

VI.—ACCOUNT OF EGGS REPACKED AT COLD SPRING HARBOR, N. Y., AND SHIPPED TO FOREIGN COUNTRIES, UNDER THE DIRECTION OF THE U. S. FISH COMMISSION, DURING THE WINTER OF 1884-'85.

By FRED MATHER.

GERMANY.

A. WHITEFISH (*Coregonus clupeiformis*).—On January 8 received from Mr. Frank N. Clark, superintendent of the hatching station at Northville, Mich., 1,000,000 eggs of whitefish in good order. They were repacked and shipped to Herr von Behr, president of the *Deutsche Fischerei-Verein*, Berlin, care of Mr. Busse, Geestemünde, by the steamer *Salier*, of the North German Lloyds, on January 10. They arrived at Geestemünde in good order, but by some misunderstanding half of them were shipped from there to Switzerland.

On February 20 another lot of 1,000,000 eggs were received from Mr. Clark, and were repacked and shipped to the same address as above, on February 25, by steamer *Eider*. These and eggs of other fish did not receive proper attention on the ship, and arrived with no ice in the boxes and in very bad condition.

B. LANDLOCKED SALMON (*S. salar* var. *sebago*).—March 27 received from Mr. Charles G. Atkins, in charge of the United States station at Grand Lake Stream, Maine, 40,000 eggs, and repacked and shipped to the *Deutsche Fischerei-Verein*, Berlin, care of F. Busse, Geestemünde, by steamer *Eider*. As stated in the case of the whitefish, above, there was a lack of ice in the boxes, and a card from Herr von Behr of April 11 says that they were "nearly" all lost. As a rule the eggs have been well attended to on this line.

C. RAINBOW TROUT (*Salmo irideus*).—March 30 received from Mr. Clark 10,000 eggs, and repacked and shipped as above by steamer *Eider*. These eggs were all lost for want of ice on the voyage. It will be seen that of the three lots sent by this ship very few arrived safely. The following translation explains their condition:

"GEESTEMÜNDE, April 12, 1885.

"MR. VON BEHR, SCHMOLDOW.

"SIR: Unfortunately the last consignment of fish-eggs again arrived here without any ice whatever; even the sides of the box were dry, and

the result, of course, was very serious. The *irideus* had decayed already to such a degree that not a *single* egg could be distinguished on the frames. The *landlocked* had already developed very considerably, and some of the young fish had slipped out of the eggs.

"I have this day sent 2,000 to each of the persons for whom they were destined, and 9,000 to Starnberg. A detailed report will follow to-morrow, because to-day I am too busy picking out the eggs.

"Very respectfully,

"F. BUSSE."

D. BROOK TROUT (*Salvelinus fontinalis*).—February 7 received 40,000 eggs from Mr. Clark, and shipped to the *Deutsche Fisherei-Verein* February 11, by steamer Fulda. These eggs were better cared for on the voyage and arrived in good order. All the eggs to Germany were carried free of charge by the North German Lloyd Steamship Company.

ENGLAND.

A. WHITEFISH (*Coregonus clupeiformis*).—January 8 received from Mr. Clark, Northville, Mich., 250,000 eggs, and repacked and shipped them to the National Fish Culture Association, South Kensington, London, care of Mr. Edward Birbeck, on January 14, by steamer Gallia. They arrived in good order, as will be seen by a letter from Mr. Chambers, secretary of the association, appended to the account of the following shipment.

B. LAKE TROUT (*Salvelinus namaycush*).—January 8 received from Mr. Clark 30,000 eggs, and repacked and shipped by steamer Gallia on January 14. The following extract from a letter shows their condition on arrival:

"[National Fish Culture Association, Exhibition Grounds, South Kensington.]

"LONDON, February 10, 1885.

"MY DEAR SIR: The consignment of 250,000 whitefish ova and 30,000 lake trout ova duly arrived at Liverpool, where they were met by our agent and dispatched to our hatchery at South Kensington. I have great pleasure in stating that upon opening the boxes, the various eggs were found to be in excellent condition and the rate of mortality remarkably low. I have delayed writing to you in order to send a later report as to their condition, which at the present time is all that can be desired. Please accept my hearty congratulations upon the efficacious mode adopted in packing the eggs, which has proved a signal success. I have written to Professor Baird upon the subject.

