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DUCKS AND DUCK SHOOTING ON LAKE TEMISCAMINGUE.

C. C. Farr.

In days of yore Lake Temiscamingue used to be a famous place for duck shooting. But the sport has deteriorated of late years owing to the rapid advance of civilization. When I speak of Lake Temiscamingue, in this respect, I do not mean those long rock bound stretches which couract rize the lower part of the lake, but the grass grown flats, fringed with dense growth of scrubby brush, at the head, which are submerged in spring, but covered with a coarse kind of beaver hay during the summer months. These are ideal spots for nesting and, except for the absence of wild rice, natural feeding places for wild flowl, even now, though I am told that the migratory flocks of ducks and geese, both in fall and spring, which congregate here have lessened considerably. Numbers of the big brown ducks still continue to breed here and good sport can be obtained by those who know how.

Twenty-eight years ago this spring I was stationed at the head of Lake Temiscamingue, on the Indian Reserve. There were only Indians and half-breeds there in those days, and not a great many of them permanently settled. They used to gather together in the spring for the purpose of making sugar from the soft maples, which abound in great numbers on the low lands, and shooting ducks and geese. There were men who shot their hundreds of ducks in the season; men who counted on the duck harvest as we count upon our gram or fruit harvest. I arrived there in the middle of April and stayed until the middle of May, hence I came in for the duck harvest, and it was an interesting experience. I learnt, in that month, more about the Indian methods of shooting ducks, and of duck lore generally, than I could by hearsay in ten years.

As the April sun begins to melt the snow from off the flats the ducks begin to arrive from the south. The ice on the river, and for some way out into the lake, disappears and then the hunt commences.

Two Indians, with one gun between them, which is carried by the one in the bow, is the complement for each canoe, and each man has his own allotted task. Both are keenly on the watch for the fowl and as soon as a flock is sighted the man in the bow puts up the "Ned-us-sitchigan." This is a light frame made of lath, interwoven with brush, which is set up immediately in front of the man in the bow. There is a peep hole in it, through which the man thrusts the muzzle of his gun and also through which he watches the ducks, and is then able, by signs with his hand, to give directions to the steersman. The object now is to prevent the ducks from catching sight of their natural enemy, man, whether

he be in the bow or in the stern. One sight of him will start the flock to flight, hence the steersman usually watches for his instructions and is quick to act upon them. The paddle is held close to the canoe and never lifted out of the water but so manipulated that it acts as a propeller without the sound of a ripple being heard. Thus to the suspicious ducks the canoe has the appearance of a piece of brush being born down on the flood, no uncommon thing in spring. Presently the man with the g in takes sight, and this is the signal to the steersman to either cease paddling, or at least to make as little vibration as possible, so as to enable the other to steady his aim. The report quickly follows and then all disguise is thrown off. Down coms the "Fly" (for so the screen is called by the English-speaking half-breeds) and the paddles are plied with vigor, so as to secure birds which have been injured, for as the shot has been fired probably into a flock, there may possibly be a few ducks wounded, but prepared to dive for their lives. It is astonishing the amount of execution that can be done amongst ducks by men skilled in the art and I often wonder that the device is not more generally used. Decoys are frequently employed. They are made of cedar, and sometimes painted, but more primitively blackened by charring in the fire.

A funny Indian extracted considerable fun for himself and his friends by getting me to shoot at his decoys. They were anchored in the shallow water which was rising fast over the flats. It is true that I was in my "salad days and green in judgment," but the sight gained by peering with one eye through a hole in a brush-bedecked hurdle is not satisfactory and in my own mind I considered the take in a greater compliment to his skill in fashioning his wooden decoys than a slur on my keenness of sight, but unconsciously and unintentionally I got even with him, for the recoil of the gun, sitting as I was in a cramped position, and not yet well used to canoes, upset us, and a ducking in the ice-cold water of spring was, I considered, more trying on his ancient constitution than on mine. Indians dearly love a joke of this kind, and little does the inexperienced sportsman know how he is criticized by his apparently obsequious Indian guide. It was not until I had learnt the Indian language that I knew this myself. There is a very keen sense of humor n an Indian, but it is of a dry kind. He is not the grinning in becile that he often gets credit for being, and when the inexperienced white man is thinking that the Indian is laughing with him he is often really laughing at him and thinking what a fool he is.

I must not forget the shooting of geese, for it was on the number of geese slain that a man's reputation for skill was built. These Indians and half-breeds can imitate the cry of a goose to such perfection that they can almost beat the goose at its own cry. They can bring them within shot by the call, and

arrest the flight of a flock when nearly a mile away. The plan usually adopted is to build a little brush shelter on the grassy flats, place a few decoys within shot and wait for a flock to come within sight and sound. Then the game com-The hunter sends forth a cry which catches the ears of the geese, and the leader of the flock wheels in his direction, taking a wide circle. If the caller is skilful the radius of the circle is gradually lessened, and man and geese keep up a discordant concert, until the latter, now flying low, come within range of the gun. The rest is easily imagined, and a skilful sportsman will probably bag a brace of geese, sometimes more, for though shy, geese are silly things and will often return within range of the gun with a view of alighting alongside of those that have fallen, especially if the leader happens to be numbered with the slain.

It is at Moose Factory and other Hudson's Bay Company's posts on the coast of James Bay, where the killing of geese is an important industry. They are killed there by thousands, and salted down for summer use. They are to the inhabitants of those places as salt pork and bacon are to us. The Hudson's Bay Company, when issuing weekly rations to their employees, instead of giving out so many pounds of pork, gives so many salted geese. I forget the exact number of geese that constitute a man's weekly ration of meat, but I think that it is somewhere about two.

There are two kinds of geese, the large grey goose and the "wavy," the latter being somewhat smaller, but the mention of "Roast wavy" to the old Hudson's Bay man makes him smack his lips, and if he has moved from the coast inland, he pines for his lost "Roast wavy." So they must be good.

I once asked a native of the north to give me the Indian names of the geese and different kinds of ducks. I have my notes lying before me, and I will now transcribe them, as they may interest some of the readers of Rod and Gun. I give them as they are written, without further comment of my own, except an occasional etymological explanation. The Indian names I have spelled phonetically, according to the English alphabet.

Neckah-Goose.

Mahnk-Loon.

Ashemalnk-A smaller species.

The Indian word for duck is "she-sheep," as an affix, "ship." Niniship—("Nini" or "inini," a man, the real thing).

The real duck, a big brown, nearly black duck.

Apishininiship—A smaller edition of the above.

Ang-Saw bills; generic term.

Ininisig-The real saw bill.

Manahsig-Lesser saw bill.

Keen-ah-Konayship—Smaller still. (Keenah konay—Sharp bill). Kenogwayowayship—(Kenoah, long; Okat, leg) Long legged duck; pintail.

Pingkwahkoship-(Pingkwahk-Arrow) Arrow headed duck; a duck with a very large head.

Kah-Kahn-de-quay-ship—(Kahkahndequay—Gomb backwards and forwards) A black duck the keeps its head moving backwards and forwards as it files, making much noise with its wings.

Quayskosheship-(Quayskoshe-Whistle) Whistling duck.

Wabiship—(Wabi or waba-White) White duck; feeds on snails; seen only in fall and spring.

Ah hah-wc—(The noise it makes, ah-hah-hah-hah-we) Beak white and brown; large flocks; the last of the arrivals from the south; does not breed here.

Mahkahtayship—(Mahkahtay—Black) A large black duck only seen in fall and spring.

Sca-ah-moo—Like the steal, only larger, dark with highly colored markings. (Widgeon?)

Shingopis—Small divers.

These are my notes and I leave it to others to class them more perfectly and add more to the list, if any are philologically inclined.

An English Sportsman's Opinion.

The route we had taken was the main highway from Port Arthur to the sea. But on both sides of it there are other lakes and rivers innumerable, the home of the maskinonge. weighing up to 60 lb. or 70 lb., of high-leaping ouananiche, of lordly salmon and of speckled trout, of sturgeon, bass, pike and whitefish. You can pull your canoe into the reeds and shoot duck-mallard and canvas-back, redhead and pintail, widgeon; green-winged, blue-winged and cinnamon teal; plover, snipe, curlew and pelicans; geese and swans-till your gun is too hot to hold. On the marshy shores you can see the moose standing knee-high in the water, you can hear the whistle of the wapiti or follow the track of the caribou. You may meet the Hudson's Bay factor travelling in pomp, in a large war-canoe paddled by a numerous crew, with his camp-equipage following him. One summer evening on the Assiniboine I was startled to hear the unmistakable notes of a bagpipe in the far distance. Rounding the hend of the river came a fleet of canoes, with the Indian agent's leading, and a piper industriously warbling Highland airs in the bows. Tell it not in Inverness, but the piper was a half-breed.

And all of these things you may see on British soil, and, having once seen them, the memory thereof will abide with you forever.—C. H. WILLIAMS in Blackwood for January.

Desbarats Islands.

By Straw Hat.

"To him, who in the love of nature holds communion with her visible forms, she speaks various languages."—Bryant.

Canada has many lovely spots, but there are few of them like Desbarats. Its predominating leature is variety, an endless variety of natural beauty, and to call it an artist's paradise is by no means exaggeration. The members of that happy brotherhood, whose love of beauty binds them by the strong bond of sympathy with nature, will find a realm of artistic scenes in this ever-changing and ever-fascinating region. Here is verily "The Meeting of the Waters." A channel from Lake Superior flows into Lake Huron, 'nd on a fine day one can see from the top of the great pine-clac bluffs, which rise in many places both along the shore and inland, a vista picture of waters, islands and mountains stretching many long miles away to the horizon. To this same channel flows the little Desbarats River, after winding silently in graceful curves past the hamlet of the same name, which, by contrast, enhances the beauty of its wild surroundings. For him who would study pioneer life and the life and character of the red man, here are excellent opportunities. The inhabitants are farmers, miners and Ojibways, a part of the Algonquin tribe which not many years ago covered almost the whole of Ontario and parts of Michigan, Wisconsin, Minnesota, and almost all the Canadian West up to the foot of the Rocky Mountains with its trails. Historically, Desbarats, as part of the Sault Ste. Marie country, has a fascinating history. By studying the map furnished by the Bureau of Ethnology, Washington, one can see that it is most centrally situated in the "Land of the Ojibways."

There is at present a great demand for the woods in preference to the seaside or the springs for a summer sojourn, especially for such sylvan localities as furnish well-stocked forests, lakes and streams. To meet this demand the Canadian Camping Club is being organized, the site chosen being in the Desbarats Islands on the north shore of Lake Huron, at Desbarats, and on several lakes north of that station, one mile or farther—a forest on the mainland. This is a section which is in the wild woods, and which, through the nature of the country, will remain so for a long time. Desbarats is on the Canadian frontier, 29 miles east of Sault Ste. Marie, Michigan, and Ontario, by rail or water, about 400 miles north of Chicago by water, about 40 to 60 miles north of Mackinae Island on the same lake, and about 300 miles northwest from Detroit by water.

For its situation amidst the great fresh water seas at Kensington Point, with its deep water dock on the north shore of Lake Huron, see the chart issued by the hydrographic department of the United States, which can be bought from the custom house collectors at the various ports. This chart gives the situation exactly, although Desbarats station, which has just been opened in the woods, is not marked thereon. About the middle of the northern part of the chart is the Walker, or Desbarats River, and on that river, one mile from the lake, is Desbarats station.

There is a twenty-room hotel at the station, which is situated half way between the islands on Lake Huron and the fishing lakes to the north, so that the situation could not be more convenient.

There are five cottages and camps on the two hundred acres of the mainland, two of the cottages being substantial buildings with stone foundations. There are three or four springs of excellent water, and the River Desbarats meanders for one mile through the meadow lands to the lake.

In addition to this there will be provided, for next season it is hoped, at Kensington Point or on McQueen Island, a dining-hall, with bed-rooms, artists' studio, twenty Indian tepees for camps, one steam yacht, a sailing yacht, bath house, bicycle path from Kensington Point to the hotel, saddle horses, row-boats, bark cances, Peterborough cances, etc.

The natural attractions of the place are its wildness and picturesqueness, combined with every facility of access by water and rail. There are here one hundred islands in a cluster, the furthest not being over five miles from the railway station and less than three miles from the dock, where a regular line of steamers call. These islands have great variety of form and outline. They are situated in a lake of clearest and purest drinking water. The islands are owned by the Ontario Government, and are sold at \$5 each and upwards according to size, with building conditions, so that speculators cannot get hold of them. A camp worth \$200 must be built and occupied sometime during the summer. When this is done a warranty title is issued by the Government to the purchasers. Some of these have been bought by gentlemen of means from the large cities of the United States, Canada and England, who compose a very attractive local society.

