consequence, the fishery which has languished for many years will probably be prosecuted with great vigor during the coming season.

NOTE UPON THE SCRAGG-WHALE.

Upon extending my inquiries in various lines, I discovered that the fishermen recognize a certain whale under the name of "scragg-whale." I could not satisfy myself as to what it really is. It was described as being smooth on the back and having short, dark whalebone. Is it Cope's *Agaphelus*, or some other species of fin-back or hump-back whale?

WASHINGTON, *October* 10, 1884.

3.—THE LABRADOR FISHERIES.

By W. A. STEARNS.

COD FISHING.—The men engaged in the Labrador cod-fishery are of two classes, the employers and the employed. The employers all along the coast are generally men who coming here poor have earned their way by hard work and "luck" to a position of more or less independence, or have been sent as agents from some firm of merchants abroad to hire men and conduct a fishery, large or small, as the wealth of the firm or the accumulation of business may allow. There are several of these foreign firms on the coast, notably those of Natashquan and Magpie, and much further eastward of Blanc Sablon and Isle la Bois; these, I believe, are all owned by merchants from Jersey in the English Channel. Among the many who have lived on the coast and worked up a business of their own, the establishment of W. H. Whitely, the magistrate for this part of the province of Quebec, is the largest; as the smaller "rooms," as these establishments are called, are simply a repetition of the larger ones on a smaller scale, a full description of that owned and conducted by Mr. Whitely will give you a pretty good idea of all.

The men employed in the fishery here are either hired from the surrounding families or from Newfoundland. The home men are rough, hearty, healthy, and good-natured, and those from Newfoundland, generally speaking, are large, robust, rough men in most every respect. They are apt to be quarrelsome, and in many cases, I sadly fear, the habit of taking whatever they see that they wish and can safely get away with is very strongly embedded in their nature. When detected they seem, like the ancient Spartans, to regret being caught more than to have taken what was not theirs. Yet many are the reverse of ill-natured. All are strong and accustomed to endurance that would wear out any ordinary individual, while it just seems to fit them for their work. Having employed some thirty or forty men the season before, the next thing is to get everything in readiness for their reception and

work the approaching season. Part of the men work on wages, while most of them work on shares, the share being a certain per cent., say one-third or one-half of the fish caught by them during the season, the other part of course going to the employer. During the winter months the nets are netted or mended as the occasion may be; while in the spring the buildings containing the sleeping apartments or bunks—arranged barrack fashion like the berths of a ship's cabin—and the eating-room and cook-room attached are put in order. In the winter also the nets, lines, hooks, &c., are all prepared for immediate use as soon as the season opens. In the spring, again, the boats are taken from their storing place, thoroughly repaired, repainted inside and out, the sails and oars mended or furnished anew if so required; when dry they are launched and moored by sunken buoys at a short distance from the stage-head. The stage itself is repaired, new props and foundation logs often being required as well as boarding for the floor proper, and fully cleaned; the empty puncheons, hogsheads, and barrels arranged to occupy as little space as possible in some sunny position, while the sheds are also cleaned and swept. By the 1st of May, or the breaking up of the ice in the bays and harbors, everything is ready for the advent of the summer fisheries.

We will now consider that the summer has begun, that the time is the first day of June, and that the men are arriving ready to begin work. Rough-looking fellows they are indeed. Tall and short, stout and broad, full-faced, full-bearded, and correspondingly fleshy in proportion. They are dressed quite alike, with suits of good thick cloth in the shape of jumper and trousers, over which are hauled the overalls and frock when in working trim on the shore, or oil jacket and pantaloons with an old "sou'wester," as it is called, or rubber hat with a huge rim that hangs over the body, allowing the rain from it to drip, at least on the oil garments if not completely over them on to the ground. Four-fifths or more of the men wear a thin belt and sheath-knife buckled around their body, which, however, is used more for appearance sake than anything else. It has been reported that occasionally on board some ill-managed crafts, these knives are used for weapons of offense and defense, as the case may be, but I have not heard it proven here at least. Though the men look fierce and ill-tempered, they are generally of a better disposition than they are usually given credit for being.

The first thing that a man asks for in Labrador on going anywhere is something to eat. No matter if he has just arisen from a table of plenty at the house of some friend, he can always find room for more. I have seen some of the largest eaters I ever beheld in my life while upon this coast. One man boasts of having eaten six ptarmigan—a bird about the size of our ruffed grouse or larger—at a meal; another says that he could eat a dozen herring at a meal, a fish about the size of a medium-sized mackerel, and, judging from what I have seen, I have no doubt but that he could do it. Still further, one fellow, upon testing some maple

sugar, declared that he could eat 10 pounds at one time, while at another time I was offered a bet of 2 shillings 6 pence by a fellow who said he could eat 4 pounds of raisins at a sitting. The paradise of a Labrador man seems to be enough to eat and plenty of tobacco. The Newfoundland men, when coming to Labrador, do not differ much.

While we are talking two boats with two fellows in each who have been out all the morning looking for fish approach the stage-head evidently deeply loaded. An ordinarily constructed stage-head consists of a platform raised upon piles driven into the mud or sunk with huge stones for ballast to the bottom where, at high tide, the water is from 6 to 10 and at low 2 to 3 feet deep. While the men are unloading their fish, by throwing them from the boats on to this wharf with huge pitchforks, it might be of interest to follow a party of fishermen just going out to the fishing-grounds and see what luck they have. The boats used in the ordinary fishing are of two kinds; those called "novies," or Nova Scotia boats, being long and narrow, shallow, and carrying no ballast, which, should she overturn, it would be impossible to sink her since she would immediately right again even if full of water; and those called "Yankee barges," or boats brought here from the States, or made here but to a similar pattern; these are very wide for their length, and correspondingly deep. With the barges the seats are so arranged that they form five partitions, the center one is heavily ballasted with rocks. Of course, should one of these boats be upset or fill with water, it would instantly sink to the bottom. Strange to say, the barges are in more demand than the novies, from the fact that while the former hold 8 quintals of fish freshly caught, the latter hold only 4, or one-half the quantity. The men choose to risk their lives rather than lose their fish, and principally for this reason, that when the fish bite well they can load their boat without stopping to run several miles home in a calm, pulling at the oars all the way, to unload and return, often to find the fish gone or darkness approaching. Fish are uncertain creatures; the fisherman must take advantage of every possible chance to secure enough to procure him his winter's supply of food, as well as to pay up the old debts and what he is consuming during the summer.

