

closely resembled the fauna so often brought up on the halibut lines from the deep-water fishing areas, that it seems desirable that mention should be made of it, although, strictly speaking, this haul was made beyond the limits frequented by fishing vessels. Among the material brought up were many blue hake (*Haloporphyrus viola*), grenadiers (*Macrurus*), 3 pole flounders (*Glyptocephalus cynoglossus*), a number of other species of fish not identified, a large amount of the little bush-coral (*Acanella normani*), specimens of gold-banded coral (*Keratoisis ornata*), 2 or 3 species of sea-anemones, soft sea-urchins, and several species of shells.

It is worthy of note that swordfish and finback whales were seen in unusual abundance on July 13. During the first part of the day as many as 20 swordfish were seen in from 6 to 8 hours; frequently 2 or 3 were in sight at the same time. As many as 20 whales were seen at one time during the morning, and a still greater number were seen in the afternoon. At station 2528 they were very numerous, apparently feeding on small crustacea, probably from 40 to 50 whales being in sight at one time. They were all finbacks, so far as I could tell. Their movements were sluggish, as they "played" back and forth in the tide rips, with their mouths open, the upper jaw just at the surface, scooping in "feed." They were joined by a school of porpoises (probably *Delphinus delphis*), which drove in among the whales, their movements indicating that they were feeding, but of this we could not be sure.

The electric light was put over the ship's side soon after dark and Mr. Nye succeeded in catching several specimens of young squid and some small fish of the genus *Scopelus*.

The researches on the fishing banks terminated on the 13th, and the ship arrived at Wood's Holl on July 16, thus ending the cruise.

GLOUCESTER, MASS., November 27, 1886.

113.—A CURIOUS KNIFE FOUND IN THE FLESH OF A CODFISH.

By J. W. COLLINS.

While discharging a fare of codfish from the schooner Vinnie M. Getchell, at Gloucester, Mass., on September 15, 1886, Capt. John Q. Getchell,* master of the vessel, found imbedded in the thick flesh of a

* It may be of interest in this connection to say that Captain Getchell is well known in Gloucester as a veteran fisherman, he having been in command of vessels engaged in the George's fishery for the past twenty years; during which time, he tells me, he has eaten only three Thanksgiving and four Christmas dinners on the land. He is a native of Maine, about fifty years old. When the news of Sumter's fall reached the North, he enlisted and served three years in the Third Maine under Colonel (afterwards General) O. O. Howard. He then exchanged his gun and a soldier's bivouac for nets, lines, and the deck of a fishing-vessel. His integrity and truthfulness are unquestioned.

large cod a knife of curious workmanship, represented by the accompanying illustration, which is of full or natural size.

The fish in which the knife was found was one of a fare caught in 75 fathoms of water on the northeast part of George's Bank; it was apparently healthy, being thick and "well-fed," and, according to Captain Getchell, would weigh about 40 pounds after being split, or say 60 pounds as it came from the water. The general excellent quality of the fare of fish attracted considerable attention from people who saw them, and led to the discovery of the knife. Some remarks having been made concerning the fish, Captain Getchell lifted several of them from a tub (where they had been thrown to wash after being weighed) and exhibited them to the by-standers, commenting on the size and thickness of the specimens. Holding one across the edge of the tub in a semi-curved position, he ran his hand over the thicker portion of the fish to call attention to its fatness. In doing so, he felt something hard beneath his fingers, and further examination produced the knife. Of course much surprise was expressed by those present, who had never before seen such a strangely formed implement, and speculation was rife as to how it came there. When found, the knife-blade was closed, and the small or posterior end of the handle was the part first felt by Captain Getchell, and was nearest the tail of the fish.

The flesh of the fish where the knife was imbedded is estimated to have been $2\frac{1}{2}$ inches thick. Unfortunately, the excitement attending the finding of the knife prevented any notice being taken of the fish, which was carried off and salted among the others; therefore nothing is known as to whether the implement was encysted or not.

The handle of the knife is of brass, curved and tapering posteriorly, with a longitudinal incision, on the concave side, to receive the edge of the blade. The handle is remarkable in form, and is suggestive of the handiwork of some savage tribe or the scrimshaw work of a sailor. Its length, measured with the curve, is $3\frac{5}{8}$ inches, and its greatest diameter one-half inch.

The blade is lanceolate in form, with the cutting edge curved outward, to fit into the handle, and the back nearly straight. It has been corroded a good deal and the extreme point is very thin. Its length, from handle to tip, is $2\frac{3}{4}$ inches;



greatest thickness (near the handle), one-eighteenth inch; and its greatest breadth a little less than one-half inch. The total length, from point to point in a straight line, is $6\frac{1}{4}$ inches.

How did the knife get there? is the question that will be asked by those who are not too skeptical to credit the story of its being found as has just been stated. Personally, I neither doubt the finding of the knife, nor the probability of its being found as stated. It is a fairly common occurrence for fishermen to find the sand-launce, or lant, imbedded in the flesh or the liver of the cod, and dried very hard. I have many times seen lant thus imbedded, and in no case that I remember was the cod any the worse for it.* It is therefore evident that it is possible for the stomach of a cod to be penetrated by a sharp-nosed fish or by an implement it has swallowed, and ultimately for either to work its way through and become imbedded in the flesh, while the wound heals and the stomach goes on to perform its ordinary functions.

As to where the fish got the knife we can only conjecture, unless some ethnologist can point out its origin. In any case, the finding of such a remarkable implement in such a strange place must be a matter of interest to the ethnologist and naturalist alike.

GLOUCESTER, MASS., *December 31, 1886.*

114.—SOME STATISTICS OF THE FISHERIES OF NORTHERN JAPAN.

By JOHN C. CUTTER, M. D.,

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The Department of the Hokkaido was organized in March, 1886. Its jurisdiction extends over Yesso† and the Kooril Islands. Sapporo Ken was one of the three prefectures into which Yesso was divided in 1882. It embraces 3,808 square ris of the 5,056 square ris of Yesso, a ri being equal to 2.44 English miles. Its population in 1883 was 91,971 Japanese, Ainos, and Americans. Its coast-line is about 550 miles in extent. Commencing at Abushita on the west coast (Abushita is about 40 miles south of Cape Kamoi, the westernmost point of the peninsula jutting into the Sea of Japan south of Strogonov Bay on the western coast of Yesso) it extends northerly to Cape Soya (Strait of La Perouse), thence southeasterly about 70 miles to Tonaiushi, the boundary of Nemuro Ken. The east coast-line commences near the westernmost shore of Volcano Bay (where the Pacific approaches nearest to the shores of the Sea of Japan) and extends east to Cape Yerimo, thence north-easterly about 70 miles to Chokubetsu just east of the mouth of the Tokachi River, the other sea limit of Nemuro Ken.

* For curious articles found in codfish, see History of Aquatic Animals, text, p. 212.

† For an article on the fisheries of Hokkaido, see F. C. Bulletin for 1886, p. 342.