

XXI.—THE FISHERIES OF ICELAND.*

By AUG. GARDE.

The board of directors of the Danish Fishery Association had kindly given its consent to my visiting Iceland during last summer for the purpose of examining the Iceland salmon fisheries; and the Assembly of Iceland (*Alting*) furnished the necessary funds. My position as secretary of the association of course made it my duty to take notice of everything pertaining to the fisheries, wherever it was possible during my journey, in order to repay the association in some measure for its kindness in having the daily routine work of the secretary's office attended to during my absence. As my principal object, however, was the investigation of the salmon fisheries, and as therefore my travels in Iceland took me away from the coast, I could not expect to have much chance to observe the sea fisheries, which form one of the principal sources of income in Iceland, and in regard to which it has been said that if properly managed they would yield as much income as the entire revenue of the Danish butter and lard trade. I must confess that I went to Iceland with the idea that all that could be seen of the Iceland fisheries during a short stay would be comparatively well known, so that in this respect I would scarcely be able to bring home any new information. I am obliged to state that, both in respect to the fisheries and nearly everything else concerning Iceland, I was greatly mistaken. I had not been long in Iceland before it became clear to me that in Denmark we have a great many erroneous ideas concerning this island. We generally imagine Iceland to be a disagreeable and poor country, where it is hardly possible to live with any degree of comfort. I can assure my readers that this is a mistaken notion. It should be remembered in what part of the globe Iceland is located, and that a vast distance separates the Copenhagen Exchange from the Iceland markets. I think that most people in Denmark know very little about the Iceland fisheries, their importance, and their future possibilities; which fisheries, if properly developed, would greatly benefit not only Iceland but also the mother country. It was not long, therefore, before I realized that even a cursory examination of the Iceland fisheries would furnish additional important information to me. I therefore intend to give some brief account of my experience.

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The location of Iceland and its numerous fiords, penetrating far into the country, both in the west, north, and east, make it a home for a population whose principal source of income must be the fisheries. The sea around Iceland is particularly rich in fish, and it must be considered a low estimate when the extent of its fishing banks is stated to be 1,000 square miles, or about one-half as much as the entire area of the island. The fishing grounds around Iceland are probably much larger, as they extend all around the island and for many miles out to sea. All that is required is to find the fish in the right place and at the right time. It is not necessary to stay long on the coast of Iceland before one discovers that an exceedingly productive sea washes these shores. The water literally swarms with animal life. The fish which are brought on shore are fat and of very fine quality, and close up to the coast there are fish which form an excellent article of food. It is, therefore, not surprising that foreign nations, including France, England, and Norway, take a share in the Iceland fisheries. During the present year (1884) even the Americans visited the Iceland waters, as two schooners came from the well-known fishing station of Gloucester in order to catch halibut. The manner in which the Americans take hold of such matters is well illustrated by the expedition of these two schooners. When one of the American commissioners to the Berlin Exposition of 1880 went home he paid a visit to England, and was informed by English cod fishermen that they often caught large quantities of halibut near Iceland. This information drew the attention of the Americans to Iceland, as salt halibut is much sought after by the smoke-houses; and if matters really were as the Grimsby fishermen stated, it would be much more advantageous for American fishing vessels to visit Iceland than the west coast of Greenland. At the London Exhibition of 1883 the Americans found this information confirmed, and the consequence was the immediate dispatch of the two schooners to Iceland. When I was in the southern part of Iceland it was known that the American vessels had arrived, but it could not be ascertained what success they had met with. In the middle of August the two schooners had not yet returned to Gloucester, which was considered a good sign, as they certainly would have returned long since if they had caught few or no fish. I have called attention to this determined way of engaging in a new enterprise, which contrasts so strongly with the slow development of the Danish sea fisheries.

The great fisheries near Iceland have for their object principally cod, herring, and sharks; and it is particularly cod and herring that attract foreign fishermen to these waters. Besides these fish, whales and halibut are caught. The Icelanders also catch lump-fish, flat-fish, and other small fish; and in the fresh waters considerable salmon and trout fisheries are carried on.