There is enjoyed here open water for yachting, which is, nevertheless, well sheltered, and there are absolutely sheltered passes and channels among the islands for boating, where women and children can row to their heart's content in perfect safety. The bathing, yachting and boating are unsurpassed in America.

There is plenty of fishing in Lake Huron itself, although pickerel are a little too plentiful there. About one mile from the hotel is an excellent bass lake, and further back are

several bass and trout lakes very well stocked. Both east and west of this little station in the woods are other stations with excellent fishing within easy reach on foot or by bark canoes.

There are pleasant side trips to be made with little expenditure of time or money. One of these is to Lake Temagaming, the heaven of the Algonquin-Ojibway Indians, even as Desbarats is called their playground.

There are beautiful drives, both on the mainland and on St. Joseph Island, which is twenty miles long and fourteen wide. Many of the roads are excellent for bicycling.

The water in the bays and on the sand beaches is very pleasant for bathing. The water registers about 72 degrees in July, August and the first half of September.

The entire region here near the shore of the mainland and among the islands is a paradise for artists and photographers. Views with wonderful color effects on land and water are to be had everywhere. The country is healthy in the extreme; hay fever is driven out of the system in this climate, residents do not know what it is.

The most enjoyable seasons at Desbarats are in the months of May, from the 1st to the end; July, from the 5th; all of August, September and up to the middle of October. June is the least attractive month on account of the mosquitoes, which leave in July. Fishermen expect to get flies and mosquitoes in the fishing season. Flies will not frighten them away in June, but to those to whom flies are very objectionable, June is a month to be avoided, except on McNab and McQueen and other small islands on which flies of any kind are never troublesome. The mosquitoes are becoming less troublesome every year as the country becomes inhabited.

Desbarats is becoming famous because of the annual presentation of the drama of Hiawatha, which is the Ober-Ammergau of the Ojibways.

How to Build a Bark Canoe.

By Henry Graithwalte, written by F. H. Risteen.

The best time of year to get bark suitable for a birch canoe is July. This is what is known as summer bark, which can be peeled from about the middle of June till the middle of August; winter bark from April 1st to Oct. 1st. Winter bark is really the firmer and stronger for the purpose of building a canoe, but it is now very scarce and hard so find. Some summer bark has good wearing quality; more of it is shelly and wears right out. In looking for bark suitable for a canoe there is no trouble in finding it wide enough but it is difficult to find it long enough and free from knots and blemishes.

How do I make a bark canoe? First, I clear off a piece of ground perfectly level the length of the canoe, rounding it up a little in the centre to fit the shape of the canoe. Next I make the frames or gunwales of the canoe, then I lay the bark on the ground with the inside downwards; lay my gunwale frame on top of that, weight it with stones or other weights to press it as solidly as possible. Then turn the edges of the bark up and drive stakes all around the gunwale from 2 to 3 feet apart, tying the tops together with cedar bark, spruce roots or any kind of string. Then if your bark is not wide enough, as is usually the case, you have to sew a piece on each edge in the centre of the canoe to make her deep enough. This will require some hours work. When all this is done she wants to be left a day or so to get the bark in press to give it the mould. Then you sew your pieces on the sides where the bark is not wide enough for the sides of the canoe. Then you raise your gunwales about eight inches in the centre up the

stakes towards the top of the bark. Of course at the bow and stern you raise them more to give them the proper curve and mould on top and still keep the weights well on the bottom so as to preserve the shape of the canoe. I should have said that as soon as the canoe is in press, you go to work and make your ribs and that gives the bark time to form. It will take a day and a half to get them made and bent. Cedar makes the best ribs. Sometimes we have to use fir, but it is very hard to make a good job of it unless you have a steam box. You can make the canoe, of course, any size you like. The average size is about 18 feet long, 8 inches deep in the centre and about 30 to 32 inches wide. Exact dimensions are a matter of fancy 1 face my canoes inside with pitch with a layer of cotton on top of that. This strengthens the canoe, and if you break a hole through the bark there is something behind it. Besides, it adds practically nothing to the weight. To build a bark canoe takes from 4 to six days according to your chances and the material you have to work with.

After you have raised the gunwales and given the canoe the right mould on top, you draw the bark up tight and bend it over the gunwales and tack it down, and then you put in a top strip and nail it to the gunwale, also a side piece of cedar or fir along the sides of the gunwale. When this is all complete, you take your weights out and turn your canoe up side down and shake out all the dirt, chips and shavings. She is now practically complete except the frame. Turn her over again on a smooth bottom, put a bunch of moss or shavings under the bow end of her and spring it up a little. This is the time when you put on your facing of pitch and cotton. When that is done you lay strips of cedar or fir about one tenth of an inch thick lengthways of the canoe, each of them being made a little over half the length of the canoe, so they will lap over in the centre, where the ends want to be shaved off so as to make the joint as neat and level as possible. Then you commence at the end of the canoe fitting in your ribs. You get the right guage after you have cut one or two. You slip them in under the gunwales and drive them in place with a mallet-a half round mallet with flat side. Keep on driving the ribs until you get to about the centre of the canoe then you reverse the ends and commence at the other end again. When that is done all you have to do is to turn your canoe up, put the pitch on her and fix the ends. The Indians use strips of cedar split to fit the shape of the bow, but I prefer a spruce, cedar or fir root made to fit the shape of your bow and stern. I set that in and then tack the bark solidity to it. Rosin and cotton are then put over the bark at the bow, and if you want to make a good job of it, it is better to place a piece of zinc over that, letting it run well under the bow to guard against striking stones &c. when you are going ashore.

Chips. By C A. B.

No more interesting bird is found in the Cauadian backwoods than the loon. Each little lake holds its pair of breeding birds in summer, but, unless in the case of exceptionally large sheets, there is rarely more than the one couple. The nest is a mere depression in the moist moss, and is never found except upon an island. Two eggs are laid early in June. The young, even when no larger than pigeons, dive with great ease, and show remarkable endurance. They may, however, be run down in ten minutes, if pursued without intermission by a well handled canoe. Each time the bird appears, shout at it, and splash with the paddle; it immediately dives, and at length

becomes nearly asphyxiated. Under no circumstances, sound or unsound, will a loon, young or old, seek the land when chased. The deepest water is always sought. It is mid-October before the young loons can fly. The mother is very solicitous as to their welfare until they are able to take wing, but after that the old birds do not seem to recognize their offspring. The quantity of fish loons capture is very great, and it would be well for the fisheries were they reduced in numbers. Netting is the only practical way of getting the old birds.

A large carriage sponge is very useful on a canoe trip. Birch barks always leak, sooner or later, and the tin mug usually employed as a bailer fails to keep the canoe quite dry, as it cannot take up the last few pints from between the ribs. By leaving the sponge in the stern it absorbs the water as it enters, so that an occasional squeeze over the side ensures a dry canoe.

The angler should preserve, for scientific examination, any unusual fish. In a great many wilderness lakes there are species unsuspected by the museum naturalists. Only this summer a fish was taken in Lake Temiskaming, the like of which the "oldest inhabitant" had never seen. The Goth who caught it, promptly put it in the frying pan; the fate of many a rare prize. Any angler of an enquiring turn of mind, should be provided with a small quantity of some preservative, so as to save anything of value he may catch. The three following receipts are valuable:—

- (1) Acetate of soda (dry). Dusted over the fish, which should then be wrapped in cotton cloth.
- (2) Formaldehyde solution; 1 part to 19 of water). Fish to be bottled in this, if possible; if not, soak fish, wrap in cotton and keep moist
- (3) Alcohol (solution; 2 parts to 1 of water). Use as directed for (2).

Never be without a book to read in camp. Take one of the cut and-come-again sort.

Should you happen to find yourself by a lake, or stream, full of fish, that will not take any notice of fly, bait or troll—which sometimes happens while the water is warm—you may catch many a one by the following device. Shoot a bird or small animal (a shellduck is best; and they ought to be killed anyway), throw it into the hot ashes, and singe and char it thoroughly. Sink it by a stone and string, after having gashed and bruised it with the axe, in some promising spot, to act as a ground bait. A few hours afterwards, approach very carefully, and throw your fly, or bait, over the defunct duck. You will be almost certain of a rich reward. This plan is most killing if the bait is sunk overnight, and the spot visited at sunrise.

In view of the increased importance of the sturgeon industry, and the rapid destruction of this valuable commercial fish, Professor Prince, of the Fishery Department, Ottawa, recommends the establishment of a close season for it. The professor also recommends that the close season for bass and maskinonge be changed, so to make it from April 1st to July 1st.

Mr. Oak, of Maine, at the meeting of January 31s of the North American Fish and Game Protective Association, made the interesting statement in regard to black bass that the parent bass will protect their young until such time as they think they are able to take care of themselves, when they will turn round andeat the same young fish.

FORESTRY

"Rod and Gun" is the official organ of the Canadian Forestry Association
The Editor will welcome contributions on topics relating to Forestry.

Editor—E. Stewart, Chief Inspector of Forestry for the Dominion and Secretary Canadian Forestry Association, Ottawa, Ont.

Sub-Editor - R. H. Campbell, Treasurer and Asst. Secretary Canadlan Forestry Association, Ottawa, Ont.

FORESTRY CONFERENCE AT KINGSTON.

A conference on Forestry was held at Queen's University, Kingston, on the 21st and 22nd of January last, and was opened on the evening of the 21st by a lecture from Dr. B. E. Fernow, director of the New York State College of Forestry. Dr. Fernow gave a very interesting sketch of the development of tree life from the carboniferous era up to the present day, and as a very interesting illustration of how forests had been produced and destroyed successively, he showed a cut of two thousand feet in Yellowstone Park, which displayed fifteen forests one above another, which had been successively destroyed by lava eruptions. Some of the trees in these forests were five or six feet in diameter, and parts of the trunks of the length of thirty to forty feet are in existence. The lecturer went on to show the struggle made by the trees with the force of nature and other conditions, as shown by the mangrove on the sea-coasts, and the bald cypress in the Southern swamps, which reclaim the land and prepare the way for succeeding forests; the cactus and mesquite, the pioneers in the dry, hot plains of the south-west; and the mosses and lichens, followed by hazel-bushes and ericaceous plants, which prepare the way for the tree growth in the most northerly districts. The present character of the tree growth of the different portions of North America was also illustrated by scenes from the luxuriant growth of the Southerr. States and the magnificent giants of the Pacific Coast to the far north where the last few straggling sentinels are left looking out over the barren lands to the eternal snows of the North Pole. The contrast was then shown between the proper methods of handling the forest crop and the wasteful methods which have been so largely followed in America up till the present time. At the conclusion of the lecture a hearty vote of thanks was given to Dr. Fernow, and some of the speakers referred to the desirability of the establishment of a School of Forestry in Canada. The Hon. Mr. Harcourt, Minister of Education, stated that he was delighted to see that the question of Forestry was receiving attention at a University. Queen's, he said, had the reputation of undertaking new projects, and it would be a grand thing for the country were a school established at Kingston.

On Tuesday morning a discussion of the practicability of the adoption of improved forestry methods in Ontario was held. At the beginning of this discussion an address was given by Dr. Fernow, which was substantially as follows:

"The broadest definition of forestry is the rational treatment of forests. But what is rational? It may be perfectly rational to burn up a forest or to cut it down. Rational means the application of reason, judgment, skill knowledge. The first premise is that you really mean to have a forest, to have it as a permanency. The agriculturist who removes the forests for the sake of his crops is not practising forestry, but he is

rational. The rational treatment of forests refers to the use of forests as such; the object which is in view and the use which is made of them. A forest answers several purposes which may be stated broadly as: first, protection of the soil; second, game preserves; third, business forests. There is a different object in view in each of these. A business forest is for the raising of wood crops. Forestry is the business of raising wood crops as much as agriculture is of raising food crops. Is it necessary to apply any skill or knowledge for this purpose? We have natural forests. If there is a small population and large resources of forests, it would be ridiculous to go into forest raising as a business. The necessity of such application appears only on the basis of statistics of supply and demand, and results from the improper use of the natural resources of the forest. There are different degrees of skill and knowledge that may be applied under different conditions. The first simple knowledge is that if we burn the forest we cannot use it. Protection from fire is therefore the beginning. When you grow a wood crop you care for the future, for you will not harvest it in your own lifetime.

In considering the lumber supply the coniferous trees are the most important. The annual supply of lumber in the United States is forty billion feet, and two-thirds of this is coniferous material. The deciduous trees may therefore be left out of consideration. No exact calculation can be made, but it is probable that the supply of coniferous trees in Canada and the United States may last for ten or fifteen years. The calculation depends upon so many changeable data that an exact estimate cannot be made. For instance, within a short time the standard of logs that are merchantable changed from twelve to eight inches, which made a considerable increase in the supply which is available at the present time.

