

hordes of Entomostraca and other small animals with which both fresh and salt waters teem; how these again are accumulated in appreciable quantities so as to furnish an important source of food is shown by the immense numbers, amounting to many thousands, which may be taken from the stomach of a single fish. In the case where the large quantity of Copepoda was obtained from the stomach there were probably more than 100,000 individuals of these crustaceans, which would average a fifteenth of an inch long and a fiftieth of an inch wide. This fact will serve to show how fine the meshes of the branchial sieve must be to prevent the prey of the shad from escaping from this remarkable collecting apparatus. The soft parts, too, of the individual crustaceans were so well preserved that one could distinguish the pigment of the eyes, the muscles, and intestine with its contents, while the vast number of their eggs mixed amongst their bodies testified to the multitudes of females which had been swallowed. These facts would appear to indicate most positively that the fish had captured its food quite recently and after it had reached quite fresh water.

FISHING AND FISH-CULTURE IN FLORIDA.

By F. B. FISHER.

[Letter to Prof. S. F. Baird.]

Mr. Way turned over your letter to me as I am in the fish business and am in favor of raising fish and stocking rivers. Florida has the finest lakes and rivers for this purpose. This country is filling up with first-class people, who will appreciate this kind of work. I have fished on this river for ten years, and I have fished on all rivers in the United States and coast. Ripe roe shad can be had at this place from five hundred to one thousand every twenty-four hours, if we have an early season. There are small streams of clear water which are cold branches that would answer splendidly for hatching purposes. When I first came here I could pick up shad all along the lake shores where the alligators run them out. The people have been shooting the alligators; thousands have been killed this season, and this gives the fish a better chance. The garfish and catfish are very destructive to all other kinds of large fish and small. Trout or bass destroyed large quantities of small shad, and my object is to destroy catfish and garfish and by making guano of them. Gizzard shad, or mud shad, are not good except for guano. I am in favor of catching fish as long as they can be put to a good use; I don't believe in wasting good fish. I have spent hours stripping shad while fishing here. This is my home, and I will be at your service at any time in stocking these lakes or rivers. Any information I can give in regard to fish, I will be pleased to communicate.

SANFORD, FLA., *September 12, 1881.*