

The loss with the Rhine eggs from the time they were received in London on the 30th January until their arrival in New Zealand was 23,414. No. 1 case English eggs, taken from the River Test, had a loss of 906; No. 2 case English eggs, taken from the River Dee on the 5th January, 660; and No. 3 case English eggs, taken from the River Dee on the 14th January, 1,430: making a total of 2,996 deaths in these three cases. The total loss was 26,410 for the whole shipment for the voyage, equal to 4·8 per cent.

The cause of the larger death-rate with the German eggs was owing to their being longer packed and the development further advanced than with the English eggs. They were seventy-two days from the time they were packed in Germany until they were unpacked in New Zealand. Had these eggs been shipped by the "Corinthic" as intended, or had we known in time that the "Corinthic" would not take them, then younger eggs could have been obtained at the same hatchery. These younger eggs were not far-enough advanced to pack for the "Corinthic," but would have been just at the right age to pack for the "Rakaia." Either way the loss on the voyage would have been similar to what had occurred with the English eggs. The greatest number of deaths occurred with the German eggs during the last two weeks of the voyage. This loss would not have taken place had they come by the "Corinthic," as they would have arrived and been placed in the hatcheries here fully two weeks earlier than by the "Rakaia."

As I anticipated, the "Turakina's" shipment arrived in first-rate condition. The total loss on the voyage from London to Wellington was 29,228, equal to 5·8 per cent., and the loss from Plymouth to Wellington was 27,998, or 5·6 per cent. This speaks very well indeed for the care and attention given to the eggs on the voyage by Mr. Parker and his assistant.

I do not know of any previous shipment of salmon or trout eggs which has arrived from England with a loss of less than 20 per cent. Usually the loss amounted to from 20 to 40 per cent. The previous shipments of salmon-eggs brought out in the "Gothic" and "Paparoa" in 1903 had a loss of about 40 per cent. This year's importation, therefore, establishes a record for being by far the largest shipment of Atlantic-salmon eggs ever brought to New Zealand, and for being landed with the smallest percentage of loss in transportation. With regard to future importation of salmon-eggs from England, orders for eggs should be received in London not later than the end of September. If the order is sent early enough there will be no difficulty in getting half a million eggs for one shipment, but it would be a very difficult matter indeed to at any season procure a million eggs all at the right age to send in one shipment.

While in Scotland I interviewed some of the members of the Tay Fishery Board and their Superintendent (Mr. Lumsden). Mr. Lumsden stated that if he received an order any year by the beginning of October, he could arrange to collect for the New Zealand Government when he commenced collecting for their own hatchery about the first week of November. At that time the spawning fish are running, and two or three days' netting when a fair run of fish is on would give all the eggs required. If the order was given early enough, the cost of collecting and incubating half a million eggs would be very small.

As stated in a previous communication to you, Mr. Ridler, the chief engineer, and Mr. Dugdale, the chief refrigerating engineer, gave me very valuable assistance on the voyage.

The captain of the "Rakaia" and his officers, and the New Zealand Shipping Company's officials in London and at Dunedin, were very courteous, and gave me every assistance in getting the eggs on board at London and off the steamer on arrival at Dunedin.

In London the High Commissioner and his officials did everything possible in procuring the salmon-eggs well, and in the quickest time possible, and I was afforded every facility in connection with the collection, packing, and shipping of the eggs, and I wish to express my appreciation of the very courteous treatment which I received from the officials in that office.

The thanks of the Department are, I consider, due to Mr. C. H. Fryer, Chief Inspector of Fisheries for the Board of Agriculture, for the very valuable assistance which he gave in connection with the collection of the salmon-eggs.

I have, &c.,

L. F. AYSON,

The Secretary, Marine Department, Wellington.

Chief Inspector of Fisheries.

The CHIEF INSPECTOR OF FISHERIES to the SECRETARY, Marine Department.

SIR,—

Wellington, 28th April, 1909.

I have the honour to report as follows on the marine biological stations and hatcheries visited when in England.

As the collection and preparing for shipment of the salmon-eggs occupied practically all my time, it was impossible to go into the sea-fish work as I should have liked; I was, however, able to visit the marine laboratories at Plymouth and Aberdeen.

At Aberdeen I met Dr. Fulton, who showed me over the station and explained the fish-hatching appliances and the work which was done there. He is very much interested in the experiments which are being made with regard to the importation of useful food-fishes to New Zealand, and there is no doubt but that the authorities can depend on his able assistance in connection with all future work. Both at Aberdeen and Plymouth it was pointed out to me that, as the staff of experts was limited, and as they were fully occupied with their own work, it was very difficult to find time to devote to outside work, such as they were doing for the New Zealand Government. At the same time they were deeply interested in the experiments which they had undertaken to do, and would have them carried out as expeditiously as possible.

With regard to the experiments that were recently made with herring-ova, Dr. Fulton is of the opinion that they were not conclusive, but he is sanguine of better results from the further