

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from:/
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments:/
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

Excursion to Eastman's Springs by C.A.R., on Aug. 9th.

August, 1890.

THE
* OTTAWA NATURALIST *

VOLUME IV. No. 5.

The
TRANSACTIONS.

Of the
* Ottawa Field-Naturalists' Club *

(Organized March, 1879. Incorporated March, 1884.)

CONTENTS.

	PAGE
The American Wolf, by W. P. Lett.....	75
Report of Zoological Branch.....	92
The Short-billed Marsh-wren.....	93
Excursion.....	94

OTTAWA, CANADA:

W. F. Mason, Printer, 48 & 50 Queen St.

Issued August 2nd, 1890.

Published Monthly at \$1.00 per annum.

Patron:

HIS EXCELLENCY THE LORD STANLEY OF PRESTON,

GOVERNOR GENERAL OF CANADA.

President: DR. R. W. ELLS.

Vice-Presidents:

1ST, R. B. WHYTE.

2ND, J. BALLANTYNE.

Secretary: T. J. MACLAUGHLIN (Dept. Public Works).

Treasurer: JAMES FLETCHER (Experimental Farm).

Librarian: W. A. D. LEES (P. O. Box 258).

Committee: { MISS E. BOLTON, MISS G. HARMER, MISS M. A. MILLS,
H. M. AMI, W. H. HARRINGTON, A. G. KINGSTON.

Standing Committees of Council:

Publishing—JAMES FLETCHER, *Editor*; W. A. D. LEES, W. H. HARRINGTON, *Assistant Editors*.

Excursions—R. B. WHYTE, T. J. MACLAUGHLIN, H. M. AMI, MISS G. HARMER, MISS M. A. MILLS.

Soirées—JAMES FLETCHER, J. BALLANTYNE, A. G. KINGSTON, MISS E. BOLTON.

Senders:

Geology—H. M. AMI, DR. R. BELL, A. P. LOW.

Botany—JAMES FLETCHER, R. B. WHYTE, WM. SCOTT.

Conchology—REV. G. W. TAYLOR, F. R. LATCHFORD.

Entomology—T. J. MACLAUGHLIN, J. FLETCHER, W. H. HARRINGTON.

Ornithology—W. A. D. LEES, PROF. J. MACDON, A. G. KINGSTON.

Zoology—J. BALLANTYNE, H. B. SMALL, W. P. LETT.

The Librarian will furnish the Publications of the Club at the following rates:—

Transactions,—

Part I, Not sold singly

" 2, 25 cts.; to members, 15 cts.	} \$1.00 for Vol. I. To members, 50 cts.
" 3, 25 " " 15 "	
" 4, 25 " " 15 "	
" 5, 30 " " 20 "	} \$1.00 for Vol. II. To members, 50 cts.
" 6, 40 " " 25 "	
" 7, 30 " " 20 "	

The Ottawa Naturalist, \$1.00 per annum.

Monthly parts, 10 cents each; to members, 4 cents.

Quarterly parts, 25 cents each; to members, 10 cents.

NOTICE.—The Treasurer begs to call the attention of members to the advertisements.

THE WOLF (CANIS LUPUS).

By William Pittman Lett.

The present, according to the Ontario Game Act, is what is known to sportsmen as the "close season," that *pax vobiscum* interval, during the continuance of which the wild birds and wild animals of the forests, the rivers and the lakes are supposed to be allowed to rest in undisturbed tranquility, unawed by the presence of man, unstartled by the deadly reverberations of the rifle or the shotgun.

Next to the matchless and magnificent surroundings of a happy sojourn in a tent, in the lonely and beautiful solitudes of the wilderness—next to a successful hunt with congenial companions, skilled in the mysteries of wood and water craft—may be classed the enjoyment of telling your experience, what you know, what you have learned, amid the solemn, sublime and illimitable glories of nature. The pleasure of the situation is enhanced, when the detonating story of the camp fire is told to kindred spirits, to sportsmen, to naturalists, to reading and thinking men, who are certain to appreciate the attractions of the narrative if it has any, sure to comprehend all, and perhaps much more than you are able to tell them.

I need scarcely say that I am delighted to find myself standing once more before the Field-Naturalists' Club of the City of Ottawa. Perhaps I have said as much before. Very likely I have. "Out of the fulness of the heart the mouth speaketh." In whatever I attempt I am ever and always an enthusiast. If I place myself in a lowly rank in that frequently misjudged and misunderstood band, nevertheless, under the light of history, I come to the conclusion that at appointed times—in favourable crises—enthusiasts have been the men who in various eras in the past, have created religious, moral, social, political and scientific earthquakes in the world. I have accidently stumbled upon an interesting and practically inexhaustible subject. I can't pursue it now. I just leave it, by simply saying, that in my opinion, one hour of enthusiastic energy in any cause, is worth a whole year of cold, calculating induction. Enthusiasm is the electricity of intellect, it is the sweeping flame of earnest endeavour. It is the strong, soaring wing.

of the spirit which carries the votary of truth above the mountain top, and enables him to get a nearer view of the stars.

Every man is an enthusiast, whose prophetic eye can see through the mist—who, gifted with a prescient insight into the abstruse problems, obstacles and contingencies of his day, takes off his coat, rolls up his sleeves, and cries, come on! to difficulties in the glorious warfare for human liberty, human progress, material development and scientific investigation.

NOW FOR THE WOLF.

