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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 6.

MONTREAL, JUNE 15th, 1881.

VOL. I.

We wish to publish the Game Laws of New Brunswick and Nova Scotia. Correspondents in the above Provinces would do us a favour by addressing authentic copies to 806 Craig Street, Montreal.

THE NATASHQUAN.

The river bearing the above name, meaning "where the seals laid," enters the sea on the north shore of the Lower St. Lawrence, some distance below the settlement of Esquimaux Point, and almost opposite the north-east end of the Island of Anticosti. The harbour of Natashquan is 244 marine miles from Gaspé Basin, and 372 from Quebec. The entrance to the river is about four and a half miles east from the settlement, and the whole of the coast at this place consists of sand. Iron sand also occurs in many places in abundance. It appears to us that the Natashquan has been during early ages, a great drift outlet from the far interior, as on its banks for twenty miles inland, the iron sand can be found at this day. The Chief of the Mountain Indians informed us that this river decreases in width and depth as one proceeds north; it branches off into a number of small rivulets, and that iron sand is seen far in the interior. Its estuary has doubtless undergone many early changes, and we are told they still continue. The channels of the river are greatly encumbered by sand, making it difficult for an ordinary keeled boat to reach the camp near the falls. This was the case in 1867, when two men were required to pole the tortuous stream. Half way between the estuary and the fall, the river is blocked up by three long islands, producing a strong current on the eastern channel. The fall is not more than nine feet, but on account of an almost squarely formed island above it, the force of water is great. It was the daring attempt to leap this

nine feet fall in a canoe, that cost Mr. Astley his life last summer. During the year 1867, only one salmon netting station was allowed by Government, and it placed in salt water one mile west of the Hudson Bay Post. We are now informed that there are nine or ten salmon nets placed in the estuary; two from the large sand island in the centre of the river outlet; one a short distance west of the Post, and three above it on the same side, and four from the opposite bank. Now we believe this is over doing a river, which was always considered a good surface fishing one. It is therefore no wonder that *Salmo salar* is becoming scarce in this wholesale dry-salting, smoking and tin-canning age. The Natashquan from its coast-arenaceous situation, and wide extent of estuary will always be a good salmon river, but many agencies are at work to destroy its prolific proficiency; for instance, during our visit we made a charge before Commander Fortin against the Indians then camping near the Post, to the effect that when they depart for the north in August or September, up the Natashquan, they reside close to the salmon spawning grounds, and spear the fish indiscriminately. The speared salmon are spread open, dried, smoked, or formed into heaps in the woods for future use in case of want, or not being successful in the capture of caribou; but should they be fortunate in obtaining plenty of the latter, these heaps of speared salmon are not required, but are allowed to rot or become food for Labradorian quadrupeds. The Chief on being asked if the charge was true, answered that it was perfectly true; that he had no control over his people at this time. He honestly stated they speared the salmon to revenge the Government for taking from them the liberty of fishing the rivers when visiting the mission. What is to prevent these Mountain Indians, who range the coast from the Saguenay to

Blanc Sablon, from acting in like manner? If this system of destruction has been carried on since 1867, we cannot wonder that salmon are scarce. If the salmon entering the northern rivers were allowed to carry out natural laws, the Labradorian spawning grounds would ultimately attain their native fruitfulness, and the surface and estuary net-fishing in these rivers become the most celebrated in the world. When we visited Natashquan there stood an old dilapidated shanty opposite the pools, on the beams of which were recorded the fishing scores of the gentlemen who were there on previous years. To day it has a camp building almost equal to those on the Godbout or Moisie.

THE MONTMORENCY.

