

## 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.*

## 88.—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

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\* There is in the National Museum a package of 15 or 20 cards of the usual size of playing-cards (2½ 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.