Professional forestry has two sides. There is the producing side and the business side. There is technical knowledge required to produce the material and business knowledge to produce the reve... e. Silviculture is the treatment of wood crops or forestry in practice. The knowledge required for this purpose is botanical. You have to know the cron you are going to raise. You must know the species. There are four hundred and fifty species of trees in the United States and Canada. A selection from these must be made. There are tree weeds as well as other kinds of weeds. Nature has not had the economical point in view and has therefore not always made selection of the most profitable species. The second thing is the condition for growing a crop: the plant, the soil and the climate. You must know the soil. In connection with the New York School of Forestry we have thirty thousand acres of land covered with maple, beech, birch, ash, elm, black cherry; of coniferous trees there are white pine, red spruce, hemlock, cedar and larch. Of the deciduous trees the ash, elm and black cherry are the most valuable, but of these nature retained only a few. " must subdue the larger forest of maple and beech and help along the few. The lumberman takes out the valuable species and leaves the weeds. It should be noted that although trees may not be found in a particular place, it does not follow that they will not grow there. In the Adirondacks we use the European spruce; first, because it is cheaper. We can get one thousand plants for \$1.25, while for the native spruce we have to pay \$8 per thousand. Then the European spruce grows faster, produces better material and is better adapted to the climate. Engineering skill is required for removing the crop, in the construction of roadways, etc. Then there is the question of reproduction. If the crop is a natural one you reproduce by removing the old trees and

leaving the old seed to reproduce. How fast should air and light be given to young seedlings? The reproduction of the beech is a matter of importance in the German forest. How often does the beech produce good seed? In different localities it varies from three years to twenty years in the northern country. A few years before the seed year the forester thins out the forest in order to allow air and light to enter and decompose the seed-bed. That takes the place of ploughing in agricultural operations. In the Adirondacks it is necessary to open up the forest cover sufficiently to allow the seed to sprout. The first year you must begin to remove the old crop and give more and more light. Perhaps in five years the seedlings will be ready to be relieved of all shade and the old crop may be taken off entirely, leaving a new forest growth of beech. Of course the entire crop might be cut off at once and the ground resown and replanted.

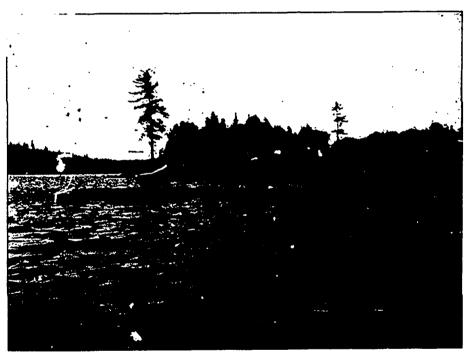
Then there is the question of revenue production. A forester has a business ideal which he calls the normal forest.

of crop to be grown I came to the conclusion that white pine was the king of the woods and would always be required, as would also spruce. So my policy was to concentrate on these two with whatever hardwood the land now produced. But there was no market for hardwood, and it was necessary to create a market. I got manufacturers of staves and wood alcohol to build a railway to get out the products. The cordword in the hardwood forest represents nearly three times in bulk what the logs represent. To get rid of this two-thirds was the difficulty. We solved it by putting the wood alcohol plant there. A contract was made for a fixed annual supply, and this takes all material down to three inches in diameter. I should cut the annual output over the whole area, but the shortness of my capital requires me to confine my operations. I have to cut clean and replant. There must be degrees in the application of forestry principles. There must be first, protection, and afterwards utilization."

Dr. Fletcher, the Dominion Entomologist, called attention

to the fact that the one this necessary is definite knowledge. We must find out what we have done and what we are doing, and must provide for forestry education. The one thing we have to aim at is to show the people what we wish to do. The ventiment in regard to trees is entirely different in this country from what it is in England. To cut a tree there is almost a sacrilege. In one county of England, Kent, the penalty for cutting an ash pole is transportation for life. The trees there are required for hop poles and they are appreciated on accountof the knowledge of their uses. One important advance in Canada is the adoption of the fire ranging system. At the forestry conference held in Montreal eighteen years ago, it was stated that over one million dollars' worth of timber per year was being destroyed by fire, and now we all notice the Cimprovement by the fact that

we have not the smoke from forest fires which was formerly so common. In deciding the question as to whether a school of forestry is practicable we must consider whether the time is ripe and the Government will give us the We have to consider carefully whether the money. time is ripe. The one demand is definite knowledge. We must know what forestry is and what are the related branches. We must understand the direct side issues which come into this question. We must have scientific knowledge. That is a false distinction which is made between what is practical and what it scientific. The man who calls himself practical is usually an ignoramus. Do I blame the lumbermen for cutting their crop, only restrained by the requirements of the market? No. They may be expected to use their resources. Why have the lumbermen the privileges they have been granted? Because we wanted to get the trees off the land. We know that we have land that could be best



Fishing Club House, Lac des Baies (Nominingue)

When does the crop ripen? There is only one way of determining it, that is by mathematics. When will it be most profitable to cut it is the main question. The crop takes at least sixty years to make useful timber. In round numbers one hundred years will represent the greatest value of crops. An intermittent business is not good for forestry any more than for any other business. The ideal forest is one in which there are trees of different ages growing side by side. The wood capital must be preserved and only the interest taken oil Forestry means the curtailment of the present revenue for the sake of future revenue. The question of profitableness cannot be answered in general. It must be answered in each particular case. The New York College of Forestry has thirty thousand acres which they hold for thirty years. In selecting the tract the first thing I looked for was a market. I located the tract in relation to two railways in order to have railway competition. It was also located near a river. In considering the question used for the growing of trees, but we had not then the definite knowledge and information which we have to-day. The work that has been done in Canada is only beginning to bear fruit. It is only now that a general interest is being awakened in the subject of forestry, and it is important that public opinion should be aroused in the matter. The Government holds back till it is forced to take action. It cannot go before public opinion.

The Assistant Secretary of the Forestry Association spoke of some of the phases of the forestry problem in Canada, and called attention to the work that the Canadian Forestry Association was trying to do in gathering together information on the question and awakening interest.

Principal Grant said that in his opinion what was required was definite and continuous action to keep up an interest in forestry. But how was that to be obtained? What we want is a man to gather together all these different lines of knowledge and focus them in one centre, until public opinion is stimulated

and formed. This man must be in touch with all who are interested in the subject. He should meet with those in the lumber trade, gain hints from them, and afterwards would be in a position to give advice. This would give us some systematic effort.

Professor Goodwin said that the thing to do now was to look over the ground and see how further to organize the forces. In the first place there is a growing feeling among the lumbermen that they can improve their forestry practice. The Dominion and Provincial Governments have begun to move in the direction of educating the people in the proper use of trees. The setting aside of forest reserves by the Dominion Government and by the Ontario Government is educational. One important question, if a school of forestry is established, is where the graduates would obtain employment. The information given at the meeting seems to have settled

this question fairly well, but I would like to have some information from Dr. Fernow as to how this part of his arrangements has worked out in connection with the New York School. I may also suggest that there are a number of persons already in the lumber business who might be benefited by attending a short course of lectures on the subject, but who would not require to take a full course in forestry.

Dr. Fernow stated that he had felt the same difficulty in starting a School of Forestry at Cornell, but they had found that when the time came for obtaining positions for graduates the demand had exceeded the supply.

Re-afforesting Older Ontario.

By Thomas Conant, Or Iawa, Ont.

This part of Ontario about Osh wa and Bowmanville was first settled by white men in 1788. L'he lands were surveyed in

1790-2, and up to the time of the surveys it was an unbroken, dense wilderness of very tall, thrifty trees, mostly hardwood. "Unbroken" the wilderness was, because there are no swamps or waste places hereabouts where trees would not grow. Among these great, tall, straight, thrifty hardwood trees were scattered white pine trees. By way of comparison of those occasional pines with the pine regions of the north, these pines were giants and of the very best quality.

My forbear came here from about Boston, Massachusetts, in 1788, fleeing from the most deplorable struggle between the colonies and the Mother Country. Deeds were granted to him by the Imperial Government when the first surveys were made of lands in this locality and at first always upon Lake Ontario shore. Some naval men, it appears, had voyaged along these Lake Ontario shores while that struggle before mentioned was going on, and saw with wondering eyes the enormous, straight, tall, white pine trees along the shore. In those days all the masts in the Royal Navy were of wood, and officers were always



Chebange Lake, Ontario

on the lookout for masts, always difficult to be found tall and straight enough. They found them here, however, and consequently all the Crown deeds reserved to the Crown the right at any time to enter and take away pine trees for masts. So far as I know, however, very few pine trees were taken by the Crown. These pines were just lightly squared and sent in rafts down the St. Lawrence to Quebec, along with enormous sticks of rock elm and white oak, and then were taken upon the timber ships to Great Britain. Along with the trade in furs, this timber trade brought the first ready money and prosperity to Upper Canadians.

White oak, when not sent off by rafts, was cut into "shooks" and sent away to the West Indies for making large casks for molasses and rum. Shooks were white oak strips about five feet long, three inches wide, and one and a half inches thick, and they also brought good money for the struggling settler here,

Sawmills cut up pine not quite good enough for masts, and it found a ready market in cities along the Lake Ontario shore in the United States. White maple, beech, and all other woods were quickly logged and burnt upon the lands. Thus were these lands almost entirely denuded of the forests. Very few copses of the original forest remain. Here and there an old-fashioned landowner, who is not always trying to find out what his last dollar would amount up to, has kept his forest. When such landowners die, these forests are almost invariably offered for sale by public auction. At the last auction sale here the wood upon the land alone brought one hundred and forty dollars per acre, and there is no limit to the sale at that high price.

Odd landowners are now turning their attention to re-afforesting these before described denuded lands. As to the whole, one in a thousand would be a fair estimate of those who have been trying so to improve their lands. This is done mainly by planting the young maple in the spring. Going to a grove where the maples have come up thickly from seed, the young maples are dug up and the roots cut off to within a radius of 18 inches from the bole of the tree. In like manner the limbs are cut off, leaving the tree bole quite bare and a straight stem. And while at first they are not pleasant to look upon, being simply bare poles, this plan is found to succeed best. That is to say the limbs must be cut off in proportion as the roots have been cut in digging up the tree.

Usually all such tree planting has been done, as I said, in the spring. It is, however, well to remark that latterly our winters have been very broken. Since our lands are denuded of the forests, our snows are not at all to be depended on, and winters frequently pass without snow available for use. Rains have not been held by forests. Fall storms have come, it is true, but the water has run off quickly, while during the preceding summer the lands were heated from the long period of sunlight, and no tarrying waters have cooled them. Manifestly when the snow falls the ground is too warm to retain it, so that it melts and is gone, and not infrequently the frost comes out of the ground in toto during a "warm spell" of the winter. For planting trees, then, this is the best possible time, not withstanding the fact that those planted in the spring have succeeded fairly well. And the cause is not far to seek. Before hot, dry weather comes on, spring rains have washed and solidified the ground about the roots of the young trees and filled every cavity, and when drouth an I heat do come they can withstand it bet er by far than those not so well solidified about the roots by spring planting.

Usually they are set in rows about twelve by twelve feet, and invariably they have succeeded. Personally, I have had unqualified success in planting out many hundreds and thousands of maples. Mr. Daniel Lick (deceased), of Oshawa, likewise planted largely. Of some five acres in one grove they all grew except on some bottom lands therein, subject to floods. Our maples, of which we are so justly proud, will not stand the wet.

To attempt to water trees during a dry time is to court failure. Somehow thetrees won't take the moisture when put on their roots by the bucketfuls. In my own experience watering the maple, hickory and spruce, has been an almost total failure. To stir the ground lightly with a hoe, daily if possible, during a dry, hot time is far better than watering, and very much less trouble.

When a forest has been cut off, the old roots of the trees are still in the soil, and they will grow most vigorously if we will let them. In two instances I have caused such forestdenuded lands to be fenced and cattle to be kept therefrom. One grove of eighteen acres, cut sixteen years ago, now gives me trees, maple mostly, averaging ten inches in diameter and sixty feet high. Another grove of eight acres, cut eighteen years a₅₀, has run into pine and oak along with maple. Pines, of course, have grown most and are eighteen inches in diameter, while the other trees are quite as good as in the first mentioned groves.

It occurs to me that words are not necessary as to the desirability of re-afforesting a portion of our old Ontario lands. The desirability is, I think, like an axiom which is granted. Indeed, I notice that my tenants are not slow to make use of my efforts at re-afforesting by sowing winter wheat in the shelter of groves, and I notice, too, that they usually succeed when many exposed fields of fall wheat usually fail.

