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The vanishing moose.

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DRAWN BY W. H. DRAKE.

ENGRAVED BY R. A. MULLER.

HEAD OF A MOOSE KILLED IN MAINE IN 1880, SHOWING EXTRAORDINARY DEVELOPMENT OF ANTLERS.

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THE VANISHING MOOSE,

AND THEIR EXTERMINATION IN THE ADIRONDACKS.

SO much has been written of late, especially in this Columbian year, of the great achievements and rapid development of the United States that sometimes we lose sight of the fact that we are still in a period of transition. The old order of things has largely passed away, but we are yet within sight of the primeval state of a savage and beautiful wilderness, and can obtain some idea of what this country once was by the untouched or only partly mutilated corners that remain. The end, however, is near, and before many years we shall have to cultivate trees as is done in Europe, and the only hunting will be in private parks. Of the great forests that absolutely covered the Eastern and Northwestern States, and served as the home of vast numbers of animals, scarcely anything is left. That little will be destroyed by fire and ax within two decades, and with the trees will vanish the last of the game.

It is really appalling to compare the enormous amount of game on this continent at the beginning of the century with the wretched remnant of to-day. At that time the American buffalo roamed the prairies in countless thousands, and was probably the most numerous large animal in the world, and now — but all Americans know the shameful story of its extermination.

Little more than a hundred years ago great herds of elk swarmed in the Kentucky and Illinois hunting-grounds, and even as late as 1820 a few could be found in the district north of the Ohio River. To-day their fast-diminishing bands are confined to the mountains of the Northwest. The same sad story of fast-approaching extinction is true of the other game

animals, the antelope, bighorn, mountain goat, and the various kinds of deer; in fact, it is true of all our larger mammals. Many persons living to-day will see their final disappearance in a wild state; so, in view of this destruction in the flora and fauna of our land, it would be wise to consider carefully the most important of the American animals that remain while yet we can gather the facts from those who actually know them, and need not rely on the wretched compilations which pass for natural histories, and which are based, perhaps, on a few badly mounted specimens.

The largest and most interesting of our native quadrupeds is the moose, an animal but little known to the average inhabitant of the United States. Oftentimes, in old settled countries, deer, bear, and a few other animals linger on, and become well known to the inhabitants of the more thinly populated districts, passing into the literature of the people, as has been the case in Europe. Not so the moose and caribou. They shrink back before the most advanced outpost of civilization, and soon vanish altogether, leaving behind the names of lakes, rivers, and mountains as the only evidences of their existence. So complete in some instances has been the disappearance of moose that one actually hears people question the fact that they ever lived in the Adirondacks, where forty years ago they were well known. The comparative mystery that has always clung to moose has caused a great deal of nonsense and error to be written about them. It often begins with their name, and in this way much confusion has been caused by would-be naturalists between the moose (*Cervus alces*) and our Ameri-



DRAWN BY AUGUST WILL.

MAP SHOWING THE DISTRIBUTION OF THE MOOSE. IN THE DOTTED TERRITORY THE MOOSE STILL EXISTS. IN THE LINED TERRITORY THE MOOSE IS EXTINCT.

can elk, or wapiti (*Cervus canadensis*). The moose closely resembles the European elk, an animal well nigh extinct, but which in Cæsar's time abounded in the lands about the Baltic, and thus the name "elk" has been sometimes applied to the moose. Long usage, however, in this country has confined the term "elk" to the wapiti deer of the West, and it can create only obscurity to use it in any other sense. So, also, by reason of a resemblance to the Scottish stag (*Cervus elaphus*), or red deer of Europe, the wapiti has been termed "red deer" by Englishmen. The word moose is the Indian word "moosoa," meaning "wood-eater," in allusion to the fact that the animal lives on twigs and the bark of young trees rather than by grazing, for which its short neck is not adapted.

The moose is distinctively a forest-loving animal, and lives only in wooded countries where the winters are long and severe. There seem to be in its geographical distribution two distinct ranges, one in the northeast and the other in the northwest of our continent. These two territories are at the present day separated by the strip of land between Lake Superior and James Bay, where no moose are found. They have always been less numerous in the West than in the extreme East, where the forests and lakes are singularly well fitted to their habits, and it is here that they are still hunted with the most success. In northern Montana, Wyoming, Idaho, Washington, and, perhaps, Dakota, northward to the Mackenzie River, moose are moderately abundant in the mountain districts, but very inaccessible to the hunter. Their southernmost limit in this section is the junction of the Snake River with the Three Tetons in Idaho. There are a few in the Yellowstone Park, but here the best moose

