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Paris International Exhibition

1900

ANIMALS OF CANADA

Fishes, Birds and Furred Animals

BY
ARTHUR BUIES

PRINTED BY ORDER OF THE
HON. S. A. FISHER, MINISTER OF AGRICULTURE
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CHAPTER I.

General Survey of Canadian Fisheries.

The Canadian Fisheries are the largest in extent of area, the most prolific, and the most varied in the whole world. Every species of marketable fish is to be found in Canadian waters, and in such abundance that fishing has become in a few years an industry of great importance, producing value to the amount of thirty-eight millions of dollars yearly ; taking into account both the quantities exported and also those which supply the local markets or are consumed on the spot.

The Canadian fisheries comprise an immense extent of maritime coast, and also innumerable lakes and rivers in the interior of the seven provinces which form the Confederation of the Dominion of Canada. The coast of the Province of Quebec, bordering on the Gulf of St. Lawrence, and those of the other provinces on the same gulf and on the Atlantic from the Bay of Fundy to the Straits of Belleisle, offer a coast line of many thousand miles, while British Columbia shows on the Pacific a coast line of which gives more than double the extent of the maritime coasts of Great Britain and Ireland together. When to this expanse is added that of the large lakes of the interior covering a space of 120,000 square millimetres, (more than half of the fresh water surface of the globe, without counting the surface occupied by running waters, which are larger than the largest in Europe), it would give but a very imperfect idea of the treasures represented by British America, treasures declared to be by all competent judges practically inexhaustible. Inexhaustible ! yes, truly ! During more than three centuries,

fishing of various kinds has been practised all along the coast of the Maritime Provinces and in the Gulf of St. Lawrence. For more than three centuries fishermen, Canadian, European and American, equipped with the most perfect outfits have been engaged in this occupation, and although they have taken each year incalculable quantities of fish, no sign of decreasing supply is as yet manifest.

The fish change their haunts, but they do not diminish in number, and old fishermen have remarked that there are to be constantly seen along the banks more dead fish than were to be observed in former years, and it is also to be noted that when the fish are less numerous in certain places than is usual, it is through a series of merely temporary causes which frequently act, but on a comparatively small and very limited scale.

CHAPTER II.

All naturalists attribute to the Arctic currents chilling the atmosphere on the Atlantic coasts the source of the ichthyological abundance which has constituted for many years one of the principal elements of the wealth of the Canadian people, and which abundance will terminate only with the geological disappearance of the country. The Arctic current, watering as it does the coasts of Labrador, Newfoundland, Canada, and a part of the United States, cools the atmosphere and carries with it immense ice floes which are the source of the large maritime richness upon which the population of these countries may depend for a long time. Filled with icebergs and ice floes, the Arctic current carries the Spitzbergen seas along the entire length of the coasts of Labrador and Newfoundland, until it meets the warm waters of the Gulf Stream going east. The Arctic current then takes the name of Labrador current, and the surface area which it covers along the coast of North America constitutes the ocean area *par excellence*, where the salt water fish come to spawn and look for food.

The Arctic seas and the rivers which feed them swarm with insect life, forming in many places a quivering mass of living slime, affording nourishment to myriads of fishes, large and small, which throng the coasts of Canada, Newfoundland and the United States, and it is upon this living insect mass also that myriads of water birds derive their nourishment during the summer season. It is calculated that the surface of the coasts of the United States watered by the Labrador current is 15,000 square kilometres, while it occupies 330,000 square kilometres of the Canadian seas, hence the immense superiority of the Canadian fisheries over those of the United States, since it has been admitted that the Arctic current has been the

habitat of the marketable fish, and that nearly all of this current waters the coasts of Canada.

It is impossible in Europe to form any idea of the extent, value and importance of the Canadian fisheries; likewise the hunting territories of fur-bearing and feathered animals, which may be marked off in vast sections on the gigantic surface of this country. To the extent of maritime coast of the Atlantic, which we have indicated above, must be added the maritime fisheries of the interior, such as the river St. Lawrence, which waters a territory of 600,000 square kilometres, the Mackenzie river 33,000 kilometres in length, the Fraser 1,000 and other streams such as the Nelson, Albany, Saskatchewan and Red rivers of the west, the Ottawa, St. John, Saguenay, Restigouche and Miramichi in the east, all of which abound in fish of the most varied species.

The maritime fisheries of the Atlantic are distributed on the coasts of Nova Scotia, New Brunswick, Prince Edward Island, around the Magdalen Islands and Anticosti in the Gulf of St. Lawrence, in the Bay of Chaleurs and on the coast of Labrador.

Those of the Pacific Ocean, extending from the coast of British Columbia out to sea for a distance of 50 kilometres, have hardly yet been explored, with the exception of the salmon fishery, which is carried on chiefly in the Fraser river. In the seas, the bays and at the mouths of the great rivers of the north are situated the fishing grounds of the whale, seal, walrus, sea trout, pike, sturgeon, etc. It is here, too, that the leviathans of the deep formerly so abundant in the waters of Newfoundland find their only harbour of refuge and as yet comparative safety.

CHAPTER III.

Production.

A quarter of a century has been sufficient to give to the value of the Canadian fisheries a prodigious increase. In 1850 their value did not exceed the petty sum of 800,000 francs, but in 1875 it had attained to nearly 60,000,000; in 1890 it amounted to 100,000,000, and since that time has remained at the latter figure with fluctuations of more or less importance. At present the amount is represented by 115,000,000, but indicates, only the value of the fish prepared for exportation and for the supply of some of the markets of the interior. Outside of this quantity there is again the domestic consumption which, estimated at 100 lbs. per head, gives a total of 400,000,000 of lbs. Putting the average price per lb. at 20 centimes, we obtain the sum of 80,000,000 of francs which, added to the value of the fish prepared for commerce, give, a total of nearly 200,000,000 of francs as representing at the present time the value of Canadian fisheries. It is also important to remark here that the fishing grounds of the Canadian coast are not only explored by Canadian fishermen but also by those of the United States, and this is done by virtue of International treaty. The large lakes are almost for the most part divided between the United States and Canada, but the Canadian statistics only include the fishing done in these waters by residents of Canada, the fisher population of which now number no less than 80,000 men. Until the last few years it was the codfish which maintained supremacy in the fish markets of Europe and America in quantity taken as well as in commercial value, but during the last three years the output of British Columbia salmon has outstripped the codfish of former years, and the value of British Columbia salmon, supplied to the markets of

the world was in 1897 estimated at 26,000,000 of francs. Following very closely the codfish and salmon comes the lobster, the sales of which during the past year amounted to nearly 18,000,000 of francs. The herring, whose habitat is principally along the coasts of New Brunswick and Nova Scotia, is also at the present time being caught in large numbers. The fishermen of New Brunswick disposed of lobster during the last year to the extent of 5,350,000 francs and Nova Scotia to the value of 2,700,000 francs. Next comes the Province of Quebec, which exported during 1897 fish of this species to the value of more than 1,000,000 of francs.

Foremost of all the provinces in general maritime production stands Nova Scotia with the sum of 40,500,000 francs, the cod alone in this province yielding in 1897 upwards of 40,000,000 of francs, lobster 11,000,000 and haddock 3,850,000 francs. Following the Province of Nova Scotia comes British Columbia with its enormous production of salmon taken on the Pacific coast and in the waters of the Fraser River. This province also in the production of flounders has only one close competitor, viz., Nova Scotia, which is slightly second in rank. From the Province of New Brunswick come nearly all the smelts and sardines, to a collective value of 3,600,000 francs. The Province of Quebec occupies in this category fourth rank, and its total maritime production for 1897, consisting almost exclusively of cod, lobster and herring, is placed at 8,685,000 francs.