Only two years ago I was in old Spain and had a look at their raisin-grape lands. In many parts I found that they had cut off the cork timber. This they did for two reasons—to get money at once for the cork, which is always valuable, and to plant the raisin-grape on the cork-freed lands. The consequence was, their rains ceased or came so irregularly, that they could not grow grapes, as the result of cutting away their timber. To-day there are tens of thousands of acres in Spain, as there are in Arabia, Egypt and the Holy Land, barren sand and rock, which I have seen and which were brought to be such barren, valueless wastes by being deforested.

Before this issue reaches our subscribers the annual meeting of the Canadian Forestry Association will be a thing of the past. A report of proceedings will appear in the April number. The programme includes the following papers: "Forest Insects," James Fletcher, LL.D., Dominion Entomologist; "Forestry in British Columbia," J. R. Anderson, Deputy Minister of Agriculture for British Columbia; "Forest Management in New Brunswich; W. P. Flewelling, Deputy Surveyor General for New Brunswick; "The Pulp Industry in Relation to our Forests," J. C. Langelier, Superintendent of Forest Reserves for Quebec; "White Pine and its Economic Management," John Bertram, Toronto; "Forestry and Tree Planting in the West," E. Stewart, Dominion Superintendent of Forestry.

A most interesting report is that of the Dominion Superintendent of Forestry, published in the annual report of the Department of the Interior. Mr. Stewart discusses the functions of governments in connection with timber lands and comes to the conclusion that the Government is fully justified in reserving forest areas. This is naturally followed by a description of the timber reserves in the West, a number of interesting views from which are included in the report. The importance of tree planting, not solely for the value of the wood, but for the effect or agriculture and for shelter purposes, is particularly dwelt upon. We hope to give a more extended notice later.

The Winnipeg Forestry Association has been formed as a result of the meeting held there recently and has affiliated with the Dominion Association. The officers are: Honorary President, Lieutenaut-Governor McMillan; President, Rev. Dr. Bryce; Vice-President, Mr. A. P. Stevenson; Secretary-Treasurer, Mr. G. H. Greig; Directors, Messis, D. W. Buchanan, C. J. Thompson, F. Schultz, E. F. Stephenson, Wm. Martin, R. Barclay and R. T. Rielly.

The permanent decline in the pine lumber products of the saw mills of Michigan, Wisconsin and Minnesota is graphically portrayed by the report of the output of those mills for 1900, the comparative 'able giving the product by districts and the grand totals for a series of years. These statistics have now been compiled for twenty-eight consecutive years, and form the only complete and reliable figures existing in regard to any grand department of the lumber industry. They have been secured from the mill men themselves and their completeness is convincing.

The last year the product passed the eight billion mark was 1892, and now it has dropped below five and a half billions. The grand totals for the last eleven years, in round numbers, are as follows: 1890, 8,597,000,000; 1891, 7,880,000,000; 1892, 8,594,000,000: 1893, 7,326,000,000; 1894, 6,821,000,000; 1895, 7,050,900,000; 1896, 5,726,000,000; 1897, 6,233,000,000; 1898, 6,155,000,000; 1899, 6,056,000,000; 1900, 5,485,000,000. The exact total for last year is 5,485,261,000 feet.

During the last two years there has been every inducement for the mills to turn out a heavy product; and yet there was a slight falling off in 1899 as compared with 1898, and a heavy decrease in 1900. Every resource was strained to make a heavy output, but without result, except to prove that at last the closing years of the white pine industry of the northwest, as one of great magnitude, are at hand. With such results it must be admitted that the product will decrease annually until it reaches a point where by the adoption of preservative forestry methods it can permanently be maintained.—American Lumberman.

We are pleased to notice that the Ontario Government has taken up the subject of perpetuating the white pine lumber industry by a system of re-afforesting and fire ranging. Our own observations confirm those of the Government officers that pine follows pine and where soil is good the growth of the young pine is from one and one-half inches to three inches increase in diameter in ten years. These measurements were taken from trees eight to thirteen inches in diameter. We hope all lumbermen will heartily co-operate with the Government by leaving all healthy young trees standing where too small for logs, instead of stripping the ground as they do.—John Waldie, President of the Ontario Lumbermen's Association.

The Canada Lumberman reports that the Sault Ste. Marie Pulp and Paper Company are said to be buying the refuse of pine, spruce, balsam and tamarack, and paying \$2.50 per cord delivered at the Soo. If this refuse can be disposed of in this way at a profit, one of the difficulties in the way of the adoption of a proper system of forestry will be removed and the clearing off of the debris made possible will do much to prevent the spreading of fire.

The San Jose Scale Act passed on the 18th March, 1898, gives authority for the prohibition of the importation of any trees, shrubs, plants, vines, grafts, cutting of buds, commonly called nursery stock, from any country or place to which the Act applies. By Order-in-Council of the same date the Act is declared to apply to the United States of America, Australia, Japan, and the Hawaiin Islands, and the following classes of stock are exempted from its operation:—(a) greenhouse plants with the exception of roses or any other weedy plants; (b) herbaceous perennials; (c) herbaceous bedding plants; (d) all conifers; (c) bulbs and tubers. By Order-in-Council of 6th January, 1901, a relaxation of the prohibition is made and all

importations thereof are permitted to be entered at the Customs Ports only of St. John, N. B., St. Johns, Que., Niagara Falls and Windsor, Ont., and Winnipeg, Manitola, between the following dates in each year: 15th March to 15th May in the spring, and 7th October to 7th December, in the autumn; and at Vancouver, British Columbia, during the winter months only from 15th October to 15th March, at which ports they will be thoroughly funigated with hydrocyanic acid gas by a competent government official in accordance with the most approved methods.

All shipments made in accordance with the above will be entirely at the risk of the shippers or consignees, the Government assuming no risk whatever.

Packages must be addressed so as to enter Canada at one of the above named ports of entry, and the route by which they will be shipped must be clearly stated upon each package.

As it is well known that well matured and thoroughly dormant nursery stock may be safely treated, but that there is danger of serious injury to the trees if fumigated in the autumn before the buds are thoroughly dormant, or in the spring after the buds have begun to unfold, all stock which when received is immature or too far advanced for safe treatment will be refused entry and held at the risk of the shipper.

The secretary of the Ontario Lumbermen's Association, in his report presented at the meeting held at Toronto recently, comes to the conclusion that the price of white pine is likely to remain firm if it does not increase. He quotes the following figures for the Georgian Bay District: Total quantity produced, 1899, 351,000,000 feet; 1900, 476,000,000 feet; increase 125,000,000 feet; decrease in product in Michigan mills hitherto supplied with Canadian logs, 92,282,000 feet; net increase, 82,718,000 feet. Decrease for 1900 in product of mills in Michigan, Wisconsin and Minnesota, which compete in the same market, 478,603,000 feet. The estimated production of the Georgian Bay District for 1901 is 501,900,000 feet, an increase of 25,900,0).

The estimate of the Crown Lands Department of the cut of pine over the whole of Ontario for this season is 750,000,000 feet, an increase over last year of 100,000,000 feet.

Mr. Nelson O. Tiffany, President of the Eric County Society for the Study and Protection of Song Birds, Fish and Game, points out a clerical error in our last issue. In our report of the meeting of the North American Fish and Game Protective Association we gave the wording of the latter part of section one, article three, as follows:

"Any fish or game association in Canada may be represented in this Association by as many of their members as they duly accredit thereto, etc." The words in Canada should, of course, be stricken out, as all societies, whether having their headquarters in Canada or in the United States, are equally redeemed.

One of the worst of our Canadian poachers is the merganser, usually spoken of by the back settlers as the "shell duck." From the day they emerge from the egg the young mergansers prey unceasingly upon fishes. They seem to have no preference and devour indiscriminately young salmon, trout, bass, pike, whitefish and chub. A charge of shot is never wasted 1. it has been fired at a shell duck, but after August 1 comparatively few allow themselves to be caught within range. The season for thinning the broods is from June 20 to July 25. The loons and mergansers together do far more damage to our fisheries than any one would think, unless he had starlied the habits of the birds.

ROD AND GUN IN CANADA अवक्रक

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Taken all in all, it will be conceded by most Canadian sportsmen, that the game and fishery laws of New Brunswick are eminently common-sense and practical. They are not perfect but they are considerably nearer perfection than those of the other provinces and territories-and, as the New Brunswick authorities readily admit, the provincial laws are almost identical with those of the State of Maine, from which they were derived. New Brunswickers, as well as their fellow-countrymen, owe a debt of gratitude to the farseeing and enlightened Maine men who have done so much for game protection; there is not a province in Canada which would not benefit by a little sensible game law legislation.

The Report of the Maine Commissioners of Inland Fisheries and Game for 1900, makes most interesting reading; it forms an admirable model for our official documents. As far back as 1867 a resolution was passed by the legislature relative to the restoration and protection of sea and inland fisheries-there were already a few men, wise and far-seeing enough to discern that the State had a valuable resource in its fish and game, and that they must be given some protection. From the passing of this resolve to the present time it has been the settled policy of the State to enact and enforce needful, restrictive and protective laws for the propagation and protection of its fish and game, and there has been an appropriation made by the legislature annually for that purpose.

The State went into fish hatching in 1868, buying the first salmon eggs from us at a cost of \$44.50 a thousand, and to-day salmon have become so abundant in the tidal waters of Maine that any quantity of eggs may be obtained at a cost of \$1 a thousand. The Commissioners would like an appropriation of \$25,000 for fish propagation and protection, and it is quite possible they may get it ere long. They say "Our fish is worth more to our people than the game. Although the game of Maine is well worth preserving and affords a good revenue to the State, yet we believe that the fish is many times more valuable than the game. Given the means, fish can be artificially propagated without limit, game cannot; nothing can be done for that except protection, which is very difficult in a large part of the State, as it is scattered over a very large territory."

From a commercial point of view a State can rarely have made a better investment than did Maine, when she wisely set aside certain monies for game and fish protection. In 1900 there were twelve hundred private cottages and six hundred hotels, hunting lodges and camps in the State which would never have been built had there been no such things as trout and deer. These buildings, together with their furnishings and attendant boats and canoes, have cost more than three million dollars. To these come each season visitors, whose number is variously estimated by those best qualified to judge as from fifty to two hundred and fifty thousand, and the smallest amount of each one's average expenses could hardly be placed at less than \$50, so from two and a half to twelve and a half millions of dollars must be left in Maine by the sportsmen attracted by her game and fish. All the more trustworthy authorities incline to the greater total.

The following extract from the Maine Farmer is particularly commended to those who represent our pioneer farmers in the various legislatures: "From the moment these visitors step upon the soil of Maine until they depart, they are spending money, and when the dollars are in circulation everybody gets a share. Three times a day the cry for food goes up, and through the invigorating influence of pure air and exercise it proves no less as the days pass. Here is the direct benefit the farmers are realizing from the generous advertising which has been given the State by railroads and hotel men. In some country towns, the home market is the best in the State, and everywhere it is more active because of the great influx from the cities."

A Maine moose may not be shot, lawfully, until it has two times or prongs to its horns. It is claimed, and rightly claimed, that the value of a moose is not in its carcass, but as a trophy of the chase, that while its meat is not worth more than \$30 its real value in not less than \$500, seeing that this represents the average sum spent by the sportsman who is sufficiently fortunate to secure one.

In conclusion the Commissioners say: "It is pretty generally admitted that Maine has the best code of game laws of any in existence, and many states and other countries are rapidly patterning after them. After the people have familiarized themselves with them we do not deem it wise to make frequent changes, 'tinkering the laws' should be avoided as much as possible."

It is very encouraging that a healthy sentiment is showing itself in Ontario against the killing of deer in the water. A provision making such slaughter illegal is already in force, and operating admirably in the Indian Peninsula of the County of Bruce. There were 5,600 licensed deer hunters in the Ontario woods last season, and the lowest possible estimate of the deer bagged is 0,500; this is a heavy strain upon the stock of deer, but the forests are so extensive that the game can probably hold its own, provided the butchery of helpless animals is stopped.

Quail are said to be growing few in number in the counties of Essex and Kent, Ontario. The open season is now from September 15 to November 15, but Mr. T. L. Pardoe, M.P.P. for West Kent, intends introducing a bill into the Provincial Legislature shortening the season by a month. He also advocates the removal of any protection for hares, as they are too numerous and do considerable damage, moreover they are said to be increasing somewhat rapidly.

AMATEUR PHOTOGRAPHY

Conducted by H. McBean Johnstone

WHY NOT FOLLOW DIRECTIONS?