I have said that most of the fishermen use the barge, but since many of them still prefer the novie from its lightness and the ease with which it is managed, as well as the expense, which is about one-third less, let us suppose that two parties, of two men each, go out fishing together, the one in a novie and the other in a barge. As no ballast is required for the former the inside room is divided into four partitions, with seats between, while the latter has five, the middle one containing the ballast. Each end of each boat contains a "cubby," or sort of low shelf closet, boarded around at each end (at both bow and stern), wherein are deposited the oil clothes and the dinner of bread and butter and salt pork, with a small keg of fresh water—since the men often start out at 2 or 3 o'clock in the morning not returning until the same time in the

afternoon, this is a necessary precaution, the stay being according as the fish bite well or poorly. After reaching the fishing-grounds the men "down sail," out grapline—a sort of five-barred iron, with curved prongs, which serves as an anchor—and prepare their hooks and lines for fishing. The hook is a large, heavy iron or steel affair, usually several inches long and quite wide at the end; the line is small for shallow and heavy for deep-sea fishing, with a huge lead sinker attached. The bait for the cod are of two kinds. Early in the season the capelan, a fish some 6 or 8 inches long and about the size of our well-known smelt or frost-fish, and much later the "seruse," a species about one-half the size of the capelan. Each species must be hauled fresh every day, usually the night before, either in a seine for the purpose, or in a dip-net when the fisherman is not able to procure a seine. Of course the boats that we are following are well supplied with bait, and the men having baited their hooks, throw them overboard, and wait the result with impatience. Each man stands in the outer hollow of his boat, he tends a line on each side and sometimes two, while as soon as a fish is caught it is hauled in and, being thrown forcibly over a crane in the shape of a figure Y with an iron bar between the ends, which tears the hooks from the gills, it falls into the hollow beyond. If the fish bite well the sport now begins to be lively. As fast as a hook is baited and thrown into the water one of the others is generally ready to be hauled in. To haul this up quickly, hand over hand, fling the line over the Y, thus depositing the fish in the hollow, rebait the hook and fling it out again is the work of but a few moments. Meanwhile, perhaps one or all the other hooks have fish upon them, and the catcher is obliged to fly from one to the other with the speed of lightning. If the shoal fishing is bad the boatman hauls up his anchor and goes out into the deep water. Here he laboriously throws his line into 30, 40, and even 70 fathoms, or 420 feet of water; add to this a heavy leaden weight of 8 or 10 pounds to counteract the effects of the tide and currents, and a struggling fish of 50, 60 or more pounds, as I have often seen these immense deep-sea fish, all to be drawn quickly, hand over hand, the line, small at best, cutting deep into the fingers, and you begin to see that cod-fishing is no easy matter. After all this hard exercise, let them row their boat home in a calm or beat about in a dense fog, as is often the case, for 6, 8, or 10 miles, and you are certain that the work is not all sport. Again, if a crew started off early and have forgotten to take any food with them, hoping soon to be back, and the fog and rain have kept them out all day, until wet to the skin, in spite of oil clothes, and very hungry and tired, they do not return until late into the night, it will be easy to see that these men must possess an endurance almost beyond comprehension, to live, thrive, and grow hearty under such treatment from wind, tide, and weather; while a few hours' sleep, just as they are, prepares them for the next day. Such, then, is the continual life of a Labrador fisherman during four months in the sum-

mer season. All the rest of the year they do nothing but eat, smoke, and sleep. One may safely call their year a period of seasons of summer and winter, with three months of the former and nine of the latter.

By this time the two boats at the wharf have been unloaded, and the workmen, returning from their dinner, are preparing to cure the "catch." The least number that can conveniently cure a lot of fish is three, when the work is pressing, for if a large quantity are brought in they must be done immediately or they will soften and spoil, or with business unusually lively, six men are necessary. For the purpose of cleaning the fish a small house is often erected on the stage-head. This consists of a low, open shed, in the center of which is a long, wide table, large enough to be occupied by two sets of three men each. On the left of the first man is a deep box, one-half of which extends outside of the shed on the platform where the fish are thrown from the boat; the man stationed by this box is called the "throat-cutter," a truly terrible name were it applied to any but one who manipulates fish. Next to this man and on the same side is the "header." Opposite stands the "splitter." The crew is now complete inside the shed; outside the men are heaving the fish on to the wharf with their long-handled and long-tined pitchforks, while a small boy, or some one not otherwise occupied fills the boxes which, as I have said, lay half outside and half inside the shed. The box being full or partly full the throat-cutter takes up one of the fish and lays it upon the table, placing his forefinger in the eye and laying his thumb upon the chin or into the hollow just beyond the chin and beneath the tongue he presses the head downward, thus opening up the gills. This is a matter more easily understood when seen than when described, but I think you will understand how pressing down, outward, or to one side will throw open the natural cavity in the throat of any fish, exposing the gills—at least a simple experiment on any fish will show it. With a sharp knife the fleshy rib of the tongue is cut through at a single stroke; another stroke severs the flesh down the belly; while a third one lays open all the inside and ends in a gash, about 3 inches long, beyond the intestines and beyond and to the left of the ventral fin. The knife used for the purpose has a short, thick, round handle, while the blade is about 5 inches long, generally less than an inch wide at the base and tapering to a rounded point and sharp as a razor on either edge. Thus cut the fish is passed to the header. As this work requires great strength a proportionately strong man is taken for the purpose. He wears woolen mittens or half gloves upon the right hand, and seizing the fish, with a scooping motion of the right hand, he separates the liver from the rest of the insides and pushes it either through a small hole in the table or over at the edge into a barrel beneath, while, taking hold of the fish again with the same hand, he tears out all the remaining insides with the left hand and presses them with the head against the edge of the table, which is hollowed or scooped beneath—often

with a piece of iron placed across the area to be used as a more durable edge—he forces the body of the fish forward with the right, and the head downward with the left, thus tearing it from the body and separating the two; the head and internal parts hanging to it drop to the floor and fall through a hole about a foot square into the water beneath the stage-head. The fish then passes on to the splitter. The splitter taking it, lays it against a small stick nailed to the table, which simply acts as a support to keep the fish from slipping, and with his knife, a long broad and slightly concave blade, well sharpened on one side only, lays the fish open from the end of the cut made by the throat-cutter completely or nearly to the tail; with another stroke he cuts through the flesh and ribs on the upper side of the bone to the top; he then gashes through the bone at a distance about two-fifths from the end of the tail toward the head, the fish lying meanwhile with its tail to the right, and continues, with a scooping cut, to sever the flesh and ribs on this side to the upper end; then a peculiar lift of the bone and shake of the arm sends the fish into a coarsely constructed wheelbarrow at the right, while it sends the piece of backbone thus cut out, with the dark inside lining of the belly, or "sound," as they call it, into a pile through a hole at the left. This, then, is the process of cleaning. When the fish have been taken in a net, a seine, or trap, and are unusually large and nice, they are thrown into a tub of water and washed carefully before being salted down; but this is done only in the case of extra nice ones. It will thus be seen that the process of cleaning fish is a purely mechanical one, and the number that these men will clean in a day quite large, especially if they have nothing to do but this work, and the box is kept full of fish. In a large establishment this is usually the case, but in a small one the men are often obliged to keep their own box filled, and afterward to do the work of others.

