

into it and the young fish going out of it. One year all the fish that come into the lake are allowed to go to their natural spawning grounds and spawn naturally. The resultant fry are counted, and on the basis of what would be a reasonable number of eggs per fish the investigation determines the return of healthy young fish to the sea. These fish are also marked very largely, to determine as far as possible the number that will come back—

The CHAIRMAN: How do they estimate the number of young fish?

Mr. FOUND: Just count them, sir.

Hon. Mr. McRAE: There is a kind of runway that the fish go through.

Mr. FOUND: There is a fence put right across the stream there, and the young fish going down are led in to compartments and they are counted and then let go. The investigation is being efficiently and carefully carried out. The next year the operations are entirely confined to planting eyed eggs, that is eggs that have been placed in the hatchery until the eye of the young fish begins to show through the shell. When the egg reaches that stage it can be carried long distances, as compared with other eggs. These eyed eggs have been the means of stocking areas remote from hatcheries and which could not be stocked by young fry or green eggs. The next year no fish are allowed to go into the lake at all, they are all taken and stripped. That is, the eggs and the milk are taken from them and the eggs are hatched, planted in the proper waters tributary to the lakes, and the young fish are counted out.

Now, that is being done by each of these methods. We are also testing out the advisability of rearing the young fish to different ages. It has been carried on for ten years. Two years hence we shall have covered four cycles for each method, and we are waiting with some anxiety for the report of the investigators as to whether the expense involved in artificial hatching for commercial purposes is warranted by the return as compared with the results from natural production.

Meantime the Department has not been expanding its commercial salmon operations. We have on the Fraser two hatcheries, one at Pemberton and the other at Pitt Lake, which, as I said this morning, cost about \$13,000 per annum to operate, in addition to the Cultus Lake hatchery, which is on the Fraser River and the results from which go to the Fraser River. It is costing more than it otherwise would on account of the investigations that are being carried on. At Rivers Inlet we have one large hatchery that costs approximately \$11,500 a year up and down, depending on repairs and other conditions. On the Skeena there are two hatcheries, one at Lakelse Lake, moderately low down and the other at Babine Lake at the head waters. These cost about \$8,100 each. On Vancouver Island we have commercial hatcheries, one at Anderson Lake and the other at Kennedy Lake, costing \$14,800. We have one main sport fish hatchery at Cowichan and four substations, which are costing us in the vicinity of nearly \$11,000 a year.

Hon. Mr. McRAE: What is a substation?

Mr. FOUND: It is operated for a few months in the year with eggs taken from somewhere else.

Hon. Mr. McRAE: You have nine hatcheries running?

Mr. FOUND: Yes.

Hon. Mr. McRAE: Costing roughly \$100,000.

Mr. FOUND: Yes, Senator McRae.

The CHAIRMAN: Does the Province operate hatcheries?

Mr. FOUND: No, sir. The Province is very much interested at the present time in the development of sport fish, and it has been doing something in that respect. We have been co-operating by helping in every way we can with our available staff without running up too much expense.