Hark to that minstrelsy, ringing and clear!
 'Tis the chorus of death on the trail of the deer;
 The fierce forest bloodhounds are gathering in might,
 Their echoing yells wake the silence of night,
 As relentless they stretch over mountain and plain,
 The blood of their fast speeding victim to drain;
 They close—he stands proudly one moment at bay—
 'Tis his last—they are on him, to ravage and slay!

The wolf belongs to the genus *Lupus*, or the canine family. According to "Audubon and Bachman's Quadrupeds of North America," the wolf has six incisors in the upper and six in the lower jaw; one canine tooth in each jaw, and six molars above and six below.

GENERIC CHARACTER OF THE WOLF.

The three first teeth in the upper jaw, and the four in the lower jaw are trenchant, but small, and are also called false molars. The great carnivorous tooth above is bicuspid, with a small tubercle on the inner side; that below has the posterior lobe altogether tubercular. There are two tuberculous teeth behind each of the great carnivorous teeth. The muzzle of the wolf is elongate, tongue soft, ears erect, but sometimes pendulous in the domestic varieties. The fore feet are pentadactylous, or five toed, the hind feet tetradactylous, or four toed. The teats are both inguinal and ventral.

The grey wolf of Canada—the typical large wolf of North America—is about five feet six inches in length from the point of the nose to extreme end of the tail; ordinarily twenty-six inches high at the shoulder; larger ones, however, measuring twenty-eight inches and upwards in

height, and they weigh from eighty to one hundred pounds when in good condition.

I give the latter measurements and weight from the bodies of wolves which I have killed, and I am confident that I am rather under than over the actual size and weight of the American wolf.

There are several varieties of American wolves, differing so much from each other, chiefly in colour, as to lead naturalists to the conclusion that they are different in species, and do not originate from the same primeval stock. They are all about the same size, and when they chance to meet, band together in the same pack.

In size and other distinctive peculiarities, the larger wolves differ from the prairie wolf and the coyote. Both of these smaller varieties burrow in the ground; are much less savage or destructive, and much more docile and affectionate in a state of domestication; and also, much more easily tamed than are those of any variety of the larger species.

According to the best zoological authorities, all the varieties of the larger species of wolves are dwellers upon the surface of the earth, sleeping in the open air, or making their dens in caves or crevices of rocks.

The most valuable skins are obtained from the white arctic wolf. The next in thickness of fur and costliness, is the skin of the grey wolf of North America, and so on down to the pelt of the black wolf, which being a southern animal, ranging in a warmer habitat, carries the coarsest and thinnest coat of the entire genus, and his skin consequently is of the least value.

The grey wolf, the variety most common in Canada, bears a striking resemblance to the European wolf. There are, however, differences between them, which appeared at one time to be distinct and permanent. Naturalists of later years seem to be unanimous in the conclusion that the wolves of the old and the new world belong to one species.

The American wolf, notably the Canadian variety, is at least equal in size to that of any other country.

Billings tells us, that the body of the American wolf is long and gaunt, muzzle elongate and somewhat thicker than that of the Pyrenean wolf, head thick, nose long, ears erect and conical, eyes oblique, as is the case with all true wolves; pupil of the eye circular, tail straight and bushy. The animal does not carry it curled over his back like a dog.'

To this correct and excellent description I may add that the eye of the North American wolf is of a greenish colour; its expression is sneaking and sinister, intermingled with an aspect of extreme cunning similar to, but far surpassing in force that of the yellow eye of the fox. As stated above, the tail of the wolf is bushy, but corresponding with the size of the animal it is neither so long, nor so elegantly rounded and heavy as that of the fox.

At one time the grey wolf was found all over the American continent, as far south even as the Gulf of Mexico. It is still to be met with in considerable numbers on the great plains of the west, in the northern and western States, on the slopes of the Rocky Mountains, and in more or less abundance, according to favorable location, in all the remote or sparsely settled portions of Canada, New Brunswick, Newfoundland and Cape Breton.

As before remarked, the black, red and grey, as well as the white wolves of the arctic regions are believed by scientific naturalists to belong to one and the same species. In physical conformation, size, weight and general character they are specifically identical. The difference of colour alone, attributable to the influences of diversity of climate, appears to be the only distinguishing feature between one variety and another. In voice, form, and manner of hunting their prey, all the varieties of the North American wolf are essentially similar.

In early times in Canada, and in the valley of the Ottawa, not less than in other places, wolves were dangerously abundant. In all new settlements, sheep, when a farmer was fortunate enough to possess any, had to be carefully penned up every night, otherwise wool would certainly have been found flying before morning.

It was not alone that in one of those nocturnal raids many sheep were devoured. This was not the worst feature in the transaction. A couple of these bloodthirsty marauders, in a single night, would kill fifteen or twenty sheep, simply tearing their throats for the purpose of sucking the blood, without otherwise mutilating the carcasses.

After such a catastrophe cheap mutton was easily procurable; frequently too at a season of the year when the old pioneers were obliged to live without meat of any kind, fresh or salt, for months at a stretch. For the benefit of those who may be unacquainted with the hardships

and privations endured by the enterprising men who with axe and handspike opened up the blooming glades of civilization in our ancient forests, I may say that this enforced economical fast usually did not terminate until the pigs were killed in December.

My subject this evening is the wolf. Let me call him, *pro tempore*, to suit the occasion, *Lupus Canadensis*, as I shall deal chiefly with the wolf of the Ottawa Valley, perhaps as large, as fierce, as cunning, and as sanguinary an animal of the amiable family to which he belongs, as can be found in any part of the world.