A good Brook Trout river entering the St. Lawrence about six miles east of the city of Quebec, where its waters fall from a height of two hundred and fifty feet, known as the "Falls of Montmorency." The locality is historical and a source of attraction to tourists and others visiting the ancient capital. About two miles above the "Falls" the scenery is primitively grand; limestone rock margins its banks; here it is formed into "natural steps," about a foot in thickness, and for half a mile they recede one above the other to the height of twenty feet, as regularly as if made by the hand of man. On the right bank, there is a terrace of similar rock, a short distance above the present bed of the river, retaining evidence that long before the era of civilization, and while the limestone was in a soft state, a powerful stream passed over it, as indicated by the presence of deep pot-holes containing stones formed globular by the friction of the water. In the woods adjacent, are marks of early agriculture, resembling plough-ridges, probably the work of troops encamped in the locality during the war. Further up are the "Saubles," where the rocks are covered with sand rolled down beneath the torrent of ages. From this point upwards there

may be found some good Brook Trout, certainly when the river is low in June. It is considered a good day's fishing to wade from the "Saubles" to the "Three Falls," near the parish of Laval. If a Quebecker goes for two days, the first start is generally in the vicinity of the "Saubles;" he wades the stream as far as "Moore's," resting for the night, and returning next morning fishing down with the current to the "Saubles," leaving the latter place at seven o'clock, and arriving at Quebec about ten p.m. There are some deep cool pools in Laval, parish of Montmorency, and the fish are of larger size as one proceeds towards the "Beaver Meadows," further north. The river is an outlet of Snow Lake, a large body of water in the northern portion of the County of Montmorency. The Lake is said to contain large trout, commonly called *lunge* or Lake Trout, which are generally fished for through the ice in winter.

FISH PLANTING IN LAKE ONTARIO.

The employes of the Government Fishery Department at Newcastle, Ontario, are alive and at work. It is stated that about 16,000 young salmon trout and 3,000 Californian salmon fry were placed in the lake a short time ago. The fishes are planted, indeed, at the risk of their lives, because the little creatures are not strong enough to take care of themselves, and it is possible, where there are so many pike, bass and other ravenous fishes and black water snakes, that the result of the planting will never be seen again. Yet, we are told by the knowing ones of the Department that each of these fishes will weigh from four to seven pounds at the end of three or four years. It is our wish to encourage fish breeding, and to see that every food fish indigenous to the Dominion should have proper facilities to propagate its species. There are many existing natural obstacles placed against the propagation of salmon in this country, which the Government should make efforts to take away. We are satisfied regarding the

utility and good results derived from salmon breeding in the neighbourhood of the sea, but placing young fish in a large inland bay or lake, where the water is swarming with enemies, is a blind proceeding, producing not one scientific result; it is actually absurd. Almost all the fish will be wasted, and the few that survive will doubtless leave the dangerous waters, never to return again. Have we not already proved that shad pass annually from the Gulf to Lake Ontario, and by so doing shewn that the lake is not land-locked to fishes which require a change of water? Therefore, the fact that shad pass up the St. Lawrence to Burlington Bay, is strong proof that salmon hatched on the north shore of the lake are not likely to remain behind, while they can find their way to the sea. If this is not the case, what has become of all the salmon hatched year after year at Newcastle? What benefit has the country derived commercially from this source to make up the annual outlay of money to sustain this establishment?

WILD RICE.

The cultivation of Wild Rice has been to a great extent successful when undertaken in the inland waters of Western Canada, where it is partly a native, and now it may be found in ponds, lakes and rivers in Ontario. We have no available record of how far north this aquatic plant or cereal can grow, but it seems extraordinary that in the Province of Quebec no attempt has been made to experiment with its seed. On the British side of Lake Champlain there are many available localities for the introduction of wild rice seed, and although we think it will not grow north of latitude 46.50, the seed should be sown in places at first south of the St. Lawrence, where, if it succeeds, and becomes acclimatized to the combined waters, then the good localities on the north side could be tried. It induces the presence of all kinds of wild water fowl in the autumn. In the west it grows in water six or eight feet deep, and the

red-winged blackbird, ducks and waders resort there and afford fine shooting. Sportsmen's Clubs are using every effort to extend its growth in Canada. It is also said that where it grows prolifically, it has been cut before seed-time by manufacturers, who find its fibre, taken from the under surface of the water to a depth of six or seven feet to be very valuable. It affords, it is said, the strongest kind of fibre known for making bank note parchment paper.

GOOD ANGLING PROSPECTS.

