

VI.—REPORT OF EGGS SHIPPED TO AND RECEIVED FROM FOREIGN COUNTRIES AT THE COLD SPRING HARBOR, NEW YORK, STATION DURING THE SEASON OF 1885-'86, AND THE DISTRIBUTION IN THE SPRING OF 1886.

BY FRED MATHER.

SHIPPED TO FOREIGN COUNTRIES.

GERMANY.

A. LAKE TROUT (*Salvelinus namaycush*).—On January 7 received from Mr. Frank N. Clark, superintendent of the station at Northville, Mich., one case containing 50,000 lake-trout eggs, which were in good order. We repacked them in our refrigerating boxes and shipped them on January 18, by the North German Lloyd steamer Fulda, to the Deutsche Fischerei-Verein, in care of F. Busse, Geestemünde. Concerning this shipment Herr von Behr, president of the Fischerei-Verein, writes, under date of February 13, that the eggs arrived in good order.

B. BROOK TROUT (*Salvelinus fontinalis*).—On January 29 we received 25,000 brook trout from Mr. Clark, and repacked and shipped them by steamer Eider on February 22, to the address given above. I have no report concerning the receipt of these eggs.

C. RAINBOW TROUT (*Salmo gairdneri*, var. *irideus*).—On February 18th 25,000 of these eggs were received from the Wytheville, Va., Station, in charge of Col. M. McDonald. They were repacked and shipped by the steamer Hermann to the Fischerei-Verein on the next day. No returns have been received from this lot.

D. LANDLOCKED SALMON (*Salmo salar*, var. *sebago*).—From Mr. Henry H. Buck, in charge of the station at Grand Lake Stream, Me., there were received 20,000 eggs of the landlocked salmon in excellent condition on March 12. These were repacked and shipped by steamer Fulda to the Fischerei-Verein on March 20. Have received no account of their arrival.

E. WHITEFISH (*Coregonus clupeiformis*).—On January 23d 1,000,000 whitefish eggs were received from Mr. Clark, of the Northville Station. On January 25 they were repacked and shipped by the steamer Ems to

the Fischerei-Verein. Concerning this shipment Herr von Behr, under date of February 13, writes substantially as follows:

I am happy to state that the lake trout, as well as the whitefish, arrived in good condition. Bavaria was to have nearly half the eggs, and Mr. Carl Schuster the other half. Now, by a mistake of the railroad, nearly all the eggs went to Mr. Schuster. This upset our calculations of sending one-half of them to Bavaria, for the eggs were very near hatching, and it was too late to reship them. If there are still more eggs at the disposition of Professor Baird, please ask him to send me some whitefish eggs for Bavaria; as the most distinguished and influential persons in that country take great interest in fish-culture.

ENGLAND.

All shipments to England were made to the National Fish Culture Association, in care of W. Oldham Chambers, esq., secretary, South Kensington, London.

A. LAKE TROUT (*Salvelinus namaycush*).—On January 7th 50,000 eggs of this fish were received from Mr. Clark, of the Northville Station, repacked in refrigerating boxes, and sent by the steamer *Aurania*, of the Cunard line, on January 15. A statement of their arrival is found under the heading of whitefish.

B. BROOK TROUT (*Salvelinus fontinalis*).—On January 25 received 10,000 eggs from Mr. Clark, and repacked and shipped them on the 29th by the steamer *Servia*, of the Cunard line.

C. LANDLOCKED SALMON (*Salmo salar*, var. *sebago*).—Ten thousand eggs of this fish were received from Mr. Buck, of the Grand Lake Stream Station, on March 12. They were repacked in refrigerating boxes and shipped on March 16 by the steamer *Germanic*, of the White Star Line. I have no advices of their condition on arriving in England.

D. WHITEFISH (*Coregonus clupeiformis*).—On January 7th 1,000,000 eggs were received from Mr. Clark, and repacked and shipped by the Cunard steamer *Aurania* on January 15. The following letter refers to this shipment and also to that of the lake trout mentioned above:

LONDON, January 28, 1886.

DEAR SIR: I am desired by the council of the National Fish Culture Association to tender their best thanks for the kindness you have displayed in forwarding 1,000,000 ova of the whitefish (*Coregonus albus*) and 50,000 ova of the lake trout, which duly arrived on Tuesday last. I am pleased to inform you that they arrived in perfect condition and commenced to hatch out as soon as they were placed in the hatchery. I cannot speak too highly of the method and care with which they were packed.

Yours faithfully,

W. OLDDHAM CHAMBERS.

Prof. S. F. BAIRD,
Washington, D. C.