The barrow being full of fish they are wheeled to the stage to be salted down. Here, also, a regular system is employed. The fish are laid down in four rows upon the floor, from end to end of the building, the heads alternating with the tails in every other row. This makes an even row about 4 feet deep, and with a length corresponding to the length of the building. The next process is that of salting. The salt purchased of the trading vessels is the coarse, granular rock-salt, as it is called, such as is bought in the States usually for ice-cream freezers and other purposes. It comes in bags, barrels, or in bulk when large quantities are purchased. It is deposited in large bins from whence it is wheeled in barrows to the salting-room and shaken from large wooden shovels upon the completed row of fish ready to receive it. Upon this another layer is laid which receives a salting similar to that of the one before it, and so on, a layer of fish, another of salt, until the row is about 4 feet high, when another is begun in front of that one, and so on until the fish or salt are exhausted, or the room, generally low, is too full for more. In this exercise the days, and often the nights,

are employed by the Labrador fishermen. I say nights, and this is often strictly true; the fishermen sometimes do not return with their loads until late in the evening, when the work extends far into the night by candle and lamplight, since the fish would become soft if left for so short a time even as over night out of the water. On rare occasions the fish are placed in bags, which are then moored out in deep water. In this way they keep a long time, but it is rather a tedious and troublesome operation, and one seldom employed unless the quantity taken is far in excess of the workmen employed.

Cod-liver oil is an article in great demand all over the world, but I often think that could one look back of the final distillery, which of course purifies every particle of the oil, they would not enjoy a very pleasant prospect. As it is our honest endeavor to follow the cod-fishery to its legitimate end, one cannot well avoid touching upon the subject in question. It is truly a sight to watch the huge puncheons and vats filled with the cod livers, and note from day to day how the rays of the sun, pouring their strength upon the mass, gradually decompose it and send the dark, thick, rich oil to the surface. The oil will begin to gather in two or three days, or more quickly if the days are extremely hot, when it is dipped up with a ladle and strained, if necessary, into large barrels provided for the purpose. It is generally reckoned that a quintal of fish (pronounced kental) will furnish a gallon of oil, but sometimes the livers are of a poor quality and will not produce so much. At the end of the season the blubber remaining from the livers after all the oil has been extracted is used, boiled, to rub over the roofs of houses, and is an excellent material to prevent the rain from soaking through. It is also saved and fed to the dogs during winter mixed with other food. It is thus that Labrador people learn to economize and use even those naturally waste productions, the remnants of their season's profit. You can easily imagine the scene a lively one when thirty or forty men are engaged in putting away a day's catch of some ten or twenty deeply-loaded boats, and the stage is filled and covered with men, fish, and oil; yet this work is not hard, except that it requires continued attention.

The curing process is, however, not yet completed. After a stay of from three to four weeks in the salt, the fish become pretty thoroughly pickled; they are then taken out, put into large trays of water, and pushed about from side to side, pried over and over, and again pushed around in the water until all the salt is washed off of them, when they are spread upon the "flakes" to dry in the sun. Fish flakes consist of a series of long, narrow rows of low posts pounded into the ground, upon which are laid frames composed of slats some 6 feet long, either three-cornered, with the angle pointed upward, or oblong, flat, nailed upon cross-bars about 6 inches apart, the bars usually 2 or 3 feet from each other. Upon these rows of lattice work the fish are laid to dry. They remain spread while the sun is up, but are gathered into

small piles (backs up) at night or in rainy weather. About two good warm days will dry them sufficiently, when they are thrown and packed into a large round pile with the tails in, the center of the circle being filled up with the small lots too irregular or diminutive to pile, and then covered with bark, upon which are placed stones to hold it down. The dimensions of such a pile are usually 5 to 7 feet in diameter and 4 high. Often the ground is cleared and a frame-work of stones made for its support, which becomes a matter of ornament when the fish are removed, and serves, to make the ground look nicely and reflect the taste of its owner. Often very pretty stones are arranged inside the outer rocky frame-work, and shells play no inconspicuous part when they can be obtained. The men, too, take pleasure in saving any choice-shaped colored piece of coral for this "fish garden," as they call it.

The process of weighing now alone remains to be attended to. All fish are reckoned as so many "quintals." The true quintal is a French weight signifying 220 pounds; how its signification became diverted to that now employed it is hard to tell. All along the coast the term means 110 pounds, or, as the merchants claim, 2 pounds extra on each similar lot for full weight, or, since some of the fish may not be quite dry, 112 pounds. It is usually weighed in lots of 2 quintals each, or the original weight of 220 pounds plus the 4 additional pounds for full measure. Such a weight is called a draft. Strange as it may appear, a draft of 224 pounds of fish just caught will very nearly equal a quintal of 112 pounds of dry fish, the shrinkage being about one-half from wet to dry. The fishermen know how many quintals their boats carry, how much each partition holds, the quantity when loaded up to her thwarts, and also to her gunwale. They know how many small fish will make a quintal and how many large ones; how many can be cleaned and salted in an hour; and, strange to say, can tell as far off as they can see whether the men in the boats are catching fish, and about how many fish from the set and position of the boat she has already. I have seen this told quite accurately time and again when the men were out on the fishing-ground, about hauling anchor to return home, and I could hardly perceive the boats themselves as they danced up and down upon the waves at all, yet I am far from being near-sighted. The people here have wonderful eye-sight. They can distinguish accurately objects at an immense distance, and judge correctly in many instances where ordinary people, unaccustomed to being obliged to do so, would utterly fail often of even seeing the object at all.

Such, then, is the nature of the work that occupies the attention of the people along the coast during the summer months. Though statistics are dry and unsatisfactory at best, a few just here may be of interest. In the whole province of Quebec, in 1878, about 300,000 quintals of codfish were sent into the market, valued, in the aggregate, at nearly $1,500,000. The northeastern division, that part from Manicouagan to Blanc Sablon, furnished 160,500 quintals nearly; but further, over 100,000

were taken by the vessels from the United States, Newfoundland, and other provinces fishing here for the summer season only and returning home in the autumn. This leaves a little over 56,000 quintals taken by the inhabitants of the coast for this district, with a value in the Quebec markets of $5, and to the people themselves, as they sell for cash or trade on board the regular authorized agents' trading vessels, of $3. Of course living is cheap here. Little or nothing is paid for land and right to fish; the gear necessary is small, and the outlay only trifling for small establishments, so that nearly all made is the clear gain of expended labor. It must be remembered also that $100 here will go farther than $400 or $500 in the States to these people, whose wants are really few; yet they are a hearty, healthy, and good-natured race. They are entirely different from the French Canadians who abound in the towns nearest Quebec, and seem to be, the farther eastward one goes in the province, a race peculiar in themselves.