country is imperiled by the Segregation Bill now before the Senate, which threatens to open up half of the Timber Land Preserve, including nearly all the moose district, and which should be vigorously opposed by every true sportsman. They extend through the mountains of British Columbia into Alaska, where the coast Indians tell of gigantic moose which come down from the unexplored interior in severe winters. Their extreme eastern limit north of the Canadian border is the Lake of the Woods and Dog Lake in Manitoba, around which they are numerous. South of the line they extend farther east, and are rather plentiful (that is, for moose, which is everywhere a scarce animal) in the tamarack swamps of northern Minnesota around Red Lake. A very few are found in Wisconsin and the north peninsula of Michigan. In 1875 a number were killed near Superior City in the extreme northwest of Wisconsin, but they probably wandered down from the lake country just mentioned. Beyond the St. Lawrence they are found from points north of Lake Huron as far east as the Saguenay, which seems an almost absolute boundary. There are none in Labrador. At the present day they extend northward to the "height of land" or watershed of Hudson Bay, but formerly they pushed northward to the great bay itself. In the country immediately north of Lake Superior none are found, although at one time they extended as far north and west as the Albany River.

South of St. Lawrence they were once very numerous in all the country, roughly speaking, between this river, the sea, and the 43d parallel in New York. There is no trace known of them in Pennsylvania, or immediately south of the great lakes, in historic times, but remains

of moose and elk found in the shell-heaps of New Jersey show they formerly existed there. At the first settlement of this country they ranged throughout nearly the whole of New England, and in New York as far south as the Catskills. In Canada proper they are numerous, but are going fast, in spite of the nominal protection of the law. They are still hunted in Maine with success, but they have utterly vanished from what were once their favorite haunts—the northern parts of New York and Vermont. In 1871 there were said to be some in northern Vermont, and in the extreme north of New Hampshire around the sources of Connecticut River there still may be a few individuals. Even as late as 1879, near the Second Connecticut Lake, they were rather numerous, and in 1884 five were killed at that place. The following year some were there, and an old bull was frequently seen, but was left undisturbed.

count of that district published early in the century speaks of them as subjects of tradition only.

With the exception of the remarkable fact that about twenty years ago the wolves all vanished from the North Woods in one season without any known cause, the similar disappearance of moose from the same region is the strangest incident in the natural history of New York. Before the advent of the white hunter, the moose are believed to have exceeded in number the deer in that beautiful country of mountain, lake, and forest, and yet to-day in all the settlements and hunters' cabins in the North Woods, or in the towns on its borders, there is not a single set of moose antlers said to be from that region.

The Adirondacks were once the hunting-grounds of the Six Nations and of the Canadian Indians for their winter supply of moose meat, and the bones of many a dusky warrior, slain in the savage combats between the rival tribes, lie under the pines and spruces by the lakes he loved so well. Many, too, were the tragedies enacted later between the red man and the white trapper, both seeking moose-hides in what was then an ideal hunting-country.

The tradition of the mighty moose will be preserved to all time by the names throughout this district, which abounds in Moose rivers, creeks, lakes, and ponds. Raquette Lake received its name from the circumstance that the Canadian Indians resorted there to get hides for their snow-shoes (raquette), and State Naturalist De Kay, writing as late as 1841, says moose still frequented that vicinity. In fact, the last authentic moose were killed there. They lingered long in what is still the wildest part of the hunting region, viz., the country south of Mud Lake, which was their headquarters long after they had vanished from the surrounding territory. Here, too, their memory flourishes, and all yarns of moose tracks are now referred to that lake. They still figure on the statute-book in mockery of the tardiness and impotence of the law to protect them, and fifty dollars is the fine for killing one.

The extremely wary character of the moose, and his dislike for the vicinity of man, render it very probable that although some were killed for their hides and meat, the great majority left the country and fled northward as settlements pressed in. The last stragglers killed seemed to have been shut off in the southwestern part of the wilderness, and so had no choice but to stay.

This tendency of game, and particularly of moose, to retire northward on the approach of man is seen to-day in the region of the upper Ottawa River. Moose are now abundant around Temiscamingue, where a few years ago none were to be found.



DRAWN BY AUGUST WILL.

At one time they pressed close to the Atlantic, for we read that a pair were sent to England from Fisher's Island. There is, however, no trace of them since the settlement in Connecticut and Massachusetts, except in the Berkshire Hills, where a few once existed, probably only as migrants from the North. The early settlers in Vermont and New Hampshire found in their meat a most welcome source of food; in fact, the numbers of moose alone enabled the colonists at first to keep from starvation during the long winters. They seem to have left the Catskills about a hundred years ago, for an ac-



ENGRAVED BY G. P. BARTLE.