We have been informed since the Fishery Department at Ottawa, and the Fish and Game Club of the Province of Quebec stopped net fishing, that Maskilongé, Black Bass, Pike-perch, and other good food fishes occur abundantly in local waters this year. Of course, the abundance of the fishes is mainly attributed to this mode of preservation, which may be the case, but we are aware that fish, like terrestrial animals, have an occasional prolific specific year. Be this the case or not, there is a prospect that anglers will have good sport this season.

THE QUEBEC MARMOT.

(*Artomys empetra.*)

This quadruped, a rodent, allied to the ground squirrel (*Tamias*), does not occur to our knowledge on the Island of Montreal. It is, however, common in many other portions of Canada. The following remarks are made from one which we have had from the Eastern Townships. It is larger than the Alpine Marmot. Its head is smaller in proportion, and round; its ears are very short; its cheeks are ash gray, and its nose black. The fur is of a curious roan colour from the hairs being gray beneath, black in the middle, and white at the tips; the belly and legs are of a high-toned fawn, approaching to orange; the toes are black and naked; the tail short and rather bushy. This species inhabits Hudson Bay and the northern parts of Canada. It is a solitary animal,

burrows in the earth, but it ascends bushes and trees in search of buds and bark on which it feeds. It also eats certain species of coarse grasses, which grow near water. Indians capture it by pouring water into its holes. The flesh is considered delicate when the animal is fat. It may be a delicacy to the aborigine, but to the white man, its strong flavor is against it. It is easily domesticated. The teeth are strong, and formed similar to those of the Beaver. The linings of the mouth indicate rudiments of cheek pouches. When annoyed it produces a hissing noise. Milk pleases these animals greatly, and they lap it with sounds of pleasure.

GAME IN THE NORTH-WEST TERRITORY.

Last April, Messrs. Bird and Ballendine started for four days on the plains in pursuit of feathered game. The former shot forty-three geese, three swan and fifty ducks. Mr. Ballendine bagged the same amount of geese and swan, but did not care to waste shot on ducks. One of the swans shot by Mr. Bird measured seven feet seven inches from the tip of the wings; four feet three inches from the beak to tail, and weighed twenty-five pounds. It was sent to be stuffed for Chief Factor Clarke of Carleton. What a grand country for the sportsman.

THE BRITISH SKY-LARK IN AMERICA.

Several years ago, a number of Sky-Larks were liberated on Long Island, U.S., with the object of acclimatizing the birds. Nothing further was seen of them until early in May last, one was heard by Mr. John Burroughs, a writer for *Scribner's Magazine*, who says that he sees no reason why the British Sky-lark should not thrive in America as well as in Europe. Acting on this suggestion, Mr. Charles R. Rowe, of Cornwall, England, an enthusiastic admirer of Mr. B.'s writings, has sent him a number of Sky-larks which arrived safely in New York, and have been forwarded to Mr.

Burroughs at Esopus-on-the-Hudson, where they will be set free. The Editor of this journal contemplates having a pair of British Jackdaws sent out this summer. When this bird is properly domesticated, it is doubtless mischievous and a thief, but with these exceptions we will be compensated by its odd tricks.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The Eighth Annual Meeting of this Society was held on the 10th of May. The following gentlemen were elected to office for the ensuing year:—

President—Mr. H. H. Lyman, M.A.

Vice-President—Mr. William Couper.

Secretary—Mr. George J. Bowles.

Curator—Mr. George Bowles.

Council, Messrs. Robert Jack (Chateauguay Basin), F. B. Caulfield, and R. Burland.

Several new members were elected, and the Annual Report gave a satisfactory statement of the condition of the Society.

A paper entitled "Notes on some species of *Hymenoptera* occurring at Montreal," was read by Mr. F. B. Caulfield, and another on "Instinct in Insects," by Mr. G. J. Bowles. We regret that want of space prevents us from publishing these papers, but we are glad to say that the study of this interesting branch of Natural History—Entomology—is being zealously carried on by this Society, particularly as regards the insects of the Island of Montreal.

RESOURCES OF THE NORTH-WEST.