Salmon and lobster canning is to-day one of the principal industries of the Canadian Dominion. The value of the salmon canned in 1897 rose to 24,360,000 francs, and that of lobster to 11,130,000 francs, representing an average of 30,000,000 lbs. of salmon and 15,000,000 lbs. of lobster, and this, too, without counting the considerable quantity of these two fish sent in the natural state to the markets of the interior and the United States.

CHAPTER IV.

The history of this industry is particularly interesting, in that it shows with what rapidity the taste for a food so accessible and convenient, is being propagated. In 1870 the total lobster production yielded only 100,000 francs, but four years later it had made a jump to 10,000,000, and finally, in 1897, it was estimated at 17,500,000 francs. As for salmon, it has taken even less time since its modest *debut* to become the most important and profitable of the fishing industries of Canada, and the Fraser River, which traverses British Columbia, furnishes the greater part, viz., about 10,000 tons.

Hunting and Fishing Territories.

Those who glance over a detailed map of British America are, as a rule, surprised at the incalculable number of large rivers, streams, medium sized and small, and lakes of all dimensions formed by nature for the sustenance of many varieties of fish, as well as for the pleasure and use of man. In the territory above the Saguenay alone may be counted among the principal rivers which empty into the St. Lawrence, the Maskinonge, Batiscan, Jacques Cartier, Montmorency, St. Ann, Gouffre and the Malbaie, and below the Saguenay are situated the Port Neuf, Betsiamis, Outarde, Manicouagan, Mecatine and Esquimault. All these rivers are augmented by the northern influx of the St. Lawrence, which extends with great depth to the point where its waters mingle with those of the Hudson Sea. The southern flow of the St. Lawrence is much less deep, but is nevertheless fed by a goodly number of smaller streams, which are important solely from the point of view of fishing and hunting. These streams include the

Richelieu, Yamaska, Nicolet, Becancour, Chaudiere, Etchemin, Ouelle, Rivière du Loup, Trois Pistoles, Verte, Rimouski, Metis, Blanche, Matane, Madeleine, etc., without including the Metapedia, Bonaventure, Cascapedia, Nouvelle and Restigouche. In a word, the entire country is as though furrowed by a network of streams of all sizes, and by an infinite number of lakes, bound together by beautiful and fixed rivers.

With the principal rivers of the Province of Quebec alone, one might make a liquid ribbon of more than 16,000 kilometers in length. These Canadian lakes are a source of incalculable wealth, quite equal to the Sound, the Gulf and the River St. Lawrence with their prolific tribes of fish, which might populate all the oceans of the globe if no obstacle interfered with their almost limitless reproduction.

Of the fresh water fish, the variety that yields the larger profit is probably the white fish, of which the production attains the amount of 25,000,000 lbs., valued at about 8,000,000 of francs. Further, the salmon, lake trout, pike, pickerel, carp, bass, perch, sturgeon, maskinonge or great northern pike, and speckled trout which abound for the most part in the rivers and lakes. In the west, and particularly in the Province of Ontario, the gamey black bass and maskinonge offer fishing of the most attractive description, and the large speckled trout of the Nepigon River, north of Lake Superior, has a reputation not overshadowed by the ouananiche or land-locked salmon of the Lake St. John district in the Province of Quebec. The principal salmon rivers of the Province of Quebec and New Brunswick, such as the Restigouche, Miramichi, St. John, Nipisquit, Cascapedia and the Saguenay, all for the most part rented by clubs or private parties, chiefly Americans, who make of fishing a recreation governed by rules and laws; who have made the expense of installation in their clubs considerable, and who have opened the roads and expended a great deal of money for the benefit of the surrounding regions.

For many years the Province of Quebec has been recognized as the paradise of amateur Nimrods and as

the country *par excellence* of the hunter and fisherman. In the forests of this province are found the stately moose, the largest animal of the deer family, peculiar to the American continent, measuring from 7 to 8 feet in height, carrying on its head a forest of horns, and whose strength and fleetness are equally combined. This animal is well worthy of the ambition of the most enthusiastic sportsman.

Next in importance among the larger animals, and first cousin to the moose, is the noble caribou, lithe, elegant, graceful, which is found in the mountains, the woods and by the shores of the lakes and streams. The caribou is remarkable for the astuteness with which it deceives the most experienced hunters. When wounded it defends itself with fury, and is so quick of hearing, that the *Coueurs de bois* are obliged in endeavouring to approach it to crawl on all fours upon the snow. The caribou shares with the moose the distinction of being one of the finest game animals on the continent of America.

In a lesser degree the red deer, wapiti or elk, roebuck, bear, wolf, otter, wolverine, lynx, and finally the beaver afford the hunter a considerable variety of sport. Among these latter animals, the beaver, emblem of Canada and a model of animal industry and sagacity, is the most prized for the market value of its skin: Then the marten, fox, pole cat, American marten, ermine and grey squirrel form and have formed for a long period, desirable objects for giving with their luxurious fur an indispensable element of well-being, comfort and elegance.

The greatest and most important of all the hunting grounds of British America is unquestionably Canadian Labrador, commonly known as the great north, which embraces an immense surface extending between 57 and 61° longitude west, and in the interior to the limits of the forests themselves. Added to this the whole length of the coast is continuously cut and hollowed out by creeks and bays, narrow, long and often very deep, which have made from time immemorial of this part of the Dominion, the chosen abode of sea birds, shell fish, miscellaneous fish and land carnivora.

The coast of the great north is in certain places full of indentations and garnished with rocks, islands and islets. Between these islands and islets cross and intercross a multitude of channels, sometimes very deep and forming interior basins suited to the reproduction of the lobster, which crustacean was formerly found there in enormous quantities, but which in late years have somewhat diminished in numbers. Twenty years ago lobsters were frequently taken weighing as much as 18 or 20 lbs., to-day the maximum weight of this crustacean is seldom more than 7 lbs. and even these are rare.

Every lobster fisherman considers himself perfectly justified in hunting the surrounding game, in consuming the flesh, in taking the feathers or skins, in robbing the eggs to serve as bait for his lobster traps, and does not hesitate to set nets at the mouths of streams frequented by salmon and trout, and unfortunately these latter fish nearly always deposit their spawn at the bottom of the creek where the lobster fisherman has established his traps.

The largest number of the web-footed birds of the goose and duck family generally rest at considerable distances from the coast, and thus relatively manage to escape the hunter, but there are two or three species belonging to these families which lay their eggs on the coast itself or on the neighboring islands. The most exposed of this species, as well as the most valuable, is the eider duck. The commercial value of the eider is well known; its down is sold in the London market at about 32 francs per lb. or 45 francs a kilogramme. This duck is in such extraordinary abundance in the Gulf of St. Lawrence that all the persistent stealing of its eggs has brought about is a diminution which has affected the species but little and which in any case could be easily remedied.

The skins of the fox, otter and marten invariably bring good prices in the market, and the skins of the black and silver species are worth 600 to 750 francs. The beaver is also met with in large numbers, although the hunter this animal pursues his calling with greater

difficulty than in former years. In the great game region which forms the back country of the provincial capital, are to be found numerous lakes and rivers, where the amateur fisherman may indulge to his heart's content. Such are Lakes St. Charles, Beauport, the rivers Montmorency and St. Ann, Lakes Joachim and Philip, the National Park of the Laurentides, the Jacques Cartier river and its neighboring lakes, Lac Desneiges, Vert, Lac des Roches, Lac Anoll, Lac Longue, Lac-à-la-Coupé, Fraser lake, Lac Regis, Lac-à-l'Epaule, Jacques Cartier lake, and finally the Sarcotoriski river and Lake Edward.

