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THE

CHAMPLAIN SPORTSMAN



AND

NATURALIST

A
MONTHLY
JOURNAL



VOL. II.
No. 4.
1882.

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THE CANADIAN SPORTSMAN AND NATURALIST.

No. 4.

MONTREAL, APRIL, 1882.

VOL. II.

WILLIAM COUPER, Editor.

IN ORDER to dispose of an accumulation of matter, we have increased the number of pages in our present number. This enlargement we would like to retain permanently, and trust that before the end of the present volume, our subscription list will have increased to such an extent as to enable us to do this without suffering pecuniary loss. We have had many difficulties to contend with—much doubt expressed with regard to our longevity—and some fault found with the limited form of our publication. These difficulties have not proved insurmountable. Our subscription list has steadily increased. We have endeavoured to profit from the well-meant criticisms of our friends, and have quietly ignored the forebodings of those who did not predict our success. We now ask the co-operation of our subscribers—of all lovers of field sports and Natural History—and with this assistance, in a country so extended as the Dominion of Canada, and in which there is such a diversity and abundance of sport, we feel quite confident of the prosperity of the CANADIAN SPORTSMAN AND NATURALIST, which we claim is the only publication in the Dominion, devoted exclusively to legitimate field sports and the Study of Nature.

WHY ARE GAME ANIMALS BECOMING SCARCE ?

When Bartram, Audubon, Bachman, Wilson and Bonaparte wrote on American Natural History, the quadrupeds and birds which are classed as game on this continent, were then abundant. The above writers had no difficulty in obtaining material to describe and illustrate their works. But a gradual change has been going on as regards the abodes of American animals. Man, in opening up the soil, destroys

or presses back almost every wild animal inhabiting his immediate woodlands and lakes. The aborigenes are no exception, as many of us now living, can remember. In 1842, Indians were settled on the North shore of Lake Ontario; one tribe called "Credit Indians," were frequently seen at that time selling their wares in the streets of Toronto. Their stay was of short duration in the neighbourhood of whiskey and the white man—being compelled to seek another *habitat*, they gradually disappeared—the weaker *homo* had to succumb to the stronger. In like manner, combined with the achievement in the forms and use of heavy arms of late there is also a visible force pressing on the wild animals from their former haunts in prairie and forest, and in order that they may retain their balance amongst the native *fauna*, they, like the weak aboriginal tribes, have also to retreat to new localities to find a subsistence. In 1842, many of the large Canadian marshes were teeming with geese, duck, snipe and plover indigenous to the country. Toronto marsh was then a good shooting ground, and many birds which regularly visited it at that time, are considered of rare occurrence to-day. A large Black Bass (*Huro vulpes*, Agassiz,) then had its *habitat* in Ashbridge's Bay, and many a fine 20lb. fish of this species did Joe Lang spear in its surrounding marshes. But there has been a change; the building of the esplanade forced back the water in Toronto Bay, resulting in a breach in the sunly peninsula opposite, therefore destroying the old marshy grounds lying east of the city, thus finishing the historical hunting and fishing resorts of Toronto sportsmen. An increasing rural population annually clearing the woodlands, and the extension of railroads are powerful agencies to frighten and cause the removal of wild animals, which, at