Apart from the information which I have gathered from the authentic records of natural history, I have had a somewhat intimate acquaintance of a personal nature with this voracious bandit of the wilderness— an acquaintance based upon practical observation, supplemented by the agency of steel traps.

It is a commonly received opinion that the fox surpasses all other animals in cunning. I have had what I consider good and sufficient reasons for doubting the correctness of this conclusion. I do not like to disturb an old popular belief, nevertheless I think that anyone who tries to catch a wolf in a steel trap, will agree with me in the fact, that the wolf is a much more cunning animal than the fox.

In my younger days, I trapped many foxes and wolves, as well as fishers, minks and muskrats. I used no pungent oils, or other extraneous attractions to wile them, but simply matched my own intelligence against their cunning, and in the case of the wolf, I have often for many successive days, found myself completely circumvented.

In proof of the persistent cunning of the wolf, I may relate a circumstance which bears directly upon the point. While out trapping in the month of November, 1840, I fastened a piece of liver upon the knotty spike of a hemlock tree, about three feet from the ground, and set a well concealed trap under it. The wolves frequented the spot every night, and although they trampled a circle in the snow about six feet from the tree, or twelve feet in diameter, their dread of the trap prevented their touching the meat, notwithstanding the fact that it remained in its original position until the first day of April.

A short distance from the same spot, during the same year, I caught three wolves, twenty-seven foxes, three fishers and a marten. I

had more real difficulty in capturing the three wolves than I experienced in catching all the others.

I captured the wolves in the following manner. I deposited a quantity of pigs' livers and other offal in the centre of a dense cedar swamp, near the present site of the Carp village, in the Township of Huntly. I had heard wolves howling there after deer on several occasions previously, and I was aware that they had killed a number of sheep and a few young cattle in the neighborhood. The wolves soon scented the bait, and gathered around it. I frequently had the pleasure of listening to their inimitable music in the vicinity of the bait. I visited the spot about three times in each week, always stepping carefully in the same tracks, going to and returning from the bait. I found that during the first three weeks they had not ventured closer than within six or eight feet of the bait, although the snow was beaten down by their tracks all around it.

Early in the fourth week I found that they had devoured the greater part of the bait. The hour for action had arrived. I then renewed the bait, and set a trap in front of it, where they had again commenced eating. After the trap was set I was particular in leaving the snow and the surroundings exactly as I found them. Next morning I found the springs of the trap bare; the snow had been scraped away and the bait eaten on the other side. I then set another trap on the opposite side, and next morning found the snow and covering scratched away from both traps. I was somewhat puzzled, but determined to persevere. I then set both traps in such a manner, that, should the wolves attempt the scratching trick again, the first part of the traps that could possibly be touched would be the pan. The wolves came that night, and one of them remained there; for, to my great satisfaction, I found him fast in one of the traps in the morning. He was a fine, large specimen, twenty-eight inches high at the shoulder, correspondingly long and bulky, and weighing at least eighty pounds.

As it has fortunately turned out for the purposes of this paper, I subjected *Mr. Lupus* to a critical examination. I stirred him up smartly, and experimented upon him, with the view of practically learning something which I did not then know about the members of his interesting race. I endeavoured to make him give tongue, but all my efforts

proved fruitless. I could not induce him to utter a single sound, nor did he attempt to snarl or growl even under strong provocation. I noticed that whenever I stepped off a few paces, at each step he raised his body until he stood at his full height. At each step as I approached him again, he lowered himself until he lay flat on the ground with his head between his paws, in which position he remained as long as I stood beside him. He seemed exceedingly shy and timorous; but he was far too cunning to display any ferocity.

An otter, a fisher, a lynx or a marten would have growled, snarled and fought viciously under similar conditions.

I feel convinced that with a collar and chain, I could have led him home without difficulty. I put this opinion to the test, in the following manner. For the purpose of fastening the trap, I had cut down a balsam sapling about two inches in diameter, the root end of which I cut off square, into which I drove a staple. To this staple I locked the trap chain with a small padlock. I then replanted the tree exactly in the spot where it had grown, and where the wolves had been in the habit of seeing it night after night for weeks.

When I had completed my zoological experiments—never then expecting to tell you anything about them—I unlocked the chain and started towards home. The wolf arose and followed me quietly for about a quarter of a mile, when I accidentally tripped over a pine root and fell. Had I not known something about the history and character of my companion, there might have been, then and there, a tragedy of peculiar interest. The instant I fell, and before I attempted to rise, I turned my head quickly and looked my prisoner in the eye. I found him with his eyes flashing and his whole body gathered for a spring. The moment I caught his eye he cowered before my gaze. Had I not been prompt, it is quite within the bounds of possibility that my audience might not have heard my story. However, I was young, strong and active then, and you may rest assured that I could not have been silenced without a determined and sanguinary struggle.

Long before the occurrence of the incident just related, I had learned that it was dangerous to fall even in the presence of a domesticated wolf.

I need scarcely say that I did not trouble my amiable companion.

to follow me any farther, but with one blow of a heavy stick which I carried for the purpose, I laid him out, as doubtless in his time he had laid out many a beautiful deer preparatory to devouring him.

The three wolves I had killed formed part of a pack which had, a few weeks before their tragical departure for "the happy hunting grounds," committed serious depredations. I put the succeeding two, each of which was equal in size to the first, through a like process of investigation, but failed to elicit anything new.