Then comes the district of Lake St. John, where are to be found a number of lakes and rivers controlled by fish and game clubs, several of which are situated in far-away regions, where ordinary mortals have never penetrated, and in the St. Maurice region are to be found the territories controlled by the Laurentian, St. Maurice and Shawinigan clubs, which possess many groups of lakes joined together by short portage. All the Ottawa and Gatineau regions are sprinkled with lakes, the number of which is as yet unknown and many of which are waiting for tourists to baptize them.

In the county of Pontiac, celebrated for its Lakes Kippewa and Temiscamingue, there is not one lake in a hundred controlled by clubs. Magnificent fishing streams are numerous.

In these regions delightful journeys might be taken by the shores of Lakes Abbitibi, Grand Victoria and the other lakes of this territory, in a circular journey of only 1,000 kilometres, and passing by Lakes Kekabonga and Des Alimet the hunter will find moose, caribou, ruffed grouse, and other feathered game in abundance. Phenomenal hunting can be had also in the valleys of the Morine and Maganacipi, north of the Mattawa river.

To the south of the St. Lawrence, the Richelieu river with its pike, bass, and maskinonge, and Brome Lake and Memphramagog with their systems of streams form a centre of attraction already well known.

Few people know the regions of Temiscouata and

Squatteck. Lake Temiscouata is a beautiful sheet of water, 45 kilometres in length ; in its vicinity are situated the deep and prolific Touladi river, Rivière des Aigles and finally the celebrated Squatteck, on the shores of which are found moose in large numbers. Let us mention once more the sources of the rivers Rimouski, Metis and Metapedia, also of the lakes Supérieur, La Croix, Humqui, Taché, Du Milieu and Mistigouche, the immediate region of these lakes being noted for caribou ; and finally the Gaspé peninsula with its hydrographical system consisting of the Cascapedia river, one of the most noted salmon of the world, and with its interior forests stocked with moose, and also the Saguenay region, celebrated among hunters for its herds of moose and caribou.

There are, too, in the Charlevoix district hundreds of lakes and rivers in the counties of Champlain, St. Maurice, Maskinonge, Berthier and Joliette, where large game can always be found in abundance. It is useless to continue this list ; it would require a small volume to make known all the numberless waters of the province of Quebec. It suffices to repeat that this province is the paradise of sportsmen and will continue to be so as long as the present physical conditions endure, which is equivalent to saying that to the goose with the golden egg is assured a prolific perpetuity.

Seal Hunting on the Ice Floes.

Who will believe that the immense fields of ice which form about the month of November in the Gulf of St. Lawrence are theatres of the most exciting, most murderous and most lucrative hunting done upon our globe ! Nevertheless it is so. As soon as winter has solidly invaded these latitudes and locked in its embrace the waters of the Gulf, innumerable troops of seals coming in from the Atlantic and penetrating the Straits of Belle Isle, which they take several days to cross, invade the fords, bays and creeks of the great estuary where fish abound,

which furnishes them with rich nourishment. During the month of February, the females give birth to their young on the ice fields which imprison the waters for immense stretches, amounting to thousands of square kilometres. The little ones grow with extraordinary rapidity, and towards the end of March, the time when the ice detaches itself from the seashore, become a prey worthy of the hunter. Schooners armed for the chase, each manned by a dozen men, set out from the ports of Point Esquimaux and of Natashquan, along the coast of Canadian Labrador, and also from the Island of Madeleine, and bear away towards the ice fields, which are literally covered with seals. These animals, young and old, wait for the moment when the youngest have become capable of taking to the sea to commence an emigration toward Greenland latitudes. The men then descend from the schooner, each armed with a stick and a knife, and the slaughter begins. It lasts from three to four weeks, when the schooners return to their respective ports with cargoes more or less precious, more or less considerable, which amounts in favorable years to as much as 1,200 skins per vessel.

Apart from the hunting done by sailing vessels is that which is made by means of steamers, some of which register up to 500 tons and carry from 100 to 300 men. Steamers have been known to bring back as many as 60,000 skins, and as the fur of the seal is worth, on an average, 15 francs, it is easy to form an idea of the annual value of these catches.

The Island of Newfoundland contains many commercial houses which have made enormous profits in the seal hunting industry of the Atlantic. Seal hunting is so remunerative that, in spite of the great expense which the pursuit of this industry entails, those engaged in it assert that the capital involved cannot bring in less than 25 per cent., and often yields from 40 to 50 per cent. The skin, as soon as it is stripped from the animal, is salted and packed for export to England, principally to the city of Bristol, where careful selection of the skins is made, superior specimens being used for purposes of winter

clothing, while the oil is extracted and furnishes lighting material for lighthouses, etc., as well as in the manufacture of elegant soaps. From eleven to twelve pounds of fat is required to make one gallon of oil.

Commercial Maritime Fish.

The infinitely numerous species of fish have, in general, two characteristics in common, namely: fecundity and voracity, and it is necessarily so, because the different species incessantly devour each other, and man also performs his part in the consumption of incalculable numbers of the fish which form such a large factor in his daily wants. The cod is amongst the number of those species whose reproductive powers are greatest. A Dutch naturalist counted as many as 9,344,000 eggs in one female. The cod is often called the "bread of the sea." Certain it is that the cod takes the place of bread in countries too cold for wheat growing purposes. If there is an article of food that may be called inexhaustible, it is fish. Far from failing, the demand grows every year and the production will doubtless finally become three or four times greater than it is to-day, and if southern countries such as Brazil, Spain, the West-Indies, etc., could be supplied with cold storage facilities, the cod and other fish exporting industries would be considerably benefited thereby. The inhabitants of warm climates regard dried cod fish as an indispensable article of diet, while pickled fish has an enormous sale in Europe, the United States and West Indies, and the quantity of dried cod exported to these countries is placed on an average of 35,000,000 francs. The cod fishing industry gives employment to a vast number of persons, and without taking into consideration the millions of lbs. consumed on the spot, by the 20,000 families of fishermen occupied in the capture of these fish, or the enormous quantities disposed of in the markets of the interior, the cod occupies first place in the list of food fish, as well as for the oil which, is known the world

over. This oil, which is extracted from the liver of the fish, is used for many industrial purposes, lubricating machinery, preparing skins, etc., and it is also largely utilized medicinally in the treatment of scrofula and other diseases of a debilitating nature. The swimming bladder furnishes a glue which is quite equal to that of the sturgeon. The eggs also are preserved for the table, unless they happen to be in a bruised condition when they become an object of commerce, like the intestines, and are used as bait in the sardine and anchovy fisheries. Finally the bones and entrails of the cod, submitted to certain chemical processes, are converted into a fertilizing manure, the qualities of which resemble the celebrated guano of Peru.

