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THE

CANADIAN SPORTSMAN

AND

Naturalist:

A MONTHLY JOURNAL.



MONTREAL, JANUARY 13, 1881.

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 1.

MONTREAL, JANUARY 15th, 1881.

Vol. I.

TO SPORTSMEN AND LOVERS OF NATURAL HISTORY.

There is an evident demand for a lively journal devoted to our Field Sports and Natural History. The Canadian sportsman, properly speaking, never had a recognized paper whereby he could communicate his experiences. Newspapers as a rule took a daily public interest in matters of this nature, but a future reference to their columns has invariably been lost. This will not be the case with the *SPORTSMAN* which is printed in proper form, may be filed, bound or become a historical document. Besides, the greater part of the original matter written on this side of the St. Lawrence, referring to our Sporting matters and Natural History, has been generally posted to American scientists or to journals published in the United States; therefore, the literary talent produced by and properly belonging to this class of our intelligent manhood, has been absorbed through other channels. We are anxious to obviate this, hence the issue of the *CANADIAN SPORTSMAN AND NATURALIST*.

Our columns are therefore open to correct brief reports on Field Sports, and matters relating to Canadian Natural History. We intend to give accurate accounts of the large four-footed game; such as the Moose, the Woodland and Barren-ground Caribou; the Virginian Deer, and smaller quadrupeds. Another object in so doing, is to make an effort to harmonize the Game Laws of Canada, particularly those of the Provinces of Ontario and Quebec.

Ornithology and Oölogy, combining descriptions and remarks on our Northern Birds, their nests and eggs, will take up a portion of our space during the summer season of 1881. Thenceforth the other branches of Natural Science will be periodically attended to.

Our columns are open to writers on the delightful and exciting sport of fishing for Salmon, Trout, and other species of fish that rise to the fly. The most prolific lakes, rivers and localities will be carefully and correctly described. We intend to give an easy and inexpensive way to reach them. Lists of the food fishes found in our inland and maritime waters will be given, together with notes relating to them.

Next we approach Entomology—a branch of natural study containing forms of great interest, and at this age, studied more than any other terrestrial life. It is possible that the Editor who is now studying the *Solitary Wasps of the North*, will be able to describe some additional forms to the already important work on this class of American insects, by Henri de Saussure, of Geneva, Switzerland.

During the first year's issue, the monthly number of our pages will be necessarily confined to eight, but should the journal succeed in attaining the anticipated support which we desire, it will be enlarged to sixteen pages of interesting matter. Now, its existence rests with our sportsmen and students of Natural History; give it your support, and we will furnish you with a neat, well-conducted, spirited periodical, which will reach you regularly every month.

In a former part of our notice we stated that the situation of the Salmon Rivers of this Province would be accurately given, with descriptions of the pools and their distance from the coast. We have done so partly in this issue, in order that European, American and Canadian lovers of fishing may take advantage of these favorite localities during the season of 1881.

The Editor of the *SPORTSMAN* has had experience on the southern coast of Labrador, therefore, gentlemen wishing to visit the rivers hereinafter mentioned, may rely on *bonâ fide* sport.

SALMON AND TROUT RIVERS AND LAKES OF QUEBEC.

It may be said that in former times salmon visited the greater portion of the Northern rivers entering the St. Lawrence above and below the city of Quebec. Some of these rivers are not now frequented by salmon. It is only of late years, however, that the Jacques Cartier became worthy of being leased for surface fishing. We are informed that under proper management and good guardianship, the pools on this river are prolific with fish that give excellent sport. Years ago, the small river known as the St. Charles, at Quebec, was considered a salmon stream, but none have been in it for seasons gone by. The Editor killed a grilse in the St. Charles, near Lorette, about fifteen years ago. Very large trout (*S. fontinalis*) has been taken by the fly from beneath the falls of Montmorenci. Doubtless, these were forced down the river when small, and having lain in the cool surging pool, the fish became fattened and large.

Salmon enter the St. Anns, but on account of lofty falls, they cannot follow the river to a great distance. This river has been greatly poached in the neighborhood of Bonquet's Bridge.

There are other salmon rivers of minor importance, entering the St. Lawrence below St. Anns, and some of them are pronounced good, but we believe that there has been too much netting of late years [on the coast, and hence the old reliable good score rivers have suffered. This may be considered a mere opinion; however, it will be our object to fully investigate the cause of last season's scarcity of the noble fish. We are anxious to have the opinion of men of old experience.