I had frequently heard the pack in full cry at night. Had it been close at hand, the sound might have proved terrifying to persons not gifted with an ear capable of appreciating nature's majestic harmonies. To me, however, the nocturnal chorus of those wolves, seemed the clearest and most melodious musical effort I had ever listened to. Since then I have heard wolves frequently, but nothing in their tones has caused me to change my opinion.

The Madawaska River, so far as unrivalled natural beauty could make it so, was once the foaming Queen of the Ottawa's magnificent tributaries—has along its turbulent course many rapids and chutes of marvellous grandeur and beauty. One of these chutes, situated about one hundred miles from Ottawa, is called "Wolf Portage." It was so named on account of deer being chased by wolves into the constantly open water at that point. In winter time the hunted deer were in the habit of plunging into the rapids to escape the fangs of their sanguinary pursuers. In catching their prey at the foot of the portage the wolves displayed much cunning. When a deer took the water at the head of the chute, it was quickly carried over the rough rapid into the gradually narrowing ice-enclosed glade or channel at the foot. Just at the spot where the current drove it against the ice, under which it would immediately be whirled, a number of wolves stood on the ice, and the instant the deer touched its edge, it was seized, dragged out on the ice and devoured.

On the Madawaska River, in the early lumbering times, the skeletons of wolves could always be seen in winter lying on the ice at the foot of the Wolf Portage.

So numerous were the wolves in the woods on the Madawaska, that during the years 1840 and 1841, the deer were driven completely

out of the section of country lying between the High Falls and the Keminiskeek Lake, a distance of sixty miles in length, and ten miles from each side of the river. The deer began gradually to reappear there in 1844, and when they returned to their old haunts along "The Hidden River," the wolves followed them to their ancient habitat. For many years deer have been abundant in the Madawaska region.

The old "Stony Swamp," west of Bell's Corners on the Richmond Road, was at one time, much infested by wolves, on account of its having been a famous fastness for deer. The wolves of that section did considerable damage to the flocks of farmers in the neighborhood.

In connection with this well known old road, I remember an incident which took place in the year 1830. It may not be known to everyone that at that early period in the history of the County of Carleton, oxen were chiefly used for all purposes of draught and travel by the farmers of that day, simply because they had no horses. Farm produce was then drawn to Bytown Market on ox sleighs, and then, as now, the journey to the market was performed partly in the night.

One clear moonlight night a farmer from the westerly part of the Township of Nepean, was driving his oxen through the lonely windings of the road in the Stony Swamp. The season was winter. He had a small dog with him which was running along a short distance in front of the team. Suddenly he heard a piteous howl, and on looking in the direction of the sound, he saw an enormous wolf darting away through the trees with the struggling dog in his mouth.

During the first few years of the early settlement of Hull, wolves were very numerous and destructive in that neighborhood. They had killed many sheep, and had also very much disturbed the minds of timid people. Something decisive had to be done to abate the nuisance. A hunter set a trap and succeeded in catching one of the offenders. He skinned part of his head and sides, and fastened a broad red collar, to which was attached a bell, around his neck. The rather cruelly treated wolf was then liberated, and according to the story, wolves became scarce in the neighborhood of Hull for a number of years.

In the year 1839, in the beautiful month of October, when the maple trees, the gorgeous sentinels of earth, seem to wear the elegant livery of heaven, I was out one morning duck shooting on the River

Goodwood—so called after a river running through or near the estate of the late Duke of Richmond. The time was the early twilight, just preceding the dawn. Suddenly I heard the voices of a large pack of wolves in full cry after a deer. The wolves were running in thick cover on the opposite side of the river, which, at the point where I stood, was about forty yards wide. The moment was an exciting one; but I have no recollection of having been frightened in the least. I stood close to the edge of the water, ready to tackle them with a single-barrelled muzzle-loader, charged with No. 3 shot, and, at the time, regretted very much that they did not show themselves. The pack passed rapidly on through the dense undergrowth on the opposite shore, and caught the deer in a few minutes, a conclusion indicated by their silence. Sportsmen will not consider the story complete if I do not tell them that daylight immediately appeared, and the No. 3 was put to its legitimate use; and if I remember correctly, ten wild ducks constituted the result of that morning's tramp before breakfast.

On various occasions since the incident above referred to, I have listened to the magnificent melody of the hounds in full cry upon the steaming trail of the deer. Sportsmen need scarcely be told how far such a concert surpasses the highest effort of instrumental music. Everything considered, such a wild, weird, clear sounding musical performance as that with which I was favoured on the morning in question, I have never since heard. The "angry growl" attributed to the wolf by the novelist and literary theorist, who possibly never heard or saw one, and probably know as little, either practically or otherwise, about the animals, as the generality of would-be-witty writers do about the correct mode of rendering the Tipperary idiom—is just so far from the natural habit of the wolf as is the capacity of that animal to play the bagpipes.

Talking of the bagpipes reminds me of an incident which I remember reading about in my young days. In the early settlement of Canada, a Scotch piper was on his way through a forest path to a merry making. In passing through a thicket his ears were assailed by the howls of a pack of wolves close around him. There was no use in running away, so Sandy struck up "The Campbells are coming," with might and main, and away scampered the wolves as if pursued by a

prairie fire. I do not believe that any animal in America could stand his ground and listen for two minutes to the Highland bagpipes.

So far as I am personally concerned, if accompanied by two thoroughbred bull terriers, and armed with a good Winchester repeating rifle, I shall be delighted at any time or place, in open daylight, to pay my respects to six of the largest wolves in America.