one time, were common in our immediate forests. The Moose and Virginia Deer will not remain long in proximity to civilization, and it is a fact that these species each successive season move towards higher latitudes. It is therefore probable that ere many years pass away, the hunter, in order to obtain venison, will have to travel to the extreme northern edge of the Canadian forests to find his game. There is an American cry at present against a few English gentlemen, who occasionally visit the Western regions of the United States in search of large game. They are accused of wantonly destroying Rocky Mountain Elk (?) Shooting the animals down for the mere pleasure of afterwards boasting of the circumstances. Now, we cannot comprehend the reason why an old sporting paper like *Forest and Stream*, should mislead its readers by stating that Englishmen journey so far for the sport of shooting Elk, when they can procure them in some places in Canada or Maine. An editorial in the same paper says that Moose are not abundant in the Rocky Mountains or valleys adjacent thereto. There is something wrong here, and the zoological writer in *Forest and Stream* would do well hereafter to adhere more closely to the nomenclature of the Michigan Sportsmen's Association. No true sportsman, especially an English one of means, will remain silent without demurring against a false charge of this nature, and it is evident that the object of making it, is to further the interests of Western skin hunters, who are jealous of the visits of good marksmen, who go there, not for mercenary purposes, but for pure sport. The people inhabiting the Western portions of the United States, where large game occur, should certainly make stringent laws to protect the animals, going so far as to compel every man to procure a license to hunt in the regions of the Rocky Mountains. If this is not done, the Wapiti (*C. Canadensis*), the Elk of *Forest and Stream*, will ultimately be exterminated, and the Buffalo (although not considered game) ere many years pass

away, will also be classed among extinct quadrupeds of this continent. In our own Great North-west Territories, at present, the richest sporting grounds in America, the advance of the white man will eventually produce the same changes in the *fauna* of that region which have been alluded to above. The lakes and ponds of the vast prairie lands for centuries past and the breeding-places of many species of wild water fowl, will, as man surrounds them with his habitations, be thoroughly deserted, and the birds, like the poor Indians, must find more retired places to produce their species. Such then is the Natural History view to be taken of the advance of civilization westward. Every animal of a wild nature will have to retire before it. That there is plenty of space for their removal, there is no doubt, but there is a limit to the northward progress of some quadrupeds and birds, many species of which cannot subsist in high latitudes. Then, anticipating a large annual increase to the present rural population in the North-western portions of Canada, the results which are now spoken of regarding a change in the *fauna* of that region, will certainly take place. Where will they go to be undisturbed as they were before the recent encroachment of man on their domain? This is a question of interest to the sportsman and naturalist. Any person reading Audubon's visit to Labrador, and who will take the trouble to follow his footsteps on the latter coast, as the writer has done, may see the changes which have taken place there. In fact, one reading his description on the spot where he found a species of bird breeding on that rocky shore, would pronounce the statements fictitious, as no nests of the kind are found there at this day. Man appeared and settled in the neighbourhood, and the birds have removed for safety to more secluded places.—C.

THE NIDIFICATION OF NUTHATCHES.

Eminent Ornithologists have described the nesting habits of these birds as similar to Woodpeckers, the nest being formed by

excavating a hole in a decayed tree or stump. Audubon mentions having found in Maine, a nest of *Sitta Canadensis*, which was dug in the decayed wood to the depth of fourteen inches. Coles, in his "Birds of the Colorado Valley," referring to *Sitta Carolinensis*, states, "that it regularly digs a hole for itself, both sexes working assiduously till an excavation, it may be fifteen or twenty inches deep, is prepared for the reception of the nest." The European Nuthatch appears to nest differently, according to Morris "the nest is placed in some hole in a tree. If the entrance is too large, they narrow it with clay, until it is of the right width." Now, if all these descriptions are correct, we find a wide difference in the nesting habits of our Nuthatches and their European congener.

My observations have, so far, been confined to *Sitta Carolinensis*, three nests of which I have taken during the past five years, none of which were in holes formed by these birds, but in natural cavities, in living trees. From these observations I would suppose a natural cavity, or the deserted nest of some wood-pecker, or squirrel to be the place usually selected, and that these birds never, or "hardly ever," dig a hole for themselves. The following extract from my note-book refers to the last nest taken.