Professor Macoun of Belleville, Ontario, who delivered a lecture last March before the "Ottawa Field Naturalist's Club," on the "Geographical Distribution of Plants and Animals of the North-west," enunciated an important law accounting for the well-known heavy crop of grain secured so far north, *i. e.*, "the law of reproduction, which was wonderfully increased as plants approached their northern limit. Hence, the cereals grown in

districts alluded to, so near the extreme northern limit, were found to be more prolific than those grown anywhere else. Ordinarily on an ear of wheat grown in Ontario each fascicle contained but two grains. In Winnipeg they averaged two and a half, at Prince Albert four, and at Edmonton the wheat ears were found to average nearly five fascicles across the ear, extending the whole length of the head. When it was taken into account that the heads also increased in length it was not difficult to understand that the same number of stalks that would produce 15 bushels to the acre in Ontario would produce 25 bushels at Winnipeg, and from 30 to 40 bushels farther north. Speaking of the grasses found in the various parts of the country the Professor stated that there was no difference between the grasses grown under the eastern base of the Rocky Mountains and those found further east, commonly supposed to be inferior in quality. The only difference was that on the dry plains of the south hardly any grasses produce a large crop of seed, and from that cause the fodder afforded by the natural grasses was richer in nutriment equalling first class hay. He referred to the popular belief that cattle fatten on the grazing lands of Texas and warm districts in the south, which he characterized as a fallacy as shown by the custom amongst grazers of driving their herds northward to fatten. This was also in obedience to a well-known botanical and geological law, which provided that the farther north animals are found the greater their capacity for putting on fat. On this ground he was convinced of the great advantages possessed by the North West as a cattle raising country. The lecturer referred incidentally to the fuel supply of the North West, and ventured to say that there was untold wealth in the form of great peat bogs within forty miles of Winnipeg, the manufacture of which could be prosecuted with great convenience in that dry climate."

SCIENTIFIC REVIEW.

Osteology of *Speotyto cunicularia* var. *hypogaea*, and of *Eremophila alpestris*, by
LIEUT. R. W. SHUFELDT, U. S. Army.

The two birds above named, one the Burrowing Owl, which "occurs on the prairies west of the Mississippi, notably in the villages of species of Marmot Squirrels, the deserted burrows of which it occupies for the purpose of nidification. Perhaps no species in the great Order to which it belongs, have less limited

power of flight, none so habitually congregate together in certain localities and choose the open treeless country as their resort, and make their nests underground." Mr. Shufeldt exhibits expertness in being a correct comparative anatomist, as every portion of the skeleton of the bird is illustrated with great care; all portions of which are fully explained in the text. There are three plates on the structure of the Burrowing Owl. Also, the osteology of the Shore Lark (*E. alpestris*), a bird said to nest on the Island of Montreal, is illustrated. Mr. S. was fortunate in obtaining several hundred specimens in March, 1880. He says—"As they afterwards lay on the table of my study, one would almost have said before submitting them to careful scrutiny and examination, that not only was true *alpestris* represented, but *leucoloma* and *chrysoloma*, described by modern writers. I have never seen the black pectoral crescent of this bird in the low position in which Audubon represents it in his work." Mr. S. has evidently identified but one species, *i. e.*, *alpestris*, and his description of the skeleton, simply reminds the student that of the several genera that go to make up the family *Alaudidae*, or Larks, but one genus has fallen to the lot of the North American fauna, and that the genus contains but one species, *i. e.* *alpestris*.

Correspondence.

SPORTING AND NATURAL HISTORY CAPABILITIES OF BELLEVILLE, ONTARIO.

