

XXVII.—ACCOUNT OF EGGS REPACKED AND SHIPPED TO FOREIGN COUNTRIES, UNDER THE DIRECTION OF THE UNITED STATES FISH COMMISSION, DURING THE WINTER OF 1882-'83.

BY FRED MATHER.

GERMANY.

A. BROOK TROUT, *S. fontinalis*.—December 29, 1882, I received from F. N. Clark, Northville, Mich., 25,000 eggs of brook trout. The box came on Friday, and the North German Lloyd steamer was to sail next day. I removed the sawdust packing and substituted ice and sent the box to Hoboken Saturday morning, but instead of sailing at the usual time, 2 p. m., the ship went at 9 a. m., and the box was too late. This package also contained the eggs of lake trout and whitefish. It was placed in a stable in Hoboken and iced frequently until the next week, when they were sent to the Deutsche Fischerei Verein, Berlin, care F. Busse, Geestemunde, on Saturday, January 6, 1883. They were received in Germany in good order, as the reports below will show.

On February 2, 1883, I received a second package of brook-trout eggs from Mr. Clark containing 20,000 brook-trout eggs, which were shipped by steamer Salior on the same day to the Deutsche Fischerei Verein.

B. LAKE TROUT, *S. namaycush*.—December 29, 1882, received a box containing 100,000 eggs of the lake trout, which went on January 6, 1883, with the first lot of brook trout to the Deutsche Fischerei Verein. They were spilled from the package by some accident, and whether all were lost or not my advices do not say.

C. WHITEFISH, *Coregonus albus*.—December 29, 1882, I received from F. N. Clark, Northville, Mich., 10,000 eggs of the whitefish, which were sent on January 6 with the first lot of brook trout to Mr. G. Ebrecht, Geestemunde.

Received December 29 as above, and shipped January 6, 500,000 whitefish eggs to Deutsche Fischerei Verein, Berlin. Arrived there in good order.

D. LAND-LOCKED SALMON, *Salmo salar var. Sebago*.—Received on March 3, 1883, 25,000 eggs of the land-locked salmon from Mr. Charles G. Atkins, Grand Lake Stream, Maine, and repacked and shipped by North German Lloyd steamer Neckar on March 10 to Deutsche Fischerei Verein.

I append the following from letter of Mr. Busse, agent of the Fischerei Verein, at Geestemunde, who received all the eggs from the ships. It includes all but the last shipment of land-locked salmon. The letter is dated Geestemunde, 24th of February, 1883:

"In due reply to your very esteemed favor of the 5th instant, I beg leave to inform you that all the fish eggs you sent through my hands to me for the Deutsche Fischerei Verein, Berlin, have arrived here in a proper and sound condition. Only the lake trout did not come in well, for most of them had slipped out before reaching me. As to the eggs Mr. Ebrecht received from you, I am sorry that I cannot tell you anything about them, as I have not seen the lot. No doubt they will have been in the same good condition."

FRANCE.

A. BROOK TROUT.—February 2, 1883, received 20,000 eggs of brook trout from F. N. Clark, Northville, Mich., and repacked and shipped them to the Société d'Acclimatation, Paris, care M. Raveret Wattel, secretary, by the steamer St. Laurent of the General Transatlantic Company, on February 6. They arrived in good order in France.

B. LAKE TROUT.—January 2, 1883, received from Mr. Clark 50,000 lake-trout eggs, which I repacked and sent on the steamer Labrador, of the General Transatlantic Company, to the Société d'Acclimatation, Paris, January 3. They arrived in France in good condition.

C. WHITEFISH.—December 29, 1882, received 200,000 whitefish eggs from Mr. Clark, and repacked and shipped them to the Société d'Acclimatation, Paris, January 3, 1883, by steamer Labrador, of the General Transatlantic Company. They arrived in France in good condition.

D. LAND-LOCKED SALMON.—March 3, 1883, received from Mr. Atkins 15,000 eggs of the land-locked salmon, and repacked and shipped them to the Société d'Acclimatation, Paris, by steamer Canada, of the General Transatlantic Company, on March 7. In this connection I would refer to the following, from letters dated Paris, February 8, March 3, and March 31:

"I have received in perfect condition the eggs of *Salmo namaycush* and *Coregonus albus* that you have had the kindness to forward to our society, and I trust there will be a good result."