Yet, in estimating the value of the cod fish, the tongues and livers are often overlooked. These are by no means unimportant details of the economy of this fish, for the livers yield as much as 350,000 gallons of oil, which added to the number of pounds of pickled tongues, bring in about 1,000,000 francs per annum. Further, the price of cod fish bait represents each year, a sum equal to a quarter of the value of the cod fish yield. The sale of the salted intestines forms another article of commerce which it is well to study. For instance, in France and Spain, where the sardine and anchovy fishing is carried on, 50,000 barrels of cod intestines are consumed every year. Now Norway in the best fishing years can only furnish 35,000 barrels, and generally she exports 25,000, there remain the 25,000 barrels which Canada can supply, and from which the Dominion can extract another million of francs, each barrel of cod intestines being estimated at 50 francs. Cod is found in all the seas of the northern hemisphere comprised between the 40 and 60° of latitude. Since the fourteenth century, cod has been the object of an extremely active fishery with all the maritime nations; nevertheless, there is not the slightest apprehension that the supply can ever diminish. The general rendezvous of the cod seems to be on the great banks of Newfoundland, which is a submarine projection of 300 miles in length and 180 in breadth. The accumulation of these fish was formerly so large, that between morning and evening the

fishermen were busy casting their lines and drawing them in again, and disembowelling the cod fish taken to bait their hooks with the entrails. The fish were so thickly pressed against each other that a line thrown at hazard in the middle of them often caught several by some part of their bodies, and one man could frequently take from 300 to 400 in a day. Their voraciousness surpasses description. They throw themselves indifferently on everything that comes, but fortunate it is, that this insatiable fish has received from nature a singular advantage in that every time his greediness makes him swallow a piece of wood or some other indigestible material, he ejects it and resumes his place in the feeding ranks once more. The cod makes its appearance on the Canadian coasts at an uncertain period, generally speaking between the middle of May and the beginning of June. They have nevertheless been as late as the last two weeks of June. These variations are caused by the currents, winds and temperature, which determine the migration towards our coasts of numerous varieties of small fish upon which the cod feeds.

The herring and smelt, forerunners of the cod, announce every spring the arrival of the latter. The smelt is a handsome little fish, from 5 to 6 inches in length, and come in a compact mass, filling, so to speak, every bay and creek formed by the natural indentations of the coast. During all the time they press along in this manner the cod fish follow close behind and devour them by millions. While the smelt run continues fishing boats traverse the coast day and night in pursuit of them. Enormous quantities are thus taken and serve as bait for the capture of the cod. Fresh smelt is a delicious dish, and since a method has been discovered for preparing them like sardines, which they resemble, this fish has acquired a great commercial value by reason of the immense quantities which can be taken almost without expense, and already in many parts of the Maritime Provinces considerable numbers of smelt are carefully dried, put in boxes, and sent to the markets of the United States.

Cod-fishing lasts till the end of November, and is pursued on the great banks either in decked vessels, varying in dimensions from 60 to 100 tons, or in small open boats at a short distance from the shore. From ten to twelve hands generally man the decked vessels fishing on the banks. The bank codfish is much larger than the cod nearer the coast; they are, besides, a better quality, and on an average thirty codfish from the bank when dried are sufficient to make one (1) cwt. The fishing done in open boats is carried on off the small banks, distant from the shore some ten to thirty miles. These boats, perhaps the best of their kind in the world, are made by the fishermen themselves, and their dimensions vary from 20 to 30 feet in length. Two of these boats were shown at the International Fisheries Exhibition of London in 1883, where they attracted the attention of connoisseurs. Canada consumes a large quantity of haddock, a small variety of cod, for which the taste is more marked than for the real cod, and which, like it, does not bring satiety.

The Herring.

The herring fishery, which occupies second rank among the maritime fisheries of Canada, is absolutely disproportionate to what it might be if the industry were carried on in a larger scale. In fact, one finds herring in all the seas of the North Pole, and they form in certain seasons living banks, both long and wide, of many leagues and of enormous depth, and so dense that the fish which form them stifle by thousands. In the deep water occasionally, too, the nets which enfold them break in the vain effort to lift their contents to the surface. If one considers that on the coast of Sweden alone are annually taken more than 700,000,000, one can judge of the returns of the thousands of vessels which European countries devote to this fishing. It is to the herring fishery that Holland owed in the 17th century a great part of her wealth. This industry was a means of livelihood to

800,000 persons in the two provinces of Holland and Western Friesland. England employs in the herring fishery a veritable fleet of vessels, varying from 50 to 100 tons in burden, and she engages in this occupation enormous capital and over 800,000 men. "It is impossible, without being an eye-witness," says Commodore Fortin, naval officer appointed for the protection of Canadian fisheries, "to form a just idea of the prodigious number of herring eggs deposited along the length of the coasts when this fish goes to spawn. I have seen, several times, thousands of miles of sea shore covered with these eggs to a depth of two or three feet."

Every spring at the spawning season the herrings crowd the coast of the Province of Quebec, and, above all, in the magnificent bays formed by the Magdalen Islands. The commercial value of the herring industry produces on an average 13,000,000 francs per annum. This sum does not include the quantity taken for local consumption or used as bait for cod fishing. Neither does it include those used in many localities for manuring the soil. But this sum might easily be quadrupled as the herring fisheries of Canada are almost inexhaustible, and surpasses by many degrees those of the European continent. Large numbers of Americans are now, at considerable expense to themselves, engaged in the Canadian herring fisheries. In the spring, as soon as the ice has left the shores of the Gulf of St. Lawrence, the herring makes its appearance. Nevertheless, the spawning fish is not considered equal in quality to those taken during the months of August and December. The best herring of all is that caught on the Labrador coast, and is well known in the markets of the world. Canada exports annually some 500,000 barrels of pickled herring, 1,000,000 boxes smoked herring, and 17,000,000 pounds of fresh fish.

The herring is called the poor man's fish, by reason of its cheapness, the small expense which its capture necessitates, and its eminently nutritive qualities. Let us add finally, that according to the ancient naturalists the herring is a type of "migratory" fish. To-day this

theory is disputed, and it is believed that the herring keep within bounds when they disappear to sink themselves in the depths of their natural element, at the surface of which they reappear regularly in the spring of the year.

The Mackerel.

Here is a fish of 10 to 15 inches in length—plucky, game and exquisite for its edible qualities. The mackerel is a most voracious fish and feeds with avidity on its own species. Its body is long and active, covered over with very small scales, the back of a beautiful metallic blue, striped with black; the crown of the head blue, interspersed with black, and the rest of the body of a silvery white. Who does not recognise this picture of a fish extremely agreeable to the angler and still more agreeable to the epicure, no matter what kind of sauce is used in the dressing?

The mackerel is found in inconceivable numbers in almost all the seas, and travels in what is termed "schools." It passes the winter in the northern oceans, burried deep in the sub-marine slime, where sea vegetation is plentiful.

Towards spring it comes down along the coasts of Labrador and invades the shores of Nova Scotia, the Bay of Fundy and the Gulf of St. Lawrence, but is found most numerous around Prince Edward Island, Magdalen Islands and the Bay of Chaleurs.

The fishermen of Nova Scotia and New Brunswick prosecute mackerel fishing on a large scale and reap good profits. For a long time the enterprising fishermen of the United States had the exclusive monopoly of the mackerel industry in Canadian waters, but to-day, Canadian fishermen can show with pride a fleet of fine schooners which compare favourably with American vessels, reputed the best in the world. Not only do they possess these schooners, equipped in the most modern manner, but they have also adopted the best devices for

fishing now known and they carry on this industry with all the tact and all the intelligence necessary to the success of their enterprising and precarious calling. The mackerel schooners have ordinarily a capacity of 60 to 100 tons and are manned by 10 to 15 men. They have little depth but are very wide and pointed fore and aft, which gives them a spacious deck where curing and salting operations can be easily done. The product of mackerel fishing are for the most part cured in salt, but they are also exported fresh or preserved in boxes in the manner peculiar to lobster packing. The best markets for the sale of mackerel are in the United States, Great Britain and the West Indies. The output of this fish amounts to about 7 million francs per annum, but it is far from yielding as much as it might, the mackerel fishing like that of the herring being scarcely in its infancy, all that is necessary for its further development being an increase of capital.