SIR, — As I understand from your prospectus that the indication of favourable sporting and collecting localities is to form a prominent, as it will certainly be a valuable, feature in your serial, I believe I will be doing a kindness to many of my fellow sportsmen and naturalists by making them aware of the advantages offered to them by this locality. The city of Belleville is situated on the north shore of the Bay of Quinte, at the mouth of the River Moira. Hotel and private accommodations are to be had of excellent quality, and at most reasonable fares. The Bay swarms with fish,—pike, pickerel, (doré), maskilonge, black and Oswego bass, perch, lake trout, rock bass, sturgeon, suckers, cat-fish, sun-fish, herring, whitefish, and eels are taken from its waters. The bass are especially fine; I have taken them myself up to 3½ lbs. weight, and I saw one some years ago

taken by Mr. C. Pauli, gunmaker, upwards of 7 lbs. First-rate sport can be had on the "bars," within a circle of a mile from the harbour mouth, and boats and boatmen, with all requisites can always be had. To the ornithologist Belleville affords a fine field for collecting; the neighboring woods afford shelter to various birds of prey, from the bald eagle down to the sparrow-hawk and shrike; the bay is the favorite resort of many ducks, loons, grebes, gulls, terns, and shore-birds, while the extensive marshes of Ameliasburgh, harbour herons, bitterns, mud-hens, snipe, rails, and other waders, and the golden plover frequents the commons in large flocks. Professor Macoun has collected during last winter and spring over 70 species of birds, a list of which I hope to be able to send shortly. About four miles below the city is Massassauga (Mississaugua) Point, one of the most picturesque sites on our lovely bay. Here a large area is being fitted up as a summer resort, with a hotel and several detached cottages, and it is intended to place it in hourly connection with the city by a special steamboat. Here are also held the regattas of the Belleville Yacht Club. Having within its limits the terminus of the Grand Junction and Belleville and North Hastings Railways, Belleville offers every facility for visiting the mining and hunting districts of Hastings and Peterborough Counties, where the geologist can study the conformation of the Laurentian and Huronian series; the mineralogist can collect the iron, lead, copper, gold and other ores and minerals of this now celebrated region; and the sportsman will find deer and bear enough so exercise his skill upon with the rifle, and the woods alive with ruffled grouse (partridge), while the lakes and rivers swarm with fish of every description, from the lordly maskilonge and great lake and speckled trout, to the humble perch, and the despised cat-fish. Altogether, I do not know any place where the comforts and conveniences of city life can be so thoroughly combined with the enjoyment of country sport, as in our own little "City of the Bay."

JAMES T. BELL,

Belleville, May 25, 1881.

DEAR SIR,—I have read with very great pleasure the accounts given in your journal, by "12-bore Greener," of his trials at the target. I consider that Canadian sportsmen are much indebted to any one of their number, sufficiently spirited to take the trouble, and

incur the expense of making such reliable tests of the shooting qualities of "choke-bored" guns, with the various charges of powder and sizes of shot. With my Hammerless Greener, which is a No. 12, choked to No. 15, at 80 yards, I put 12 pellets of No. 6 American chilled "Tatham" shot, (almost as large as No. 5 English), into a foot square, and at 90 yards 7 pellets into the same sized target. This was with 3 drams of powder and one ounce of shot, and the penetration was sufficient, at both distances, to bury the shot out of sight in a dry pine board. I think, for general utility, handiness, convenience, *rapidity of ignition*, and unquestionable rapidity of firing, the hammerless gun is infinitely superior to the gun with hammers; and, within a very short time, amongst sportsmen, at least, must entirely supersede guns of the old style of construction. The hammerless gun of improved make is perfectly safe, handy to use in a boat or canoe, and when loaded is always ready. Having no hammers it can be put easily and conveniently into a water-proof cover, and in use the breech action can never become locked by the striker forcing its way through the cap and sticking there, as sometimes happens with hammer-guns. The irresistible force with which the tumblers are drawn back to cock, entirely obviates the chance of this difficulty occurring. In addition to the foregoing advantages, the facilities afforded for fighting and shooting amongst brush by the hammerless gun are unquestionable. Hammers may be ornamental, but in the face of hammerless guns they are entirely useless and superfluous. For the information of "12-Bore Greener," I may say, that in my one trial with half ounce charges of shot, although I had not the appliances for measuring the force and velocity of the shot, the penetration was eminently satisfactory.

Yours truly,

HAMMERLESS GREENER.

Ottawa, May 23, 1881.

P. S.—No sportsman of my acquaintance ever made a practice of shooting Robins. Small boys and thoughtless persons alone in this neighborhood are guilty of this indiscretion.