About twelve years ago, the hunting party to which I had the pleasure to belong, was encamped on the bank of Bearbrook, about twelve miles from Ottawa. It was during a cold time in the month of December, a fact which I distinctly remember, in consequence of having had to cut a large supply of birch stovewood to keep the tent warm. During our stay in camp on one occasion about midnight, we were awakened by the howling of wolves near at hand, accompanied by a noise like that produced by a large animal jumping through the snow. Rifles were instantly grasped, but the noise suddenly ceased, and all again was still. By the tracks found in the snow next morning, we discovered that a large buck had galloped within less than one bound of the back end of our tent, and had then turned aside. Upon following the tracks of the deer a short distance, the fresh tracks of two wolves were found on the trail. We did not follow them far. Had we done so, we should, doubtless, soon have discovered the mangled remains of the deer. Had the buck made one more bound in the direction in which he was going, we should have had an immediate row in that tent of more than ordinary interest and excitement. I have often regretted that the deer and the wolves had not landed on top of us in the tent. In that case I could have given you a true story eclipsing in romantic interest the most florid imaginary efforts of the most ingenious newspaper reporter of the present day.

Wolves were very numerous in the Township of Gloucester up to a few years ago, and doubtless there are many still in the solitudes of the vast tamarac swamps still existing within less than twenty-five miles of the City of Ottawa.

During the winter of 1868, Doctor Bell, of New Edinburgh, was driving through the long swamp east of Eastman's Springs. At that time there were lots of wolves within even ten miles of the city of Ottawa. While jogging along at an ordinary gait, the Doctor's horse suddenly

became restive, stood still and pricked up his ears in a startled manner. Just then a deer crossed the road a few yards in front of the horse. The poor animal was tired, its tongue was hanging out, and its panting could be heard quite distinctly. The howling of wolves was then heard close at hand, and after a few seconds eleven of those ferocious forest sleuth-hounds rushed across the road on the track of the deer. What a glorious chance for a sure eye, a steady hand, and a good repeating rifle. Although a keen sportsman, the worthy Doctor was armed only with what modern pathological science regards as the most killing weapon of the Faculty, his lancet.

Roman history, at least tradition, tells us that Romulus and Remus, the founders of the ancient city of the Seven Hills, were suckled and reared by a she wolf. If this story be true, the foster mother of those distinguished sons of the Tiber, in her nature, was not all wolf. This incident has been partially paralleled by the story of Androcles and the Lion, and that of Mahdonata and the Puma. All three of these interesting incidents are highly creditable to the character of the brute creation.

It is certain that the ancient Romans inherited none of the characteristic cowardice which fine drawn physiological science might trace to the source of their ancestors' early sustenance. Nevertheless the blood-thirsty instincts of the lupine race were amply exemplified by the humane and gentle rule of many of the Roman Emperors, notably Nero, Caligula, Galba, and Vitellius. Patriotically ferocious selfishness was also conspicuous in the too often misjudged character of Brutus; whose treason against the purest instincts of humanity, in my opinion, was only surpassed by the atrocious turpitude of Judas Iscariot!

The old wolf foster-mother of the founders of Rome, may have polluted some of the rivulets of Italian blood. You may search in vain amongst the Knights of the Stiletto, and the wretched organs-grinders of to-day, for a single heroic counterpart of those stalwart Roman warriors who carried off the Sabine women and bore the victorious eagles of Julius Caesar through ancient Gaul and Britain!

In the history of British America the instances are very rare indeed in which wolves are authentically reported to have attacked human beings. Emboldened by numbers, and stimulated into audacity by

hunger, the wolves of Russia and Siberia have, for ages, been a perpetual terror to night travellers in the frigid and inhospitable countries referred to ; in the wild forests, and dangerous fastnesses of which, they are met with in such vast multitudes.

In a land where the humanizing influences of a refined civilization, are even yet in their extreme infancy, the dead and wounded, for hundreds of years, upon the battle-fields of intestine wars, were left to rot or be devoured by wild animals. Is it any wonder then, that the wolves of Russia have acquired a taste for human blood, and like the Bengal Tiger, have become man-eaters ?

In contradistinction to the habits of their European congeners, North American wolves, although comparatively bold under the pressure of hunger, commonly dread the presence of man, and flee from him in terror as do the deer and the black bear.

I remember a story current here in old times, about the fate of a gigantic indian named Clouthier—a rather Gallic designation for a pure Algonquin—who was well known to the late "Squire Wright," the original founder of the ancient village of Hull. My story may be true in every particular, for Clouthier was a man of herculean proportions, and almost superhuman strength.

Clouthier was a great hunter, and had a fine field for his prowess and skill in the neighborhood of Hull, which then abounded with bears, deer, moose, wapiti, otters and beaver. In one of his hunting excursions he was attacked and torn to pieces by a large pack of wolves. It was surmised by those who afterwards discovered his bones, and fragments of his clothing, that after he had shot one of his assailants with his single-barrelled flint-lock gun, he had drawn his tomahawk from his belt, and fought desperately for his life.

From the number of skulls and other portions of their bones found at the scene of the tragedy, it was calculated that the indian had killed fourteen of the wolves before he was overpowered. The dead wolves had all been devoured by their fellows, nothing of them being left but their bones. Like his scriptural prototype, the Algonquin Sampson did not fall unavenged.