Returning from a visit to a sugar camp in the spring of 1878, I heard the cry of a pair of Nuthatches, following in the direction of the sound, I soon perceived the birds and was not surprised, even at this early season, to find that they were making preparations to build. One of the birds had in its mouth a large piece of downy looking material, with which, after a short time, it flew to a neighbouring tree and proceeded to the spot selected for the nest. This was a round knot hole, overgrown by bark, and about four feet from the ground. I ventured to peep in, but all was darkness within, and as I did not wish to disturb the birds, retired, to observe them from a distance. For several days both male and female were busy carrying material for the nest, after which I did not see them for some time, as after completing the nest they apparently retired to some secluded spot, no doubt to complete their nuptial arrangements. On the 20th April, with mallet and chisel in hand, I again went to the tree and on looking down into the cavity could see the female on the nest. The hole, though sufficiently large to admit a bird of greater size than the Nuthatch, was too small to allow me to insert my hand. Before pro-

ceeding to enlarge it, I knocked vigorously on the tree but could not frighten the brave little bird away. I then took a slender stick which I thrust gently into the hole and endeavored to force her to leave by touching the head and wings. This, she resented by pecking angrily at the twig and I was at last obliged to allow her to remain while I enlarged the cavity. The nest I found to be composed of a large amount of miscellaneous matter, rabbit hair predominating. The material was spread over a large surface in the cavity, with a well defined depression in the centre, which contained the eggs, nine in number. Incubation had not commenced and I transferred them to my cabinet without accident. This was the largest set I obtained, the other two nests having contained six and eight respectively.

W. W. DUNTON.

Montreal, March 10th, 1882.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The eighty-ninth meeting of this society was held on the 13th March, at the residence of the President, H. J. Lyman, Esq., who read a paper on the Lepidoptera collected at Sault St. Marie, in 1881, by Dr. Robert Bell, of the Geological Survey. All the species taken are also found at Montreal, with the exception of *Coenonympha inornata*, Edw., a butterfly taken in the Western States, but which extends into the Algoma region of Canada. A pleasant hour was spent over the microscope, and several rare and beautifully illustrated works on Entomology were also on the table for the inspection of the members.

REPLY TO ORNITHOLOGICAL QUERIES.

SIR,—In your March Number it is queried if the nest of the Whip-poor-will (*Antrostomus vociferus*) has been found in latitude 45°. The latitude of Listowel is nearly 44°, but owing to its elevation, is probably as cold as 45° of the sea level. The Whip-poor-will is quite common in the swampy woods of this neighbourhood, and during the calm hours that follow the sunset of the early summer evenings, its loud and melancholy notes may be heard in the town, from the woods north and south, though nearly a mile distant. Its eggs have been found by several parties in the vicinity, and one collector who procured some and appeared well acquainted with its habits, informed me that its nest is always sure to be found near the place where its notes are heard

in the early part of the season. Two years ago, a boy who resides a few miles south of this town, told me that the summer before, he had found the eggs of this bird on the bare ground, where a log had been removed, in a piece of swampy land. In 1865, when I came to reside in North Wallace, a neighbour found a nest of the Whip-poor-will, containing two eggs, in the month of August; this seems to indicate that it hatches more than once in the season, as it is well known that the eggs are generally found in the early part of June. The latter nest was on a piece of rising ground close by a pine and cedar swamp, and the eggs were of a bluish white color mottled with brownish black. The peculiar notes of this bird are probably the voice of the male, and its noisy repetition is generally heard at the time when the female is selecting her nesting place, and during incubation. After the young are hatched, the time and attention of the male is occupied in assisting to supply their wants, and his twilight notes gradually cease as the young become more voracious, until about the middle of July, when he becomes silent, except when the first eggs have been removed and his mate is again nesting. It makes no regular nest; the two eggs are deposited on some dry leaves, or fine rotten wood, near swampy woods, where amid the dense foliage, and gloomy shade, perched lengthwise on a low branch, or mossy log, the male passes the hours of sunlight in silence and inactivity, but as the shadows of evening gather over the woodlands, it commences its low, soft flight in pursuit of night-flying insects, or in some dark retreat, "begins its evening hymn." *The Winter Wren*—A query regarding the nest of this bird, is also made. I do not know it by that name, but there is a Wren quite common in the wild swampy woods of Central Ontario, whose thrilling notes are very pleasant, especially when heard in the early spring mornings, before the snow and ice have disappeared from the gloomy places, where the little creature takes up its summer residence. Its general appearance is similar to that of the House Wren, but it is rather smaller and darker in color. It sometimes utters notes like the red squirrel, and again like the chirp of the cricket, but louder. It forms a nest like that of a mouse, generally in the under part of the turned up root of a fallen tree, sometimes in the side of an old moss-covered log, or rather stump; the outside is formed of moss, and the inside is lined with fine dry grass, feathers, and hair. Its eggs are white with reddish spots scattered over the