BULL MOOSE. AFTER A PHOTOGRAPH FROM LIFE.

DRAWN BY W. H. DRAKE.

A deer when started by a hunter or driven by hounds usually returns in a few days to the same hill or mountain-side where he was first found; but a moose, when once thoroughly alarmed, will start on a long swinging walk, and, taking with him his entire family, leave for good. It is one of the greatest difficulties—and there are many—in still-hunting this animal, to avoid getting him under way, for then the hunter may as well break camp and try other fields, since not a moose will be found within miles. They scent a moccasin track or the smoke of a fire at an incredible distance. A fresh trail may be found one day, and arrangements made to follow it at daybreak on the morrow. During the night the moose, returning to his old haunts, detects the danger-signs, and all the hunters find in the morning is a trail six or eight hours old leading for parts unknown in an almost perfectly straight line. The moose is at that moment, perhaps, twenty miles off, and still going.

Although moose cannot be driven to water by hounds like a deer, but will turn savagely to bay, still they will not remain in a locality where dogs are running; so that when the white hunters became numerous in the North Woods, and especially when they introduced hounding, the moose simply left the country, and passed either eastward to Maine or northward to Canada.

It is a well-authenticated but little-known fact that they practically left in one season. They were numerous in the Adirondacks, especially in Brown's Tract,—a large district in what is now the southwestern part of the wilderness—until the period between 1850 and 1855 (probably near the latter year), when they suddenly disappeared. Before this several had been killed yearly. Scattered ones were shot later, but 1855 marked their exit from the annals of New York game. Years later, four or five were brought back to Saranac, but would not stay.

An account of the localities in which moose were killed during the last few years of their existence in the Adirondacks will be interesting, and in time prove of great historical value. The data have been collected with great care.

From the following facts 1861 appears to be the year of their final disappearance, although so high an authority as Mr. Verplanck Colvin asserts that the year 1863 is more correct, and that for several seasons after the latter date their browsings and tracks were seen.

John Constable, a well-known sportsman and hunter, killed two moose near Independence Creek, Herkimer County, in 1851, and in the winter of 1852-53 shot his last one west of Charley Pond. That same season Alonzo Wood and Edward Arnold shot two moose,

and found another dead, in the forest back of Seventh Lake Mountain in Hamilton County. In the summer of 1855 the last moose captured alive was taken by Charles L. Phelps, who killed a cow moose in Brown's Tract and brought her calf out of the woods with him. It died the following year. A moose was killed at Mud Lake in 1856, and Edward Arnold at Nick's Lake in the same year killed another. The next year a man named Baker shot one in the same vicinity.

It was long thought that Governor Horatio Seymour had killed the last moose in the Adirondacks, but several others have better claims to that honor, if honor it be. Governor Seymour did shoot a fine bull in 1859, just north of Jock's Lake, not far from West Canada Creek, Herkimer County. The horns were kept for years at his farm at Deerfield, near Utica.

In 1860, however, Alvá Dunning killed several on West Canada Creek, and Reuben Howard, an old moose-hunter, killed his last the same year. Howard states that he heard of two being shot a little later, which may refer to the two that Chauncey Hawthorne claims to have killed about this time. The year 1861 saw at Raquette Lake the destruction of the last family of moose, and, in all probability, of the last individual in the State. In July a Mr. Blossom killed a cow moose on the south inlet of Raquette Lake, and later in the same month his companion, Mr. Tait, while jacking on Marion River, wounded a young moose, but lost him in the dark. Early in August a bull calf was killed near the same place by a guide named William Wood. It had been wounded, and was unquestionably the one hit by Mr. Tait. Marks of a bull were seen in the neighborhood.

But the last positively authentic moose killed in the Adirondacks was in the autumn of the same year, on the east inlet of Raquette Lake. A party of sportsmen, guided by Palmer of Long Lake, was canoeing down Marion River toward the lake. On turning a bend in the river they were surprised to see a huge creature start up among the lily-pads and plunge wildly toward the shore. Several charges of shot were fired with no visible effect, when Palmer took deliberate aim with his rifle, and killed the animal on the spot. It proved to be a cow moose, the last known native of its race in New York State. Most fitting was it that the final death-scene should be at Raquette Lake, which for centuries had been their favorite haunt—a worthy subject for a painter to match with the "Last Buffalo."

Tales like the following are rife in the North Woods, and show how strong a hold this great animal has on the popular imagination:



DRAWN BY HENRY SANDHAM.

TRAILED DOWN.

ENGRAVED BY H. BAKER.