There are two ways of reaching the salmon rivers between Bersimits and Natashquan. This is done by means of sailing mail packets—one leaving the long wharf at Rimouski on the 1st and 15th of each month, from May to September. The other packet leaves Gaspé Basin on similar dates. The Rimouski

packet calls at Bersimits, Godbout, Trinity Bay, Seven Islands and the Moisie River. The captain charges one dollar per passenger crossing the St. Lawrence, the latter to supply his own provisions during the passage. The Gaspé packet is supposed to call at the west and east ends of the Island of Anticosti alternately—that is to say, one trip to English Harbour on the west end, and the following trip to Fox Bay on the north-east end; thence across to Natashquan, Point Esqui-mault, Mingan and other rivers on the same coast. The charge for the passage from Gaspé to Anticosti is four dollars, with board.

Now that we have introduced these matters in regard to fishing localities, the continuation of our remarks on the salmon rivers will appear in the February number. In the meantime, we will occupy a portion of our space with a description of the beautiful trout lakes situate north of Montreal.

We will first mention the region of the Upper Assumption River, where numerous lakes abound, containing beautiful rich-flavoured trout. It is difficult to reach the lakes of the Northern Laurentian districts, on account of rugged woodland and rocky surroundings, there being no roads leading from civilization but what are generally used on both sides of the river as Indian paths to the upper waters. With a good guide a series of mountain lakes can be reached in a day's walk from Manning's farm, taking along a canoe or two. Any lake will offer abundant sport. The upper portion of the Assumption river abounds in trout averaging from a quarter to two pounds weight. There is another grand scenic locality which we have visited, where the lakes are alive with large luscious trout; these are situated on each side of the colonization road leading to the Mattawan. The Black River runs for several miles along the side of the road and its pools and rapids are teeming with game fish; therefore, as a summer resort for fishing, this region cannot be surpassed. To reach the mountain lakes, it will be necessary

in starting from Montreal to take the steamer "Berthier," from the wharf opposite the Bonsecours Market, to Lanoraie, where a railway carries passengers, &c., to Joliette. At this village a team is necessary to carry the sportsmen and traps to either Manning's farm or Mr. Leprohon's house on the Black River Road, which leads through the trout lake region towards the Mattawan. We will continue this subject in the February number.

WHOLESALE SLAUGHTER OF WILD DUCKS.

Among the various devices resorted to for the destruction of our Wild Fowl, the swivel gun is perhaps the most destructive in its effects. Great numbers of wild ducks are annually slaughtered by its means, and the genuine Sportsman must view with alarm the rapidly decreasing numbers of the birds in the localities where it is used. For the past two or three seasons several American steam yachts, armed with these guns, have been cruising in Lake St. Francis, near Lancaster, Ont., and have apparently done a remunerative business in supplying the American markets with birds. The *modus operandi* is to steam slowly towards the large flocks, or "rafts" of ducks, on their feeding grounds in the lake, and as they are then usually in compact flocks, a great number are secured at a single discharge. As many as 50 to 100 being often bagged at a shot; while, as a matter of course, a great many are wounded, and but few of these are secured, the operations of these pot hunters being conducted on too large a scale to allow of the pursuit of single birds. It is needless to state that this system of shooting has already been productive of a great amount of harm, and if persisted in will spoil to a certain extent the duck shooting on our lakes. We therefore trust, before the advent of another season, the Game Societies of Ontario and Quebec will have taken the matter in hand and devised some means whereby the slaughter

may be prevented, and the rapidly diminishing birds be conserved for the legitimate sportsman.

WALLACE.

OUR JOURNAL

will sustain properly defined Game Laws of the Dominion of Canada. It will also extend a cordial hand of fellowship to all well organized game clubs. We fully trust in its success, and now wish our patrons happiness and prosperity, with plenty of sport during the season of 1881.

IN PROSPECT.

A gentleman lately returned from the Northwest Territories promises to send us some interesting and truthful accounts of the game noticed in the regions through which he passed last summer. We will endeavour to procure it for the February number.

PROVINCE OF QUEBEC.

GAME IN SEASON—JANUARY.

Caribou, Virginian Deer, Moose and the common Hare.

Ruffed and Spruce Grouse, Wild Geese and Ducks.

FISH IN SEASON—JANUARY.

Whitefish, Salmon-Trout, Speckled, Brook or River Trout, (*S. fontinalis*), Bass, Doré, Maskilongé.

NOTE.—Every net licence issued by the Department at Ottawa, states as a condition of the issue, that its use for the capture of Bass, prior to the 1st of July, is prohibited.

