

bad weather that it keeps the water thick and dirty all the time. When the nets are hauled up they are full of sea-weed, kelp, and all such stuff; so, in rough weather, they don't have much chance to fish. I had a talk with George, my son; he says he never saw so many beach-fish as he saw last Wednesday; they were off shore and as far in as the eye could see; they were bound to the westward. The same day he saw a large school of porpoises bound west. The vessels that were out in the last gale, February 4, come in slowly. I am sorry to say I think some of them will never come. Some of the haddock vessels have been gone four weeks. Some of the George's vessels have been out as long; I hope they will all come, but I think it doubtful. All the vessels that have come in are more or less damaged; they all report the gale very hard. I think if we had fine weather they would do well with nets for a month to come. The fresh-halibut catchers that have come in fared hard; their decks swept, and the dories stove. All say one thing: it was a bad time.

GLOUCESTER, MASS., *February 12, 1882.*

AN OPINION REGARDING THE INFLUENCE UPON THE COAST FISHERIES OF THE STEAMERS USED IN THE MENHADEN FISHERY.

By J. W. HAWKINS.

[Letter to Prof. Spencer F. Baird.]

JAMESPORT, N. Y., *January 20, 1882.*

I am engaged in the menhaden fishery, having been master of a steamer in that business for six years past and before that for four years in a sail vessel.

In view of the fact that a bill is pending before the New Jersey legislature to stop the use of steamers for catching menhaden off the coast of that State, will you please state your views as to the relative extent of the injury, if any, done to the fisheries for edible fish by the operations of the menhaden fishermen as compared with the influence of other causes, including the destruction of menhaden by their natural enemies?

1. Do we catch edible fish ourselves with our set-nets?

We do not find them with the menhaden, except as they are chasing and worrying the menhaden.

We never look for nor set for anything else but menhaden, and, take the season through, we do not catch enough to supply our table on board the steamer.

There was one instance that you have heard of, but it was exceptional and was the only one that ever happened in my experience. In June last, while on my steamer, the J. W. Hawkins, off Rockaway, I set for what I supposed to be a school of menhaden. When I had surrounded them I thought I discovered they were bluefish and that my seine was gone (for bluefish eat a seine, and such a school would have destroyed

it quickly), but I could not get away from them, and was glad to find they were weakfish. I took about 20 tons of them and carried them at once to Fulton Market, New York, and sold them for edible fish. At the same time two other steamers made hauls of the same and sold theirs in the same way.

I have been engaged in menhaden fishing for thirteen years and for six years have been master of a steamer in that business, and in my judgment, during that time, not one fish of one thousand of those which have been rendered into fertilizers was an edible fish, unless the menhaden themselves are called such.

2. Assuming that menhaden are the chief food of the bluefish, and in part of the weakfish, bonito, cod, and bass, do our steamers render those edible fish scarce by driving off or catching up the menhaden? •

That is a question which every one engaged in the business is interested in asking.

I am entirely satisfied with the position taken by Professors Baird, Huxley, Goode, and others, that all the menhaden that man has ever caught in any one year have been but as a drop in the bucket compared to those which are annually destroyed by the bluefish and sharks, and their other natural enemies.

Some years, when with a sail-gear, I have found less fish than in other years, but since I have been in a steamer, my cruising has been more extended and I can't say that I have seen less fish in any one year than in another. During the season of 1881 I cruised from Cape Henlopen to Montauk Point, and in my judgment as many fish came on to coast in the spring as I ever saw in a spring before, and although the fish were in different localities from what they sometimes are, I think I saw as many menhaden that season as ever before.

2. Does the cruising of our steamers drive the menhaden from any part of the coast? I believe it does not.

Although it is true that menhaden do oftentimes seem to be shy, and do not show up as well as at others, and although you may by rowing ahead of or around a small school cause them to sink below the surface, and that they will then change their position before showing up again, and although when you make a stab at one side of a school it may turn just far enough to clear your seine and then pursue its course; yet it is my opinion, and so far as I know it is the universal opinion of fishermen, that when a large body of fish is coming upon the coast, or is located upon the coast, or at sea, there is no such thing as stopping them or varying their course by nets or boats or steamers or by any other means that we know of.

We cannot explain the movements of the menhaden.

During most of the season of 1881 they were on the coast of New Jersey, and most of the fishing fleet were there, but the menhaden did not leave. It is said that edible fish were scarce on the coast during 1881, but it

could not have been from the absence of their food, for the menhaden were there.

Steamers certainly don't frighten the fish. Their going over a school of menhaden has no more effect than a sail vessel. They sink at the bow and come up at the stern. Moreover the steamers don't go near the school; they simply carry the fishing-crews to the fishing-grounds and wait off one side to receive the fish after they are caught.

NOTES ON THE GLOUCESTER FISHERIES.

By S. J. MARTIN.

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

Five boats are fishing for cod with nets, each boat having 24 nets. They have a new set of nets. The rest of the vessels that had nets are using trawls. They have done better with nets the last week. The five boats with nets landed at Rockport last week 44,000 pounds of large cod. Some of the trawlers got as many fish. They were mixed fish—cod, haddock, hake, cusk—so the trawlers did not get half the money the netters did. The fish they got in nets are large, mostly male fish. I looked at 800 pounds and found that two-thirds were male fish. The female fish had very little spawn in them. I found 6 females with spawn nearly ripe. I was glad to hear that you got plenty of cod spawn at New York. Cod have been plenty off the Long Island coast all winter. I will tell you a little about haddock fishing on George's. There has been a large school of haddock on George's for the last three weeks. I will give you some facts, then you can judge for yourself. Schooner Martha C. arrived yesterday with 90,000 pounds, gone eight days; schooner Josie M. Calderwood, 85,000 pounds, gone seven days; schooner H. A. Duncan, 80,000 pounds, gone seven days. Four vessels left here Saturday and were back Wednesday with 40,000 pounds of haddock, having fished one day and a half. That is good work and quick work. The vessels don't find the codfish very plenty on George's. The average pounds of fish brought in by the George's vessels the last trip were 16,000 pounds of cod and 2,000 pounds of halibut. Most of them were gone three weeks. The halibut-catchers have done nothing. Schooner Corrina H. Bishop arrived yesterday; been out 6 weeks; lost 6 men and 1,500 pounds of halibut. Two of the haddock fleet are missing; I don't think they will ever come back; they have been out since the 18th day of January. The vessels are schooner Edith M. Pew, Captain Corliss; schooner Paul Revere, Captain Bently. They have not been seen since the gale of February 4. The price of fresh fish the last week has been high; there was a large pile of haddock yesterday. They all sold at 2 cents to 3½ cents a pound—good prices since there are so many fish.

GLOUCESTER, MASS., *February 19, 1882.*