large end. It sometimes lays eight eggs. Those in my collection were taken from a nest of six in the early part of June 1879. *Sitta Canadensis* is rather a *rara avis* in those districts where my ornithological researches have been pursued. It appears to prefer the deep evergreen woods to the hardwood timber lands. I have not seen its nest or eggs, but am informed that they differ little from those of the white-bellied species. I have often seen the nest and eggs of the latter and can furnish a sketch if desired. *Parus Hudsonicus* does not visit this latitude, and the Pine Grosbeak is only a rare winter visitor. Of owls I have not seen a nest or egg of any of the species, some of them, however frequent our woods, and doubtless nest here. Mr. Vennor's article on the nest of the Sparrow Owl, is the only article on the subject that I have ever seen. It is a very rare bird here. The Woodpeckers mentioned do no visit this region. The nest of a Crossbill, containing young, has been seen in a neighbouring township, in the month of March, and another species, the Shore Lark also nests in March and April.

WM. L. KELLS.

Listowel, Ont., March 15th, 1882.

Pine Grosbeak (*P. Canadensis*). I collected an adult female in the immediate vicinity of this city, about the beginning of August, 1879; this was the only one I have observed during summer. Mr. J. H. Carnall informs me that he found them quite abundant in September, on Nielaux mountain, Tobique river; he also found several old nests, which he assures me were made by these birds. Some years they are abundant, then, for two or three successive winters, we see nothing of them. During the winters of 1876 and 1878 they were very abundant, visiting the suburbs of the city, feeding on the berries of the mountain ash. Can you give a reason for the peculiar movements of this bird? Hudson Bay Tit, (*Parus Hudsonicus*). This Titmouse is undoubtedly a resident with us, and breeds in this Province. I collected a specimen on the 20th of May, and have observed them here during summer. Mr. Banks noticed a pair in June, carrying material for nest-building. Two nests of this species were discovered near Stewiacke, N.S., by Mr. Bailey of the Nuttall Ornithological Club. Red-bellied Nuthatch, (*Sitta Canadensis*). Have found this bird nesting near St. John. They are more abundant some seasons than others.

HAROLD GILBERT.

St. John, N.B., March 13, 1882.

NOTE.—These queries are going to do good eventually. In their promulgation, I wished to arrive at truth in order to correct the errors of old American writers on our birds, more especially regarding the time and localities of nidification of the species which pass the greater portion of their lives in high latitudes. Our correspondent gives no substantial proof that the Pine Grosbeak breeds in N. Brunswick. Until the nest and eggs are discovered, the mere occurrence of one adult female in August will not suffice to class it as a resident. They arrive about the latitude of Montreal during severe weather in September, being then gregarious, remaining as such in the woodlands until the middle of May following, when they leave for the far north. Regarding the nests spoken of by Mr. Carnall, it would be worth his while to visit the locality again during the breeding season. Will Mr. Gilbert be kind enough to send a description of the nest of the Red-bellied Nuthatch? Does it select an old knot-hole or excavate a cavity for itself?—C.

ACCLIMATING THE MESSINA QUAIL AT QUEBEC.

DEAR SIR.—In one of your recent issues you alluded to the efforts of Col. W. Rhodes, and others to acclimatize the Messina Quail in this Province. The Colonel is now in Europe and has, if I mistake not, sent orders for the importation of a few hundred of these birds. In order to help his praiseworthy efforts, I permitted him to send to my aviary of Canadian birds, the Quail he received too late for distribution in the woods last year. I intend to give them their liberty in April, and from the following statements, I hope success will crown the Colonel's efforts.