Negative-making is a subject that seems to be just as full of little puzzles to the twenty-year professional as to the twentyday amateur. I have run the query column in one of the leading amateur journals for about four years now, and I know from experience what the most popular (if I may use the word) troubles are, and just where the erring lambs have gone astray. The main trouble, in fact, the trouble of which the others are all mere details, is that the amateur simply won't follow directions. Maybe he thinks that the plate manufacturers just put in printed slips of directions because it somehow manages to afford them pleasure, or perhaps he thinks it is just done for appearance's sake because it is customary. Well, that's right where you fool yourself, amateur. Those directions have all been carefully studied out in order that a developer may be compounded with ingredients in the proportions that will agree best with the ingredients used in the making of the film with which the plate is coated. And then the other directions such as those referring to temperature and illumination of the dark room are intended to be followed too. That is if you want perfect negatives.

About three weeks ago an amateur acquaintance of mine came to me with a long tale of woe of how all the plates he had developed during the last month had been covered with a thin veil of fog. They had made printable negatives, you understand, but somehow they seemed to lack that brilliancy so essential to a good negative. I could not understand it. I knew him to be an carnest and careful worker and to follow the directions given to the best of his ability. Where could the fault be? Well, to cut a long story short, we took his camera and went out and made an expegure and then went up to his dark-room to develop it. Dark-room appeared to be all right, too, and for a while I couldn't locate the trouble. Finally I asked him what plate he was using and the cat was out of the bag. "Isocromatics," he said. "Why, you idiot," I cried, "how long since you ouit using Cramer Banner? This ruby light you have is about twice too strong for an isocromatic. No wonder your results are fogged." Yet in the ordinary sense of the word he was what I would call a very careful worker.

Another fault I find to be very common among amateurs, though not so among professionals, is a too sparing use of the dusting brush. Most amateurs have one-they get it on the start because the salesman said it was a necessity-and they keep it laying on the table with the rest of their tools. I suppose the reason they keep it laying there is to give it plenty of opportunity to gather dust and hypo and whatever else may be there. Now let me suggest a little scheme -or rather not suggest but recall it, for I picked it up out of a journal some years ago myself-have your brush hanging from the ceiling by a good stout cord, so that it is about on a level with your clbow, and you have reduced its power of accumulating dust to a minimum as well as having fixed it so that it can be found when it is needed. I know of nothing more aggravating than to be unable to find the dusting brush when you have your plate box and holders open and all ready to load. It's apt to make a fellow feel like saying --! --!!! Just a word on its use. Nineteen out of twenty amateurs seize it and run it hurriedly across the face of the dry plate and imagine that they have improved matters. Well, they haven't. They have instantaneously electrified the surface so that all the loose particles of dust in the air are thereby attracted and the condition of the plate is worse than if you had let it alone. You have to run it across slowly and lightly to remove the dust. And say, do you dust out your plate holder each time, just the same as you dust off your plate? No? Well, you should, or if you don't you might just as well be without a dusting brush, because that little holder can hold more than the plate. It can hold enough dust to create a most magnificent pinhole effect. I know pinhole photograms are said to be very effective, but not this kind.

During the summer months, if you take a picture, and then re-pack the plate for development a couple of months later, you will have to be careful in the re-packing. I saw a box of plates done up once and a piece of newspaper laid on top of each one as it was put in, to prevent its scratching from contact with the next, and I remember the day we opened the box how one snap-shot of a drunken old toper clinging affectionately to a lamp-post, bore the word in big reversed letters across the top, "McKinley." Investigation showed that the paper that had been in contact with that plate had a heading on it with McKinley's name in big letters. Another thing you'll have to be wary of, is finger marks. I know you are careful not to touch the film with perspiring fingers, but are you as careful about the backs? I guess not. And then you put your plates away, all of the film side down as you would negatives, and the consequence is that when you come to develop you find great big finger marks on your choicest negative. It's always the best that is spoiled, you know. You can easily remedy this by packing them film to film.

I remember getting a letter once from a chap who wanted to know what the little brown specks were all over his negative. Of course I'm expected to know all these things without ever seeing the negatives. If I didn't I wouldn't be running a query column. Well, I sent for the negative and examined it and for a few minutes was just about as puzzled as he was himself. The cause was so simple that I couldn't think of it. Then I wrote to him and told him to tie a piece of cotton flaunel over the faucet to keep back the pipe rust and sand, and after each negative was thoroughly washed to rinse it off and gently pass a soft wet sponge over its surface—taking care, of course, that the sponge was really very soft and wet. That fixed his trouble all right, but its surprising how a little thing like that will often prove a big stumbling block.

I am frequently asked why it is that some negatives are more brilliant than others, and occasionally I am sent two negatives for comparison. The first question I always ask is, "Were both exposed correctly?" and usually that locates the disturbance. It is also well to remember that thorough fixing and thorough washing followed by quick drying assists greatly in the producing of a fine printing quality, and that if the negative is weak then it can be re-wet and dried in a slight heat to intensify it. This plan will often answer too, where it is desired to only slightly intensify a negative.

How many negatives do you develop at once? One or six? When you started you only developed one, of course, but now you are getting bolder, and you're running up—two, three, four—just whatever you happen to have on hand when you start work. Now, do you think you can produce as good results and watch four or five as you can where you only have one in your tray? O yes, I know that Mr. Shinitype, the pro-

fessional, develops five or six at a time, and makes good negatives, too; but, my dear friend, Mr. Shinitype is quite satisfied if he secures a certain amount of excellence in his results, and as long as his customers are pleased why shouldn't he be? He's not working for the advancement of his art. Not much. It's his pocket that he's looking after. Anyhow, old Miss Jones will never know that he could have improved on her phiz if he had just given it a little care during development. And as long as she doesn't know it she's not going to make a kick, is she? So why shouldn't he save time? But you're not that way or if you are you shouldn't be. You should be looking for the opportunity to improve on each detail of each negative and yor certainly can't do that if you go at it in a wholesale way. I think that there are more half bad negatives turned out each year by amateurs just through trying to hurry than from any other cause-and you know amateurs do make a lot of failures from other causes too. No, sir, you go back to your small tray and develop one negative at a time and see how your work will commence to improve. It can't help it.

But I'm not going on to give the various ways of treating weak negatives, or strong negatives, or yellow and mottled negatives or negatives that are failures from a hundred and one other causes. Why should I? Doesn't every plate manufacturer do it in the printed slip of directions he issues. Yes, sir, no does, and that's just what I want to impress upon you. He puts out directions suitable for the manipulation of his plates, and if you will insist on trying to use somebody's developer on somebody else's plates, you certainly have no cause for complaint when you get inferior results. Now, this is the beginning of a century and the time for making good resolutions. The best resolution that every amateur photographer can make is to "follow directions." And right to the letter, too—that's what they're there for.—II. McBean Johnstone in "Camera Craft."

A Puzzled Photographer.

A photographic journal tells the story of a trick recently played on a portrait artist. A man came to the studio to have his portrait taken. The photographer's assistant attended him. Two plates were exposed and then the assistant went into the dark room to develop them. Presently he returned and asked for another sitting, explaining that two spoiled plates had been accidentally used. Two more exposures were made and the assistant after a few minutes in the dark room, came out with a pale face and hurriedly went in search of the photographer. On his arrival he told the sitter that there was a peculiar mark on each of the photographs which his assistant had taken, and asked to sit again, when he would operate himself. The sitting was granted, but with no better success. The photographer was in despair. He showed the plates, each of which bore the same blemish. It was a well defined skull and cross bones on the forehead of the sitter. The photographer said he was not a superstitious man, but that kind of thing frightened him, and he would not attempt to take another likeness of his patron. The explanation given of the matter is that the young man is a druggist and had been playing a joke on the photographer. Bisulphate of quinine is a chemical which is white in the naked eve, but seen black by the camera. Anything that is painted on the skin, therefore, with the chemical will be ordinarily invisible, but will come out prominently in a photograph.— Professional Photographer.

There's nothing like good clean dishes, such as developing and toning trays to help to turn out good work. You can spoil the very best of work by a little filth. 'Nuf sed.

A Postcard Novelty.

It consists in printing, by the ferro-prussiate process, on the backs of postcards, leaving sufficient space for writing. This space is then darkened by exposure to light, and the writing done when the prints are finished and dry, with a pen dipped in a solution of caustic potash—the writing appearing brownish white on the blue ground. It has the merit of novelty, is quite practicable and costs next to nothing. With a little taste, too, the postcards can be made to have quite an artistic appearance.

The sensitizing solution consists of :-

A.—Potass. ferricyanide	1 part.
Water	8 parts.
B.—Ammonia citrate of iron	2 parts.
Water	5 parts.

Keep in the dark and when required for use mix two parts A with one part B. Coating is done with a tust of cottonwool applied lengthwise and crosswise. It is best to do it at night, and the cards can be left to dry at a distance of two feet from a fire, as quick drying gives brilliant results. Do not use glazed postcards. Printing should be carried on till the deepest shadows assume a "copying ink pencil" appearance by reflected light. After printing it is only necessary to wash the cards in water till the high lights become clear. A pen with a fine point should be used for writing, and a little gum may be added to the caustic solution to make it flow easier.—J. L. Toner in the "Am. Photo."

The Scrap Bag.

Very serviceable trays can be made from table oilcloth. One can take some squares along when touring and clip them on to a folding frame when wanted and thus economize space. For occasional enlargement work it is entirely unnecessary to pay out six or eight dollars for two large trays, as this cloth is perfectly serviceable and lasts a long time.

Edward W. Newcombe says that "pants" and 'photos" are the two most vulgar words he knows of. "Let us wear trousers and take photograms." Good boy, Ned. Come again.

If you have a box of negatives or lantern slides, and want to always keep them in the same order without twisting your brain too much, just fill the box full, index it and with a brushful of glue paint run a diagonal across the tops. That having been done, an erroneous replacement, it will be seen, is out of the question.

What's all this talk about "artistic" and "soulful" photography? It means "fuzzy types," doesn't it? Say, let's drop it all and commence to make pictures instead of trying to hide our bad workmanship by printing from the wrong side of the negative. Other fellows do it. Why can't we?

When you have made an exposure use one of those red lawyer's scals (the scal is red, not the lawyer), and you can make sure of the fact that the plate is exposed. Mark the exposure on it, the subject, if you care to, and stick the wafer on the holder in such a manner as to make it impossible to open the holder again. See?

That E. W. W. spotting medium is the only thing of its kind on the market that will spot a negative up so you can't tell where the scratch was. And an amateur can use it too after he has once tried it. You know there's no reason on earth why you should have your photograms all covered with pin holes.

A couple of days ago I landed in an annateur's dark-room that set me thinking. Or to be more correct, it was the dirt and not the dark-room that I thought about. Why not clean up once in a while? It pays. Now, you spill a dish of hypo and never bother to wash it up. May be you think that's the end of it. Well, it ain't. The blooming stuff dries up and the hypo crystallizes into a fine dust and gets into the developing and printing frames and everywhere else. A stitch in time saves nine.

No, I don't like too much "yaller flesh tints" in mine. There is no use spoiling a good platinum print with mercury. Once in a while some of the superb work of Holden in Philadelphia, thus tinted, appeals to me, but 'tis certainly questionable practice save in the most expert hands.

The great danger in interior work will be under-exposure and awkward lighting. Never take an interior with strong lights in front of the camera unless you use a non-halation plate. Then the light should be screened by a shade, an exposure taken from the shadows, the shutter closed, the shade raised, and a short exposure taken for the light.

Now, why in thunder is it that you try every new developer as fast as it is put on the market? If you would only stick to one and learn how to make it make thin or thick, or contrasty, or detail, or all the other kind of results you want, it would be better for you. And keep to a two solution developer always. You haven't much control over one that is all in one solution.

In a recent issue of the Cumcra, Mr. Juan C. Abel, ex-editor of the Photographic Times, says: "Regularly, on the approach of winter, we read in one or more of the photographic journals a plea for the more extensive use of the camera during the cold season, more particularly when the snow is lying on the ground and everything is of a more or less monotonous white to the eye. And, somehow, it is the kodaker-the pocket kodaker -who is most careless of all photographers, who seem to take the proffered advice most to heart, and with loaded kodak wanders out, with every fresh fall of snow, to waste another roll! Yea, verily, the desire for snow-covered landscapes produces more disheartening failures than any other subject I can think of. And all for the want of a little common sense. We have been told, or we have read, often enough that reflecting surfaces require a quicker exposure than an ordinary wooded landscape, and that a sky covered with light clouds, such as we often find in winter, gives out a stronger light than a blue, cloudless sky. Consequently, with the average snow-landscapes, we shall need to use a very rapid shutter and a very small stop or diaphragm opening. With lots of fresh snow on the ground and the sun shining fairly briskly, towards the end of January, time II a.m., I have found that f-128 and the speed set at 100 (this is not 100th part of a second, mind you) on a Unicum shutter will give me a pretty fairly timed exposure. The majority of failures, however, result from over-exposure. The beginner reads in the instruction book (save the mark), which accompanies his camera, that in winter the sun is very much weaker than in summer, and that exposures must consequently be very much longer during the short, cold days. Nothing is said about the strong reflecting action of the snow, and the thoughtless beginner accordingly gives half-minute exposures where the twenty-fifth part of a second would suffice. The nonhalation or double-coated plate is perhaps the best to use for snow scenes. The latitude in exposure is so great with these that one may over-expose to a considerable extent and still get a very passable negative."