A GOOD FIT.

In the selection of a gun, the inexperienced Sportsman is apt to overlook one of the most important features required. For rapid and accurate shooting, it is necessary that the stock of the gun be curved to suit the length of neck of the marksman. To fit properly, the gun, when raised to the shoulder should be almost on a level with the eyes, requiring but a slight

bend in the neck to enable the sportsman to cover the object aimed at. Before the introduction of breech loaders it was a difficult matter to procure a gun with the necessary curve, and even at the present time, the greater number of those manufactured are too straight in the stock to suit the average neck.

The various improvements in the manufacture of guns made during the past few years, leaves little to be desired, and the reputation for excellence of work, achieved by some of the most celebrated makers, leaves little room for criticism. The Sportsman has now no difficulty in procuring a good article; let him be careful in his selection, recognize the importance of a proper fitting gun, and the result will be an increased pleasure in his sport,—a pleasure engendered by success.

WALLACE.

DEATH OF THE EDITOR OF "LAND AND WATER."

The death of Francis Trevelyan Buckland, better known as Frank Buckland—announced from London, has been expected, as he has been in wretched health for some time past. His father, the geologist, Dean of Westminster, a most accomplished man, lost his reason some time before his death. Frank Buckland, who was born in 1826, was a student of Winchester College and afterwards at Christ Church, Oxford. The larger part of his life was given up to the study of the natural sciences, and he was a recognized authority upon the habits and culture of the food fishes. Few men of science were so popular in England. He was a public benefactor through his introduction of new varieties of fish for food and especially through his successful cultivation of salmon and trout. In social life he was one of the most charming of men, despite the fact that his house was really a kind of combination of the Aquarium with the Zoological Gardens, so full was it of birds and beasts and fishes. Whoever loved him loved him perforce, not his dogs only, but his cassowaries and his

crocodiles. The story might have been told of him which was true of Agassiz, that when his wife one morning found in one of her slippers a cold little slimy snake, one of six sent the day before to her scientific spouse, and carefully set aside for safety by him under the bed, and upon the startling discovery started back, crying out in terror, Agassiz! Agassiz! there is a snake in my slipper!" the response of the *savant* was, as he rose suddenly up from his couch: "A snake! Good heavens, *where are the other five?*" At home Frank Buckland sat in a cumbrous old chair which he valued highly because it had once belonged to the famous John Hunter. Its uncomfortable angles were disregarded by him—they were convenient for the monkeys. These small men sat aloft, and were free to pounce down on his proof sheets at will. A retired organ monkey was a great favorite, and shared with the afflicted but always cheerful *savant* the frugal meals to which physicians limited him, tasting everything in turn, even to the claret and water.—*N. Y. World.*

MONTREAL BRANCH OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

The seventy-ninth meeting of the above Branch took place on the evening of the 11th inst., at the residence of H. H. Lyman, Esq. "Thornmill," McTavish Street.

An accurate and interesting paper was read by Mr. George H. Bowles, "On the mouth-parts of some carnivorous and wood-eating Beetles," with very excellent illustrations of dissections.

It was moved by Mr. Couper, seconded by Mr. Lyman, "That the paper just read, with the accompanying illustrations, be sent to the *Entomologist* for publication.—*Carried.*

Mr. H. H. Lyman exhibited his very fine collection of Insect Architecture, the only one of the kind in the city.

Mr. Burland, jr., was elected a member.

Natural History.

ORNITHOLOGY OF MOUNT ROYAL.

A ramble over our beautiful Mountain Park, and Cemeteries will well repay students of Ornithology, and Oölogy. The summit is 750 feet above the level of the river, and commands a view of one of the most magnificent landscapes on this continent. The noble river St. Lawrence, is seen for a long distance, and beyond Belœil Mountain rises majestically above the surrounding valley; on the south side, the view is bounded by the long range of mountains in the State of New York.