In the summer of nineteen years ago a sportsman was jacking on Bog River, when suddenly the light flashed on two moose among the lily-pads stupidly staring at it. The guide, not relishing the idea of additional loads over the carries, joggled the boat, and the astonished hunter missed with both barrels full of buckshot.

About twenty-five years ago a party of hunters were hounding back of what is now Paul Smith's, and one of the watchers, an old guide, had taken his watch-ground on Mountain Pond, about five miles from lower St. Regis Lake, when he was so frightened at seeing a huge animal plunge into the pond and swim over that he did not even dare to move from his post, much less to use his rifle. From the description given by the thoroughly scared hunter, it must have been a moose.

One of the Saranac guides, Reuben Reynolds, remembers hearing his father tell of helping to kill a bull moose which was mired in Fish Creek on the Lower Saranac Lake, near the present Hotel Ampersand. This is interesting as an example of the manner in which many prehistoric animals, notably the Irish elk, have been buried in the bogs, and their remains thus preserved to future ages. A number of similar stories exist, most of which relate vaguely back to a period at least twenty-five years ago. The moose had gone long before

that, but it is possible that solitary individuals lingered on in the Bog River country even later.

In 1877, tracks of moose were reported near Great Sand Lake, and nearly ten years later, in October, 1886, a young bull weighing three hundred and fifty pounds was shot on Long Lake. This last was unquestionably one of several which had been turned loose by a game club near Lake Placid. They had imported three or four to stock their preserves, but on discovering that the moose did not breed well in confinement, set them all free in the woods.

It seems well nigh incredible that, if this young moose was native to the Adirondacks, no authenticated instance had been recorded of seeing either a moose, or even undoubted moose-signs, during the quarter century since 1861. Their tracks, and other indications of their presence, were occasionally reported, but in a well-known country like the Adirondacks a moose could be trailed—or his yard found, if in winter—by a persistent hunter. From the eagerness and perseverance shown in hunting down a panther whenever a track of one is found, one can readily imagine how much chance a moose would have of escaping. Moose-signs are unmistakable, and the marks where they have yarded may show for years. Nothing but doubtful tracks, which may have been made by a lost cow, or lopped twigs have been proved, so we may be

tolerably certain that at least for twenty years there has not been a native moose in New York.

Strange tales are told, however, that lead even a very cautious hearer to think that perhaps somewhere in the woods there is something bigger than the ubiquitous "big buck"—perhaps by some strange chance a stray caribou, for a caribou was killed there a few years ago, and it has since been proved that it was one turned loose by a game club. Better still, let us call it by the term used by the guides in describing the antlers of the mysterious beast—a "brush heap."

The southern watershed in New Brunswick was once a grand place for moose, and around the head-waters of the Miramichi and Restigouche rivers many are still to be found. North of the latter river, in the peninsula of Gaspé and in the county of Rimouski, they existed in great quantities until the winter of 1862, when, during the deep snows, they were almost entirely exterminated by Indians sent out to get hides. Moccasins were needed for the British troops just arrived in Canada, in consequence of the threatening aspect of the Trent affair. Gaspé was the last place where they were very numerous, and this indiscriminate slaughter sealed the doom of the moose in the East. A few may still be found in the once-famous Muskoka deer country, a locality that has been several times suggested as an excellent place for a moose preserve. The best place for a good hunter to get a moose head is now the country on each side of the Ottawa River above Mattawa.

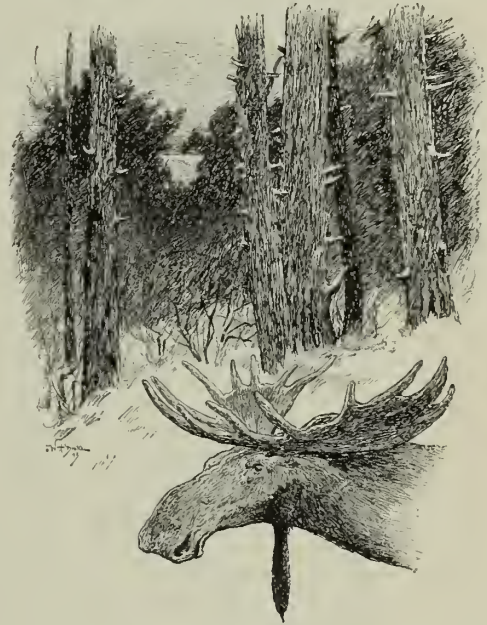
The moose, while totally lacking the grace and ease of movement of the deer, is appallingly grand as he stands swinging his immense antlers like feathers as he turns to catch a taint in the breeze. In the rutting season, when they are at their best, the body is rusty black and the legs grayish. The shoulders and broad chest show tremendous strength, and the hips are stout and clean cut; but the great height of a moose is owing chiefly to his long legs and bristling mane.