Another lot of 1,000,000 whitefish eggs was received from Mr. Clark on January 25, and the eggs were repacked and shipped by the Cunard steamer *Servia* on the 29th. No account of their arrival has been received.

SWITZERLAND.

All eggs shipped to this country were sent to New York, in care of the Swiss consul, J. Bertschmann, esq.

A. LAKE TROUT (*Salvelinus namaycush*).—On January 7th 50,000 eggs of this fish were received from Mr. Clark, and were repacked and shipped to New York on January 11, in time for the steamer *Amérique*, of the General Transatlantic Company. I have no account of their arrival.

B. BROOK TROUT (*Salvelinus fontinalis*).—On January 29 there were received from Mr. Clark 10,000 brook-trout eggs, which were repacked and forwarded to New York on February 2, in time for the steamer *St. Simon*.

C. WHITEFISH (*Coregonus clupeiformis*).—On January 7th 1,000,000 eggs were received from Mr. Clark in good order, and were forwarded four days later by steamer *Amérique*. I have no advices concerning the arrival of any of these eggs at their destination.

FRANCE.

On March 1 I received through Mr. E. G. Blackford, commissioner of fisheries of New York, a package of 10,000 rainbow-trout eggs from the Wytheville Station, and returned them to Mr. Blackford the next day, as I understood these were for foreign shipment.*

RECEIVED FROM FOREIGN COUNTRIES.

GERMANY.

A. COREGONUS.—On January 28 a case containing 100,000 eggs of some small species of whitefish, perhaps *Coregonus albula* or *C. marana*, was received from the Deutsche Fischerei-Verein, in very fair order. There were 5,000 of the eggs dead, and some fungus had grown. These were re-iced and shipped as per orders, on the same day, to Mr. Charles G. Atkins, Bucksport, Me. On February 4 another case, containing 50,000 eggs, apparently the same kind, was received, in which 22,000 were dead. The good ones were placed in a hatching-jar to await orders, where they were kept until February 14, when they were repacked and shipped to Mr. Frank N. Clark, Northville, Mich.

B. BROWN TROUT (*Salmo fario*).—Notice had been received from Herr von Behr that a shipment of 64,000 eggs of this fish would be sent to Professor Baird, and that a second package would be forwarded to Mr.

*These were sent by Mr. Blackford as a present to the Société d'Acclimatation, Paris.—EDITOR.

E. G. Blackford and myself. It was agreed that both packages should be equally divided between the three, so that in case of failure in either lot we would all receive a share of such eggs as were good. On March 1 the case for Professor Baird, containing 64,000, came to hand in a very bad condition. There were about 10,000 eggs which had not turned white, and hopes were entertained that some fish might come from them. These were placed upon the hatching trays, but within a week all had turned white or burst, showing that the embryos were dead in the egg when received, although they had not become opaque. This fact was suspected at the time, because no movement could be seen in the eggs which were very far advanced.

On March 20 we received another package from Herr von Behr, containing 40,000 eggs of brown trout packed by Mr. Schuster, of Freiburg, Baden, in good order. Some of these eggs were exceedingly light colored, and I wrote to Mr. Schuster, asking if they were a different fish. He answered me, "the light colored eggs came from tributaries of the Danube, while the higher colored ones are from the Neckar." We removed 4,134 dead ones, and shipped 10,000 to Mr. Clark, Northville, Mich., and 3,000 to the station at Wytheville, Va. Those retained at Cold Spring Harbor hatched exceedingly well, and some of them were planted in Clendon Brook, Warren County, New York, and the others were kept at the hatchery. From this stock some 7,000 fry were sent to Lake Brandon, Essex County, the Adirondack Station of the New York fish commission.

On April 16 we received from Max von dem Borne, the celebrated fish-culturist of Bernenchen, Germany, two cases, each containing 25,000 eggs of the brown trout, in excellent condition; only 480 dead eggs were removed. Thirteen thousand were shipped to Mr. Clark, Northville, Mich., and 1,000 to James Nevin, superintendent of the Wisconsin fishery commission, at Madison. At present writing the fry are strong and healthy, but have not begun to take food. Concerning these last two lots of fish, Mr. Clark writes me under date of May 10, as follows:

"The first lot of brown trout came in excellent condition; and the fry are doing well. The last—the von dem Borne lot—came in poor condition, about one-half being hatched on arrival; but we shall save four or five thousand nice fry from the last lot."

This fish is strong, quick-growing, and gamy, and I have on several occasions declared it to be the finest trout that I have ever seen. In Europe they endure waters considerably warmer than our Atlantic brook trout (*S. fontinalis*) can stand. I have one specimen in the ponds, a fine male trout, which at two years old would weigh nearly 2 pounds.

COLD SPRING HARBOR, N. Y., May 15, 1886.