The Lobster.

It is hardly more than a quarter of a century since the birth of the lobster industry in the Maritime Provinces of Canada, particularly in the Bay of Chaleur and in many of the rivers of the Canadian Labrador, and at that time one could procure, in most of these districts, lobsters of medium size for five cents each. About 1870 an enterprising citizen of New Brunswick came to Prince Edward Island and founded a factory for the preserving of lobsters. The investment succeeded from the first year, and was soon followed by other capitalists who invested considerable money in the industry, which progressed from that time with astonishing rapidity. Prince Edward Island in 1871 had an output of 67,000 boxes of lobsters, but four years later there were packed 151,248, and in 1892 the number of boxes had increased to 6,300,000. This same province, which in 1871 possessed only one factory, now has 120 in full activity. The same increasing progress is apparent in New Brunswick and Nova Scotia. In

1870 the proprietor of the only lobster factory then existing in New Brunswick placed upon the market some 20,000 boxes of lobsters; 12 years later, in 1882, about 6,000,000 boxes left New Brunswick for the United States and Europe; and Nova Scotia, which in 1870 could only offer 30,000 boxes exported in 1883 nearly 5 millions. To-day 740 lobster factories can be counted in the Maritime Provinces, and the value of the output in 1897 was estimated at 17½ million francs, the province of Quebec only accounting for little more than one million. The lobster industry employs, according to the last statistics, 15,165 persons, of whom 1,870 are in the Province of Quebec. The value of lobsters earned was 11,130,000 francs, which represent an average of 15,000,000 pounds contained in 11,130,554 boxes. England is the best market for the Canadian lobster. She buys three-quarters of the canned lobster, the other quarter going to France, Germany, Brazil and the West Indies; besides this export enormous quantities of lobsters are shipped in the natural state to the interior and the United States.

The Oyster and Seal Fisheries.

We mention only by way of memorandum the oyster and seal fisheries; this latter animal being known in the province of Quebec as the Loup Marin. The Canadian oysters, which bear respectively the names of Malpeque, Caraquette and Buctouche, are incontestably the most luscious bivalves in the world. These oysters are not as yet well known in foreign countries, for the reason that oyster culture has not been so far developed in Canada, and Canadians cannot spare sufficient for export purposes, as the home consumption is large enough to keep pace with the supply. As for the seal fishing, which is done with nets in November and December, it is a very limited industry compared that of the spring hunting on the ice floes. The winter season, namely November and December, is too rigorous to permit of regular systematic fishing; and the seals, which are taken in nets and frozen a few minutes after removal from the water, are

generally placed in a shed where they remain until the warm sun of spring has thawed them sufficient to allow of their being cut into sections and the fat melted.

Fresh Water Fish of Commerce.

The Salmon.

The salmon is the king of fish and the Restigouche River is the home of the noblest specimens ever known. The Restigouche flows between the provinces of Quebec and New Brunswick and empties into the Bay of Chaleurs. From a commercial standpoint British Columbia salmon dominate all the other fresh water fish ; but the *salmo salar* of the Atlantic is superior to the British Columbia representative as well for the excellence of its flesh as for its sporting qualities. Furthermore the salmon is a very democratic fish ; it spawns indifferently in all inviting waters and on gravelly banks, where it lies and fertilizes its eggs : it recognizes no other distinction than that of *avoir du poids* and when its weight attains 40 lbs. or upwards, has no other desire than to figure in a Grand International Exhibition.

It has been seen in the preceding pages that the salmon taken in British Columbia during 1898 represents the sum of 30,000,000 francs. As for salmon captured in the numerous rivers of the Maritime Provinces, and particularly in the Province of Quebec, it is impossible to estimate the value as statistics on these subjects are lacking ; and there are only in these provinces two or three business firms engaged in the fishery. These houses export either to the United States or to the markets of the Canadian interior. Nevertheless the trade in fresh salmon between Canada and Europe, will not long be delayed, thanks to the use of refrigerator chambers or cold storage, which is of late coming so much into vogue. The salmon streams of the province of Quebec, on account of the extraordinary number and size of the fish they yield, are renowned the world over.

In the first place the Grand Cascapedia, the resort in former years of the Governors-General of Canada, has seen upon its shores more than one prince of the blood and some of the first peers of the realm of Great Britain. The American clubs luxuriously installed on its banks have leased for a term of years pools in the lower part of the river, and the various resident proprietors along the course of the stream have no difficulty in disposing of their land at fabulous prices. To illustrate : a wealthy business man of New York paid 20,000 francs rental for the cottage and adjoining salmon pool belonging to the Princess Louise, wife of the Marquis of Lorne, and the privilege of using one rod per season frequently costs from 250 to 750 francs. Following the Cascapedia, comes the Restigouche, which is one of the finest streams known to the salmon angler, and the privilege of fishing in its waters is controlled exclusively by private clubs. This river is divided into five sections, which are leased at fabulous figures. An organization consisting of wealthy Americans occupies two of these divisions; they have also leased the river Patapedia, one of the tributaries of the Restigouche, and built a beautiful club house at the junction of the Restigouche and Metapedia.

The country north of the St. Lawrence has also excellent salmon rivers; among them are the Godbout and Marguerite, north west of the Seven Islands; the Moisie, which furnishes the company of Holliday Brothers, with about one hundred thousand pounds of salmon yearly; the St. John river, the Mingan, Romaine, the Natashquan, and finally the river St. Augustine. On the north shore of the St. Lawrence are to be found flowing out of Gaspé, the rivers York, St. Anne des Monts, Cap Chatte, Matane and Rimouski, all of which are regularly frequented every year by numerous fly fishermen.

The White Fish.

The white fish vies with the salmon in the excellence and firmness of its flesh, its nutritive qualities and com-

mercial value. It is sold in all the American markets and the consumption is prodigious, yet the white fish never takes bait, for the very good reason that they are devoid of teeth. They have a very small head and rather large body, and on seeing them one recognizes at once that they have been made to be eaten. The white fish is caught principally in the five great lakes of North America, and the white fish of Lake Superior are accounted the finest of all. These fish weigh on an average 4 or 5 lbs., but occasionally one is caught weighing as much as 15 lbs. The white fish derives its name from the exquisite whiteness of its flesh, which is furnished with a gelatinous substance the delight of epicures. It is said that the flesh of this fish never produces satiety, but on the contrary excites the appetite and demands no accompaniment of other foods. As a rule, the white fish is caught by means of nets which are let down into the deep portions of the lake, but in the autumn a great quantity are taken with ordinary seines placed near the river mouths, when they come in troops to spawn. It is not so very long ago that whole tribes of Indians were obliged to subsist entirely on white fish. This fish constitutes one of the greatest sources of wealth in the history of fresh water fisheries, the annual production never brings less than nine or ten thousand tons, that is to say one-fifth of the cod production, and in commercial value the white fish represents a sum of 7,500,000 francs.

The Trout.