In the 500 miles of coast from Manicouagan to Blanc Sablon, already spoken of, there are several large fishing establishments whose yearly catch of cod amounts to some over 1,000 quintals. They all pursue the plan I have described in catching and curing their fish; thus, of course, more or less petty rivalry exists between them. Starting then from Manicouagan and going eastward, the first place of any importance is Caribou Island. Here the catch amounted to about 1,150 quintals; in the same year (1878), Moisle, a little below, took about 1,260 quintals; still further, Sheldrake took 5,850 quintals, the fourth largest catch made on the coast. At Thunder River the take was 3,125; at Savage Harbor, 1,300; at Pointe Ridge, 1,200; Magpie, 8,200; Saint John's River, 7,500; Long Point, 1,050; Esquimaux Point, 2,010; Natashquan Harbor, 1,900; Bonne Esperance, 1,700; Salmon Bay, 6,510; Long Point, 1,270. It will be seen that several of these establishments took much larger catches than the others. Of these, Sheldrake had 73 boats, valued at $4,380, and employing 237 men; Magpie, 95 boats, valued at $5,700, employing 332 men; Saint John's River, 114 boats, valued at $6,840, and employing 358 men, and Salmon Bay 41 boats, valued at $3,110, and employing 154 men.

SALMON.—One of the most important of the Labrador fisheries next to the cod is that of the salmon, though they are by no means as extensive here as they are in the lower Canadian provinces, especially of Restigouche and the Bay of Chaleur, on the south side of the river Saint Lawrence. The salmon go up the river to spawn; returning they are found in the adjacent waters of the rivers along the coast in the late summer and early fall. The number of fish annually captured is immense. The best and in fact only real season for capturing these fish is a few weeks in the early autumn. They are caught in gill-nets, large or small, with a regulation mesh of 6 inches. The nets are placed along shore at the mouth of the river, or across some channel of the stream, and visited every day. The fish entangle themselves in the meshes, which are

made sufficiently large to allow the young fish to escape by passing entirely through them, and are held until the fisherman comes and secures his catch. The fish are then cut open from head to tail, and carefully cleaned inside and out; all the black skin being peeled off the back bone. They are then soaked in fresh water, then in salt brine, and finally packed in barrels. There are seldom more or less than 23 fish to a barrel. As each barrel brings about $12 cash, each fish is valued at 50 cents. This is of course the first cost of the fish.

Salmon-fishing is only in its prime for about four weeks, between, say, July 25 and August 25. This fishing is plentiful all along the rivers on the coast, and there is seldom one that has not several fisheries upon it. I should say that a barrel of salted salmon will average about 200 pounds in weight. Salmon are, other than above, preserved by drying, smoking, and canning. The latter process is rarely if at all employed in Labrador, the other two seldom. They are smoked much as herring are, and dried in the sun much as codfish on the fish-flakes. Salmon are caught with the hook and line by those who care to angle for them; and as the rivers and bays are quite full at the proper season, it is a work of pleasure and profit to practice the rod with this king of fish in his native element and at home, when he is most abundant.

A gentleman by the name of Napoleon Corneau, an agent for a firm situated at the mouth of Goodbout River, has given his time and attention so fully to this sport that his record for salmon-catching stands alone so far as I know. I am not prepared to say that the record is the "largest score of salmon ever killed by a single man in the world," but certainly it looks most extraordinarily like it. Within a period of eighteen days, a few years since, beginning July 8, he captured 365 fish, weighing altogether 3,861 pounds. This is an average of over 20 fish a day and also of about $10\frac{3}{5}$ pounds for each fish. The largest fish weighed 26 pounds.

I should add that this last year (1881) a French steamer visited several localities along the coast purchasing salmon from the people fresh from the nets at a liberal price. The fish were submitted to a refrigerating process and packed for shipment to a foreign market. That year the success was sufficient to warrant the captain in making great offers to the people for the following year, but whether the actual sale will permit so expensive an equipment again or not remains to be seen. Freezing salmon may be a success so far as the freezing goes, but can there be found a company or even a single man enterprising enough to risk his capital in building up a trade that it is not at all likely will become general? Do not understand me as discouraging the enterprise, for a flourishing trade ought to be built up in this very business if the first attempts are successful.

TROUT.—The trout-fisheries are conducted much like, and generally in company with, the salmon fisheries. The nets used are long and

narrow, while the meshes are from 3½ to 4 inches wide. This enables the smaller fish to escape and retains the larger ones, whose usual size ranges from 3 to 4½ pounds, and from 12 to 14, or even nearly 18 inches in length. These nets are set across the mouth or along the shore of some small bay into which runs a stream of sufficient size to allow the fish to run up to spawn. The bottom of the net is sunk with heavy weights, while the upper side is supported by cork bobs which float upon the top of the water. The net is examined twice a day, and the fish taken from the meshes. They are then slit down the belly and cleaned thoroughly; after being washed carefully in fresh water they are packed in a barrel and salted down carefully. When full the barrel contains about a third salt and water. In some places the people have out a large number of nets, and often catch from a quarter to half a barrel of trout daily; but the latter is a capital day's work and seldom made.

Trout are caught at all seasons, from early in the spring, when the ice breaks up, to late in the fall. They are most abundant just before it is high tide; and their favorite time is from 2 to 4 in the afternoon of a rather windy and lowering day. They at all times seem to prefer cloudy weather in which to be about, and when the wind blows lightly, ruffling the water, and are then caught in greater abundance than at any other time. In some of the bays the trout are so abundant that you can cast a double-hooked line and generally catch a fish almost instantly on each hook. I have in mind a locality called Baie Des Roches, where a small stream comes down into a sort of bay or arm of the sea, and where, in 1875, a party of five of us succeeded in taking with hook and line some 938 fish, large and small, fishing only part of two days. The fish bit at the red and gray flies, and as fast as we could haul them in. About 100 of these would weigh less than half a pound each, the majority between 1 and 2 pounds, as many as 75 of them 3 pounds apiece, and the largest weighed 4½ pounds.

There seems to be three or four varieties or species of trout in these regions, but they have not all as yet been positively identified. They are called here salmon trout, spotted and gray trout, sea trout, and another species, if indeed it be a valid one, called by the people the mud trout. Of these three or four, the sea and spotted and gray trout alone appear extensively as articles of commerce. Trout are caught all along the coast from Mingan to Blanc Sablon, if not to Belle Isle itself. Anywhere about the mouths of small streams these fish are abundant. The large streams are usually so completely filled with salmon nets that trout nets are of no account whatever. In the small places, even, I have known a small boy hardly ten years old to catch from half a barrel to a barrel and a half of trout in a season with one or two small nets only, thus earning from $15 to $20 on this alone. The fish, like all other "catches," are taken by the traders at a nominal price in exchange for food and articles of necessity, and sold in Quebec as grade 1, 2, or 3,

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according to quality as seen by examination of the barrels by the inspection officer.