The cod fisheries are the most important of all the Iceland fisheries. The catches of large codfish form the basis of the entire trade in salt

and dried fish; and it is this which principally attracts the foreign fishermen. From March 1st till some time in May, and during winter, the large codfish come near the shore, while during the rest of the year they go out to sea, so that the vessels have to go from 4 to 12 Danish miles [18 to 56 English miles, about] from the coast in order to find them. As a general rule, the Iceland fishermen are not prepared to catch large codfish except in the neighborhood of the coast. Their condition is about the same as that of the fishermen on the west coast of Jutland; and, like these, they must return to their homes the same day. Neither of these two classes of fishermen can be blamed for this way of carrying on the fisheries, as natural conditions compel them to follow this method. None of these fishermen have a suitable harbor; but they are obliged to pull their boats on shore, and often the breakers prevent them from going out to sea. It should also be held in mind that the winter fisheries of the Icelanders are carried on during a season when there are only a few hours' daylight every day. The fishermen must go out to sea early, so they can get to work when the short day breaks; and many a time they are out at sea fishing by the weak light of the aurora borealis. The same causes which compel our West Jutland fishermen to use open boats are also met with in Iceland; but there is this difference, that the Icelanders could find many places where their vessels could lie sheltered if they possessed such vessels. The Iceland fishermen are generally too poor to get anything but open boats; and, for this reason, many a good day's fishing on the open sea is lost to them, and the number of their fishing days is greatly diminished thereby. Much time is also lost in rowing out to the fishing place, and by the poor fishermen getting wet and hungry. The lot of the Iceland coast fishermen is a hard one. They take out little or no provisions, and it often happens that they have to go without food for more than 12 hours. Now the Icelanders can go without food for a long time, but he can also do full justice to a meal when he gets it.

I will not now describe the migrations of the fish in the waters around Iceland, nor will I speak of the coming of the fish at the different seasons of the year, the methods of fishing, the boats employed, &c.; but I must state that the development and, in fact, the future of the Iceland cod-fisheries depends principally on the possibility of increasing the number of larger and decked vessels. When such a vessel is well commanded and has a good crew it can earn about four times as much as an open boat. The best illustration of this condition of affairs is furnished by the circumstance that while the French fishermen every year catch about 25,000,000 pounds of fish near Iceland, the Icelanders themselves catch only about 22,000,000 pounds; and the 100 vessels sent out every year by the city of Dunkirk, France, bring home about as many fish as Iceland exports. Each French vessel catches about \$6,432 worth of fish per annum.

As regards the pay of the fishermen on the Iceland vessels, we pos-

sess some data, furnished by Mr. Th. Egilson, of Havnefiord, and published in 1882 in the *Nationaltidende*. From these data it appears that each fisherman gets about one-half of the fish which he catches. But it is also the general custom that the fishermen get in addition all the halibut and other fish which they may catch. Of the codfish and haddock the fishermen get one-half, while the other half goes to the owner of the vessel. In the beginning the owner furnishes the salt, but later the fishermen have to buy their own salt. About 10 bushels of salt are needed for 320 pounds of klip-fish. With the exception of dinner, which the owner provides, the fishermen must furnish their own meals. During the fishing season, which lasts about three months, the following is used for a crew of 10 or 12 men: 4 bushels peas, 4 bushels barley, and from 40 to 60 pounds rice. The owner gives the crew hot coffee three or four times a day. The captain gets one-half of all the codfish which he takes, and keeps all the other fish which he may catch. He is boarded entirely by the owner, and gets 53 cents premium for every 100 codfish caught by his vessel. He is also furnished with salt for his share of the fish. The mate has free board, and is in other respects situated the same as the captain, with the exception that he receives no premium and gets only one-half of the salt which he needs. The cook gets free board, \$2.14 per month, and one-half of all the fish he catches.

The herring fisheries of Iceland are of comparatively recent origin. It had long been known that herring of excellent quality were found near Iceland, and some Norwegian vessels had for several years made vain endeavors to make a good catch, when suddenly success crowned their efforts some years ago, and immense herring-fisheries sprang up in several of the Iceland fiords. The Iceland herring is large and fat, and is in great demand. In olden times an Iceland herring was a great delicacy in Denmark, and as much as 80 cents was paid for one. The Norwegians did a good business, as the herring cost them only from \$2.14 to \$2.68 per barrel, while they sold them at \$6.70 and upwards per barrel. Of the herring associations existing in Iceland, the Icelanders themselves take part in 6; and 2 are exclusively composed of Icelanders.

