# 264 BULLETIN OF THE UNITED STATES FISH COMMISSION.

# COD-FISHING, WITH GILL-NETS IN IPSWICH BAY, MASSACHU-SETTS.

## 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 netfishing 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,