The writer spent many pleasant days last summer, observing the birds that frequent and breed on Mount Royal, and identified thirty-eight species. Those marked with an asterisk, do not breed on Mount Royal, but are frequently seen there. Several other species were observed, but not having been fully identified, are left out for a future note this coming spring. The following list contains the names of the thirty-eight species identified:—

- Robin.....*Turdus Migratorius.*
- Wood Thrush.....*Turdus Mustelinus.*
- Catbird.....*Mimus Carolinensis.*
- Eastern Bluebird.....*Sialia Sialis.*
- Golden-crested Kinglet*.....*Regulus Satrapa.*
- Black-capped Chickadee.....*Parus Atricapillus.*
- Red-bellied Nuthatch.....*Sitta Canadensis.*
- Brown Creeper.....*Certhia Familiaris.*
- Winter Wren.....*Anorthura Hyemalis.*
- Black-and-white Creeper.....*Mniotilta Varia.*
- Summer Warbler.....*Dendrea Estiva.*
- Chestnut-sided Warbler.....*Dendroica Pennsylvanica.*
- Golden-crowned Thrush.....*Seiurus Aurocapillus.*
- Redstart.....*Setophaga Ruticilla.*
- Bank Swallow.....*Cotyle Riparia.*
- Purple Martin*.....*Progne Purpurea.*
- Cedar Bird.....*Ampelis Cedrorum.*
- Great Northern Shrike.....*Collurio Borealis.*
- American Goldfinch.....*Chrysomitris tristis.*
- Song Sparrow.....*Melospiza Melodia.*
- Snowbird.....*Junco Hyemalis.*
- Chipping Sparrow.....*Spizella Socialis.*
- English Sparrow.....*Passer Domesticus.*
- Indigo Bird.....*Cyanospiza Cyanea.*
- Cowbird.....*Molothrus Ater.*
- Baltimore Oriole.....*Icterus Baltimore.*
- Crow Blackbird.....*Quiscalus Purpureus.*

- Common Crow.....*Corvus Americanus.*
- Kinbird.....*Tyrannus Carolinensis.*
- Phoebe.....*Sayornis Fuscus.*
- Nighthawk*.....*Chordeiles Virginianus.*
- Chimney Swift*.....*Chetura Pelasgia.*
- Ruby-throated Humming }
Bird } *Trochilus Colubris.*
- Black-billed Cuckoo.....*Coccyzus Erythrophthalmus.*
- Downy Woodpecker.....*Picus Pubescens.*
- Yellow-bellied Wood- }
pecker..... } *Sphyrapicus varius.*
- Golden-winged Wood- }
pecker } *Colaptes Auratus.*
- Ruffed Grouse.....*Bonasa Umbellus.*

ERNEST D. WINTLE.

Montreal, Jan., 1881.

THE BARRED OWL.

This bird was, last month, abundant in the neighborhood and city of Montreal. We have no recollection of seeing so many near another city in Canada. It is a day owl, and its occurrence in the vicinity of civilization may possibly be on account of the House Sparrows, which have multiplied greatly of late. The latter are easily caught during the winter, and doubtless a nice morsel for the owls. The common haunts of the Barred Owl are dense woods—they are not pelagic—loving the northern forests, but during winter, hunger will force all woodland animals to retreat from their solitudes. The abundance of the House Sparrow has also induced an unusual number of another enemy to remain in our neighborhood. The Shrike or Butcher Bird. Persons who have read the history of this bird can well understand that he would be a greater foe to the Sparrow than the more clumsy owl. Here we see a natural law faithfully carried out in order that each species may be benefited, even as parasites, retaining an equal balance in their sphere.

THE GRAY SEA EAGLE.

A large specimen was shot on the 28th December, at the village of Cowansville, while in the act of carrying off a chicken from a farm yard. This eagle is the *Haliaetus albacillia* of Cuvier, a bird of doubtful specific position at present. Its habits are similar to that of the Bald Eagle. It is the property of J. I. Newport, Esq., of this city.

WOODCOCK IN DECEMBER.

Early on the morning of the 16th December a man captured a woodcock which was running on the ground in the vicinity of Beaver Hall Terrace in this city. This fact would not have been ascertained, were it not for the numerous telegraph wires which surround the streets. During the previous night, the bird, in its southern flight, struck against a wire with force sufficient to take off the skin and feathers, from the front portion of the head, above the base of its beak. Many woodcock are killed in the spring and fall by telegraph wires, as they migrate only at night, and generally fly low. The bird was brought to the SPORTSMAN Office, the man being ignorant as to its name. Having no immediate accommodation for this interesting game bird, we sent it to Mr. Hall's restaurant, on St. James street, where it was living on Christmas eve. It may not be generally known to Sportsmen or Naturalists, that the woodcock has the power to erect about half an inch of the upper mandible, without opening the beak to its base. It appears as if the bird was supplied with a flexor nerve to elevate the tip of the upper mandible. This feature was quite remarkable in the above specimen. It is supposed that these late woodcock have been living in the vicinity of warm springs on the Laurentian Mountains.