Yours truly,

J. M. LEMOINE.

Spencer Grange, }
Quebec, 20 March. }

W. Rhodes, Esq., Quebec, P.Q., Canada.

DEAR SIR,—Your favor of 13th January came duly to hand and much interests me. I did not see your referred notice to queries in

"Forest and Stream," or I might sooner have given you the gratifying news that the quail returned to Maine last spring. None were imported to this State in 1881, and they were observed here previous to the liberation elsewhere of any newly-imported ones. The young of the previous season were hatched in June and July. They mature very rapidly, and from the time of hatching (when they at once leave the nest as good runners) until the autumn migration, there is an interval quite equal to the time afforded the young of as many of our song birds to acquire strength for their long journey. By my advice and direction the 2,000 quail that I distributed throughout Maine, in 1880, were liberated in lots of not less than 15 or 20 in each locality selected. If this method with equal total numbers should be followed up for several consecutive years, I should have no doubt of success in the object desired. The results of a single season, however, may not prove to be permanent.

Yours very truly,

EVERETT SMITH.

Portland, Maine, Jan. 20th, 1882.

NOTES ON THE NATURAL HISTORY OF LUCKNOW, ONT.

SIR,—You published a list of reptilia procured by me in this vicinity, and other localities in Ontario. The following four additional species, have been added to my collection *Chorophyllus triseriatus*, Little Tree-frog, Lucknow. *Amyda mulica*, (four specimens.) Lake St. Clair. *Amblystoma Jeffersoni*, Jefferson's Salamander. Found at Hyde Park, by J. Morden. *Scotophilis, Allighanensis* is reported to be found in Essex; its occurrence here is probable, as I have received several specimens from Michigan, which is in the same latitude, the only barrier being a river, separating the Southern portion of Ontario from Michigan.

The Red Lynx, *Lynx rufus* is not uncommon in this neighbourhood. I obtained four specimens this year, and I can procure more if I take the trouble to hunt for them. The Canada Lynx, *Lynx Canadensis*, appear to be a larger Northern species. It has never been seen on this peninsula, or south of the Ottawa river. I have read of it as occurring common in the Province of Quebec. Almost every school-boy has read the interesting account of Mr. Bannelyne in the "Reader," of how an

Indian was killed by a Canada Lynx, and his brother's description of his death and removal for burial. Among birds, I record the capture of the Sandhill Crane, *Grus Canadensis*, shot by Mr. F. Martin on St. Clair flats. I obtained it from him. He killed another which unfortunately flew into an unapproachable morass and was lost. I accompanied him on the next day to hunt for it; the mud was deep and we could not find bottom with an eight foot paddle. The surface was covered with rank weeds and other vegetable refuse, preventing us from pushing the canoe into it or over it, and to attempt walking on it would be a mad idea. I shot the King Rail (*Rallus elegans*), and had it mounted; also a Yellow Rail (*Porzana Norboracensis*). I presented these two birds to Mr. John Morden of Hyde Park. A very fine specimen of *Rallus Virginianus* shot on the flats may be seen at any time among his beautiful collection of Canadian birds. Among rare ducks, I secured two fine specimens of the American Black Scoter (*Edemia Americana*); also the Velvet Scoter (*Edemia fusca*); they are magnificent birds. I killed some splendid Canvas-back which I prize highly, as they are becoming scarce, but I am sorry to add that I lost a fine young specimen of the Red-necked Grebe, (*Podiceps Holbolli*), which by the carelessness of the Express Co., was not delivered until spoiled. I particularly regret this, as I have only procured one specimen during many years. The Great Northern Diver, (*Colymbus torquatus*), is common but difficult to obtain. I am not aware that *Colymbus Arcticus* has been noticed on the inland lakes, but I have shot three or four of the Red-throated Diver, (*C. Septentrionalis*). I have also seen the great White Heron, and one was killed near Wallaceburgh Co. Kent, but the ignorant person who shot it, allowed the bird to spoil. The Least Bittern, (*Ardetta exilis*) and Night Heron, (*Nycticorax grisea*), are not uncommon on the St. Claire flats.