Trout abound in almost all the lakes and rivers of Canada, and are to be found in all varieties. They serve principally for interior consumption, although a considerable quantity is exported yearly to the United States. In the Maritime provinces and in that of Quebec, they are mostly consumed on the spot, and they constitute one of the ordinary food supplies of the settler class. In the lakes of Ontario, the trout fishing is regularly carried on for commercial purposes, and the finest and most beautiful variety of this fish is the speckled trout, inhabiting

the waters of the Nepigon to the north of Lake Superior. This lake is the largest of all the Algoma district ; is 200 kilometres in length and 100 in breadth ; its surface is dotted with numerous islands, and its waters, which are clear and limpid, contain millions of trout. The river Nepigon, which rises in the lake just mentioned, also contains trout in large numbers and flows through several bodies of water until finally it empties into Lake Superior. The fish in the swift current of the river Nepigon frequently attain the weight of 9 to 10 lbs. and fight with a vigor only equalled by the salmon.

In the district of the Bay of Chaleurs, the rivers Nouvelle, Escuminac, Bonaventure, Grand and Little Cascapedia, all contain sea trout running up to 6 or 7 lbs. in weight. Lake trout fishing is usually carried on by means of small steamers, generally 50 feet in length by 12 feet wide and furnished with cold storage apparatus. As soon as the nets are taken out of the water, the little boats steam away under full pressure for the nearest point of shipment, where the fish carefully packed in suitable boxes are despatched to the markets of Canada and the United States. A few years ago the quantity of trout and whitefish exported fresh by the Ontario fishermen was estimated at 4,500,000 lbs., which included 5,079 bbls. of whitefish, 9,758 bbls of trout, and 41,360 bbls. of pike, sturgeon, maskinongé and other fish.

The best and largest of all the trout species is known as the salmon-trout, which is chiefly met with in the rivers emptying into the Gulf of St. Lawrence. This fish frequently attains a weight of 30 to 40 lbs. and is noted for its superb edible qualities.

The Sturgeon.

The sturgeon, last survivor of the 700 species of *Janoicles* which populated the seas after the cretaceous period, traverse to-day the St. Lawrence from Cap Tourmente, at the point of union of salt and fresh water, and upward to the head of Lake Superior.

It is a very much esteemed fish, the flesh of which constitutes a food of the most substantial character and which combine the dual qualities of pork and veal. This fish furnishes material for various domestic industries of importance, isinglass and caviare and others; and the glues used for the manufacture of envelopes, etc., come from the swimming bladder of the sturgeon. Formerly in Canada the flesh of the sturgeon was not popular as an article of food, but to-day it is used to a fair extent and the fish sell for from 7 to 12 francs each. The caviare made from the eggs of the sturgeon brings on an average 1 franc per lb. The sturgeon of the lakes, so called on account of their natural habitat, frequently weigh from 50 to 200 lbs., but it is much inferior in size to the sturgeon of British Columbia, which occasionally attains a weight of from 100 to 1000 lbs. The commercial value of the sturgeon is not very considerable, but this can be explained by the fact that Canada possesses so many fish of other varieties more suitable to the average palate.

Other Species.

The pike (often termed the shark of fresh water) frequently attains the length of four feet, is voracious and carnivorous, and will attack almost anything in its native waters. The flesh of this fish is held in high esteem on all Canadian tables.

The maskinongé, or Great Northern pike, is well known to sportsmen as being in the very front rank of game fish, and the flesh is also wholesome, palatable, and worthy of the daintiest epicure. This fish is found distributed in many of the Canadian fresh water lakes and rivers. Another game fish and one that takes the fly with avidity is the black bass, considered by many sportsmen superior to even trout or salmon.

The ouananiche, or fresh water salmon, frequenting most largely the region of Lake St. John in the vicinity of Quebec, has attained a classical reputation for its game qualities and is moreover a beautiful table fish.

Other minor varieties of fish comprise the tommycod and smelt, which frequent salt water and tidal streams, and tommycod is the fish to which Acadians have given the name of "poulalmond." An enormous quantity of these tiny fish is annually consumed in the Dominion and also exported to other countries.

Fur Bearing Animals.

The fur bearing animals, properly speaking, of Canada, namely those which are regularly hunted and which supply the fur of commerce are usually confined to the following, viz. : Bear, fox, wolverine, lynx, fisher, marten, otter, beaver, American marten and muskrat

One might and one ought to add to this list the weasel, squirrel, polecat, and flying squirrel which, on account of the beauty and coloring of their winter coats, belong in reality to the fur-bearing animals, but which do not bring to the trader profits enough to be noticed in a general summary. There might also be mentioned the wolf, which is not systematically hunted, although its fur is of the softest and warmest description. The same might be said of animals such as the moose and caribou, whose flesh is excellent and whose skins are put to various uses.

The Bear.

The Canadian bear is brown or black, with an orange muzzle. Like man, the bear is absolutely carnivorous ; it eats everything it can procure—meat, fish, fruit and herbs—and in winter chooses a retreat in the hollows in the middle of rocks or decayed tree trunks and passes the whole of the cold season in complete torpor. The bear frequently accumulates sufficient fat to make its flesh tender and succulent, and one was killed recently which had a layer of lard five inches deep.

Opinions differ very much on the subject of the bear's temperament, and one does not know how to give any precise ideas on that score. Some observers say that the

bear is generally tame and good-natured and others believe it to be fierce, because it never scruples to feed upon lambs, calves, muskrats and also beavers whenever opportunity presents. The bear is a veritable pasha ; it repudiates monogamy, and, had it the gift of preaching, would unquestionably enter into the Mormon Brotherhood. However, the bear is a good mother ; its maternal instinct warns it that the little ones can not be surrounded with too much comfort, and during the whole period of gestation the she bear hides herself in the very heart of the woods, where she gives birth to two or three little ones yearly. The Canadian bear never becomes a very large animal and it is rarely that its weight exceeds 300 to 400 lbs.

The Fox.

The fauna of Canada numbers four species of fox, the blue, silver, crossed and tawny. The first species alone is clearly distinct from the others by its shape and by the snowy whiteness which its fur assumes during a short period in winter, while with the three last species nothing distinguishes them but the color of the hair. This diversity in the species, if, however, they are a species, does not prevent a general crossing ; frequently in one litter are found fox cubs of which one is silver, another yellow and a third crossed, etc. However, the blue are not found in this promiscuous coloring.

The blue fox is the largest of the American species and is extremely rare, whereas the white or dun-colored fox is common enough. One may be assured of this fact by glancing over the following statistics of the Hudson Bay Company during a space of 14 years :

White Fox	4,000
Silver and Crossed	665
Red	300
Black	30
Blue	15
Total	5,000

The Canadian fox has no settled abode ; it overruns the country in every sense of the word ; it is a gourmand as well as tramp, and differs from his European cousin, who, if he has an equal penchant for rabbit and chicken, has at least a settled habitation or place of abode. It is not yet known whether the Canadian fox obeys regular laws of migration, but one thing is certain, that is his extreme abundance on the northern coast of the Gulf of St. Lawrence. Like all the other fur-bearing animals, the fox generally hides away during the Canadian winter.

The skin of the fox affords very valuable fur, and those of the black and silver varieties attain remarkably high prices. A black fox skin has been known to sell at 600 francs, and, singularly enough, the skin of the blue fox, the rarest of all, scarcely attains the price of the double crossed.

Following is a table giving the minimum and maximum figures paid on the north coast for skins of foxes of all varieties :

FOXES.	MINIMUM.	MAXIMUM.
Yellow	6 francs	12 francs
Red	7 "	15 "
Crossed	20 "	40 "
Double Crossed	30 "	70 "
Silver	140 "	175 "
Silver Black	175 "	240 "
Black	275 "	600 "
White	12 "	17 "

The Wolverine.