As an old hypo bath or as worn out gold bath often works hardship to plates and paper and fills the amateur with arguish over the spoiled negatives or batch of prints, so will a weak and worn out developer often give the amateur negatives that are inferior. If new baths are essential to work along other lines of photography, why should not the new and fresh developer work better and give better results than one that has been partially worn out by previous use.

When you make an exposure on a man five feet from your camera, always try to remember that you've got to give a longer exposure than if he was twenty-five feet away. And don't give hazy landscapes or distant mountains too long an exposure.

There is not enough "doctoring" of negatives done by the Americans. A little blue patted on the heavy shadows on the back, a smooth piece of cepa (a very fine transparent tissue) pasted over the front of the frame and touched up a trifle with gumbage, a brushful of spotting color, etc., etc., might make you all open your eyes.

Did it ever strike you that stock dealers get tired of answering questions? It didn't? Well, they do. I was in a supply store a day or two ago when an amateur came in and bought a pound of hypo. Then he asked the clerk if he could develop with hypo. The clerk (Heaven help him), sud "ves." Goodness knows whether he tried it or not, but if he did I'd like to see the results. Don't know as I'd like to hear the result though.

The height of the camera relative to the head of the sitter is a matter of importance. Beginners often use an ordinary tripod, of height about five feet, and place their figure seated, and bring the camera far too close to the sitter. The result is a deformity of the figure and an earthquake-like effect of the ground. As a rule the height of the lens for head and shoulders should be about on a level with the middle of the head. For a standing full length figure, the lens may come about opposite the chin. If the camera is above the head it seems to give a humpy-back high-shoulder effect. If it is too low, the neck may come unduly long and the head look too large about the lower part. It is seldom pleasant to show the under part of the nose and nostrils.

Correspondence.

Correspondence should be addressed to Hubert McBean Johnstone, Box 651, Sarnia, Canada.

Say, you fellows, I wish you wouldn't write on both sides of your paper, or else number 'em, or fix it somehow so that I can find out where I'm at.

Royal Mary.—Rodinal is a good developer, but I rather think that if I were you I would prefer a two-solution mixture. One has more control over it.

A. M. Carple.—The speed of the No. 6 Low shutter when set for instantaneous work is about one-fifth second.

Bert.—An hour ought to be long enough to wash prints. Of course I take it for granted that you wash them in running water.

Johnson.—Paint labels on bottles with melted paraffine wax. While not permanent this will last for some time.

Jones (testily)—"I say, mister, your dog has bitten my boy severely. What are you going to do about it?"

Brown (mildly)-"Well, sir, if the dog don't get sick I won't do anything about it."

THE GUN

Conducted by "Bob White"

SOME FAVORITE LOADS.

To those who load their own shells, the formula given by the Winchester Arms Co., as being the loads adopted by some of the champion trap shooters of America, in their little pamphlet, "The Trap Shooter's Guide," will be interesting. For the benefit of our readers we give the loads, as follows:

Elliot's Live Bird Load.—Winchester Leader Shell, 12gauge, 23-in. long, 43 grains Hazard "Blue Ribbon" smokeless powder, 11 oz. No. 72 Tatham chilled shot. Wadding: One 12-gauge Winchester nitre felt wad and one 91-gauge 3-inch

Falls of the Kiameta, Quebec

Winchester white felt wad over the powder, and one 12-gauge Winchester "C" card wad over the shot.

Elliot's Target Load. - Leader shell, 12-gauge, 23-in. long, 40 grains Hazard "Blue Ribbon" smokeless powder, 1] oz. No. 71 Tatham chilled shot Wadding: One 12-gauge nitro felt wad and one 91-gauge white felt wad over powder, and one 12gauge "C" wad over the shot.

Gilbert's Live Bird Load .- 12-gauge Leader shell, 3-in. long, 3½ drachms Dupont smokeless powder, 14 oz. No. 7 Tatham chilled shot. Wadding: One 12-gauge "C" card wad and three 1-in. 11-gauge black edge wads over powder and one 12-gauge "C" card wad over shot.

Gilbert's Target Load.—12-gauge Leader shell, 21-in. long, 38 grains Dupont smokeless powder, 11 oz. No. 71 Tatham chilled shot. Wadding: One 12-gauge "C" card wad and three J-in. 11-gauge black edge wads over the powder and one "C" wad over the shot.

Crosby's Live Bird Load.-Leader shell, 12-gauge, 3-in. long, 48 grains of E. C. smokeless powder No. 1, 11 oz. of No. 7 Tatham chilled shot. Wadding: Three 12-gauge 1-inch black edge wads over powder, and one "C" card over shot.

Crosby's Target Load. Leader shell, 12-gauge, 3-in. long, 44 grains of E. C. smokeless powder No. 1, 11 oz. of No. 71 Tatham chilled shot. Wadding: One 12-gauge grease-proof and three 12-gauge 1-in. black edge wads over the powder, and one "C" card over the shot.

TORONTO TRAPS.

Dufferin Club's Shoot.

The Dovercourt and the Brunswick Gun Club have amalgamated, and will be known as the Dufferin Gun Club. They held their first successful shoot on Saturday, January 26th, at 25 targets. Score: R. Waterworth, 24; S. Nowberry, 23; George Mougenel, 22; I. Lawson, 20; C. Mougenel, 19; I.

Habberly, 17; C. Moore, 17; J. Grainger, 16; J. Patterson, 15; J. Turner, 15; Fred Peacock, 15; F. Currie, 13.

The Stanley Gun Club.

The members of the Stanley Gun Club have been making some creditable scores lately, some of which we give below:

Scores in 5th and 6th Target Series.

Sweep No. 1, 10 targets. - J. Townson, 9; Herbert, 9; Plunkett, 9; Friend, 8; Ayres, 7; Wilson, 7. Sweep No. 2, 10 targets.-Herbert, 9; Plunkett, 9; Alberts, 8; Ayres, 7; Wilson, 7.

Target series, squad No. 1, 25 targets.-H. Townson, 15; J. Townson, 19; Buck, 15; Edwards, 14; Herbert, 20; Simpson, 17. Squad No. 2, 25 targets. - McClure, 21; J. Townson, 17; Pearsall, 15; Edwards, 16; H. Townson, 17; Green, 21. Squad No. 3, 25 targets. -Green, 19; Alexander, 20; Mc-Clure, 17; Buck, 16; Pearsall, 15. Squad No. 4, 25 targets.-Green,

19; Pearsall, 15; McClure, 17; Herbert, 20; Alexander, 21; Felstead, 19.

Score in 7th Target Series.

Sweep No. 1, 10 targets.—Simpson, 9; Herbert, 8; II. Townson, S'; Benson, 7; Friend, 7; James, 7.

Sweep No. 2, 5 sparrows.—Charles, 5; Townson, 4; Felsted, 4: Plunkett, 4: James, 4: Benson, 3.

Sweep No. 3, 5 sparrows.—Charles, 5; Townson, 4; Felsted 4; Benson, 4; James 4.

Sweep No. 4, 5 pigeons.-Plunkett, 5; H. Townson, 4; Friend,

Benson, 3; Roberts, 3.

Target series, squad No. 1, 25 targets.—Simpson, 19; McClure, 20; Edwards, 17; Herbert, 17; Pearsall, 15, Squad No. 2, 25 targets.—Alexander, 19; Green, 18; Felsted, 18; Charles, 19; Edwards, 16.

Medal series, 10 pigeons. — Herbert, 7; Simpson, 8; Alexander, 6; Green, 9; J. Townson, 9; Felsted, 8.

McDowall's Annual Tournament.

McDowall & Co. held their annual tournament at the Woodbine Park, commencing February 26th. There was a large attendance and all the events were well filled, visitors being present from Brantford, Hamilton, Hespeler, Bowmanville, Uxbridge and several other places.

The scores :-

Event No. 1, 5 pigeons, purse, \$50; entry, \$2.—G. H. Briggs, 5; E. Sanderson, 4; W. Richardson, 3; H. T. Westbrook, 5; W. Wingfield, 4; C. Montgomery, 5; W. Marshall, 5; D. Miller, 4; D. Blea, 5; C. Burgess, 4; W. Vint, 2; C. F. Mitchell, 2; W. Lewis, 5; Fred Westbrook, 5; J. Thompson, 4; J. Wayper, 5; J. Phillips, 3; G Musson, 4; C. Fish, 5; J. Bellamy, 4.

Event, No. 2, 10 sparrows—J. Bellamy, 8; W. Spence, 9; W. Smith, 10; W. Richards, 8; G. H. Briggs, 9; W. Vint, 6; J. Thompson, 10; D. Blen, 9; J. Wayper, 10; J. Phillips, 9; Fred. Westbrook, 9; C. Burgess, 9; E. Sanderson, 8; D. Miller, 7; C. Montgomery, 9; H. T. Westbrook, 8.

Event No. 4, 10 blue rocks—F. Westbrook, 9; J. Thompson, 6; C. J. Mitchell, 9; H. T. Westbrook, 9; J. Wayper, 10; C. Vint, 5; C. A. Crew, 8; Ross, 8; Fish, 8; Montgomery, 10; W. Marshead, 9; D. Miller, 9; C. Burgess, 7; J. Coulter, 8.

Event No. 5, 15 blue rocks—F. Westbrook, 14; C. Mitchell, 14; E. A. Montgomery, 12; Westbrook, 14; W. Marshead, 14; D. Miller, 14; J. Wayper, 14; Thompson, 14; J. Phillips, 12; C. A. Crew, 13; F. Ross, 6; J. Bellamy, 13; C. Turn, 13; D. Jones, 13.

Event No. 6, 25 blue rocks—T. Westbrook, 25; C. Montgomery, 24; J. Bellamy, 20; J. Thompson, 24; C. F. Mitchell, 23; H. F. Westbrook, 22; J. Phillips, 18; J. Wayper, 28; D. Miller, 20; C. Turp, 20; W. Marshead, 21; D. Jones, 21.

Harold Money, Amateur Champion.

Harold Money of Oakland, N.J., a member of the Carteret Gun Club, of Garden City, L.I., won the amateur pigeon shooting championship of America, on Feb. 22nd, from a field of seventeen contestants, with a score of 88 kills out of a possible 100. Col. Thomas Martin, of Bluffton, S.C., and Harry S. Kirkover, of Fredonia, N.Y., tried for second honors with 87 kills each, and Dr. Frank C. Wilson, of Savannah, Ga., and C. A. Painter, of Pittsburg, tied for the fourth place with 86 kills each.

Each competitor puts up \$100, which was divided among the four high guns. All contestants that from the 30-yard mark. Money won \$680; Martin and Kirkover divided \$680 and Wilson and Painter got \$85 each.

Essex County Championship.

An interesting contest took place at Walkerville on Saturday, Feb. 9th, for possession of the King Trophy, emblematic of the championship of Essex County, Ontario, between E. C. Clark of Detroit, the holder, and J. E. Pastorius of Kingsville, the challenger. The contest was at 50 sparrows, each, 21 yards' rise, 30-yard boundary, and was won by Mr. Pastorius with a score of 42 to 40.

Mr. Clark promptly challenged his opponent for another match, this time at live pigeons, and the contest, which, no doubt, will be an interesting one, will be held at Kingsville at an early date.

Moose in Western Quebec.

Captain Jones, commodore of the Lumsden Line, visited Montreal one day last week, and had some excellent news for sportsmen. It appears that a man in the captain's employ ran across a herd of six moose—five cows and a bull—within two miles of Opemican, Lake Temiskaming, on January 7th. Another herd of seven was seen higher up the western shore of Temiskaming between Opemican and the mouth of the Kippewa river.

There are fully as many moose within a very short radius of the C. P. R. track at Temiskaming as in more remote regions,



The Luncheon Hour

but Captain Jones, as well as all other law-abiding sportsmen, would like to see the present systematic out-of-season slaughter stopped. In every lumber camp on the Montreal River (Ont.) and the lakes of the Kippewa chain, (Que.), moose meat is served regularly under the guise of "beef." These dishes of beef are costing the Province a pretty penny. It would be far more economical to supply quail-on-toast gratis to all the hardy bush-whackers who are tired of salt pork.

