

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.,

Professor in the Imperial College of Agriculture at Sapporo.

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 northeasterly 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.

The following tables give a summary of the latest statistics of the fisheries in Sapporo Ken.

TABLE I.—Product of the fisheries from 1878 to 1883.*

Kind of fish.	1878.	1870.	1880.	1881.	1882.	1883.
	<i>Kokus.</i> †	<i>Kokus.</i>	<i>Kokus.</i>	<i>Kokus.</i>	<i>Kokus.</i>	<i>Kokus.</i>
Herring (<i>Olupea harengus</i>).....	295, 141	457, 777	501, 030	444, 830	538, 330	412, 872
Spring salmon (<i>Oncorhynchus perryi</i>) ..	445	1, 213	658	721	440	2, 091
Fall salmon (<i>Oncorhynchus haberi</i>) ..	27, 895	52, 244	51, 013	45, 548	66, 605	59, 206
Cod (<i>Gadus brandtii</i>).....	6, 887	5, 878	9, 274	3, 048	6, 002	5, 388
Pilchard (<i>Olupea melanogastrula</i>).....	12, 399	6, 686	12, 662	5, 696	5, 906	7, 942
Bêche-de-mer ("namako") (<i>Stichopus japonicus</i>).....	573	269	394	264	708	1, 363
Ear-shell ("awabi") (<i>Haliotis gigantea</i>)..	1, 890	599	567	1, 235	1, 055	623
Cuttle-fish.....	172	76	693	93	203	259
Edible sea-weed ("kombu") (<i>Laminaria japonica</i>).....	38, 220	49, 949	38, 428	63, 729	46, 510	46, 988
Total.....	383, 622	574, 691	614, 719	595, 164	665, 849	536, 532

* A partial statement of the product for 1884 in kokus was as follows: Herring, 500,650; spring salmon, 1,236; fall salmon, 36,541; and cod, 6,480.

† A koku equals 7.55 cubic feet.

TABLE II.—Value of the fisheries from 1878 to 1883.*

Kind of fish.	1878.	1879.	1880.	1881.	1882.	1883.
	<i>Yens.</i> †	<i>Yens.</i>	<i>Yens.</i>	<i>Yens.</i>	<i>Yens.</i>	<i>Yens.</i>
Herring (<i>Olupea harengus</i>).....	1, 329, 350	2, 948, 958	4, 035, 780	2, 766, 792	2, 960, 822	2, 063, 360
Spring salmon (<i>Oncorhynchus perryi</i>).....	4, 005	7, 281	3, 510	5, 948	3, 520	12, 546
Fall salmon (<i>Oncorhynchus haberi</i>).....	202, 265	312, 893	563, 443	388, 008	533, 560	355, 236
Cod (<i>Gadus brandtii</i>).....	64, 204	70, 538	57, 610	17, 180	78, 026	54, 656
Pilchard (<i>Olupea melanogastrula</i>).....	76, 454	62, 425	109, 642	32, 752	41, 342	51, 623
Bêche-de-mer ("namako") (<i>Stichopus japonicus</i>).....	42, 982	2, 156	35, 514	39, 600	106, 200	204, 404
Ear-shell ("awabi") (<i>Haliotis gigantea</i>).....	108, 708	43, 167	43, 511	92, 625	79, 125	46, 725
Cuttle-fish.....	3, 113	1, 529	25, 971	2, 139	4, 669	5, 957
Edible sea-weed ("kombu") (<i>Laminaria japonica</i>).....	160, 524	254, 246	136, 419	287, 661	186, 040	160, 958
Total.....	1, 995, 605	3, 703, 193	5, 011, 400	3, 612, 765	3, 998, 304	2, 955, 465

* For the value of the Sapporo fisheries in 1884, see Fish Commission Bulletin for 1886, p. 345.

† The values are expressed in yen paper. Taking the silver yen (416 grains, nine-tenths silver, now worth about 80 cents) at 100, the paper yen has about the following relative values: In 1878, \$1.05; in 1879, \$1.16; in 1880, \$1.70; in 1881, \$1.70; in 1882, \$1.60; in 1883, \$1.26, and in 1884, \$1.11.

Additional facts for 1883.—Fishermen in the Ken (or district), 16,064; "Yatoi" or hired men, who come from Hondo (the main island) annually, 28,065; fishing smacks, 5,411; trap-nets, 1,790; seines, 350; gill-nets, 35,394.

The taxation on the products of the sea and river ranges from 7 to 20 per cent of the product. The cost of collection ranges in different years from one-third to nearly one-half of the tax collected. For the most part it is collected in kind. The number of tax collectors and officials for attending to this, the only paying industry of Hokkaido, is very large. It is, however, the intention of the Hokkaido Cho to diminish the tax, to simplify the collection, and to reduce the number of officials.

SAPPORO, HOKKAIDO, JAPAN, May 14, 1886.