributary streams was lighter than last year.

Steelhead.

Steelhead seeding is hard to keep track of, as spawning is scattered lightly over the whole area and takes place as far as it is known from November to May and June. By the Indian catch and by catches made by sportsmen would appear that there was a better than average run this year.

Two trips were made over the district with A/Supervisor Reade, one on July 28th to August 2nd, the other October 24th to October 28th.

The Indian fishery at Hagwilget Canyon was kept under close observation as it was felt that there has been some loss to both the Indians and to the Spawning population through the use of gaffs for taking salmon at this point. Salmon wounded by gaff that die before reaching the spawning grounds, even in small numbers, can be considered wasted. It is hoped that a system of dipnetting can be introduced this coming season and plans are being made to put this into effect.

No arrests were made and there was only one confiscation of a short net found in river near Terrace.

Small logjams were cleared from Sealy Creek, near Hazelton, Deep Creek and Spring creek near Terrace.

A close watch was kept on logging operations and only one instance of slashing being left in streams found. In this case a word to the operator was sufficient to have the condition remedied.

There has been no new logging operation started in vicinity of salmon streams.

Equipment.

An eighteen foot Peterborough canoe was purchased for use in spawning inspections in this area. This canoe proved to be very useful this season.

Other items of equipment received in this district were 1 sleeping bag and 1 typewriter.

Weather conditions for the year have been somewhat unusual. Heavy snowfall during the first of the year caused the spring floods.

June, July and August were very dry although stream levels did not get too low.

November and December were very cold for this time of year, Zero temperatures were recorded in the vicinity of Terrace and 20 below in the vicinity of Hazelton.

A check was made of the salmon streams in Lakelse area during the cold weather and as water levels were normal

redds appear to be safe from frost.

*V.H.B. Giraud*  
V.H.B. Giraud, Fisheries Inspector

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Smithers, B.C.  
December 31st. 1948

G.S. Reade, Esq.,  
Regional Supervisor of Fisheries,  
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Herewith please find my annual report of the Fisheries in the Babine-Morice Area for season 1948.

A. The runs of the different varieties of Salmon on the spawning areas were as follows;

Sockeye There was an excellent run of Sockeye this season but can't be compared with either 1943 or 1944 because, according to Dr. A.L. Pritchard, the commercial catch over the past ten years has averaged 42% four year olds, and 44% five year olds which is also the case this season. Large fish were prevalent but the sex ratio is very extreme and interesting. One creek on Babine Lake had almost 4 females to 1 male. This was not true throughout the area but one which might cause some concern.

Spring Spring Salmon were a medium heavy run over the whole District and will compare with 1943 although these fish are not necessarily all 5 year olds.

Coho Coho are about a medium run with a much heavier run in most areas than 1947. The number of Small Jacks are noticeable on the smaller streams, the larger fish being well paired off and the Jacks are left as surplus.

Pinks The majority of Pinks spawn in the Lower Babine River with a few reaching the Moricetown Canyon. The run is very much better than the cycle year.

Chums Very few Chums ever reach this District.

Steelhead Indians in most areas reported a fairly heavy run.

Dolly Vardon This fish still remains high in the list of predators of eggs and fingerlings. This area abounds with them and those caught are very large and fat. Trout fishing was excellent most of the year in the Babine River but spotty at others portions of the Lake and B District. There are more sports fishermen now entering the District from outside areas.

B. As we have no commercial fishing in this district there are no fishing fleets. Indians use dugouts and flat bottomed boats while tending to set nets for their food supply catch. Each year there are a few new boats built and likewise the old ones are discarded. These boats are about the only means of transportation and are seldom used over 3 years.

C. The Salmon Counting Fence on the Lower Babine River operated by the Fisheries Research Board was partially undermined in the flood this spring with the result that no counting was done. This fence is being repaired and should be in operation next season. Indians do not like this fence so will have to be educated all over again as to where they can get the best fishing. Indians following the Logging operations are moving to scattered portions of Babine Lake necessitating many more hours of work for the patrolman in checking their fishing.

D. Due to the high cost of living many people who normally do not bother with Salmon now find it necessary to supplement their food supplies with the result that they buy fish from Indians or use a jig. to capture them. Three prosecutions seemed to stop this trend. The Guardian at Moricetown is to be congratulated in the way he handled the situation. A sign is to be erected at Moricetown Canyon stating the law at this point. Outsiders do not seem to realize that there are any laws governing Salmon in the Interior.

E. Closed seasons were very well kept throughout the District with no difficulties in enforcing them.

F. This District in the past year has been cut down to make more evenly sized districts for the Inspectors at Terrace and Smithers, the dividing line now comes at Hazelton. The Smithers Inspector now takes in the Upper waters of the Copper or Zymoetz River. This district has one Guardian at Moricetown and two Patrolmen on Babine Lake. The Patrolmen being provided with outboard motors and boats. This district calls for two Inspectors but as the Grade 2 Inspector was retired in April with 6 months retirement leave the Grade 1 Inspector had to carry on alone. However the laws were enforced in an effort to stop commercializing of Salmon.

G. Wherever there is any possibility of waters being contaminated with sawdust or other pollutions the areas are patrolled and steps taken to see that such does not occur.

H. A sort of fishway is in operation at Moricetown Canyon but it is far from being perfect. This is looked after to the best of our ability.

I. Spawning beds have been well supervised as far as possible, good water has been useful. Some work being needed on certain streams in Babine Lake. Spawning beds will bear up well unless some adverse weather conditions either during the winter or in the early spring change them.

J. The Guardian and Patrolmen on duty have shown keen interest in their work and it is hoped that their services can be obtained next season. The Guardian at Moricetown could aid considerably by the use of his car but with the present mileage rate patrols can not be expected. Equipment on Babine Lake is not in first class condition but the addition of a new boat would help considerably. The Inspector has used his car during the busy months to aid the Department receiving no thanks and not receiving enough at .09¢ per mile to cover all expenses.

Signed W.K. Elliott

W.K. Elliott  
Fishery Inspector.