The wolverine is the most intelligent and crafty of all the fur-bearing animals, and the savages of the mountains call it "Qua-quasut" (Devil of the Woods). It passes its life as the active enemy of all the other animals inhabiting the forest, not excluding the hunter himself, rendering his traps useless and often obliging him to

change his hunting territory. Its odor is unmistakable and will frequently reveal its presence even when the trap is covered with two or three feet of snow. Besides being the most malicious of animals, the wolverine is also the most intelligent, and its manner of procedure denotes faculties truly well above those of ordinary instinct. It seems to have a particular predilection for everything that is the property of human beings, and not only does it destroy all the traps it discovers, but also pillages and devastates the camps, and carries to a distance the clothing which it discovers there. The wolverine is sufficiently courageous and possessed of a profound ironical instinct. It appears to be afraid of nothing, and seems to laugh at everything. It is of uncommon strength, though its body is scarcely larger than that of a medium-sized dog. Strongly armed is the wolverine for theft and carnage, possessing, as it does, 38 teeth, of which twelve are incisor, four canine and the rest molar. Monsieur Henry de Puygalon, a mighty hunter before the Lord and a great naturalist before men, affirms that the wolverine pierces the huts of the beaver, destroys their dykes, and takes possession of their homes. It also attacks other animals of larger size; and it is a well-known fact that it can kill the young of the caribou. This unique animal defies everything, poison as well as traps and guns, and it is seldom that it can be induced to swallow poisoned meat. When this does occur, the wolverine at once relieves itself of the ingesta by ejaculating all that it has swallowed.

The Lynx.

This animal resembles somewhat the hyena, possesses very large paws in comparison with its body, enormous claws and a very small tail. Carnivorous as much as it is possible to be, the lynx prefers to eat hares, muskrats, and grouse, and having the eyes of a cat, it climbs about the trees at night to catch the unwary bird asleep on its nest. This animal is excellent eating; the flesh tasting like lamb, and its fur is remarkably beautiful and abun-

dant in winter. The female of the lynx gives birth to from four to six young, and the skin of the lynx, which is much used in Canada for clothing, finds a ready sale at from twelve to twenty francs.

The Pekan.

This animal is first cousin to the sable, but possesses a larger body, the fur of which is much denser than that of the sable, and the price varies from thirty to forty francs. Rapacious and destructive like the fox and lynx, the pekan has become very rare in the Province of Quebec.

The Marten.

This is a beautiful little animal, supple, graceful and lithesome. The marten seems to be a very refined miniature of the pekan, and, like it, feeds on hares, grouse, squirrels, and fish, and also the berries of the mountain ash. Its fur is noted for its richness and lustre. It is one of the most constant inhabitants of the woods, and is very easily trapped. As regards the fur of the marten, one can distinguish the yellow, brown and black marten. The first is seldom seen in the forests north of 47 degrees, while the habitat of the black marten, the most beautiful of all, is situated in the heart of the most northerly forests. It closely resembles the sable already mentioned. The brown marten is most commonly met with in the Province of Quebec, the country *par excellence* of the beautiful fur-bearing animals. In certain years it is very abundant, because it has a periodical pension for certain territories. The female gives birth to three or four little ones yearly, and she nurses them very tenderly. The market price of the skin is variable, fluctuating from eight to forty francs.

The Otter.

The otter is an aquatic animal, strongly resembling the seal, and its luxurious fur of deep tone is very much esteemed and much worn in America. The skin gen-

erally sells at forty to fifty francs. The otter is endowed with a voracious appetite, and destroys numbers of fish of all varieties. The body of the otter has every appearance of vigor and agility. It inhabits the banks of rivers and lakes, in retreats hidden from all human eyes, in the middle of rocks and roots, and which is only accessible under water.

Its hind feet are webbed, which makes it eminently suitable for swimming, and even the most agile of fish cannot succeed in escaping its clutches. On dry ground it is comparatively lacking in suppleness, but still is quite able to traverse the foot paths whence it desires to follow. The female of the otter is very much attached to its offspring, and gives birth to two or three young at each litter.

The Beaver.

The beaver is a model animal; intelligent, hard working, economical and provident, it possesses all the qualities and all the gifts except that of music, and this defect exists because, unfortunately, its hearing is not sufficiently developed, while its sense of smell exists to an extraordinary degree. Upon the beaver has been built all sorts of legends. Thus the beaver, the eminently sociable animal of which we have so often heard, does not mingle with its relations to the point of associating with them and forming villages on the borders of a lake common to all, but they live generally alone with their little families on the shores of a chosen pond or lake, and if other families of beaver come and join them, it is because the territory is very extensive, very remote and isolated.

The beaver is an incomparable swimmer; its hind feet are webbed, and its mouth contains twenty-two teeth, four incisors, in the form of a crescent, and sixteen composite molars. With such an arsenal in the upper orifice, it is quite conceivable how the beaver manages to dam the rivers and lakes to maintain for themselves the water

level and construct a habitation of two flats, one submerged and the other on the surface of the water. Besides this cabin, the beaver constructs a hiding place along the river, in which he takes refuge when danger threatens. The two flats of the beaver cabin communicate with each other, but the animal is always at the door of the lower flat. The upper compartment is divided into cells, where each member of the family constructs a bed of moss. Generally speaking, a family is composed of father, mother and three offspring, but often there are five little ones, including two of the preceding year, to which the hunters give the name of middles. Finally, it occasionally occurs that cabins containing eight or ten beavers are found, but this is a very rare experience.

The flesh of the beaver is much esteemed by hunters and its tail is a delicate morsel.

Beaver trapping is one of the most fruitful of the fur industry. The skin is sold by the pound and brings on an average from 18 to 20 francs. Although a war of extermination has been for a long time waged, the beaver has not yet appreciably diminished in numbers.

The American Marten (Sautereau)

is a handsome little animal of lively appearance, and its fur is much sought after for the manufacture of muffs and winter head-dresses. For some time the skin of the marten had gone out of fashion, but the taste has lately revived. The American marten makes its home among the rocks scattered along the shores of lakes and rivers, and the peculiar odour which it emits never fails to betray its presence. The female of the marten gives birth to four or five little ones yearly.

The Musk Rat.

The musk rat bears so strong a resemblance to the beaver that it is believed to be a diminutive of the latter,

but its tail is much narrower, body considerably smaller, and it is furnished with odoriferous vesicles suggestive of the musk, which gives the animal its name. The habits of this animal are akin to those of the beaver, it feeds principally on aquatic plants growing at the bottom of the water, and which it transports to the bank to eat at its leisure. The musk rat is very abundant, the female giving birth every year to two or three litters of eleven little ones in each litter. On the shores of lakes that are well provided with aquatic plants, one is always sure of finding the musk rat in large numbers, but the taste of the musk rat for aquatic plants does not prevent it from feeding upon the fresh green grass of the meadow. The skin (fur) of this animal is valued at only 1 franc per skin.

The Skunk or Pole Cat.

The body of the skunk strongly resembles that of the domestic cat, and the fur, which is profuse, is marked by black and white stripes, and is much used for purposes of winter clothing. The price of the skin varies from five to six francs each.

The Squirrel.

There are three species of squirrel—Traveller, black, and Hudson Bay squirrel. The flying squirrel is a very interesting little animal, and the membrane with which it is endowed by nature enables it to soar as if on wings from tree to tree. The skins of all these animals are so cheap as hardly to deserve notice.