If this story be correct—and it was considered quite authentic by the old inhabitants of Hull and Bytown—it is the only instance of

which I have heard or read, of wolves having attacked man in this part of Canada. On the contrary, I know of several instances in which one man had taken the carcass of a recently killed deer from as many as four wolves, without meeting with any resistance, although without a weapon of any kind.

In a thickly wooded country like Canada, hunting the wolf is necessarily confined to shooting, trapping and poisoning by means of strychnine. The latter mode of destroying wild animals is altogether unsportsmanlike, and, excepting under very peculiar circumstances, ought to be frowned upon and discouraged by all the sportsmen. Leaving out of the question the danger to domestic animals caused by putting out poison, many of the animals killed by this questionable method, wander off a long distance before they die, suffering extreme torture, and are never found.

Wolves are seldom seen in the woods, even by those whose avocations oblige them continually to travel through the most solitary fastnesses. So keen is the eye and the ear, and so acute is the wolf's sense of smelling, that the hunter or bushranger is either seen heard or scented before he has any idea that a wolf has been near. Now and then an accidental shot may be obtained, but even such chances are few and far between.

Six years ago, while deer hunting, I saw an enormous wolf on the Madawaska River. He had been started by another hunter on the top of a mountain, and had rushed down the side of a ravine at the end of which I was watching for him. As he came within range, he jumped up and stood upon a log behind two pine trees growing together, which concealed every part of his body but his nose. As that part of his anatomy is not as vulnerable as the nose of a bear, I waited for him to take another step. This, to my great regret, he did not do, but jumped off the log and disappeared in the thick brush and tall weeds. Thus I lost my chance of obtaining a grand trophy; and thus by his escape, I feel that many a beautiful deer afterwards lost its life.

Spearing the wolf, on the open prairie, in the manner of "Pig Sticking" in India, is a most exciting kind of sport, although not always unattended by danger, occasioned by badger-holes and prairie dog towns, which are frequently encountered in the chase.

But the grandest sport with the gray, or as he is called on the

prairies, the "timber wolf" may be enjoyed in coursing the animal with strong courageous greyhounds.

Although the grey wolf is an animal of great speed and endurance, he is soon overtaken by those fleet-footed gaze hounds, which, when they overtake him, snap at him and wound him with their sharp teeth and powerful jaws, and by their extreme agility avoid his dangerous attacks, keeping him at bay until the mounted hunter arrives and terminates the chase by a well directed pistol shot. For a time this kind of hunting taxes all the energies of the greyhounds, in consequence of the fleetness and great staying powers of the wolf, a swiftness, however, which may be termed comparatively slow work contrasted with the lightning performances of that telephone of the plains, the "Jack Rabbit," or correctly speaking, the great hare of the prairies.

It has been affirmed by the great naturalists of America, that the aborigines of this country, before the advent of white men, used domesticated wolves instead of dogs. This can readily be credited by any one acquainted with the indian dogs of even the present day. Although smaller in size, a condition superinduced by ages of neglect and starvation, the indian dog of the present is peculiarly and positively wolfish in aspect and characteristics.

It is a notable fact that an irreconcilable antipathy has always existed between the domestic dog and the tamed wolf of the Indians. In their constant quarrels and combats with each other, the former are always the aggressors. The Indian wolf dogs always act upon the defensive; usually trying to avoid a conflict with their more courageous kinsmen.

In other days, when the lordly bison frequented and ornamented the limitless prairies of the great Northwest, when their million-hoofed tramp shook the solid earth, the wolf was ever his sneaking and persistent enemy. He silently tracked the calves, the wounded, the aged and the helpless, until an opportunity presented itself for a safe attack.

A single white arctic wolf will run down a barren ground caribou and by one savage bite in the flank disable the largest buck.

Sir John Richardson, a distinguished arctic explorer, who has contributed many interesting facts to the general fund of natural history, tells us that the wolves of northern America run down and capture

foxes, whenever they find them on the open plains, at a distance from their underground dens. A large wolf is strong enough to carry off an arctic fox in his mouth at a rate of speed far surpassing that of hunters upon snowshoes. They are said frequently to attack and carry off the sleigh dogs of the Indians.

The northern Indians improve the breed of their sleigh dogs by crossing them with wolves. This process adds to their size, speed and strength. The voice of the wolf and that of the Indian dog, to my own personal knowledge, in volume and sound, is precisely similar.

Many years ago I remember having hunted deer with a large sized Indian dog. He was one of the best dogs that I ever turned loose upon a deer track. As he pursued his quarry his tongue was distinctly and unmistakably the howl of a wolf, loud, clear and prolonged, without a single sharp bark like that of a dog. This dog, true to the instincts of his ancestry, never failed to find a deer, if there was one within reach, and once the game was found, he stuck to the trail like his old progenitors until he tasted blood. I would not mind paying what some of my audience would consider an exorbitant price for such another dog to-day.

When I speak of Indian dogs, I do not mean the miserable diminutive race of singed curs generally found in starving annoyance around an Indian camp to-day. Such attenuated whelps, in my opinion, can trace their origin to the fox; certainly not to the wolf. I allude to the strong and hardy wolf dogs used by the Indians in the Northwest, and by the Esquimaux as they speed along over the snow under the crackling of the aurora borealis in the Arctic Circle.