J. H. GARNIER.

Lucknow, 27th Feb., 1882.

EXPERIMENTS WITH GUNPOWDER.

SIR,—I send you a report of some experiments I have been trying with the following powders, thinking it might be of interest to some of your readers. I have been unable to carry out the trial of the different kinds of powder I mentioned to you some time ago,

owing to the difficulty I have in obtaining it in such small quantities (viz.: 12 charges of 3 drams each.)

Description of Powder.	Wadding.		Pattern 10 In. Plate.	Force per Pellet.	Velocity. Feet per Sec.	Recoil. 89 lbs.
	Over Powder.	Over Shot				
Pigeon, Wilks & Laurence No. 4 Grain	{ Thin Card } { Thick Felt } { Thin Card }	Thin Card	21	2.66	617	89 lbs.
Curtis & Harvey's No. 6 Diamond Grain	do.	do.	34	2.46	556	79
Hamilton F.F.	do.	do.	26	2.39	534	88
Hamilton "Caribou"	do.	do.	34	2.30	533	83
Shultzze	do.	do.	21	2.55	556	87

CHARGE OF POWDER 2½ DRAMS AND 1 Oz. No. 6 SHOT.
(Same Distance.)

Pigeon, Wilks & Laurence	4 Pink Edge.	Thin Card.	40	2.78	644	91
Curtis & Harvey	do.	do.	25	2.63	476	83
Hamilton F.F.	do.	do.	30	2.71	638	81
" " "Caribou"	do.	do.	15	1.66	431	73
Shultzze	do.	do.	40	2.41	566	87

I may state the recoil spring was screwed up to 60 pounds.

The fine grain powder (Pigeon, Wilks & Laurence's and Hamilton FF) did best with the 2½ dram charge, both in pattern and pellet force. Shultzze's powder also gave the best pattern, but the force was not quite so good; the recoil being the same as with 3 drams of Curtis & Harvey's, and "Caribou" fell off very much, although the recoil of the former was four pounds heavier and the latter ten pounds lower. The heavy recoil with the 2½ dram charge was probably caused by the

change of wadding, the four pink edge offering more inertial resistance than the thin card and thick felt.

TABLE SHOWING HIGHEST AND LOWEST PATTERNS, VELOCITY AND RECOIL.

Charge 2½ Drains.	Pattern 10"		Velocity.		Recoil.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
Schultze.....	55	35	6:09	501	90	86
Curtis & Harvey.	30	20	5:03	412	85	81
Hamilton P.F....	40	20	7:30	528	83	80
Do. "Caribou"	20	10	4:04	412	75	71
Pigou, W. & L....	65	20	7:40	545	96	86
<i>Charge 3 Drains.</i>						
Schultze.....	34	17	5:03	577	90	86
Curtis & Harvey.	37	20	5:40	501	90	72
Hamilton P.F....	23	20	5:50	547	91	84
Do. "Caribou"	42	28	5:40	519	85	81
Pigou, W. & L....	35	15	6:38	580	93	84

AVERAGE OF THE DIFFERENT POWDERS.

Charge 2½ Drains.	10 in.		Pellet Force.	Velocity.	Recoil.
	Pattern.	Pattern.			
Eng. Black Powders .	33	2,41	559	84	
Hamilton do.	23	2,26	524	77	
Schultze	40	2,44	556	86	
<i>Charge 3 Drains.</i>					
Eng. Black Powders .	28	2,53	586	78	
Hamilton do.	30	2,35	545	83	
Schultze.....	24	2,53	586	86	

Schultze Powder recoiled nearly as much with these charges as it did when fired with 52 grains and 1½ oz. of shot, in which case it averaged 88 pounds.

SPREAD OF SHOT AT DIFFERENT RANGES, (1 oz. of Shot used.)

