

too young for this purpose. It requires a larger size—four to six year old ones, of 4 inches to 5 inches in length. I kept in my ponds as breeders a large size, 5 inches to 6 inches long and 1 inch thick (after feeding). They call them in Austria, Germany, "mother-leeches;" in France, *sang-sue-vaches*.

On this occasion I believe it my duty to call your attention to the special breeding of another animal, which is extensively carried on in Italy, Spain, France, Austria, and South Germany, namely, that of *Helix pomatia*. This breeding is as yet quite unknown in America, although large quantities of *Helix aspersa* are brought to New York from private establishments each winter.

How extensively the breeding of helices is carried on in Southern Europe, France, Austria, Italy, and South Germany (not at all in Central and Northern Germany), you may gather from the circumstance that Marseilles ships more than 10,000 to 15,000 hundredweight for Paris and London; Genoa the same quantity.

Austria breeds a great many; Bavaria, Würtemberg, and Baden, too, for the Vienna, Munich, Swiss, and Paris markets.

When a young boy I collected them by the thousand in the valleys and little hills of the Black Forest Mountains and in the sunny meadows of the Upper Rhine, where I found many other kinds of *Helix*.

I myself raised some of them years after, by the thousand, in my own business, and these were the *Helix pomatia* out of the vineyards, *Helix rhodostoma* from France and Italy; *H. aspersa* (France) and *H. vermicularis*.

Not much room is needed to keep about 1,000 or 2,000 living in, and, for breeding purposes, a box, 20 feet by 5 feet by 2 feet in depth, sunk into the ground and covered with a wire screen frame, will answer to raise about 40,000 to 50,000, with a few square yards of ground to plant the food for them.

WASHINGTON, D. C., February 9, 1882.

FISHERY NEWS FROM GLOUCESTER, MASSACHUSETTS.

By S. J. MARTIN.

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

The weather during the last month has been very bad for all kinds of fishing. When there is a chance they get some fish in nets. When nets have been down two or three days with fish in them, most of the fish are spoiled. The nets get badly torn; they could do better with them than with trawls, however, if they had fine weather. The schooner Northern Eagle arrived yesterday; she had been trawling down at Boone Island. When there was a chance to set, they would get 2,000 pounds of fish with 9,000 hooks. The average a night with 24 nets last week was 2,500 pounds. The nets would do better than that. We had such

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