HERRING.—The herring, of which there are two if not three species, appear in the waters along the coast of Labrador, if it be an open season, late in April or at any rate early in May. The inhabitants begin to fish for them with nets and seines as soon as the ice in the bays has broken sufficiently to allow, while they continue the operation till sometime in June, usually a little earlier than the middle of the month, when the fish, having deposited their spawn in shallow water, return to the deep water again. These fish are called "spring herring." They are poor and thin, and, caught in the very middle of the spawning season, cannot but affect future fishing in these same waters. These fish are of a very poor quality and are generally salted down for the dogs to eat in the winter months, when a suitable provision must be made for them or they will starve. In the fall, however, the fishing is of a much different quality. The "fall herring" appear on the coast about the middle of August and remain about six weeks. They are in excellent condition, and very fat, and equal even to Scotch herring of the best quality. These fish appear in vast bodies and cover the water often for miles.

They occur all along the coast from Blanc Sablon almost as far as Northwest River. Sometimes the fish remain into October; when they do, these later fish are generally unusually fine, and Pierre Fortin, in his report of the fisheries in the Gulf of Saint Lawrence, states that they are nearly always taken with a seine, and that he has himself seen "a seine set by Nova Scotia fishermen, after having been five days in the water, drawn out with 800 barrels of herring."

The largest fish are caught within the above named district, while the "spring herring" are now rarely taken except in some localities in Newfoundland. It cannot be stated positively but it is generally supposed that these spring fish, after depositing their spawn on the Newfoundland coast, are the same which afterward appear fat and large on the Labrador coast. Although the migrations of the herring are not perfectly understood, it is supposed that local and atmospheric changes enter largely into the causes for which the fish will leave a part of the coast suddenly and only appear again after the lapse of years as suddenly as they disappeared.

Although herring are captured with nets and seines, much as other fish are, yet there is a process known as "weir-fishing," which differs essentially. Weir-fishing is conducted as follows: Young fir trees are driven into the soft mud or sand at ebb tide so thickly that their branches interlace each other. When full tide sets in and brings the

fish they are caught in the mass of branches which the brush or weir presents, and the retreating tide leaves them stranded and at the mercy of the fishermen, who soon collect and salt them down in barrels furnished for the purpose by some trader who purchases the fish at a stipulated price. The usual herring nets are generally 30 fathoms or 180 feet long by 30 feet deep, and good fishing fills from 6 to 12 barrels a day, or rather at each haul, which is generally once a day. Seines are generally 100 to 150 fathoms long and about 10 deep, while the "ketch" is according to the size of the school.

With regard to the curing of these fish it is well asserted by Mr. Townsend that "of all mercantile fish herring is the most delicate and tender, and is, therefore, the most liable to damage from the air and heat after they are out of the water. Herring ought to be scaled, washed, and in pickle as soon as possible after they are out of the water; not a moment ought to be lost that can be avoided. The flesh being so delicate and tender, not only injures quickly by exposure, but is much less liable to take the salt. On the other hand, if the herring get into pickle in a clean state before they have been any time exposed they take the salt quicker, and, therefore, preserve much better the natural quality and taste of the fish." On the Labrador coast the herring are generally simply packed in brine in barrels and sent at once to the Quebec markets.

In Mr. Perley's Report of the Fisheries in the Bay of Fundy, the manner of curing herring is thus described: The fish are scaled by being washed in bushel baskets with a square bottom, open like a coarse sieve, the men standing in the water up to their knees. The best fish have very few scales, and only half a bushel of them are taken in the basket at once; they are then salted in large tubs, the salt being stirred through them by hand; the quantity used is half a bushel of salt to two and a half barrels of fish, which are a tub full. They lie in salt twenty-four hours, and are then washed in fresh water to prevent their becoming "salt burnt," after which they are strung on rods, with their heads all one way, and then hung up in the smoke-house. In Clements the smoke-houses are usually 30 feet square, with 14 feet posts and a high roof; no fish hang nearer the fire than 7 feet, but the most careful curers do not hang them nearer than 8 feet. Rock maple is used in smoking; when it cannot be procured ash is used, being considered next best. The process of smoking usually occupies eight weeks; and it requires the whole time of one person to watch the fire and attend to the smoking, in which much judgment and great care are required. The smoke is usually made up at nightfall, unless the weather is warm and wet, during which time no fires are made. In fine weather the smoke-houses are thrown open during the day to cool; and the greatest care is taken at all times to keep down heat, and to render the smoke-house as cool as possible by numerous windows and openings. After being smoked, the fish are packed in boxes of the established size; these are 18 inches

long, 10 inches wide, and 8 inches deep, measured on the inside; and there should be 12 rods, or 24 dozen, of fish in a box of prime herring. If the fish are large and of the best quality, it requires some pressure to get this number into a box. The Digby herring are in some instances cured in pickle, unsmoked, and packed in half barrels. Packed in barrels, each barrel is supposed to weigh 224 pounds.

SEALS AND SEAL HUNTING.—There are seven species of seals credited to the coast of Labrador. Of the first, the walrus, or morse, or *la vache marine* of the French (*Odobænus rosmarus* Malmgren, also called the Atlantic walrus, in distinction from the *Odobesus*, or Pacific walrus), I will not attempt to give a history, it being of too irregular occurrence upon the coast to admit it. It is found sometimes in Northern Labrador. Two specimens were captured at Fox Harbor about 1880, and one of the young men in our expedition in 1882 secured the tusks of a small specimen from this locality. The inhabitants here say that they see these animals occasionally in the water, but rarely capture them; that they occur more frequently farther north on the coast, though probably never common. None of the eared seals are known to occur on the Atlantic coast, I believe. The remaining animals are of the family *Phocidæ*, and of these six are generally believed to be found in Labrador.

First may be mentioned the Harbor seal (*Phoca vitulina* Linné). This is one of the smallest of the seal species. Its coat is of a beautiful, soft, and silky texture on its surface, the hairs being darker beneath, and often variously spotted and marked with dark and white spots and blotches. When young they are of a dirty, yellowish white. The specimens of harbor seal usually seen in our country are only young, and rarely exceed 5 feet in length; the adults are occasionally 7 feet or more, as I have several times seen them. Few species have so wide a geographical distribution as this same harbor seal, and its variation in coloration, also, has combined with this distribution to give more synonyms to this than perhaps any other species of the seal tribe. It occurs in nearly every region of our northern hemisphere, and even ascends the large rivers, and is seen in the interior of the country in large lakes and ponds where they occur. It is not a migratory species, at least not extensively so. It lives in the region where it occurs throughout the year. It is confined to near the shore. It rears its young, at least in Labrador, 10 to 20 miles up some river in the interior of the country where there is a sand-bar in the river, and in the early spring as soon as the river is free of ice. It is a very knowing animal, and also a very sagacious one. Seals are captured in nets placed at the mouths of the rivers or near some rocky point of land where the seals are abundant. These harbor-seal nets are made of stout "salmon twine," are 40 to 50 fathoms long, and 6 to 8 deep. The meshes are 6 inches. The nets are moored with heavy weights, and tended about twice a week, as frequent visiting of the region where they are set tends

to frighten the seal. This trapping is carried on in all seasons of open water from spring to fall. This is the only species found on the coast the year around. The skin is worked into all sorts of fancy articles; the blubber makes first-class oil, and the flesh of the young is good eating, if nicely broiled before the coals without the fat. As far as I can learn, the female gives birth to but a single young seal.