When a bull moose lies dead in the forest, he looks like some strange antediluvian animal, with his square prehensile muffle and horns spreading laterally—a peculiarity which he shares with the prehistoric Irish elk and the nearly extinct European elk of later times. The huge form tells of strength and swiftness, and, withal, the still dangerous gleam of the eye, glazed in its last stare, bids the hunter pause and feel almost guilty of a crime in the destruction of so much that is grand and weird, a feeling very different from the sentiment supposed to attend the slaughter of a deer. But the triumph of mastering the wariest and bravest animal in the woods by fair still-hunting, and by grimly

sticking to the track for many a weary mile, amply atones for any regrets.

One can form only a very erroneous idea of the true appearance of a moose from the stuffed heads usually seen. Few, if any, taxidermists have ever seen a live moose, and with only the loose hide to work on, they make a monstrosity of it, giving him a decidedly misshapen nose, and filling out to the utmost the immense nostrils, which in repose are in a collapsed state. The ears come above the horns, not behind them, as is usually the case in mounted specimens.

In the living animal the nose is a marvel of ugliness, and the surface covered by the olfactory nerves so great that it is doubtful whether there is any other animal whose sense of smell is so highly developed. Like most other deni-



DRAWN BY W. H. DRAKE.

HEAD OF A MOOSE KILLED ON THE UPPER OTTAWA RIVER IN 1891, SHOWING THE "BELL."

zens of the forest, it relies far more on its scent than on its sight. The eyes are small and wicked, snapping and gleaming on the slightest provocation, and betray at once the ugly character of their owner.

When captured young, moose prove most interesting pets, and become very tame, remaining so except in the autumn, when the bulls are apt to give trouble. Taken later in life, however, they are extremely hard to domesticate; still, they have been broken in to harness and used for draft purposes. In confinement they are dangerous from a little trick they have of striking with their fore feet, not straight out, as a horse sometimes strikes, but first lifting the



DRAWN BY HENRY SANDHAM.

ENGRAVED BY H. BAKER.

"THE SIOUX INDIANS BELIEVED IN A MONSTROUS MOOSE WHICH COULD STRIDE WITH EASE THROUGH EIGHT FEET OF SNOW."

hoof almost perpendicularly above their head, and then cutting forward and down—a blow that would tear a man nearly in two. The lightning-like quickness of the movement does not give time to dodge, and there is no warning. In the autumn, when wounded in the body or brought to bay, a full-grown bull is a very dangerous animal; by some hunters of wide experience they are thought to excel the grizzly bear in downright ugliness. A case occurred in Maine in 1885 of a bull attacking two men on sight, and keeping them treed for hours, a not uncommon event when they are wounded.

The battles between the bulls—the only occasion when their huge antlers come into use—are described as being simply terrific, and often result in the death of one or both of the combatants. The double fenders or brow-antlers do the most damage, although the whole horn, so massive and firmly supported by the stout neck, deals fearful blows. The shock between two of these animals can safely be left to the imagination, for a large bull usually weighs about 1000 pounds, and they are sometimes killed weighing from 1200 to 1500 pounds, which is about the limit. Cases, how-

ever, apparently authentic, have been reported when 2000 pounds have been claimed. The great difficulty is to find anywhere near their haunts scales which can weigh so huge an animal, for if galloped and carted out, much of the original weight is lost.

They begin their battles early in life, for a four-year-old bull, shot last autumn on the Ottawa, when skinned showed on one side a fresh wound with a shattered rib beneath it, and on the other, the scars of an old wound where another rib had been broken the year before. His latest combat had evidently been successful, for when shot he had two cows with him as proof of triumph. Whether in his maiden battle of the year before he had been victorious over his rival it would be interesting to know, for he was a brave brute, who met his death from pure love of a fight. Hearing the approach of hunters, and probably thinking the noise came from another bull, he turned back to defend his charge, freshly wounded as he was, and deliberately stalked up to within thirty yards of his enemy, only to fall with a bullet below his ear.

Early in September, before they are mated, in a good moose country it is no uncommon thing to hear their challenging calls, which sound precisely like a man chopping, and their combats are of daily, or rather nightly, occurrence. Indian hunters say that when they hear in the twilight the breaking of the undergrowth and the crash of antlers in one of these mighty battles, they slip up close and shoot the cow as she stands placidly at one side watching the result with languid interest. When she falls the bulls fight on with redoubled fury, and so intent are they on the duel that both can be killed with ease. If, however, a bull is shot first, the survivors take to the bush at the report. As in the case of battles between deer or elk, the horns are said sometimes to become so interlocked that they cannot be pulled apart, and both animals perish miserably. From the structure of the horns, however, this must be a very rare event, but a pair of interlocked horns were found in Oxford County, Maine, about 1845.