The Grand American Handicap will be held this year at Interstate Park, New York, on April 1, 2, 3, 4 and 5. The conditions governing this big shooting affair will be practically the same as last year.

The Montreal Canine Association will hold a bench show of dogs in the Victoria Rink on May 29, 30 and 31.

Peterboro vs. Birohbark. By St. Croix.

It is almost heresy to suggest that after all the birchbark cance is not quite perfect. In the popular mind it is invested with qualities and perfections utterly beyond the possibilities of boats built by skilled white labor. You may go to the most cunning artisan, open your purse strings, and direct him to fashion an alluring craft planked with white cedar, finished with mahogany, and elenched with the best lake copper—yet do not be so foolish as to suppose that the man in the street will ever credit your cance with one-half the excellencies of the alleged fairy craft of the forest.

Now, I myself am a heretic—without desire for repentance or wish to be shrived. I, too, once worshipped at the shrine of the birchbark; knelt in spirit before the creation of the Indian; believed in Longfellow's panegyric, and scoffed at those practical men who binted at any imperfections in it. But I have had a change of heart.

A cedar, or basswood canoe may be made considerably lighter than a birchbark of equal length and capacity, even when each craft is new, and after they have been a couple of weeks afloat there may be forty pounds difference in a 15-foot canoe. A 15-foot cedar-rib canoe, 31 inches beam, weighs 60 pounds, new, and becomes little heavier, even after several weeks' flotation. A birchbark of equal length weighed 78 pounds at the beginning of a cruise last summer, and tipped the beam at 96 pounds three weeks later. Birchbark absorbes water and rapidly increases in weight. When compelled to use one of these canoes for a long voyage, it should be painted or varnished. But the old Indians never did this! No, because, you see, they had no paint or varnish. For similar reasons they did not use brass screws, nor copper rivets, nor electric lights.

As to speed, the lines of a birchbark are not what a naval designer would call "fair." That is they are full of hollows and swellings, highly prejudicial to speed. Given equally good men in a cedar and in a birchbark cance, and on still water the former will draw away from the latter one foot in every ten. Against a current the advantage will be still more marked. "But," say the advocate of the more primitive craft, "a peterboro (generic term) cannot live with a good birchbark in a gale on open water, nor is it so handy in a rapid. Such arguments do not seem to me to have much weight. It is merely a question of model. If a peterboro be designed with too straight a floor, she will not be handy in a rapid, and unless she has sufficient depth, her gunwale will not be carried sufficiently high to escape the crests of swells caused by gale or rapid. These are mere details, and a cedar canoe may be had surpassing the birchbark in every respect. The latter is a good enough make-shift, but an exasperatingly imperfect craft, with scarcely any of the admirable qualities with which romantic minds have invested it. There is no unnecessary glamour about a dead-slow and leaky old birchbark,

Notes.

It is a great mistake to hire guides, canoemen and cooks, through any business firm, especially if the latter is to pay them. More often than not the men are in debt to the said firms, before they start, and are well aware that when their pay becomes due, they will receive it minus more or less heavy deductions. This makes them listless and without vim or interest. Far better hire and pay your own men, whenever possible, and always fix the scale so low that you may promise them a certain bonus for good service in addition without

ruining the market for yourself on future occasions or for those that may follow you.

New Hampshire has a revenue of \$1,947,000 from her summer visitors. Her area is 9,000 square miles. That of Quebec is 345,000 sq. miles, and of Ontario 220,000 sq. miles. Each is therefore many times larger than New Hampshire, in no way inferior to that State in summer climate or scenery, and in addition furnishes hunting and fishing such as no American State can give. Under wise direction, what is the amount these two provinces should receive annually, from visitors, by the close of another decade or so?

Fresh ment hung in the shade, even during the dog days, dries without putrifying in the Mount Trembling region. This shows the absolute purity of the air. If you doubt this deduction ask your medical man for his opinion. Were there any germs or microbes in those northern forests this could not be.

The best fishing in any of the lakes of Northern Ontario or Quebec, is always to be had when the nights are dark. Big catches are rarely made at the full of the moon.

Most men find seven hours open air sleep sufficient in summer, even after the longest and most gruelling day's work. Mere muscle fatigue is easily overcome, but brain-fag is another matter. The more fresh air the sleeper gets the better will he rest. In hot weather a closed tent, damp with dew, and reeking with the exhalations of the inmates, is an abomination. If you would reap the full benefit of the ozone-laden air of the Canadian forest do not mew yourself in a canvas prison, but see to it that the sweet scented breath of the pine reaches your lungs, and cools you brow with its soothing caress.

If you wish to study conditions of life entirely opposed to those of the big cities, go back among the French-Canadian habitants. You will see oxen yoked to the plough; brick ovens for baking the family bread, big enough to hold the owner and his numerous offspring, and many other things to give you room for reflection. There you will find neither millionaires nor dyspepsia, and will run across more perfectly contented persons than you doubtless ever expected to meet this side of the grave.

Answers to Correspondents.

N. Y. Z.—Pemmican is beef mixed with a considerable quantity of fat. The meat is first dried in the sun, and then pounded in a mortar. After being placed in some suitable receptacle such as a tin box or hide bag, melted tallow is run in and the whole closed in from air. In the days of the buffalo, the half-breeds usually added service-berries (A. canadensis) as a flayor.

Hunter (New York).—The Canadian hunter's toboggan weighs from 11 to 15 lbs. There are several patterns. The usual Indian toboggan consists of one or two thin maple or birch boards curled up at the front; but many white trappers prefer a sled with 21-inch runners. Some choose a short, wide sled, and others a long narrow one, and there is also a difference of opinion as to the merits of maple shoes and those of metal, though owing to the difficulty of procuring the latter they are seldom seen. After the thaws of spring have set in, metal runners are decidedly preferable, but during the extreme cold of winter, a maple shoe glides more easily.

KENNEL DEPARTMENT

Conducted by D. Taylor

Correspondence is invited on all matters pertaining to the kennel, and items of interest concerning man's best friend, will be welcomed. An effort will be made to furnish correspondents reliable advice as to the care and treatment of dogs in any case submitted. All communications for this department should be addressed to D Taylon, ROD and Gun in Canada, Gog Craig street, Montreal.

THE NEW YORK SHOW.

It is greatly to the credit of Canadian breeders that dogs sent from Canada to the big show of the Westminster Kennel Club at New York occupied such a conspicuous place in the prize list. In nearly every instance they were in the money or received honorable mention. This is all the more creditable when it is borne in mind that the classes in most breeds were exceptionally large, comprising the very cream of dogdom from all over the United States as well as from England. The judging was done principally by specialists, breedus for years of the varieties they were called upon to judge, and the inference is that a more than usually high standard of merit was set. The show was exceptionally well patronized, the élite of New York society turning out in large numbers, so that even with the ample space that Madison Square Garden affords, the aisles between the benches were at times uncomfortably crowded. It must have been a great financial as it was a social and canine success. Below are some of the awards which came to Canada:

Skye Terriers.—Geo. Caverhill, Montreal, 1st and 2nd with Jubilee Queen and Diamond Queen, respectively.

Cockers.—T. C. Mead, Toronto; G. Bell, Toronto; George Douglas, Woodstock, Ont.; George Dunn, Woodstock; C. J. Ford, Kingston, Ont.

Collies.—Jos. Reid, Montreal, \$300 challenge cup for best American bred and silver medal offered by Canadian ennel Club; one 1st and three second prizes.

Bull Terriers.—Mark O'Rourke, Hamilton, Ont., . ith Wentworth Beaut, sired by Edgecombe Dick, of the Newmarket Kennels, Montreal; Fred. Miller, Trenton, Ont.

Fox Terriers.—Norfolk Kenne:, Toronto. Field Spaniels.—T. C. Mead, Toronto. Irish Setters.—E. A. Carson, Kingston.

In Airedales, Mr. Jos. A. Laurin's fine young dog, Brian Ranger, and Colne Princess were in the money, while the latest addition to his kennel. Ch. Dumbarton Lass, confirmed the reputation she has gained in England as one of the best Airedales ever shown, by being placed at the head of the list in all her classes.

In St. Bernards, Prince, belonging to Mrs. Belasco, of Prince Arthur street, has a V. H. C. and an H. C. to his credit, which may be taken as a great compliment, indeed, when the fact is stated that there were 113 entries in all of the saintly breed. The judge on this occasion, Mr. Arthur Trickett, of Kansas City, Mo., a prominent breeder and recognized authority, gave him as above stated, and we understand that size alone was against his having a better position.

At the annual meeting of the American Collie Club held in New York during show week, Mr. Joseph Reid, Montreal, was elected one of the vice-presidents.

Amateur vs. Professional Judging.

With the example set by the Westminster Kennel Club in appointing amateur specialist judges, the new fad is likely to be taken up by other kennel associations. The question of what constitutes an amateur or professional judge is being pretty well ventilated in American kennel papers just now, and tree following is what Turf, Field and Farm has to say on the subject in a recent issue:

"The amateur judge question is one that will engage the attention of the Mascoutah Kennel Club, as they announce that amateurs will be engaged at their next show. The amateur judge question has never been thoroughly discussed for the reason, we presume, that it is difficult to tell where amateurism ends and professionalism begins. There is no recognized definition that we know of, and it would benefit the fancy if those who know absolutely what constitutes the amateur in judging affairs would give the information to the public. In sports the amateur law is clearly defined, but it can in no way apply to the judging question. A professional judge under the law would properly be one that judges for a livelihood, and we know of none that would be willing to accept so poor a living as judging alone would afford. It goes without saying that the best judges are those who have kept in touch with doggv matters in a practical way, and it has been proven time and again that those known as judges, who had not acted in that capacity for years, when called on, seemed to be all at sea as to where the ribbons should go.

"Between the amateur and the so-called professional judge there has been no distinction except as to ability, and that ability is recognized by the specialty clubs and bench-show committees of the best shows. A judge that appeals to the exhibitor by reason of his knowledge and qualification to judge properly is the judge that bench-show committees and specialty clubs seek for, and he is usually what is termed a professional. The amateur cry is frequently made not always for the sake of better service, but frequently for economy. There are men who will agree to judge at a show when they have had very little experience. These are amateurs, and they will never be anything else, because the knowledge they think they have prevents them from learning anything more."

Mrs. Oughton Giles, of England, who was one of the judges at Providence, R. I., was, according to all accounts, not an unqualified success. She made the unfortunate mistake of putting one dog over another in one class and vice versa in the next. Mrs. Giles is well known in kennel circles in England, being a regular exhibitor at all the principal shows, and her famous pack of toy beagles is celebrated far and wide. All of them are under 12 inches high, most of them under 10, and their proportions and shapes are exquisite; in fact they are ideal hounds in miniature. Mrs. Giles is also a great admirer of the whippet, one of her dogs winning the race held in the Crystal Palace Grounds last October.

A London, Eng., paper relates the following story of the intelligence of a dog, which was told by the owner, an ardent sportsman: "Would you believe it?" he said, "when I was walking into the city he suddenly stopped and pointed at a man by a bock stall, and nothing I could do would induce the dog to move. So I went up to the man and said: 'Would you oblige me with your name?' 'Certainly,' said the stranger, 'my name is Partridge.'"

The annual show of the Canadian Fox Terrier Club will be held Thursday, Friday and Saturday, March 21-23 in the Horticultural Gardens, Toronto. Mr. James Mortimer will judge, and from his popularity with the fancy will likely meet with a large entry.

Bloodhounds are now a part of the equipment of the Oregon Short Line. The hounds will be kept at certain stations in Utah, Wyoming and Idaho, where their presence is thought to be most needed, the character of the country and the small number of inhabitants affording excellent opportunities for the operations of train robbers. The moment that word of a train robbery reaches the railroad officials a special engine and car containing a pack of hounds will be sent to the scene at full speed and with absolute right of way. The Bloodhound Special will stop at nothing until itarrives at the spot where the bandits were last seen. Experienced men in charge of the dogs will put them on the trail.

On Dog Training.