ENGLISH SPARROWS.

The question as to the desirability or non-desirability of introducing the English sparrow, *Passer Domesticus* into Canada has been not unfrequently discussed. My own opinion has always been adverse to such introduction,

and my principal reason, as a lover of birds, has been, and is, that the English sparrows drive away our own more charming native birds. That opinion has just been emphasized by the following incident. I was passing down one of our streets the other morning when I observed four birds in a state of great commotion on the ground, kicking up, in fact, an awful dust; the birds, being, as I soon ascertained, three English sparrows and one Chipping sparrow, *Spizella socialis*. The poor little native bird was being unmercifully attacked by the three more robust immigrants, and I verily believe would have been killed, but that my companion, a lady, begged to be allowed to rescue it by driving its aggressors away. For myself, I confess I should have been cruel enough to await the issue of the conflict for the purpose of exemplifying my theory, whereas now, instead of a charge of "wilful murder," I can only prefer that of "assault with intent."

VINCENT CLEMENTI, B.A.

Peterboro' May 9, 1881.

NOTE.—The House Sparrow, (*Passer Domesticus*) has been of good service since its introduction into Canada. Previous to its arrival in Montreal, it was almost impossible to keep down the millions of house-frequenting spiders, which during summer, festooned the interior of our houses, and exterior of outhouses with their webs. This nuisance is now lessened, as the bird relishes the spider, and whenever one of the latter shows itself, it is doomed. The acclimatized sparrow has besides adopted the flycatcher's system in obtaining its prey; it also imitates the woodpecker by holding itself with its claws and tail against a wall, picking from the interstices any insects lurking therein. Before the house sparrow was liberated in Montreal, an entomologist could, on a June morning's walk along the garden fences in the western portion of the city, pick up probably from twenty to twenty-five beautiful rare insects for his collection. This cannot be done now, as the sparrow destroys all insects whether he eats them or not. This is the only fault we have against him—that he makes no discrimination in his selection—he kills as many beneficial as injurious insects. We have seen

this pugnacious little bird attack the large Northern *Cicada*, holding it in its beak while the insect made the curious noise with its drums, which we frequently hear in the early part of September. The bird heard it, but the insect's noise was of no avail; the sparrow placed its foot upon it and picked it to pieces.—ED.

TENACITY OF LIFE IN BIRDS.

DEAR SIR,—Last fall, I received from the Manitoulin Islands, a living Eagle—the Gray Sea—*Haliaeetus albicilla*, to stuff. Wishing to kill it as quickly as possible, I procured a strong acid poison from a druggist, and gave it a dose said to be sufficient to destroy its life in a few seconds. After waiting for half an hour, I went out expecting to find it dead, but there he sat as upright as usual. I gave the bird a second dose and patiently awaited the result. It had no more effect than an evident disagreement in the appearance of water from its mouth. Then I gave it a large piece of meat covered with arsenic and retired to rest, expecting to find him stiff and ready to stuff next morning, but to my surprise, when I went to his cage, it stood as upright as ever, and looking none the worse. I had laudanum in the house, and it occurred to me that I could put him in a deep sleep; therefore I gave the Eagle one half ounce, which had no apparent effect. I then procured strychnine, of which I gave him a large dose; in a short time it took effect, and the strong frame which withstood the other poisons had at last succumbed; it swayed with violent convulsions, and as I stood looking on its agony, I felt that I was the cause, and guilty of a crime. A few weeks ago I had occasion to kill a great Horned Owl, (*Bubo Virginianus*), and remembering my former experience with the Eagle, thought to try a more speedy method. I took a revolver carrying a No. 22 cartridge, which I fired close enough to penetrate the centre of its body, and the only apparent effect it had was merely to tip him off his perch, which he afterwards regained. Four hours afterwards I found him still sitting there, appearing all right. I fired the second ball forcing him from his perch, which he did not afterwards regain, yet he lived two days afterwards. On skinning this bird I found that both balls passed through his body. On the 27th May last, I had occasion to kill another Horned Owl, and remembering my former unsuccessful experience I thought to give him a blow which would pro-

duce instant death. I prepared a sharp-pointed instrument, and with one stroke the point entered the brain to the depth of three eighths of an inch; even after this the owl lived over one hour. I would be pleased if some of your readers would suggest a more speedy way to kill large birds?