There are two varieties of moose, according to experienced hunters, the chief difference being in the antlers. The smaller, the kind most often found in Maine and New Brunswick, has small antlers, inclined upward, with wide palmations and having many points. This is a dark-colored, short-legged swamp breed. The other, which ranges further north and west, and in Ontario about equals in numbers the former kind, has the grand antlers we occasionally see — wide-spreading, more symmetrical, and with from eight to twelve points, and very massive brow-antlers. As the palma-

tion, or webbing, is not so wide as in the first variety, the points are longer. This kind is browner in color, and has longer legs than the other. Like the antlers of other deer, those of the moose are not constant in shape or size, and vary from year to year, and even one blade from its mate. The size is probably in great degree dependent on the way the animal wintered, for the drain of the system must be very great to produce such a mass of bone. If the preceding season was an open one, so that plenty of good food could be found, the moose of course would be in condition, and the horns consequently would appear early in the spring and attain their full development. If a severe winter should follow, the next set of horns might be very backward and much smaller.

A large pair measures from three to four feet from tip to tip. Now and then a pair will exceed five feet. One killed in 1881 measured five feet six inches from the extreme points. Mr. Albert Bierstadt, the artist, is in possession of an immense pair of moose antlers measuring five feet five inches at the widest point. The webbing is remarkably wide. A gentleman of Mattawa, Ontario, has a pair which measures five feet eleven inches from tip to tip. This seems to be the limit. An interesting theory has been advanced to account for the palmation of the horns: that being placed below and behind the ears, they act as a sounding-board and give the animal his great quickness of hearing.

The height of moose at the withers is a source of much dispute, and this variation largely grows out of the different ways of measuring one as he lies on the ground. An ordinary bull stands fully six feet, and a very large one seven feet at the shoulders. There are many authenticated cases where they ran as high as seven feet two inches and seven feet four inches. In October, 1880, George Ross killed in Muskoka a moose which, when carefully measured by several persons, stood eight feet two inches at the shoulders! His antlers alone weighed eighty-four pounds! This seems beyond the possible limits, but gigantic moose do occur, especially in this part of Canada. Indian legends abound in stories of moose of fabulous size. The Sioux Indians believed in a monstrous moose which could stride with ease through eight feet of snow, and which no single hunter dared attack. Alaska and Rupert's Land furnish material for similar tales. At all events, the moose is the largest quadruped on our continent, and with his strength and swiftness has only man to dread, as the bear lacks both the courage and agility necessary, and the wolf or panther would scarcely dare to attack any but a very young calf.

Of the various modes of hunting moose, the most destructive is "crusting" in the deep

snow, when the surface has melted and refrozen hard enough to support a man on snow-shoes. The heavy moose of course cuts through, and is soon exhausted by plunging, and his legs are terribly lacerated, so that he can be safely approached and killed with an ax. In this way the lumbermen slaughter numbers of them for their meat, and even more are killed every year for their hides by the Indians and half-breeds. One Indian on the Ottawa killed twenty in the spring of 1891. The law is apparently helpless to prevent this indiscriminate destruction, and in fact does little except annoy sportsmen, who as a rule kill very few, and then only bulls and in the proper season. If this hunting in the deep snow could be severely punished, and the law enforced in Canada and Maine, the natural increase would fully compensate for those killed by other methods; but it is useless to expect this amount of foresight among legislators until, as was the case with the buffalo, there is no game left to protect.

Maine and New Brunswick need a long, close season like that in force in Ontario, until the number of moose increases again. This, if rigidly enforced, would be effective to preserve them for a time at least.

No true sportsman would kill a bull in summer, or a cow at any time, except in case of actual need of food, and then only when no deer or other game could be had. The antlers at that season are in the velvet, and useless to mount, and the skins are of little value as rugs. Still, many are shot on the borders of the lakes and rivers while feeding on the roots of the water-lily.

"Jacking," or "floating," for moose is seldom practised, from the difficulty found in getting close enough to flash the light on the game. Deer will stand and watch a light until they see the boat or scent its occupants, but in the case of moose a light would drive them back into the bush. So a lantern fastened to the hat, and provided with a powerful reflector and quick-working slide, is used. Generally the animal can be located from his splashing in the water near the shore as he tears up the roots of the water-lily, his favorite food. He can be very closely approached by listening carefully and advancing only when his head is underwater. When very near, the lantern is flashed suddenly on him, and a shot fired at the same moment. The light must be instantly extinguished, and the canoe drawn noiselessly back; otherwise a charge will instantly follow, probably with fatal results to one or both hunters. If, however, the animal hears or sees nothing after the flash and report, he retires to the bank, and attributes his wound to some unknown agency. If disturbed again, he will fight, or run for miles without stopping. If left alone, he will not go far, and can be easily

trailed in the morning, when he will be found stiff and weak from the loss of blood.