"We have received in most splendid condition the trout eggs (*S. fontinalis*) that you have had the kindness to forward us, from Professor Baird. They were packed up in so perfect condition that not one had been lost, and I consider it as a certainty that they will give a lively fry. So it is a new success."

To Professor Baird he writes:

"I have received in perfect condition the ova of land-locked salmon forwarded to our society, under your kind direction, by Mr. Mather. They were really splendid as for the preservation, and not one had

been lost. The model of package was better again than the former. Permit me to express to you all our thanks for this new present, and to assure you of our deep gratitude."

ENGLAND.

A. BROOK TROUT.—On February 2 I received 10,000 eggs of brook trout from Mr. F. N. Clark, Northville, Mich., and repacked them and sent by Cunard steamer Catalonia to the Norfolk and Suffolk Acclimatization Society, care Hon. W. Oldham Chambers, secretary, Lowestoft.

I will refer for their condition to the following letter, dated Norfolk and Suffolk Fish Acclimatization Society, honorable secretary's office, Lowestoft, February 26, 1883:

"I have pleasure in reporting to you that the 10,000 *S. fontinalis* eggs arrived from New York in grand condition. I do not think I have picked out more than 50 dead eggs in all. I must certainly congratulate you upon the most successful system you have adopted in packing eggs for transit. If you possibly can spare a few land-locked salmon eggs for my society we shall be particularly indebted. It is not a large quantity that I ask for; we so much want to get this particular strain of salmon in our waters, fully believing they will form a very valuable addition to the food-fishes of England. Your best endeavors in this direction will be particularly esteemed. I have written to the Hon. Spencer Baird by this post, thanking him for the handsome donation of fontinalis eggs."

B. LAND-LOCKED SALMON.—On March 3, 1883, I received 10,000 eggs of the land-locked salmon from Mr. C. G. Atkins, and shipped them by Cunard steamer Bothnia to the Norfolk and Suffolk Acclimatization Society, care of Mr. Chambers, Lowestoft, on March 7.

The following report of their condition is taken from a letter to Professor Baird, dated Lowestoft, April 6, 1883:

"I have much pleasure in reporting to you the safe arrival of 10,000 land-locked salmon eggs, which were duly received at my hatchery on the 19th of last month. My executive committee desire me to express to you their thanks for this generous gift and practical desire on your part to increase the food-fishes of this country. I am happy to say the *S. fontinalis* eggs have hatched off with only a nominal loss."

SOUTH AMERICA.

A. BROOK TROUT.—On January 9, 1883, I repacked for Mr. E. G. Blackford, Fulton Market, New York, 6,000 eggs of the brook trout, being part of 10,000 of the same which he had received from Mr. F. N. Clark, Northville, Mich., for shipment, in charge of Mr. Ricardo Becerra, Bogota. The remainder of the eggs were kept in a jar and hatched in Fulton Market. I have no advices as to the condition of the eggs on their arrival at their destination.

BLACK BASS.

In August, 1882, I went to Greenwood Lake, lying partly in New York and partly in New Jersey, and took some medium-sized small-mouthed black bass with the artificial fly, and some small bass of the big-mouthed species with bait. The former were fish of a half pound to one pound in weight. They were placed in the tanks of Mr. E. G. Blackford, Fulton Market, New York, and kept there all summer. About the middle of February Mr. George Eckardt sailed in the North German Lloyd steamer Elbe with what was left of them. The following letter from Max von dem Borne acknowledges their safe arrival. It is dated Berneuchen, March 3, 1883, and is as follows: "The black bass arrived safely on February 27 in Bremen, and reached Berneuchen March 3. Allow me to thank you very much for so much trouble you have so kindly taken in this matter. There were seven large and forty-four small black bass, and one small perch. Is this the number you gave to Mr. Eckardt? I should be extremely obliged to you if you would kindly inform me how I am to breed these fish, whether in pond that can be drained, or by artificial incubation. How deep should be the ponds? Should the bottom be rocky, gravelly, sandy, or muddy? Perhaps you would reply to these questions in Forest and Stream? In about a fortnight I hope to send you on my own account (not in behalf of the Deutsche Fischerei Verein) 10,000 eggs of our brook trout, which is foreign in America."

I also assisted Mr. Silk in procuring some black bass in October for England. They also arrived in safety and were placed in the ponds of the Marquis of Exeter.