"Faithfully yours,

"W. OLDHAM CHAMBERS.

"FRED MATHER, Esq.,

"Cold Spring Harbor, N. Y."

C. SALMON (*Salmo salar*).—January 31, received from Mr. Charles G. Atkins, Bucksport, Me., 30,000 eggs of Atlantic or Penobscot salmon. Repacked and shipped to the National Fish Culture Association by steamer Scythia on February 4. The following letters show their condition on arrival:

“LONDON, February 25, 1885.

“MR. FRED MATHER.

“MY DEAR SIR: I have the pleasure to inform you that the Penobscot salmon eggs arrived at South Kensington in grand condition, the death rate being under 1 per cent. The eggs still maintain the excellent condition in which they arrived.

“Yours faithfully,

“W. OLDHAM CHAMBERS,

“*Secretary.*”

[National Fish Culture Association, Exhibition Grounds, South Kensington.]

“LONDON, February 25, 1885.

“The Hon. Prof. SPENCER BAIRD,

“*Commissioner of Fish and Fisheries, Washington.*

“MY DEAR SIR: Allow me, on behalf of the council of the National Fish Culture Association, to thank you for the further presentation of Penobscot salmon eggs and about 7,000 *fontinalis* eggs, which arrived here in excellent condition, and were immediately transferred to our hatchery.

“It will, I am sure, be interesting to you to know that all the eggs still maintain the excellent condition in which they arrived.

“I must again compliment you upon the admirable system adopted by you in packing the eggs, which is worthy of great commendation.

“Yours faithfully,

“W. OLDHAM CHAMBERS,

“*Secretary.*”

D. BROOK TROUT (*S. fontinalis*).—February 7, received from Mr. Clark 25,000 eggs, and repacked and shipped them to the National Fish Culture Association February 11, on steamer Servia. As to their arrival, see letter of February 25, above.

E. LANDLOCKED SALMON.—March 27, received 30,000 eggs from Mr. Atkins; repacked and shipped to the National Fish Culture Association April 1, by steamer Bothnia.

F. RAINBOW TROUT (*S. irideus*).—April 11, received from Mr. Clark 5,000 eggs; repacked and shipped them to the National Fish Culture Association April 18, by steamer Servia. All the eggs sent to England were carried free of charge by the Ounard Line.

Under date of April 21, 1885, Mr. W. Oldham Chambers wrote to Professor Baird as follows:

“I am requested by the council of the National Fish Culture Association to thank you for the very valuable presents of salmon and trout

ova that you have forwarded to this association during the past season, which I am happy to say were hatched out at South Kensington with a very low minimum mortality, and the fry were, in due course, transferred to our fish-culture establishment at Delaford Park, where they continue to thrive."

SCOTLAND.

A. LANDLOCKED SALMON (*S. salar* var. *sebago*).—Received, March 27, one case containing 20,000 eggs. Repacked and shipped to the Tay District Salmon Board, care John Anderson & Son, Royal Emporium, Edinburgh, by steamer State of Pennsylvania, of the State Line, on April 4. Have no advices as to their condition on arrival.

B. RAINBOW TROUT (*S. irideus*).—April 11, received from Mr. Clark 10,000 eggs, and repacked and shipped to Sir James Gibson Maitland, Howetown Fishery, Stirling, by steamer Devonian, of the Anchor Line, April 18. The eggs arrived in good order.

SWITZERLAND.

A. WHITEFISH (*Coregonus clupeiformis*).—January 8, received from Mr. Clark 500,000 eggs. Repacked and shipped them in care of Inspector Coaz, Bern, on January 14, by steamer Amérique, of the General Transatlantic Company. On the 19th of February their safe arrival at Bern was reported to Professor Baird by Hon. Emil Frey, minister from Switzerland. [See letter in Bull. F. C. 1885.]