

**22.—RETURN TO GLOUCESTER HARBOR OF THE YOUNG CODFISH
HATCHED BY THE U. S. FISH COMMISSION.****By R. S. FARR.**

[From a letter to Prof. S. F. Baird.]

While in Gloucester recently I made some inquiries in regard to the report that small cod of the species *Gadus morrhua* were very abundant in the harbor. Although I was there in the wrong season, still I think that I ascertained enough information to establish beyond a doubt that small cod, some as large as 14 inches in length, belonging to *G. morrhua*, are extremely abundant at Gloucester; and as these belong to the species which is at present almost entirely deep sea, it seems evident that we must look to some other causes than natural ones to explain the appearance of such great numbers in so small an area, for as far as I can find out only one other school has been seen along the New England coast in shallow water. I talked with several fishermen, and they all reported the abundance of the "silver gray cod," which could not be distinguished by them from the deep-sea cod. The most intelligent and observing of all with whom I spoke was Mr. Edwin F. Parsons, of East Gloucester, who expressed a willingness to correspond with you upon the subject, and also to make preparations of specimens, under your direction, if you desired it.

He told me that in the spring and summer for the two past seasons, while fishing for bait for his lobster traps, he took great numbers just outside of Ten-Pound Island. Their abundance dwindled down until in February they were least abundant. Last spring the largest fish weighed 4 or 5 pounds, and often in a day 100 pounds would be the result of his catch. He did not fish especially for these, but simply for bait for his traps. The cod he would sell, while the other fish would serve his purpose. He thinks that he can see three generations, the largest weighing 5 pounds and the others considerably smaller. Although he has been fishing for seven or eight years, never before 1882 did he find deep-sea cod in any numbers inside of Gloucester Harbor. Taking into account this fact, Mr. Parsons feels confident that they can be no other than the fish put into the harbor in 1879; and he wished me to say that he feels thankful for the money he had made and the chowders he has had, as he expressed it, at the expense of the Fish Commission. Considerable enthusiasm is expressed among the fishermen in regard to this matter, and they feel anxious that the work started in 1878 shall be continued. Not only are these fish caught in the outer harbor, but even in the innermost docks of the inner harbor, boys, while fishing for flounders, frequently land gray cod. This is extremely remarkable—that such cod should be found in the very impure water of

the docks. But still this is asserted by many. My cousin, Mr. Spinney, who for many years was a practical fisherman and a good observer, and now the head of a firm which handles thousands of cod every month, has examined them critically and compared them with deep-sea cod, and said positively that they were the same. The specimen sent by Mr. Wonson is *G. morrhua*. If you wish specimens in alcohol Mr. Spinney will obtain any that you want upon receiving directions from you. Mr. Spinney sees nearly all the cod which enter Gloucester, and upon being asked if the gray cod was found at other points along the coast he said that the only instance that he knew of was the case of a vessel which had just landed 15 barrels of cod taken in shallow water near Mount Desert. I went to the wharf and found the fish, which proved to be *morrhua*, 14 inches long. I obtained two specimens for the National Museum. They seemed to run about the same size, varying about 1 inch in length, and correspond in size almost exactly with the specimens taken at Gloucester. These may be a portion of the cod from Gloucester emigrating from their original home. As this was the only case which I could find of the *G. morrhua* being found in shallow water, outside of Gloucester, I am inclined to the opinion that they are but an offshoot of the Gloucester cod.

Another recognized good caused by the Fish Commission while at Gloucester is in regard to the reddening of fish. I was informed by several fish-dealers who have adopted your suggestion to use Trepani salt instead of Cadiz, that not a single instance of reddening has occurred during the past summer. The butts used for pickling the fish exhibited a tendency to turn red only when they had previously been saturated with Cadiz salt.

WASHINGTON, D. C., November 12, 1883.

23.—SOME OBSERVATIONS ON THE COD GILL-NET FISHERIES AND ON PRESERVATIVES FOR NETS.

By J. W. COLLINS.

[From a letter to Prof. S. F. Baird.]

In course of a conversation last evening with two young men who have been engaged in the gill-net cod fishery this winter, I gathered the following items of information:

They stated that since the fishery closed in Massachusetts Bay, some time in the early part of the winter, and the vessels had resorted to Ipswich Bay, nearly all the fish caught in the latter locality had been netted on a small area that did not exceed three-fourths of a mile in diameter. This piece of ground, which seems to be swarming with fish while the adjacent bottom appears quite barren, is somewhat irregular in outline,