The Iceland herring-fisheries, however, shared the fate of all fisheries; *i. e.*, they had their ups and downs. This year, for example, the herring fisheries in the Iceland fiords were not very productive, and the Norwegians sustained considerable loss, by lying out at sea for months, and waiting in vain for the coming of the herring. People are inclined to ascribe the failure of a fishery to excessive fishing. This assertion is frequently made in Denmark, and the same story now comes to us from Iceland. As soon as the fisheries are less productive, or as soon as the fish become scarce in the market, it is said that excessive fishing drives the fish away, or has begun to exterminate them. But if we consider the extent and depth of the Iceland fiords and the wealth of animal life found in them, not even counting in the vast sea outside the fiords, we are compelled to own that some other cause than excessive fishing

must have occasioned the failure of the fisheries. We possess statistics of the Iceland fisheries going back several centuries, and we find that at all times there have been ups and downs. But is there any difference in this respect between fisheries and agriculture? In the course of years there is a constant alternation of good, medium, and bad harvests; and it will be generally acknowledged that climatic changes are the principal causes. The same applies to the fisheries. The weather exercises an influence on the animal life of the sea, and on the facilities for fishing. Unfavorable weather may in one year destroy partly or entirely the eggs of the fish and greatly interfere with spawning, or even destroy many of the young fish; then again there will be years when hardly any fish are caught, and such a year will long be remembered. It may also happen that the spawning and hatching processes pass off successfully, but that the young fish perish, because from some cause the food on which they depend has been destroyed. Poor fisheries are, as a rule, caused by natural hindrances, such as the condition of the weather and of the sea. I consider it impossible to determine beforehand, in waters like the Iceland fiords, what amount of fish will be caught; but I think that more knowledge should be obtained of the natural condition of those waters, with special regard to the fisheries and their needs. Everywhere endeavors are being made to obtain such knowledge; and in all cases the object is the same, namely, to obtain such a knowledge of the conditions of life of fish and of the physical conditions of the sea, as will enable fishermen to pursue their trade with some understanding, and not to work in the dark, as is unfortunately done so frequently. At present the Iceland herring-fisheries are a sort of lottery, which probably in the course of years yields but small gains to the ship-owners who every year send their vessels to Iceland.

The shark fisheries, more than any other fisheries, are peculiar to Iceland. Their results are more uniform from one year to the other; and they must, on the whole, be considered remunerative. The principal object is to get the liver of the shark, which contains a great deal of oil. Some time ago I gave a full description of these fisheries, and it will therefore not be necessary to say anything about them in this place.

The whale fisheries are not carried on systematically by the Icelanders, and no Danish vessels are engaged in them. Occasionally a whale is thrown on the Iceland coast; and it even happens sometimes that a whole school are locked in the ice, and are killed or else perish. Thus a few years ago 40 large whales were caught on the property of one man in Nordland. During the last few years the Norwegian whaler *Sven Foy*n has maintained a whaling establishment on the coast of Iceland. Last year these fisheries were not very productive, and there was some talk of closing the establishment; but this year about 25 whales were caught, worth from \$16,000 to \$21,000. Whale fishing is

not very popular in Iceland, as people have an idea that the whales chase the fish from the open sea towards the coast, and thus benefit the fisheries. The objection might be advanced to this theory that in poor years for fisheries the whales must be idle. It seems that the Icelanders cannot understand why foreigners should reap the benefit of the fisheries in these waters; and the idea seems to prevail that the whale fisheries contribute their share towards chasing the fish from the coast and driving them far out to sea. I think that in this respect the Icelanders are very much mistaken. What does the catching of 25 whales during a period of six months amount to? That would be about one whale per week. I cannot imagine that, if in the little Kallundborg fiord (in Denmark) a whale was killed every week, the fish would be chased away thereby.

The halibut fisheries are principally of importance only to the Icelanders themselves. These fish do not seem to meet with much favor in England, and attempts to introduce them, salted, into the Danish markets have not proved successful, another instance showing how difficult it is to induce the public to take to a new article of food. For the Icelanders the halibut is of great importance, as dried halibut is to them what wheat bread is to us, while other dried fish correspond to the common, every-day rye bread. I must admit that dried halibut with good fresh butter is a very savory dish, and fully as digestible as our dark Danish rye bread. For my own part I would gladly exchange all our cakes for the inviting and finely-flavored dried Iceland halibut. The lump-fish is smoked by the Icelanders, and as it forms a favorite article of food with them and keeps for a long time, it is much sought after.