REPORT ON NOMENCLATURE.

We have received the Third Annual Book of the Michigan Sportsman's Association for 1880. It contains ninety-seven pages of interesting matter. Considering the fifth Committee Report valuable to Canadian Sportsmen and Naturalists, we publish the first portion in this issue of our journal.

Your Committee on "Nomenclature, both Popular and Scientific," would respectfully report: That uniform and correct names *should* be habitually employed in speaking and writing of the different species of game. On account of the loose way of naming animals

in vogue in this country, many otherwise well-written articles become quite unintelligible. In reading of field sports we are constantly in the position of Mr. A., who was informed by his friend B. that he had just scooped Mr. Johns of a cool \$100 at poker. Mr. Johns being A.'s clergyman, and a very exemplary man, an explanation was demanded, when it was ascertained that it was not Mr. Johns at all that had been relieved of his money, but Jones, the gamester. Such carelessness in the use of names is reprehensible and never necessary. And yet in writing of game, one will give a description of a day with the partridges. As there are two species of birds called by that name, we are left in doubt as to which he means. Another has been shooting elk. Does he mean wapiti, or the true elk, commonly called moose? Another has caught a fine string of pickered in the clear waters of Niagara river. We doubt the fact and the habitat. On investigation we find he enjoyed the superior sport of taking pike-perch. The same species receive different names in different places, and different species receive the same name. Some kinds are called by names that properly belong to other species, and thus the mixing and muddling goes on. One fish has received nineteen different names within a few hundred miles on the Atlantic coast. Herring are said to be taken in Lake Michigan, when it is known that there is not a herring west of the Niagara river, except such as are brought here dried or pickled. And so we might go on almost indefinitely depicting the ridiculousness of popular nomenclature. But the annoying fact is too well known to require amplification. Nor are we much better off when we turn to scientific classification and nomenclature; for ambitious naturalists are constantly re-arranging both.

What constitutes classification and nomenclature? Accepting the testimony of lexicographers, the first is an arrangement or distribution of groups in classes, orders, families, genera, and species, according to common

relations or affinities : and the second a peculiar system of technical names adopted as descriptive of the first. One, then, must be subservient to the other, yet in intimate relation to it. Again, classification should be an arrangement the most easily adapted to the demands of science, at the same time affording the best means of study and research ; in fact, should be the guide-board on the free road of science, instead of (as it too frequently is) the barrier and stumbling block to progress.

Nomenclature, too, is expected to serve the purpose of an aid to the examination and classification of objects in connection with the laws by which they are governed, and as a means of investigating their structure, history, and uses. For this reason Latin or Greek names were adopted as affording uniformity that could not be attained by the use of common or vulgar designations, and as permitting scientists of all nations to meet upon a common ground, irrespective of profuse lingual knowledge. Whether nomenclature is serving such a purpose, or not, we shall see further on.

Embracing so wide a scope as does natural history, objects animate and inanimate, from the awe-inspiring celestial bodies in their multitude, to the most insignificant of earthly microcosms, and details so numerous that to possess a knowledge of the smallest portions is a competent task for a lifetime spent in study and investigation, it is little wonder that errors are both numerous and constant. Yet this affords no excuse for their unremitting multiplication by individuals of less than two score of years who insist on forcing them upon us regardless of scientific truth or progress. They laugh, sneer, and pooh-pooh, the patiently acquired results of old, staid and carefully plodding and reasoning naturalists to scorn ; and not satisfied with this, only too frequently resort to abusive epithets and vituperative abuse. For what rights has either age or reason that are not subservient to Young America, when full of egotism, he steps upon the stage?

Our interest as an association is centered

chiefly on those forms of *fera natura* usually denominated game, with, perhaps a minor regard for the fur-bearing species. Individual animals, we feel, demand individual and at the same time appropriate names ; names indicative somewhat of their character—such is the true rule of nomenclature and classification. The better to exhibit relationship, individuals are collected into groups that present the greatest number of characteristics in common such being called *genera*. Genera are further collected under the same general rule into *families* ; families into *orders* ; and orders in turn into *classes*.

Were it possible to arrange all classes in such a manner that the individuals of one genera of an order should be connected more nearly with that order than any other, little would be necessary to render classification both simple and complete. But, unfortunately, it has been found that characters are not sufficiently uniform, and at the same time easily cognizable, to allow the arrangement of all groups of individuals into closely connected families. Aware of this, the great Swedish Naturalist employed one system of organs as the basis of classification. Others have aimed to classify only by the structure of individuals, as a whole, and this latter could it be carried into effect, would seem the most philosophical ; it has been found, however, that either system followed exclusively results in heterogenous combinations. It was like errors that caused the famous controversy between Huxley and Owen a few years since, and which led to the re-classification of mammals. A combination of the two systems is now in vogue as being the least objectionable, and affording the greatest facility in investigating the productions of nature.

