87.-WHAT CODFISH SOMETIMES SWALLOW.*

By CAPT. J. W. COLLINS.

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

I send by to-day's express a knife, apparently of the kind known as a "haddock ripper," which was taken from the stomach of a large codfish on Le Have Bank. The knife was presented by Captain Henry McEachern, of the schooner A. F. Gifford, of this port, through Capt. Benjamin F. Blatchford. Captain McEachern stated to me that the knife was found in the stomach of a 45-pound cod which was caught this winter on a trawl-line, in about 55 to 60 fathoms of water, latitude 43° 08' north, longitude 64° 11' west. As Captain McEachern is considered very reliable, there is no reason for doubting the correctness of his statement, though it does seem strange that a fish should swallow such an implement.

GLOUCESTER, MASS., January 26, 1884.

SS.-LEECH CULTURE.

By RUD. HESSEL.

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

The *Hirudo medicinalis* and the *H. officinalis* begin to propagate when three or four years old, at which age they are from three to five inches in length and from half an inch to an inch in diameter.

They are raised extensively in France, especially on the moss-lands in the environs of Bordeaux, where the culturists call the adult worm by the unscientific name of *Sangsue vache*, "cow-leech." I have seen all the different kinds of ponds in use there, as well as in other parts of France, and in the Danube province of Austria-Hungary.

I once laid out some ponds on my place especially adapted to the habits of the leeches, and to protecting them from their enemies. I then bought 10,000, including both species, one of which I got from Bordeaux and the other from Hungary. Two years afterwards, when my establishment was washed away by a freshet, I had about 100,000, about 60,000 of which were of marketable size.

For the trial which you are intending to make, from 150 to 250 would

^{*}There is in the National Museum a package of 15 or 20 cards of the usual size of playing-cards (24 by 4 inches) which were taken from the stomach of a codfish. The corners are well rounded off, but the colors are in quite a good state of preservation. The cards were exhibited at the London Fishery Exhibition, and the fact that they came from the stomach of a cod is well authenticated.—C. W. S.

be enough to begin with. You might then have from 2,000 to 3,000 a year for distribution to the hospitals, &c.

The propagable leeches sell for higher prices than the common-sized ones. I think that I paid 20 francs [\$4] per hundred for the best of mine. They may be cheaper than that. I suppose the best thing to do is to get the price-lists from the different Bordeaux establishments, through the mediation of the United States consular agency at that place, so that we can see what kinds of leeches they sell, as well as their prices. The Becharde Brothers, rue Fondadège, Bordeaux, from whom I got my "vaches," gave me entire satisfaction, both in regard to the quality of the leeches furnished and their healthiness.

WASHINGTON, D. C., November 17, 1883.

89.-EDIBLE QUALITIES OF CABP.

By EDWARD THOMPSON.

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

I enjoyed reading the different opinions of men on the eating qualities of the carp.* I would venture to say it would be the same with beef. pork, or any other fish, no matter where it came from. It would be an utter impossibility to take any fish out of a muddy hole and expect it to taste like a fish out of a pond with pure, clear water, such as you could stoop down and drink out of. One fact which cannot be got over is that different food and water will make either animal, fowl, or fish taste differently, no matter where they come from or what their names are. I once sent Mr. Eugene G. Blackford two brook trout, about onehalf pound each, and asked him his opinion as to flavor, and he pronounced them as good, if not better, than any he had ever eaten. Why? Because they were fed on the natural food for trout. Again, I have Why? Because eaten trout that tasted very distinctively of liver. they were fed on liver, &c. It is the food and water which makes the carp have so many different tastes. I might ask one more question. Can you find two even in one family to whom things taste alike? It is not so in mine.

The carp is the best fish I know of for workingmen and mechanics, who rarely lack an appetite, and who will always consider the fish good when they can get it. My personal opinion is that it is a very superior fish, and I will even go so far as to say that I prefer it to trout.

ST. JOHNLAND, SUFFOLK CO., N. Y., February 15, 1884.

^{*} Notes on the edible qualities of carp, &c., by Chas. W. Smiley. Bull. F. C., 1883, p. 305.