In the spring and fall these seals are abundant all along the flats at low tide, where they herd in large numbers. I have seen them thus perched on the flat stones along a few rods of beach so thick that all seemed one black mass of bodies. The least disturbance, and the whole herd flop off into the shallow water and hurry to sea, and in a moment not a seal is left. Soon one hundred heads are seen, in as many directions as many rods from shore, in the surrounding water, and they continue to swim about and watch the intruder till either he goes, or, satisfied that they cannot land again, they disappear to some other chosen spot, or sport in the water at their pleasure. They come ashore mostly at low tide, and in the evening about sunset. They love to bask in the sunlight during the daytime on the flat rocks along shore. They are very hard to kill with shot or ball, but if caught far on land are soon dispatched with even a moderate blow on the end of the nose. They eat fish, often robbing the salmon and probably the trout nets also of the fisherman. They also eat crustacea and small shell-fish, shrimps, &c. Some of the fishermen told me that they fed on a species of tender kelps at the bottom of the shallow passes between the rocks and islands, and on small sea animals. Their curiosity is very great, and a peculiar mode of enticing them within gunshot is practiced by the inhabitants, who dress in a black suit, pull a black cap over their heads, and, going to some flat rock, lie over it much as a live seal would do, keeping the face down and the gun ready; the voice is then made to imitate the bellow or rather hoarse bark of a seal. The animal mistakes the person for another animal of his own tribe and gradually swims up to him, frequently diving and appearing again as he swims around; when finally near enough, as the animal dives, the hunter clutches his gun and takes aim at where he expects the seal to appear; the minute it shows its head he fires, generally killing or wounding the animal; he then rushes out to his boat, shoves off, and secures the booty. A seal, if only wounded, will dive and not appear again on the surface of the water unless at a great distance away. If shot dead it will float at once if very fat; if not it rises in a few moments, timed by the fatness or leanness of the animal; the fatter they are the quicker they rise, so that the hunter is sure of his game in the end if he kills it.

The Ringed seal (*Phoca fœtida* Fabricius) is rather rare, as far as I can learn, upon the Labrador coast. It is found all the season around, like the harbor seal, and with it, having also many of its habits. It is distinguished by its smaller size, and it is said, "can always be recognized by the length of the first digit of the manus, which slightly ex-

ceeds all others." This is in all probability the species called by the natives the gra or jar seal. It much resembles the harbor seal, but is even smaller, the adult being about 5 feet long, and the female even less. Several were killed while I was on the coast, but I did not obtain them. I sent word, however, to have them "salted down" for me, and shall doubtless obtain them on my next visit to the coast. It has a peculiar habit of balancing itself and tilting backward and forward when in the water, much resembling the bobbing of a bottle when thrown overboard. It occurs near shore.

The Bearded seal (*Erignathus barbatus* Fabricius) is probably the "square flipper," as it is called here. It is found generally on the ice and is of immense size. Several were captured while I was here. Their average height is 8 to even 12 feet, their weight 500 to 1,000 pounds, and their yield of oil 30 to 40 or more gallons. They occur singly and occasionally, I believe, accompanied by their young, which are found with them just before the breaking up of the ice in spring. It is the largest species of seal found on the Atlantic seaboard. They are regarded as a great prize by the inhabitants, the yield of oil being so large, and the skin furnishing so much material for boots, gloves, mittens, &c.

The Gray seal (*Halichœrus grypus* Fabricius) so closely resembles the bearded seal, first mentioned, that the two are doubtless often confounded. It is credited to the North Atlantic and the straits of Belle Isle as also the Labrador coast, but it occurs so rarely as to deserve no special attention here. It is shorter and the skull much larger than is the bearded seal, which it so closely resembles.

The Harp seal (*Phoca grœnlandica* Fabricius) is the Greenland, or saddleback seal of Labrador and Greenland coasts which, with its next neighbor, the hood seal, affords such rare sport to the seal hunters in the spring and fall of each year. The general color of the male is yellowish white, the nose and face black, as are also several lines forming a fancied resemblance to a harp upon the back of the animal. The female resembles the male, but has the black indistinct or wholly wanting, the yellowish white inclining to grayish to compensate. The young are light golden-yellow or white when born and gradually become dirty yellowish or white, like the adult, as they grow older, but when young distinctly spotted more or less according to age. They are then called "whitecoats," and require five years to mature. Its size is inferior to that of the hood seal.

Of this species, Samuel Robertson, in the Transactions of the Literary and Historical Society of Quebec, in an article entitled "Notes on the coast of Labrador," says: "The harp seal is found from the river Saint Lawrence to the Arctic Ocean, and from Greenland eastward to Nova Zembla. Its usual size is 7 feet in length, 4 feet in girth. For forty-two days the young have the hair yellowish white; it then changes to mottled black and light blue. It grows for three years. They are more

or less abundant all along the coast, are carnivorous though very abstemious, and when caught rarely have anything in their stomachs; rest alone seems to fatten them. In February or March the mother drops the young on the drift-ice, one, two, or rarely three at a birth. At first they are about the size of a cat, and weigh 14 to 15 pounds. They are helpless and can get no food; they suck the ice, and absolutely fatten with no food. They remain thus helpless on the ice until they have grown there on air to the weight of 70 pounds, when they take to the water, cast their coats, and seek their own food."

This remarkable statement is by one who for a long series of years hunted seals for his living at La Tabatier and other places on the Labrador coast. I am aware that this is in direct opposition to our generally received theories of the growth of these animals, but have great confidence in Mr. Robertson's opinion, as he wrote from experience in an establishment that has made seal hunting its business for the best part of half a century.

An adult harp seal weighs about 400 pounds, its pelt equaling about 5 gallons of oil in value. This species rarely occurs south of the Magdalen Islands. They are migratory, appearing in herds in spring and fall, generally near shore, at stated times, as regularly as the season comes around. The farther north one goes generally the more abundant they become. They appear in vast numbers on the drift-ice, that also holds their young, and both old and young are hunted by sealers from Newfoundland and vicinity in spring upon the ice. Vessels are fitted out for this purpose alone. In 1880 eight vessels secured 22,500 young seal within a few miles of the Newfoundland and Labrador coast, most of which were of this species. They were taken during the month of April. In 1881 the number was 36,000. The yield of oil was from 4 to 5 gallons to each seal. The pelts averaged 80 cents apiece.