The six primary orders of Linnæus are now divided into *vertebrates* and *invertebrates*. Of the former, mammals, birds and fishes alone have special interest for us. Following classification onward, we find mammals divided into classes in accordance with their marked physiological and anatomical peculiarities ; and the

reproductive system being the most prominent and permanent in all forms of life, it is justly selected as a basis. UNGULATA, for instance, is recognized as a generic order among animals possessing non-deciduous uteri, and its name further signifies that all of this class have all the toes or digits protected by a case forming or approaching to a hoof. Now, the possession of hoofs, of itself, is not of sufficient evidence on which to base an order; but taken, with the peculiarities of diffused or cotyledonary placenta, of milk teeth, absence of clavicles and other concomitant anatomical idiosyncracies, it has a firm basis; but people at large are not supposed to be familiar with these, while a hoof or a hoof-like tendency is patent to all—hence the title.

By dividing the order *Ungulata* into two sub-orders, we have, PERISSODACTYLA (odd-toed) and ARTIODACTYLA (even-toed), and approach a step nearer the desired result. The former is further recognized by the possession of not less than twenty-two (22) dorso-lumbar vertebrae, a simple stomach, large caecum, udders in the groin or inguinal region; and when horns are present, as being entirely epidermal and devoid of bony core, and placed in the centre of the skull; there are also other minor characteristics too numerous for mention in this connection. This order embraces the *Equidae*, or horse family, *Rhinocerotidae*, or rhinoceros family, and *Tapiridae* or tapirs.

The ARTIODACTYLA, or even-toed, has two sub-orders, the *Rumantia*, or those provided with compound stomachs, and the *Non-Rumantia*. The former have but one pair of incisor teeth in the upper jaw of the adult, and those the outermost; canine teeth may, or may not be present above, they almost always exist below and are frequently so approximated and inclined forward as to be mistaken for true incisors, which they closely resemble in form; the third and fourth digits are consolidated into one, vulgarly known as the "cannon-bone," and there is an extra metatarsal or ankle-bone, appearing as if the detached distal end of the

fibula; the stomach is compound—"all chewing the cud"—with not less than three more, commonly four, divisions. Of this sub-order we hold the sheep, deer, or ox as a type.

While *Rumantia* might very properly be held as a family instead of sub-order, for convenience sake, and greater ease of approximation, it is divided into the families of *Tragulidae*, *Cotylophera* and *Camelidae*, the former with the false musk deer as a type, the second with deer, antelope, and oxen, and the last embracing camels, llamas, etc.

In turn, *Cotylophera* may be divided into sub-families as *Bovidae*, *Cervidae*, etc., though the anatomical differences are not sufficient to absolutely warrant it; to prevent confusion, however, it is perhaps better so. Next we have the genera *Cervus*, *Bos*, *Ovis*, *Antilocapra*, etc.

As classification now prevails, we have another order, *Rumantia*, embracing families of *Cervidae*, and *Caricornae*, etc. The latter is usually again divided into sub-families of *Orindae*, *Bovinae*, *Aplocerinae*, etc., and the former given the sub-family of *Cervinae*. The *Cervinae* embrace the following genera: *Alces* (elk or moose), *Rangifer* (reindeer or caribou), *Cervus* (wapiti or stag), and *Cariacus* (Virginia, black-tailed, mule deer, etc. The characteristics of the family *Cervidae* are given as "Incisors, $\frac{1}{1}$; canines, $\frac{1}{0}$, or wanting; molars, $\frac{6}{6}$; antlers solid, deciduous not encased by horns, sometimes wanting. Foot bifid."

Sub-family, *Cervinae*—"Horns solid, always present in males, sometimes in females, not covered with skin; foot bifid, with two small hoofs behind and above the large ones."

Genus *Alces*—"Horns in male only, broadly palmated at tip; nose broad, hairy except small spot between nostrils."

Rangifer—"Horns in both sexes, broadly palmated at tip; nose hairy."

Cervus—"Horns on male only, rarely sub-palmate, curved backward, snags forward, one immediately above the burr; tail short; hoofs broad and rounded."

To be Continued.