There never was a more fallacious idea than that of whiping and covering a dag, under the belief that he could be taught better to obey. It is true that a dog may be made to crouch and crawl, tuck his tail between his legs and slink around by this process, but a noble-blooded, high-spirited dog can never be induced to exercise his noblest faculties by any such means. The dog is anxious to please his master and to do just what he wishes him to do, and usually tries as hard to understand his master's wishes as his master tries to make him understand. The trouble usually is with the trainer and not with the dog. The first thing required in training a young dog is to gain his affection, and the second important thing is to have his respect. Calling up a dog three times a day and feeding him liberally, and providing him with a good warm kennel is quite humane and desirable, but it is not the way to gain his affection—he considers this as a simple matter of duty to him-one of his rights. But if you wish a dog's love you have to associate with him, talk to him, travel with him, take a snack with him when on the highway-you and he sit down for a little rest and lunch-and talk to him just as you would a child. You will be astonished at the result if you carry out this idea of assuming that your dog is your companion and friend. You will find that he comprehends your manner, your feelings, and bundreds of your words.

I recall in old friend, who, many years ago, was a veritable Nimrod, and kept all manner of dogs. He never called his dogs or gave commands to them in the usual style, but always as if he was addressing a fellow huntsmar. On one occasion several of us were resting from an old have hunt, under some walnut trees, in the Fall, when he said 'Boys, I believe I have rested enough." This was said in a quiet tone, and, I thought, was addressed to us who composed the hunting party; but no sooner had he said it than his three lazy-looking hounds, who had been spread out as that and as dead looking as sleeping dogs could look, sat right up and regarded their old master with intense interest. They not only understood these words but were on the lookout for further directions.

No more striking example of love from association can be found than in the "nigger's dog" among the blacks of the South. These poor brutes are usually half starved, live on the crumbs that fall from the darkey's "ashcake," with an occasional lop of pea liquor, sleep on the ashpile or under his log cabin, and are altogether miserable in body and soul (for I believe the dog has a soul—often a larger one than many men.

This animal will follow the shiftless ne re all day long, find game, run it down and guard it faithfully until his beloved friend and companion (the inferior biped) comes up and takes it from him with a kick and a growl. It is pretty tough on the dog, but he loves to hunt and be around with his friend, so he forgives him and soon gets up another "old hyar."—C. A. Bryce, M.D., in the Amateur Sportsman.

The Pacific Kennel League has adopted what is practically the A. K. C. classification, the only exception being the puppy class, where the age at which they may be shown is put down at four months instead of six. This is altogether too young and certainly increases the danger of infection from communicable diseases while exhibiting at dog shows.

The St. James Gazette relates the following extraordinary story, which comes from the village of Eaglesham, about five miles from Glasgow: "Two or three weeks ago a sheep farmer there had occasion to visit the Glasgow Cattle Market, attended by his dog. Business over, he had arranged to attend the sale at Perth on the following day, and as he had no particular need for his collie there, he resolved to leave him with a friend in Glasgow till he returned. Scarcely had he gone when the imprisoned animal, seizing its opportunity, jumped over a window two stories in height; and was at his home on the Eaglesham moors before his master had arrived in the Fair City. The farmer, who had bought another collie at Perth, called on his return to Glasgow at his friend's, and was told of his dog's successful leap for liberty. He concluded that he had gone home, and on arriving at the farm accompanied by the new dog his old canine friend was evidently much displeased. This was adding insult to injury. That very night he left the house in a 'huff,' and has never been heard of since."

The Dachshund.

The writer has long been waiting for an opportunity to write upon this breed, as he was impressed by it in the land in which it has been most successfully cultivated, but press of work has higherto prevented, and must now restrict this communication within very narrow bounds. What impressed me most in Germany was the regularity of type, the generally rather small size, and the spirit and workmanlike appearance of the dogs one sees at shows. Of size more later. There the shy, and still more, the nervous dog is extremely rare. In fact the way in which the German Dachshund walks up to the largest dog, as though quite his equal in importance, is very striking, and one quality frequently wanting in dogs of this breed on this side of the water. Perhaps nothing so strongly cries out for improvement as the "character" of our American Dachshund.

I saw very few dogs at German shows benched in that horriby thin condition too often painfully evident with us. They were generally "fit," as the English say, in an eminent degree. The ideal types show that muscular development and tention (tone) so frequently lacking in our dogs.

It is in connection with young and imperfectly developed animals that the specialist judge is apt to go astray from excess of admiration of certain parts.

Not a single specimen shown lends the slightest support to the view that the Dachshund is a hound. The word itself simply means badger dog. The German Dachshund is in fact a Terrier with somewhat hound-like ears, so far as their form is concerned. This fact is the key to the standard. His peculiar conformation enables the dog to burrow more rapidly than any other Terrier, and though no coward he understands how to keep out of unnecessary trouble. Indeed he has few equals in looking after Number One. He is worthy of more care and study than he has received in America.—Wesley Mills, M.D. in Kennel Gazette.

The extent to which dog shows are held in England may be judged from the fact that Our Dogs, the English doggy journal, reported no less than 420 in Great Britain last year. The number of thoroughbred dogs must be something enormous.

Mr. Joseph Reid, of Logan's Farm, has sold Clover Blossom, a little sister of his famous prize winner, Heather Blossom, to Mr. Palmer, a wealthy American, for \$100, and has refused an offer from the same gentleman of \$350 for the latter dog.

A London, Eng., dispatch announces the death of the King's favorite bulldog, Peter. This dog was run over by a cart at Chatsworth, and besides a broken leg sustained internal injuries from which he died, in spite of the best medical attention.

The following ancedote of a dog, taken from an English paper published in London, is a little fishy, but amusing. A suburban gentleman, who was in the habit of giving his dog some small delicacy on leaving for the city each morning, forgot to do so on one occasion. As he was going out of his house the dog caught his master's coat tails in his teeth, and leading him into the garden, stopped at a flower bed. The flowers growing there were "forget-me-nots."

That enthusiasm in the dog line is certainly growing in Detroit and vicinity, is proven by the fact of a meeting called on Monday, February 12, in Windsor, for the purpose of giving a large show sometime about the 1st of April. There is no doubt of its being a success, as there are a great many enthusiastic and influential fanciers behind the scheme. An effort will be made to get as many of the stud celebrities in setters and pointers as possible, which should prove a great drawing card.

Referring to the Prince of Wales, now Edward VII., King of England, a daily journal says of his fondness for dogs: "Albert Edward is as fond of a good dog as of a good horse. His kennels at Sandringham, are fourteen in number, built of brick and iron, with every modern improvement which architects and dog fanciers could suggest. Among his favorites are the quaint Basset hounds, dogs of great intelligence and charming manners. Sandringham Count, a good looking, rough coated St. Bernard, of enormous size and possessing a tremendous bass voice, is another dog which he prizes highly. Other breeds at the Sandringham kennels, are Newfoundlands, Scotch deerhounds, collies, spaniels, dachshunds, fox, rat and bull terriers, Mexican and Chinese dogs, pugs, bulls, Pomeranians and many others, altogether some seventy dogs. Most of the animals belong to Alexandra, but Albert Edward has a good lot of his own. An inscription over the entrance to the kennels furnishes a key to the feelings of Their Royal Highnesses toward the intelligent and kindly dumb beasts that inhabit them, 'Love me, love my dog.'"

Humberstone Bristles, who captured open and winners' classes, for wire-haired fox terriers at the Westminster Kennel Club show, has been sold by George Raper to G. M. Carnochan, who judged the fox terriers, for \$1,200. Raper has bought on private terms from G. H. Gooderham, of Toronto, the smooth fox terrier Norfolk Trueman, placed third in the limit class to his own dog, Rowton "esom, and Norfolk Mainstay. Norfolk Trueman will be taken to England after the Pittsburg show the first week in March.

A. Grayson, a colored coachman for a private family in New York, has sold the rough St. Bernard puppy, Colonel Shelby, winner of the first prize in its class over Frank J. Gould's Lyndhurst Choice, and eight other dogs, to the Cedar Kennels for a long price. The new owners resold the dog to Louis Rosenstein, of the Hotel Marlborough, for \$1,00. This is said to be the record price for a St. Bernard puppy.

Wanted-A General Purpose Dog.

We have been been favored with a communication from away up in the wilds of Sault Ste. Marie, Mich., which speaks for itself. If any of our readers has such an animal to trade or dispose of, kindly inform the conductor of this department:

"I am in want of Hound Dog that will run Fox Lynx & Wild Cat Bark up a tree in a Log and Hole in the ground and will stay on a Fox all day and not loose trail; quite long Legs as the snow is deep up here. I will trade an English Setter for such a Dog this setter is a first Class Dog broke fine 3 years old very staunch on Point great scent a first class all round Dog Please send me Catalogue Descriptions & your Prices by early mail."

How to Build a Trapper's Camp. By the late Frank H. Risteen.

It is a rough and ready camp I build. I put down two posts in the ground about 6 or 8 inches in diameter, sharpening off the tops to a flat point. I lay a couple of logs six feet back of them and one log on each side. I put on a rafter dovetailed on to the top of those posts running up about two feet beyond them and resting on the logs behind. These I spike down if I have spikes, or pin down if I have not. I then lay four ribs across from one rafter to the other and they would be the better for spiking down or fastening in some way. Then you can suit yourself as to covering. Birch bark is preferable to spruce, as the latter lasts a very short time, and is dirtier. Little strips of cedar or fir about six inches apart are placed over the ribs to support the bark. If you use shingles, instead of bark, you put the shingles right on to the ribs. Then I put a frame up in front about 11 feet from the back of the camp. That is simply two posts and a ridge pole. I spike a piece from them up to the top of the other rafters, making a peak to the roof; then board in with splits-fir, cedar or spruce-on the front and two sides, standing the splits on their ends. The reason for standing them on their ends is that the camp is not so likely to smoke, because the current of air has a tendency to follow the grain of the wood. I have noticed that when the cracks run up the air coming in carries up the smoke, while if the cracks are horizontal they stop the smokent every step. In wet weather, of course, the rain more readily reaches the ground where the grain is vertical. This is an ordinary trapping camp which I build about 10 or 12 feet square. I have one of them located about every 6 or 8 miles along my trapping lines.

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Ovis Fannini.

Within the past twenty years the wild sheep of North America have been studied in detail by competent authorities, and as a result several species have been discovered. The earliest known to civilized explorers was the typical Ovis montana, which is well distributed in the mountain ranges of Wyoming, Montana, Idaho and Southern British Columbia. In 1884, A. W. Nelson discovered a pure white mountain sheep from the Sea Alps of Alaska and Northern British Columbia, it was christened Ovis dalli, in honor of Professor Dall, of Washington, D.C. In 1896, two additional species were described, one Nelson's mountain sheep, Ovis nelsoni, from Southern California; the second, Ovis stonei, found in the Cassiar Mountains of Northern British Columbia by A. J. Stone—and now a new one has been discovered by Henry W. Brown in the Yukon country.

Ovis fannini, named in honor of John Fannin, the famous naturalist, whose devotion to his work has been of such inestimable value to British Columbia and the Dominion, differs very decidedly from any of the other sheep, and is perhapt the most handsome and striking of any of the American species. It is heavier than the ordinary mountain sheep, is grey in color with a darker "saddle," and presents important modifications in skull formation.

The discoverer has furnished the following description of the animal's habitat:

"From the summits of the low mountains about Dawson, on the east side of the Yukon, can be distinctly seen, about fifty to seventy-five miles to the eastward, a beautiful, long, rugged snow-capped mountain range, extending in a northerly and southerly direction away beyond the view, known as the Rocky Mountains. The two main branches of the Klondike river head in those snowy mountains, in a southeasterly direction from Dawson, and I understand it is there the mountain sheep are found by the hunters. As to how numerous they are I do not know, but presume they are quite plentiful, as I have seen several sled loads of the frozen carcass brought in by hunters to sell to the Dawson markets. There are two species, one being all white, the other, such as the specimen you saw, is white with grey saddle-back. The white species, so far as I saw, are a little the smallest.

"Mr. Warburton Pike, the Arctic explorer, informed me that on his journey down the Yukon, a short distance below Dawson, he heard of a 'pie-bald' mountain sheep, but was unable to procure a specimen. It is highly probable that Ovis fannini will be found distributed throughout a considerable extent of the rugged mountain ranges, which quite surround Dawson City north of the Yukon."

The statement was made by a prominent member of the Anglers' Association of the St. Lawrence River, at the recent meeting of the N. A. F. and G. A., that no less than ten millions of dollars have been expended on the Thousand Islands in buildings, etc., for the accommodation of visiting sportsmen.

Mr. N. E. Cormier, Provincial Game Warden of East Aylmer, P.Q., is wonderfully successful in keeping wild animals in captivity. The spacious grounds surrounding his residence are devoted to many of the more interesting Canadian mammals. Quite recently he lost a fine and very gentle cow moose, as a result of rough handling in transit by rail; but even better worth seeing are the three bears now sleeping their long, sound winter's sleep beneath his study windows. Mr. Cormier's pet beaver are well known throughout the Province.

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