The migrations of these seal do not appear to be very clearly understood. They pass southward in fall in small, increasing to large, herds; some winter in the Gulf of Saint Lawrence, where they breed; the majority, however, seek the open ocean and return north to breed on the drift-ice, which floats down loaded with them in April. In May they return north again, but generally far out to sea, returning south again in fall as before. In spring hunting the herd rarely gives the hunter over one or two days; in fall he has as many weeks. The ice fishing occupies a different season of the year.

The harp, as also the hood seal, feeds chiefly upon fish, and to a terrible extent upon young cod, doubtless also herring. The migrations of each of these animals must have a more or less connected origin, be it climatic or what it may; and it is a well-determined fact on the coast that the abundance of one means rarity of the other. Those years when a large "catch" of cod occurs seal are scarce, and *vice versa*. It is a well-established fact that the cod-fisheries of the east coast of New-

foundland are seriously affected if large quantities of seal occur in that region the same year.

The Hooded seal's (*Cystophora cristata*, Nilsson) general characteristics much resemble those of the Harp, though it probably takes much less time to mature. The adult male and female are very much alike, and the hair bluish black without trace of yellow, save the gloss on the surface of the coat, and the light yellow spots all over. Its size is from 7 to 9 feet; weight 500 to 700 pounds; and it produces about the same quantity of oil as the Harp seal. The movable cup or hood which appears upon the head of the male about the breeding season is probably peculiar to that time and sex.

The Hooded seal seems to keep close company in migrations and breeding with the harp seal, and, as far as we can say, many of the peculiarities of the one species are common to the other. They are much less abundant, and more irregular in occurrence than the harp, however. From accounts received from hunters on the coast this is the most dangerous of the seals. When pursued and wounded it will fight fiercely. In migrations the males and females proceed in separate herds, the one preceding the other in autumn by a week or ten days; usually, the females appear first, I believe. This, I believe, is also true of the harp seal.

Seal hunting on the ice along the Labrador and Newfoundland shores, formerly a considerable industry, is now generally conducted by small vessels of 10 to 40 or 50 tons' burden, manned by five to twelve men each. The average catch is from several hundred to several thousand for each vessel. A few large steamers only are now engaged in this enterprise. While on the coast one steamer found an unusually large field of floating ice covered with seals, old and young. The men turned to and killed 5,000 young seals in a single day, piling them upon the ice to be skinned the next day. That night the weather moderated, the ice did not freeze, and the weight of the seals breaking the mass, every seal was lost. The next day the men, not to be discouraged, turned to and before night had again killed as many more, which they proceeded to skin at once, thus saving all.

On the Labrador coast the most noted fisheries are Whale Head and neighboring posts, under the supervision of Joseph Gallishon; La Tabatiere, under Samuel Robertson, whose statement, previously quoted, was of such a surprising nature; Great Mecattina, under Samuel Gaumont; minor stations at Old Fort Island, Bradore Bay, L'Anse des Dunes, Long Point, Five Leagues; and in Newfoundland Labrador, Mr. Davis's establishment at Point Amour. At these various places the catch was chiefly adult harp and hooded seals, with occasionally a "square flipper," and amounted in 1878 to about 2,700. A few of these were young harps, which, in their second and third year, go by the name of "Bedlamer," or "Bellamer," at least on "the Labrador," the very old ones going by the name of "saddlers."

The harp and hood seal are captured in nets made similar to those used for the harbor seal, but of greater length, and about 8-inch mesh, and moored in some similar position. It requires considerable tact to manipulate a seal net. One of the many devices whereby seals are secured is to keep constant watch for the seals. When a herd appears near the nets, shouting and firing of blank charges of powder are begun to keep the herd under water, so that they may the more surely become entangled in the meshes of the net. After a sufficient time the nets are visited and seals not already strangled by the netting are killed with blows upon the nose. Seals will remain under water ordinarily about five minutes, but if pursued or forced to it will remain ten, fifteen, or even twenty minutes, while they will swim great distances without appearing on the surface for air.

Ice hunting is practiced during the last of March and first of April, along the drift, a few miles off the Labrador and Newfoundland coast, though sometimes 60 to 80 miles away even. It has been discovered that it is prejudicial to the interests of the hunters themselves to start too early in the season for the hunting ground, as the supply is greatly diminished by killing the old seal while the young are helpless, even before they are born at all, as was formerly done to a great extent. The system of shares generally prevails here, as in the cod-fishing, everything depending upon the abundance of the seals. When a locality is found full of drift ice, on which the "whitecoats" are particularly abundant, the men land and begin the slaughter. The seals are killed by knocking on the end of the nose. They are then skinned by a relay of men, or, as a rest from the exercise of "clubbing," by the same set. The process of skinning or taking the pelt consists of cutting the animal through skin and fat from nose to tail, while but a short time suffices to remove the carcass, which is then thrown overboard, while the skin with its fat is laid out to cool and partially dry before packing away. An average pelt weighs about 40 pounds, and is about 2½ feet square. The old seals are occasionally caught or shot, being seen everywhere about in the surrounding water, but the slaughter is generally confined to the young. As the pelts are brought on board they are stowed away in the hold, which is partitioned off to prevent the shifting of such a mass of slipping ballast, and when full the vessel starts for home. If the prospect for more seal is good the cargo is quickly unloaded and the vessel returns to renew the work of destruction.

The skins, when landed are "skulped;" that is, the fat is taken off of them and they are salted thoroughly and packed away to be sent to the factory, when they are used for knapsacks, trunk coverings, also shoes, boots, gloves, hats and caps, and a variety of articles when common leather is too thick and rough. In England they are converted chiefly into one of the many varieties of patent leather. The process of making seal oil is simple. The fat is cut into small fragments and put

into vats, to be exposed to the rays of the sun or tried by fire, as the case may be. The young produce the "pale seal oil," the older seal the darker and heavier "straw-colored seal oil." Either kind of oil is then reduced by straining and other refining processes to two or three qualities, each of which brings a price corresponding to its grade. Seal oil is used for a variety of purposes in manufactures, and in many countries is still burned. The seal-hunter, if successful, is never lacking in good, healthful food. Steak from the young seal, if freed from fat or oil, is most tender, and really delicate and delicious eating. It tastes more like fresh cow's liver than any other meat with which I am acquainted, and is highly prized by the natives, as well as by all who have once tasted it when properly cooked.

