

COD-FISHING WITH GILL-NETS IN IPSWICH BAY, MASSACHUSETTS.**By S. J. MARTIN.**

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

I had a letter from Mr. Clark saying that Major Ferguson wanted to know if he could get some cod spawn. I don't think we can get any this winter. The reason is, that there are no hand-line fishermen. All the fish are now caught with nets and trawls, which are set over night and hauled in the morning. There is therefore no chance to get spawn from live fish.

The fish are scarce. The prospect in Ipswich Bay is better for net-fishing than it was last month. Boat Eva May caught 7,000 pounds in two nights with twenty-four nets. That is better. The boats that put their nets ashore have taken them on board again. They are going to try their luck again. They don't catch any fish on trawls. They find nets better in the winter than trawls.

Seventy thousand pounds of cod have been caught in nets during the past fortnight. This is more than they caught inshore on all the trawls they had set.

GLOUCESTER, MASS., *February 1, 1882.*

ARTIFICIAL CULTURE OF MEDICINAL LEECHES AND OF SPECIES OF HELIX.**By RUDOLPH HESSELL.**

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

Referring to your formerly expressed intention to make at the United States fish ponds a trial of breeding the *Hirudo medicinalis*, or medicinal leech, and other species of *Hirudo*, I beg to remind you of the matter, deeming this season most favorable for the importation of a number of propagative animals. It will require for the first trial not more than 200 to 300 or 400 individuals and I have found a little pond about 36 inches by 16 inches the best size.

I recommend for this purpose the green species, *Hirudo officinalis*, from Southeastern Europe (Hungary, Croatia, Bosnia), and the brown species, *Hirudo medicinalis*, from Southwestern Europe (Italy, Spain, France, and some few parts of Southern Germany). There are some other different kinds coming from Asia Minor, Egypt, Algeria, and Morocco; but I think the above named are the best for breeding and medical purposes. They have more eggs in the cocoon (12 or 15 to 20) and are not subject to many diseases, and they are hardy enough for our climate. I must explain to you that the so-called marketable *Hirudo* that we find in the drug-stores is *not the propagative one*; it is too small,

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