In the fresh waters of Iceland salmon and several kinds of trout are caught. The salmon is the most important of these fish, and might be made still more valuable to the Icelanders. At present it is almost impossible to ship the Iceland salmon fresh because it is difficult to get ice to those places where it is needed. The salted salmon is not cured in such a manner as to give it a general sale. The Iceland salmon and trout fisheries are on the decline, because the fisheries are carried on during the wrong season, and because the seals are protected to the detriment of the salmon; the Iceland rivers are moreover soon exhausted if fishing is carried on to an excessive degree. In the lakes, however, there are considerable trout fisheries.

The question may well be asked whether the Danish fisheries near Iceland, and the fisheries carried on by the Icelanders themselves, have any future. I am of the opinion that the question can be answered in the affirmative. But I do not think that the matter should be taken hold of in the same manner as was done in 1865, when a plan was under discussion to start a joint-stock Iceland Fisheries Company, with a capital of \$268,000 and about one hundred vessels. When it came to the point, the capital and the number of vessels were put down much lower; but the great mistake was that people here in Denmark thought that

the whole battle was, so to speak, to be won by a single stroke, whereas it certainly requires considerable time to start an enterprise like this. Such a matter should be taken up slowly and deliberately. In this manner some Danish fisheries have already been started near Iceland, and gradually a considerable number of vessels visit Iceland every year, and the fisheries carried on by them have on the whole paid well. I do not desire to pass any criticism on these efforts, but I must say that in fitting out a vessel for the Iceland fisheries it is of greater importance to engage the right kind of men than to haggle about the wages, as some of the men who have engaged themselves on Iceland fishing vessels have not been sailors, much less fishermen. In view of the rich hauls which may be made in Iceland waters the object is not to save something on the men's wages, but to secure experienced and active fishermen, on whom, after all, it will depend what the results of the fisheries will be. It is somewhat of a hardship to go out with an Iceland cod or shark vessel; the crew should, therefore, be treated well. A poor crew will also get poor treatment. The crews of some of these vessels are composed of all sorts of people, some of whom know very little about fishing. Vessels having competent crews invariably bring home the most fish, and the reverse is the case with those vessels which have poor crews.

We have heard so many complaints that the Danish fishermen, as a rule, live in very poor circumstances. Unfortunately this is but too true, for it is well known that a fisherman's family, whose principal source of income is fishing in Danish waters, earns on an average only from \$134 to \$160 per annum, and even less in some parts of the country. As long as we have no good harbors on the west coast of Jutland, and as long as it is difficult to find a market for the fish caught on that coast, it seems perfectly proper to encourage our young fishermen to go to Iceland, and to recommend our sailors, who frequently cannot find anything to do at home, to seek employment in the Iceland fisheries, where there is a constant demand for skilled sailors.

More remains to be done for the Iceland fisheries than for the Danish fisheries. In the first place, it should be remembered that many Iceland fishermen have to solve a twofold problem: They are to furnish food for themselves and for the population of Iceland, and they are at the same time to prepare an article for which by bartering they can obtain what they need. Nor should it be forgot that many a farmer turns fisherman during a part of the year, while during the remainder of the year he gives his whole attention to farming. All these causes combine to render the Iceland fisheries, as carried on by the Icelanders themselves, comparatively unprofitable, simply because they are not properly developed. The reason why the Iceland sea fisheries do not flourish is that labor is scarce. The Icelanders begin to emigrate; they should rather encourage immigration to their country. The Icelanders are justly displeased to see foreigners come to their shores, earn con-

siderable money, and go home again without spending anything in Iceland. The Icelanders should encourage foreigners to come to their shores, not only on a visit, but to settle there. This could easily be done by giving employment to foreign fishermen who would consent to stay in Iceland for some years and try their fortune. Iceland is by no means such a terrible country to live in as is sometimes made out; and skilled fishermen will certainly have a chance to make money.

The Iceland fishermen have but little knowledge of navigation, and it is a very rare thing to find an Icelanders as captain of a sea-going vessel. Why does not the Iceland government establish a school of navigation at Reykjavik, perhaps in connection with a school for fishermen? This should certainly be done. The Iceland government should do something to promote the fisheries, as by forming an Iceland whaling company, by establishing a guano factory, by endeavoring to introduce lobsters in the Iceland fiords, &c.

Denmark might cause a cable to be laid between Iceland and Norway, and have the Iceland waters properly examined and surveyed and good maps of the same published.