MACKEREL FISHING.—Mackerel abound chiefly in the Gulf of Saint Lawrence, seldom coming on to the Labrador coast. They are found here occasionally, however, and are then captured and cured as in other places. The time for catching these fish is usually from early in July to late in September. The fish come along shore like the herring to spawn, but are seldom fished until after spawning season, which is usually in the earliest part of summer. It is most numerous in the fall months, when it is extremely fat and well savored. It is taken in nets and seines, and quite large ones at that, many of them capable of holding 600 to 800 barrels of fish. The practice among ordinary fisherman is to use the hook and line; the bait used is a small fish called the pogie, though anything bright will attract them, as a small silver piece placed alone upon the hook. The mode of taking these valuable fish is thus excellently and pleasantly described by Mr. Fortin:

"As soon as the schooners have reached the place where shoals of mackerel are usually found, they keep cruising backward and forward, and the moment there is the least appearance of fish, or their presence is even suspected near a vessel, the jibs are taken in, and the vessel is brought to, with the mizzen-sail and mainsail veered half round. Feed is then scattered all around from small pails, the fishermen seize their lines, bait their hooks with small pieces of the skin of the neck of the mackerel or any other fish (but the mackerel is much preferable), and throw them into the water. The lines are fine, and are made of hemp or cotton, generally the latter. They are from 6 to 8 fathoms long, and one end is fastened to a small sinker of polished pewter, oblong in shape, and weighing about 2 ounces, to one end of which is soldered a middle-sized hook.

"Each fisherman plies the lines, one in each hand, and leans on the rail while fishing. He seldom pays out more than 4 or 5 fathoms of line, for the mackerel, attracted by the chopped fish thrown overboard, thousands of pieces of which float in mid-water, leave the depths of the sea and come swimming toward the surface to feast with avidity on this excellent bait, prepared for him with so much care; while he is gorging himself with pieces of pogie and mackerel, he seizes the bait on

the fisherman's hook, and soon, in spite of his violent efforts to break the iron that is tearing his mouth and to free himself, he is pulled out of the water and thrown upon the deck, where he dies before long.

"Such is the method of taking mackerel with the line, pursued by the American fisherman, and our own, as well as those of Nova Scotia and the other provinces, have adopted it as being the best. But it is far from being invariably successful; for it often happens that the fish, finding plenty of food at the bottom of the sea, will not rise to the bait, or care so little for it as hardly to bite at the hooks. But the great difficulty with the fisherman is to find a shoal of mackerel. It is almost always an affair of chance. When mackerel swim near the surface, as they do when they are pursued by the porpoise or some other of the large fish that prey upon them, they are easily recognized, especially by the experienced fisherman, by the ripple they make in the water, and sometimes the noise they make by beating the water with their tails; and the moment they are seen from the fishing schooners these bear down upon them and make all sail, so as to reach the place where they are as quickly as possible. Then quantities of bait are thrown into the water, and if the fish are hungry a good take may be expected. From 15 to 30 barrels of mackerel, for example, may be taken in a forenoon by a crew of fifteen. But mackerel do not always show themselves near the surface; on the contrary, they generally keep at a great depth, in order not to be seen; and then the fisherman are obliged to seek for them. For this purpose they cruise with their vessels, as I have said already, in certain places from sunrise to sunset; and I should add that in fine weather they stop every half hour, and sometimes oftener, to throw bait into the water, in the hope that some shoals of mackerel may see it and allow themselves to be attracted by it to the surface. The mackerel-fishing schooners, which are almost always good sailors, often sail from 60 to 100 miles in a day on a cruise of this kind; and they can cruise for a week at a time and sometimes longer without taking a single fish."

It is also true that a vessel will remain out almost the entire season and obtain barely enough fish to supply food, while at other times a fortnight good fishing will secure a good load. With regard to curing, the fish are simply washed, dipped in fine salt, and packed in barrels, either whole or split in two, with the flesh downward, salted with coarse salt and pickle; they are then divided into three grades, and priced and sold accordingly.

LOBSTERS, CLAMS, CRABS, &C.—Lobsters are found everywhere along the coast in great abundance. There are factories for canning them, however, only in Nova Scotia and on the Newfoundland coast. Lobsters are caught in one of two ways. When they are abundant, boats are sent out and the lobsters caught in nets, which are stretched over a barrel hoop or some similar frame, and lowered by strings into the water, a piece of cod-head or some sort of bait having been tied down

in the middle of the net. The lobsters crawl upon the net to feed upon the bait, become entangled in the meshes, and are hauled carefully up and out of the water. Very often the beach is covered with rocks, large and small, interspersed with holes and pits filled with water at low tide. The seaweed grows over these places, thus affording capital hiding places. One can often procure 100 lobsters in an afternoon from a strip of this beach hardly as many yards long. The small boys hunt them with long poles, on the end of which are tied large cod-hooks. With these the boys reach in and feel about in the holes and under the rocks until they feel the shell of the lobster, when a smart or careful haul, as the case may need, generally brings the animal out of his snug quarters and at the mercy of his captors. A lobster factory could undoubtedly be set up with profit on some part of the Labrador coast; now a limited quantity are caught and carried over to the Newfoundland factory. The lobsters that I have eaten from the Labrador coast have an unusual sweet and juicy taste, it appears to me. They are seldom very large, while the very young ones appear not to come in shore among the rocks to any very great extent. When boiled at once, and eaten as soon as cool enough, they are most delicious.

Of the other edible invertebrates, oysters do not live so far north and east, the oyster beds of Gaspe being the only successful enterprise of this kind established as yet. Crabs are sometimes caught here and eaten, but they are not as abundant apparently as farther east. Shrimps are common, and may be eaten in a few places, but I have not seen them used here as an article of food. Of the numerous species of edible molluscs, abundant all along the coast, the mussel is a common dish, either baked or boiled. Limpets may be eaten occasionally. Clams are sometimes found in the mud flats, especially along the coast line; and the razor clam is abundant in but one or two localities. They are all used and greatly relished by the people about the coast.

STATISTICS.—The north-shore fisheries of the Saint Lawrence are separated into nine divisions, from Manicoungan to Blanc Sablon, as follows: Godbout division, extending from Manicoungan to Point des Monts, contains 15 stations; Trinity, from Point des Monts to Baie des Roches, 10; Moisle, from Pigon to Jambons, 30; Saint John's, from Sheldrake to Esquimaux Point, 11; Watsheeshoo, from Betchouan to Little Watsheeshoo, 6; Natashquan, from Natashquan River to Nabisippi, 6; Washeecootai, from Kegashka River to Romaine, 7; Saint Augustine, from Coacoachoo to Chicatica, 41; and Bonne Esperance, from Chicatica to Blanc Sablon (the terminus of the Canadian province), 33 stations. The total value of the north-shore fisheries for 1880 was $1,401,289, or an increase on the preceding year of $126,209. The cod fishery was by far the most valuable, amounting to nearly $1,200,000. In 1881 the catch of cod was nearly double that of the previous year.

AMHERST, MASS., *February* 10, 1884.