Yours, &c.,
R. B. SCRIVEN.

Gravenhurst, Ont.

NOTE.—The editor of this journal has had long experience with large living wild birds. The best mode and the quickest to destroy bird life, is pressure across the sternum. In this way the skin is not destroyed, and it dies without great pain or struggle.

OUR FOREST TREES.

CHESTNUT; *Castanea vesca*.—A large and abundant tree, valuable for its nuts and its timber. The nuts, though much smaller than those of Europe, are sweeter and more nutritious. Close observers say that the chestnut moth lays one egg in each bur, and thus they account for the fact that in a quantity of chestnuts, about one-third are found to be wormy. The timber is more used than formerly. Its durability has long recommended it for fence posts and rails, and of late years it is largely used in cheap furniture, and the interior wood work of houses. It to be varnished or oiled, the pores should be carefully filled.

AMERICAN HORNBEAM; *Carpinus Americana*.—A small tree, 20 to 30 feet in height, admired for its soft green foliage, which in autumn changes to bright scarlet and orange. The wood is white and solid and is used for mallets and levers.

LEVER WOOD; *Ostrya Virginica*.—This closely resembles the last in size and foliage. The uses of the wood are similar, but it is even harder and tougher, and it is often called "iron wood."

BUTTERNUT; *Juglans cinerea*.—A broad-topped tree, seldom more than 40 to 50 feet in height. The nut when half-grown makes excellent pickles, and when ripe, if carefully dried, contains a sweet kernel. The wood is light and durable, of a pale reddish color, and is used for making drawer fronts, coffins, gunstocks, and panels of carriages.

BLACK WALNUT; *Juglans nigra*.—This tree is less abundant in New England than the but-

ternut which it much resembles, in size, form, and foliage. The leaves are smother, and the fruit spherical, while the butternut is long and oval. In the States bordering the Ohio River, the Black Walnut reaches its greatest size and yields its valuable timber in its highest perfection. This when first cut is of a purplish color, but soon changes to a rich dark brown, becoming in some cases nearly black with age. It is beautifully shaded and admits a fine polish; and no other American wood is so largely in demand for furniture and ornamental wood work of every description. The rapid consumption of walnut lumber is rendering it every year scarcer and more valuable in the market. It has also been largely exported to Germany and other foreign countries.

ENGLISH WALNUT; *Juglans regia*.—This tree has been successfully introduced into New England, but is less hardy than our native species. Its well known nut is in constant demand.

BLACK BIRCH; *Betula lenta*.—This is the most beautiful and valuable of the birches. In early spring its long bright coloured tassels give it a pleasing appearance, and it is among the first to put forth its leaves. In the forest it often reaches a height of 70 feet. When standing alone its long hanging spray earns for it the name of the weeping birch. The inner bark of young shoots has an agreeable spicy taste and odor. The wood is easily worked, yet firm; is of a delicate rose colour and presents a handsome grain. It is in demand for cabinet furniture, and is sometimes called "American Mahogany."

YELLOW BIRCH; *B. lutea*.—This is a rather larger tree than the preceding, and when seen in perfection is almost as beautiful. The scaly bark in long rolls adhering, by the middle or one end, and adorned with mosses and lichens, gives to the trunk a unique appearance. Its wood, though of less value than that of the black birch, is often used for making chairs and bedsteads. Its resinous bark is the tinder of northern voyageurs, and a flame will shoot to the top of a lofty tree in a few seconds, lighting a wide circuit.

RED BIRCH; *B. nigra*.—This graceful tree is usually found bending over a stream, and in some sections of New England is known as the "river birch." Its usual height is 50 feet. The wood is compact and white, and is now but little used. The earlier settlers made spoons, bowls and trays of it, hence it was called by them "spoon wood."

(To be continued.)