

7.—BROWN TROUT IN AMERICA.

By FRED MATHER.

In July, 1886, Mr. Amsden, a banker, of Rochester, N. Y., sent to Mr. E. G. Blackford, of Fulton Market, a brown trout which weighed, on its receipt by Mr. Blackford, 3 pounds. It was taken in Allen's Creek, Monroe County, New York, a tributary of the Genesee River, which receives the famous Caledonia Creek, on which the hatchery of the New York fish commission at Mumford is placed. This fish must have been one which was hatched at the New York station in March, 1883, from eggs sent there by me. These eggs were the first which were received in America, and came to me as a personal present from my friend, Mr. von Behr, president of the Deutscher Fischerei-Verein, whose headquarters are in Berlin, and consequently the fish was about three years and three months old.

At the time that these eggs were sent from Germany Mr. von Behr advised me that there were two kinds of them, not species, nor even varieties, but merely from different waters. One kind, the larger eggs, were from trout inhabiting deep lakes, while the smaller kind were from the mountain streams. These kinds are probably analogous in respect of size to the *fontinalis* of the Rangeley Lakes of Maine and those of our other eastern American waters, as near as I understand the case. I sent to the Caledonia station eggs of both kinds, and this fish, which was taken in Allen's Creek, is probably one that escaped from the hatchery, unless a plant had been made in the creek.

In the ponds now under my charge at this place, we reserved some of these first importations, but lost the greater portion of them from various causes. The station was then new and the waters were infested with eels, which have since been kept down as far as possible, and, while we raised several thousand to be a year old, we lost the most of these by their jumping from the pond they were confined in, an event which has been previously recorded in the publications of the Fish Commission. Of the few that were left there was one which was somewhat larger than its fellows, and proved to be a male fish, and was named "Herr von Behr," in honor of my German friend. In October, 1886, when it was three and a half years old, we took it from the pond and placed it in an aquarium in the hatchery, which had a good flow of running water, in order to show it to the New York fish commissioners, who were expected the next day. In the morning the fish was dead, and it now reposes in alcohol, where its size can be admired by visitors. Its weight was $3\frac{1}{2}$ pounds plump, or at the rate of 1 pound a year.

Mr. James Annin, jr., proprietor of the trout ponds at Caledonia, N. Y., writes that the growth of the brown trout in his ponds is greater than that of the native brook trout.

Mr. A. D. Frye, of Bellmore, Long Island, writes me under date of March 27, 1887, as follows: "Two years since I applied to you for some brown trout to stock a public stream, called Newbridge Creek, at this place, and you furnished them. I have by inquiry learned that last summer some of these fish were taken which weighed three-quarters of a pound."

According to this, these fish could not have been more than one and a half years old; and from my experience I think that the brown trout, as it is called in England, and which is the common brook trout of Europe (*Salmo fario*) is a quick-growing fish, which is destined to become a favorite in America when it is thoroughly known. I have taken this fish with a fly, and consider it one of the gamiest, in fact, *the* gamiest, trout that I ever handled with a rod. I will state, however, that angling friends who have had more extended experience in European fishing than I have say that the Loch Leven trout is a gamier and better fish than the brown trout, but I have had no experience with the Loch Leven fish further than to hatch it. I believe that the brown trout will be found to be a better fish, taking it all around, than our own native *fontinalis*. The reasons for this belief are: (1) It is of quicker growth; (2) it is gamier; (3) except in the breeding season, when the males of *fontinalis* are brilliantly colored, it is fully as handsome; (4) from what I can learn I incline to think it will bear water several degrees warmer than *fontinalis*, and therefore it is adapted to a wider range.

COLD SPRING HARBOR, N. Y., April 20, 1887.

S.—THE SPONGE FISHERIES OF FLORIDA.

By J. G. RUGE.

These fisheries give employment to the owners and crews of over three hundred vessels of from 5 to 50 tons burden. They are carried on with some risk from the weather, and at times with much hardship. Each vessel is fitted out for a trip of about four to eight weeks, carrying from two to five dinghies and a crew of five to twelve men; and makes two trips a year, usually in spring and winter, the latter being the best catch. The position of the sponge as it grows on the bottom is ascertained by means of the water-glass, which is a simple bucket with a glass bottom in it, through which when placed in the water one can readily make out articles at the depth of several fathoms.

The Florida sponges are chiefly of four sorts: Sheepswool, velvet, reef, and glove. The sheepswool is the most valuable. It requires about five to six years for a sponge to grow to 8 inches in diameter, and about three years to make 6 inches. The warmer the winter (which makes the water warmer) the faster they grow. The fishermen soon learn by experience to distinguish the grades before taking them.