"Calling" is a perfectly legitimate but rather lazy way of hunting, practised in September, chiefly in Maine and New Brunswick. The long call of the cow is imitated by the Indian guide at night with the aid of a birch trumpet, and the cry repeated at intervals until answered by the bull. Great caution is then necessary to prevent giving alarm, and sometimes most of the night is passed by the bull in circling around the supposed cow to catch the wind. It is exciting, and requires strong nerves and a steady hand, for the bull is very close before he can be seen clearly enough to afford a good mark, and he sometimes charges if only wounded.

By far the noblest way for a real sportsman to secure a set of antlers is the still-hunt. It requires strength and nerve, and calls into play great knowledge of woodcraft and of the habits of the quarry. None but a true hunter is capable of the persistency needed, and the result is in proportion to his patience and shooting qualities. After locating his camp in a good moose country, the hunter first carefully inspects the neighborhood for moose-signs. This is done by taking a wide circle, crossing over the tops of the hardwood ridges, if there are any, to find indications of a yard. They do not, properly speaking, yard up until the deep snow comes; but immediately after the rutting season they appear to locate the future yard, and to frequent the vicinity. Like all other deer, early in September they leave the watercourses and lakes and retire to the hills. In winter the yards often cover several acres, and have beaten paths radiating in every direction. The snow is trampled, and the twigs are cropped close. The smaller saplings are ridden down, and the tops and bark torn off. A yard usually contains a family — an old bull, sometimes a half-grown bull, and several cows and yearlings. At times several such groups yard together.

Throughout the following summer, and often much longer, the evidences of an old moose-yard are easily seen in the mutilated condition of the branches and bark, and sometimes, but rarely, by the presence of a single antler-blade, cast off in midwinter. It is very strange that horns are found so seldom, especially in yards; but the truth is, almost as soon as dropped they are eaten by mice and other small rodents which abound in the woods.

Another excellent plan to find moose-signs in the early fall before the freezing of the small waters is to examine the edges of the ponds or marshes in abandoned beaver meadows, where the moose come at night to drink or wade in the mud. As soon as a fresh track is located, and followed for a short distance until his general route is clear, the hunters are satisfied for

the day, and return to camp. An experienced Indian or half-breed can tell from the direction and character of the trail about where the game is. To him the woods are an open book, with the tracks for words.

The next day before sunrise the hunters are off, and starting from a new direction make a wide circle around the spot where the fresh track was last seen. Presently the guide stops, and, after looking earnestly at the ground for a moment, turns disgustedly away. The hunter questions him, and he points to the leaves. "Two moose — cow and calf — two days old." Sure enough, there are the two tracks, looking not unlike cattle-marks, only rather more pointed in shape, one large and the other small. The leaves fallen into the prints show they are old. Swinging the butts of their rifles over their shoulders again, the two move on in silent Indian file, winding now over the top of some hill with an open glade of birch, maple, and beech, now through some hemlock swamp; walking logs in preference to the ground, a feat easily performed when one wears moccasins; now out on some *brûlée* in hideous contrast to the surrounding forests. Mile after mile in this way — the guide stopping often to examine a trail, where perhaps the blunted character of the prints shows that some big bull has passed there many hours before. Finally the fresh track of the day before is found miles from where last seen. It can be identified by the general direction of the trail, and the number, sex, and age of the moose that made it. All this is an open secret to the guide, who grins silently as he points to the trail, which the other had long since given up as hopelessly lost. Now it is time for lunch. A little fire is built, the inevitable tea cooked, and cold pork or venison eaten in silence.

The hunter, when the halt was called, was so exhausted that he could scarcely stagger under the weight of his rifle. The rest and lunch make a new man of him, and he takes the trail again as fit and enthusiastic as when he left camp. Now the real work begins. The track is an hour or so old. The twigs crushed under the heavy foot have scarcely begun to straighten out, as they will in a few hours. Perhaps a little snow still shows the clean-cut outlines that last so short a time. The game cannot be far off, and is apparently moving slowly along, feeding on the tops of the moosewood, which grows abundantly in their favorite haunts.