The late Sheriff Dickson, of Pakenham, who, during many years of his life was, not only a successful deer hunter, but also an enthusiastic student of geology, in an interesting article on the wolf, published in the Canadian Naturalist and Geologist, gives many entertaining particulars respecting the Canadian wolf. From personal experience he bears testimony to the cowardice and treachery of wolves. When caught in a trap, wounded by a gunshot, or cornered up so that they could not escape he invariably killed them with a club or tomahawk, without ever meeting with any resistance. Wolves, he found, could always be frightened away from the carcass of a deer by firing a shot amongst them.

As their only means of escape, when hunted by wolves, déer make for the nearest water. Should the river or lake be narrow, the deer generally swim either up or down. Seldom straight across; and frequently after making a detour of some distance, land again on the same side from which they had entered the water. By this ruse the wolves are puzzled and put off the scent.

If there are weeds or thick brush growing along the shore, a hunted deer will sometimes sink himself under water in a thick clump, so that no part of his body can be seen above the surface but his head, by which his pursuers are baffled. On glare ice the wolf soon ends the chase. When frightened, the deer falls flat at every bound and is quickly overtaken and killed. Should a deer get into a strong rapid and the wolves attempt to follow, they are generally swept off their feet and carried away. If one should approach close enough, a large buck will often kill his foe with one blow from his sharp hoof. Dogs of the courageous kind are sometimes killed in the same manner.

The great and merciless slaughter of deer, however, occurs in the latter part of winter, when the snow is deep and covered by a crust strong enough to bear wolves or dogs, and not sufficiently so to support a deer. Then it is that the wild wolves of the forest, as well as the human wolves of a yet imperfect civilization, relentlessly murder the poor animals in hundreds.

I have now told you nearly all I know about the wolf, and also much of what I have learned from the valuable writings of standard naturalists concerning the life, habits and habitat of this widely distributed member of the great and interesting family of our north American carnivora.

From personal experience, and careful comparison, I have no hesitation in assigning to the wolf of the Ottawa Valley, if not a pre-eminence in size and weight, at least an equality in magnitude, as well as in all the other amiable characteristics distinguishing the genus *lupus* in any other land.

If I have been fortunate enough to add one original fact to the voluminous records of natural history, if I have imparted one instructive idea, if I have succeeded in amusing or entertaining my critical audience, if I have thrown but a single ray of new light upon the wolf, I shall consider myself specially favoured in having achieved more than I expected to accomplish.

REPORT OF THE ZOOLOGICAL BRANCH OF THE OTTAWA
FIELD-NATURALISTS' CLUB FOR THE YEAR ENDING
18TH MARCH, 1890.

In the year which is just closing there have been no mammals observed in the immediate vicinity of Ottawa, which have not hitherto been seen and more or less accurately described. This does not mean, however, that the field is exhausted, as there is no certainty of such being the case, on the contrary, there are reasons for believing that there yet may be found among the smaller mammals species new to this locality, it being only about three years ago since the hairy-tailed mole (*Scapanus breweri*) was first noted as having been seen in this neighborhood

During the past year two specimens of mole shrew (*Blarina brevicauda*) were caught, one by Mr. Lees in the early part of December in the village of Ottawa East, and the other by Mr. Fletcher in Stewarton in January last, both of which were sent to Mr. Whiteaves of the Geological Museum and duly acknowledged. The one caught by Mr. Lees has been prepared and mounted and placed among the other animals in the museum. One specimen of the field mouse (*Arvicola pennsylvanica*) was caught in Mr. Fletcher's house on the 10th February, after having gnawed off about a yard of a lace curtain where it touched the ground. It gnawed its way into the room through the floor. It is well known that the common house mouse will eat starch quite readily, and probably the field mouse, having a similar taste, was attracted by the starchy dressing of the curtain.

A jumping mouse (*Zapus hudsonius*) was caught near Billings Bridge last summer by Mr. Bartlett, of the city post office, who ought to be a member of this club. The mouse is somewhat rare in this vicinity. It is now mounted and placed in the Geological Museum.

It is hardly necessary to mention that Mr. W. P. Lett gave a very instructive and interesting lecture on the 21st February on the habits and characteristics of the common grey wolf before the members of this club. The animal in question having been very common in this locality thirty or forty years ago, but now never seen.

We think it well to recommend that in future the different mem-

bers of the club should be asked to report as soon as possible to the leaders of this branch, for the time being, if they should observe any animal which might be new to them, as important discoveries may often be lost for want of attention just at the time. They think also that it would be desirable to have printed, a list of all the mammals which have ever been known to frequent this neighborhood. Many of the larger kinds have now completely disappeared.

Respectfully submitted,

Ottawa, March 14, 1890.

J. BALLANTYNE, } Leaders.
W. P. LETT. }

—:O:—

CORRESPONDENCE.

To the Editor of the Ottawa Naturalist:

SIR,—In the transactions of the O. F. N. C. for 1883-84, the report of the Ornithological Branch notes that one of its members found the Short-billed Marsh Wren, *Cistothorus stellaris*, "very abundant" in a marsh along the Rideau, about twenty miles from the city. As this is a very rare bird in Ontario, and one whose acquaintance I have never made, I made enquiries about the locality, and on the 9th July my brother, F. A. Saunders, and myself took the C. P. Ry. to Osgoode and went from there to Kars, where we were informed the Marsh Wrens were to be found. The marsh was there, with the usual quota of marsh birds, viz: Florida Gallinule, Bittern, Carolina Rail, Virginia Rail, Red-winged Blackbird and Long-billed Marsh Wren, but though we searched diligently we could find no trace of the short-billed species. All we saw at short range were long-billed, and the only one we shot was of the same species, but as neither of us were familiar with the song of the short-billed, we might possibly have heard it without knowing it. The eggs would have provided a ready means of determining the presence of the Short-billed Wrens had they been laid, but though we examined between twenty and thirty nests, some of them almost if not quite completed, none contained eggs and we were again left in the dark. These nests, however, were the ordinary type of the long-bill, whereas the short-bill is said to build among long rush-like grasses,