The Game Birds of Canada.

The game birds of Canada may be summed up into two classes—migratory and non-migratory, the former group far out-numbering the latter. Among the non-

migratory are the wild turkey, ruffed and pinnated grouse, and black duck ; but occasionally slightly wounded birds, or those which in some manner have missed the autumn flight southward or spring emigration to the northern nesting grounds, will remain behind in Canada for a season or perhaps longer. These cases, however, are rare, and in no way affect the great annual migrations. The turkey, the largest of our domiciled birds, and once very common, particularly in Western Ontario, is to-day, owing to the injudicious killing of years ago, a veritable *rara avis* ; however, the patient hunter may even now make a fair bag in the forests bordering on the shores of Lakes Erie and Huron. Wariest of all American birds and most difficult of approach is the turkey, whose weight frequently attains to 30 or 40 pounds.

The ruffed grouse is widely spread over every province of the Dominion, while the pinnated variety is largely confined to the prairies of the West. Both are extremely fast-flying birds and will test the nerve and eye of the most experienced wing shot. The black duck, too, ranks high among Canadian sportsmen, and are as numerous as one could desire. Along the shores of the Maritime Provinces of Nova Scotia, New Brunswick, Prince Edward Island, and Quebec, geese, duck, and brant are very plentiful during the spring and autumn seasons. The Bay of Chaleurs, in the vicinity of the Gaspé peninsula, often contains herded together millions of these birds, which stop to feed on their annual flights from north to south and *vice versa*, and the same conditions obtain all along the Eastern coast line. In the provinces and territories of the Canadian Northwest, however, are the shooting grounds *par excellence* of wild geese, and ducks ; particularly the former. There they have sought a temporary refuge *en route* north or south ; and the reason is obvious. The prairies of the Western United States once literally swarmed with game, but market hunters killed and slew so remorselessly, that finally the migratory game, instinctively looked for less dangerous passage ways, and the Canadian Northwest became the favorite air route of the feathered tribe. All

through this territory, geese and ducks are to be found in vast multitudes—besides every other variety of aquatic birds peculiar to the North American Continent.

Lake Manitoba, a short distance from the City of Winnipeg, reached by the Canadian Pacific Railway, is a noted rendezvous for water-fowl, which include the trumpeted and whistling swan, the Canada goose, Ross' goose, lesser snow goose, and Hutchin's goose, and also several varieties of ducks, namely: Mallard, black duck, canvas back, red head, pintail, wood duck, blue wing, golden eye, buffle head, etc. Besides these are found snipe, quail, golden plover, great flocks of curlew, and many others of lesser importance. The marshes, too, of the Canadian Northwest swarm with cormorants, pelican, Sandhill crane, coot, rail, etc. While we are discussing this particular region and its prospects for feathered game, we might specify a few of the places where more than ordinarily good shooting may be had: Reaburn Station, for instance on the Canadian Pacific, thirty-five miles west of Winnipeg, is well worthy a trial. There are plenty of duck on the lake close by, and as a rule heavy bags are made. In this vicinity, too, prairie chickens and plover can always be found. Another good point is Whitewater Lake, in Manitoba, a few miles from the provincial capital. Here "chicken," snipe and plover are to be had in fair numbers, and there are thousands of duck, geese, and other water-fowl. The waters and shores of Lake Dauphin and Winnipigoosis afford a magnificent territory for the feeding ground of duck, geese and white swan, the latter of which is one of the noblest of birds, his trumpet-like call being heard for nearly a mile. From McGregor to Brandon, along the main line of the railway, the country is full of ducks, "chickens" and grouse (ruffed and pinnated), but for wild-geese shooting Buffalo Lake, some twenty miles north of Moose Jaw, is probably the finest situation in America. Here the geese in countless numbers come down from their feeding grounds in the Arctic circle in the months of September and October, and remain there until they take flight for the south, when ice begins to form on the lake. The

wheat stubble on the shores of this lake affords splendid opportunities for the constructing of blinds which are used by the sportsman, who lies in ambush for his quarry. The entire Province of Manitoba is noted for its great abundance of feathered game, but the territory of Alberta is also peculiarly favoured in this respect, and weeks, aye, months, might be spent in Alberta among the geese, swans, prairie chickens and ducks, which are found in abundance all through the territory, which is easily accessible by the line of the Canadian Pacific Railway. Still further west, in the Province of British Columbia, we come to a region where the sportsman may with confidence reload his favorite No. 10 or 12 bore. British Columbia, besides possessing most, if not all the game birds already mentioned, also contains within her borders the English pheasant, introduced some years ago, and now thriving both in number and quality. These birds are found in abundance on Lulu Island and Sea Island, at the mouth of the Fraser, within five miles of New Westminster, and with quail, duck, snipe and plover, furnish excellent sport for "the man who carries the gun." The older provinces of Ontario, and particularly such districts as Algoma and Muskoka are prolific of duck, woodcock, snipe, ruffed grouse, etc., while the shores and waters of Lakes Erie, Huron, Superior and Ontario are noted everywhere for aquatic birds during the proper season. Western Ontario also is well supplied with that game little bird the quail, which closely resembles the European variety. The Province of Quebec, with its myriads of lakes, rivers and forests, can furnish to the sportsman a great variety of feathered game. The Quebec forests is the permanent home of the ruffed grouse, one of the speediest birds that ever tested the gunner's aim, and in the northerly portions of the province, the beautiful snow white ptarmigan, makes his winter abode, and snipe, woodcock, duck and geese are abundantly present in nearly all parts of Quebec during the autumn season when shooting is permissible. The different provinces of the Dominion have, as a rule, their own seasons during which fish and game may, or may

not, be taken or killed. The season, for instance, when game birds can be shot in Manitoba, is as follows: Game birds (open season) all varieties of grouse, including prairie chicken, pheasant and partridge, between October 2nd and November 14th. Woodcock, plover, snipe and sandpipers, between August 2nd and December 31st. All kinds of wild duck, geese, sea duck, widgeon and teal, between September 2nd and April 20th. Upland plover from July 16th to December 31st.

THE NORTHWEST TERRITORIES.

Open Season—Grouse, partridge, pheasant or prairie chicken, September 16th to December 14th. Wild duck of all varieties and geese, from August 24th to May 14th. Plover, snipe or sandpipers, August 2nd to December 31st.

BRITISH COLUMBIA.

Open Season—Bittern, September 1st to February 28th. Ducks and geese, September 1st to February 28th. Heron, plover and grouse of all kinds, including prairie chickens, September 1st to December 31st.

NOVA SCOTIA.

Open Season—Woodcock, snipe, teal, blue winged duck, wood duck and geese, September 2nd to February 28th.

NEW BRUNSWICK.

Open Season—Grouse, from September 21st to October 31st. Woodcock and snipe, from September 2nd to November 30th. Geese, brant and black duck, from September 2nd to November 30th.

ONTARIO.

Open Season—Woodcock, snipe, plover, rail, grouse, pheasant, September 15th to December 15th. Wild duck of all kinds, September 1st to December 15th. Quail, October 15th to December 15th. Swans and geese, September 15th to May 1st. Wild turkeys protected until October 15th, 1900.

QUEBEC.

Woodcock, snipe, plover, curlew, sandpipers, September 1st to January 1st. Grouse, September 1st to December 14th. Ptarmigan, November 1st to January 31st. Wild duck of all kinds and geese, September 1st to March 31st.

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