It would never do to follow directly down trail, for the moose would catch the scent. So they circle down wind — that is, leave the track and, taking a long swing round, turn up wind again and approach the trail with great caution at a point a mile or so beyond where it was last seen. The prints now show very fresh. Water, perhaps, from a puddle is still trickling

into a half-filled mark. Other signs indicate his nearness. He has stopped lopping the twigs, and his uncertain and wandering course shows that he is looking for a comfortable place to lie down. The track is at once abandoned, and in the same way as before a smaller circle is made. Every step is studied, not a twig must snap, not a bush be disturbed, not a bough scrape against moccasin or gun. Foot by foot the hunters again get down wind, and even more slowly turn back. The moose is now in front, lying down. He has himself made a half-circle on his own trail, and is now to leeward of it, so that anything passing along his back track will scent the wind as it blows to him. Then, too, he is lying facing his footmarks, and can see anything approaching him from that direction. Thus the necessity of not following directly on the track is apparent. The hunters are now to leeward of the moose, and are working slowly toward him with every nerve on the stretch, starting at the slightest noise, peering anxiously in every direction, expecting to see the huge beast rise from behind each fallen tree-top. Every hillock is carefully mounted, and the surrounding woods are inspected. Panting with excitement, forgetful of the weariness and the long road home, the hunter sees phantoms of immense antlers and charging bulls, figures to himself a thousand times the deliberation with which he will shoot, just where on the shoulder he will "hold," and sees in every movement of the spruce boughs a dim and vanishing form, and hears in every squirrel's chattering around him the sound of departing hoofs. Thus on and on, praying for a clear shot and a big pair of horns, till suddenly the guide stops and looks reproachfully back, and then turns sadly to the hunt again. A rotten root has broken underfoot with a muffled sound so slight that the hunter himself had not noticed it. Fifty rods further, and for the last time the guide stops and points to the bed of a huge moose faintly outlined in the wet leaves, still warm. "Too much hurry" is his only comment. The broken root has done its work and told its story to the ready ears, and the immense creature has risen, and, stepping over a log some three feet thick without touching it, has passed noiselessly into the dense bush from under the very eyes of his pursuers.

Then comes the long tramp back to camp in the growing dusk. Tired out and disgusted with hunting, they pick their way through the woods by some short cut which the guide finds and follows with the instinct of a hound, until at length the welcome gleam of the camp-fire is seen. Back at last, they eat a hasty supper and sink into a dreamless sleep, only to waken on the morrow with fresh determination to find more tracks. So the hunt goes on, until at last the stalk is successful, and the game is started

up in plain sight, or is found quietly browsing. A well-sent ball ends the chase, and the labor and fatigues of perhaps weeks are fully recompensed. A still-hunt of this description, in the skill required, infinitely outranks the much-vaunted "stag-stalking" in Scotland, and is the noblest of American sports.

Here, truly, is grand game, and one which could be restored to its former haunts in the Adirondacks with a little intelligent outlay. Native American game abounded in that beau-

tiful region at no far distant time, and may again, if the men who have charge of the forest commission, and who appear to know nothing of game, would abstain from silly plans of introducing the European boar—a most unattractive and destructive creature, entirely out of keeping with American surroundings. Perhaps some day the example of private preserves may induce the legislature to attempt a restoration in a State park; but until that day comes, the work of destruction in game and forest will go on.

Madison Grant.

POEMS OF WINTER.

THE STILLNESS OF THE FROST.

OUT of the frost-white wood comes winnowing through
 No wing; no homely call or cry is heard.
 Even the hope of life seems far deferred.
 The hard hills ache beneath their spectral hue.
 A dove-gray cloud, tender as tears or dew,
 From one lone hearth exhaling, hangs unstirred,
 Like the poised ghost of some unnamed great bird
 In the ineffable pallor of the blue.
 Such, I must think, even at the dawn of Time,
 Was thy white hush, O world, when thou lay'dst cold,
 Unwaked to love, new from the Maker's word,
 And the spheres, watching, stilled their high accord
 To marvel at perfection in thy mold,
 The grace of thine austerity sublime!

Charles G. D. Roberts.

A WINTER LOVE-SONG.

THE sad fields, veiled in falling snow,
 They are not sad to me;
 Not chill, to me, the winds that blow,
 However chill they be:

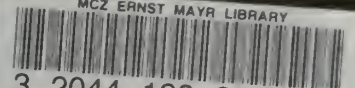
The eddying flakes that speed away,
 With music they drift down,
 Through myriad, lacing branches gray,
 On dead leaves, crisp and brown.

No bloom upon the whitening hill,
 No green leaf on the tree;
 The music is sad music: still
 It is not sad to me.

For song, with my heart's muffled might,
 Keeps measure, blow for blow;
 My love's warm breast is pure and white,
 And softer than the snow.

Robert Burns Wilson.

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