covering the nest completely on the outside with living blades, so that it is comparatively difficult to find. The nest of the long-bill, placed high in the cat tails, is easily found, in fact the searcher is bewildered by finding three or four nests at one glance, most of which are invariably empty. It would be interesting to know if the authors of this note referred to, took specimens of the bird when the locality was visited before. The Short-billed Wren inhabits a much more restricted region than the other species, and has not, as far as I am aware, been reported as *common* from any other point in Ontario, and as the long-bill is abundant in every suitable locality in Western Ontario, New York State and all adjacent parts south and west, the chances are that the Short-billed Wren if present at Kars at all, is rare. Nevertheless, it is found in its greatest abundance through the States along the Atlantic, and as its numbers gradually diminish the nearer they approach Ontario, it is not impossible that they have been found as stated. I have observed the long-bill species in abundance in the marshes at Toronto, Rondeau, Point Pelee, and Lake St. Clair, and in smaller numbers in little pieces of bulrush marsh through the country, and in all these places they have shown their industry by building several unused nests for every one that is built for breeding purposes, but even then, their numbers are such that the collector has no difficulty in securing all the eggs he may desire. Their song is a medley of unmusical chatter, delivered generally on a short flight into the air, but often while perched on a dead bulrush stalk, and while they are not easily approached if sitting in a conspicuous place, their assurance is such that they will often come fearlessly to within 8 or 10 feet and sing and chatter at the intruder at a great rate, very likely making a big hullabaloo over his approach to the very nest they have decided not to use.

London, Ont.

W. E. SAUNDERS.

—:o:—

EXCURSIONS.

The next general excursion of the Club will be held on Saturday, 9th August, to Eastman's Springs, on the Canada Atlantic Railway. The train will leave Elgin street station at 2 p.m.

The following low rates have been arranged, which should secure a large attendance :—Members of the Club, 25c ; non-members, 30c ; children, 15c. Tickets must be bought from the Club.

September Excursion by vans to Kirk's Ferry on 6th September.



SUMMARY

— OF —

Canadian Mining Regulations.

NOTICE.

THE following is a summary of the Regulations with respect to the manner of recording claims for *Mineral Lands*, other than Coal Lands, and the conditions governing the purchase of the same.

Any person may explore vacant Dominion Lands not appropriated or reserved by Government for other purposes, and may search therein, either by surface or subterranean prospecting, for mineral deposits, with a view to obtaining a mining location for the same. But no mining location shall be granted until actual discovery has been made of the vein, lode or deposit of mineral or metal within the limits of the location of claim.

A location for mining, except for *Iron* or *Petroleum*, shall not be more than 1500 feet in length, nor more than 600 feet in breadth. A location for mining *Iron* or *Petroleum* shall not exceed 160 acres in area.

On discovering a mineral deposit any person may obtain a mining location, upon marking out his location on the ground, in accordance with the regulations in that behalf, and filing with the Agent of Dominion Lands for the district, within sixty days from discovery, an affidavit in form prescribed by Mining Regulations, and paying at the same time an office fee of five dollars, which will entitle the person so recording his claim to enter into possession of the location applied for.

At any time before the expiration of five years from the date of recording his claim, the claimant may, upon filing proof with the Local Agent that he has expended \$500.00 in actual mining operations on the claim, by paying to the Local Agent therefor \$5 per acre cash and a further sum of \$50 to cover the cost of survey, obtain a patent for said claim as provided in the said Mining Regulations.

Copies of the Regulations may be obtained upon application to the Department of the Interior.

A. M. BURGESS,

Deputy of the Minister of the Interior.

DEPARTMENT OF THE INTERIOR, }
Ottawa, Canada, December 19th, 1887. }

ADN 1 31986

HENRY WATTERS,
Chemist and Druggist,
Corner of Sparks and Bank Streets,
OTTAWA.

ROBERTSON BROS.,
Booksellers and Stationers,
69 Rideau Street.
—
Natural History Works supplied to order.

C. P. WILLIMOTT & CO.
333 Wellington St., Ottawa.
Mineralogists & Lapidaries
—
Every variety of stone cut and polished. Large stock of cut stones to select from. Rock sections for microscope carefully prepared. Collections of named characteristic Canadian minerals from \$1 upwards. Give us a call if you want something new. Send for catalogue.

W. T. MASON,
Book and Job Printer,
48 & 50 Queen St.
OTTAWA,

WM. HOWE,
Importer of Artists' Materials and Artistic Interior Decorations. Manufacturer of White Lead, Paints & Colors.
Howe's Block, - - **OTTAWA.**

M. M. PYKE,
MEN'S OUTFITTER,
99 SPARKS ST.,
OTTAWA, - - - ONTARIO.

BOARDING and DAY SCHOOL
—FOR—
YOUNGLADIES.
(Established 1862.)
49 DALY AVENUE,
MISS A. M. HARMON, - - PRINCIPAL

A. J. STEPHENS,
FINE SHOES,
39 SPARKS ST.
Boots and Shoes Made to Measure.

J. & R. CRAIG, Tailors, 105 Sparks St., Ottawa.