Distance	5, 10, 20, 30 and 40 Yards.				
	Charge of Powder.		Diameter of Pattern		
	in Inches.	Ver- tical.	Hor- izontal.	Ver- tical.	Hor- izontal.
3 drains.	4 6½ 17	43	and 40½	79	and 70
3½ "	5 6 15½	40	" 38"	74	" 69
3½ "	4½ 9 24	52	" 51	90	" 87

Circles with the above diameters do not include all the pellets in a charge, as there were a few wild shot that I did not include, as anything outside would only be struck by the merest chance. According to the spread of shot they do not travel in a straight line after leaving the muzzle, but curve outwards from the "line of fire. At first I thought this was caused by the shot passing through the paper screens, so I tried a shot at the 40 yard screen only and obtained about the same result; therefore I am satisfied the screens did not affect the direction, and conclude it is caused by the shot colliding with each other during their flight. The horizontal diameters of the 30 and 40 yard pattern, were shorter than the vertical in every case, varying with the charge

of powder, the heaviest charge giving the least difference. I measured and weighed the different powders, and find that Curtis & Harvey's is the heaviest for its bulk, "Caribou" the next, the other two samples are the same weight, and Schultze's powder was rather under half the weight. The charges of "Caribou" used in these experiments, were obtained from a friend, who purchased the powder as such.

Yours truly,
12-BORE GREENER.

Lachine.

A DEER HUNT IN FLORIDA.

DEAR SIR,—Thinking perhaps some of the readers of your journal, would like to know what kind of sport we have on the West Coast of Florida, I will try to give them an idea of what is to be had in the way of shooting. I shall tell them of what I saw in a day's deer hunting on one of the Islands of Charlotte Harbor. Leaving this place about ten a.m., a party of five of us, exclusive of "Bob" a very intelligent hound, proceeded across San Carlos bay; two going in a small schooner, and three of us going in a sloop; after a pleasant run of about an hour, we passed between Sunibel and Pine Islands, entering that beautiful sheet of water named "Charlotte Harbor." Before us lay a number of islands of a semi-tropical appearance. The palmettos and hemp raising their heads high above the mangroves; between the islands were oyster bats which were covered with White and Grey Pelicans, Cormorants, and Great Snowy Herons. On the neighbouring mangroves, perched Ibises, the Scarlet necked and Louisiana Herons, and the beautiful Roseate Spoonbill, while further up the harbor we could see the white sails of a schooner beating up towards the north. Sailing along the shore of Pine Island, we dropped anchor close to a small island near Pine. Leaving H— in charge of the boats, we took our small boat and rowed to an oyster bar between the two islands, where K. and I landed, and concealed ourselves behind a low growing mangrove. C—, S—, and the dog then went to the small island to drive it. We expected the deer, if any were there, would take to the water, and swimming to the bar, cross it, and endeavor to escape to Pine Island. We had not very long to wait till Bob gave tongue. K— and I crouched lower among the leaves and anxiously watched the opposite mangroves, but Bob drove away from us, and then suddenly changing his note, we knew he had **TREEN**. "Well, by George, I'll bet that's a COON" said

K—, at that moment we heard two reports from a gun, then all was silent. We waited a few minutes longer, when Bob again spoke. He made the circuit of the island several times and then once more all was quiet. K— and I sat and watched the sharks pursuing the mullet. I counted seven sharks from five to ten feet long, all within a hundred yards of us; or we watched the interesting movements of a large Bald Eagle and an Osprey. The latter had captured a mullet, when the Eagle, which had waited patiently on a large mangrove near by for this event, immediately swooped down towards the Osprey, which uttering screams of despair, endeavored to rise above the Eagle. This, the last named bird tried to prevent. I never saw anything more beautiful than the flight of those two birds. The Osprey would rise quickly, then drop, but the Eagle was always close behind, and throwing itself down with a half somersault movement, would try to seize hold of the fish. When this had gone on for some time, a second Eagle appeared on the scene and took up the pursuit, upon which the first withdrew from the chase and returned to his perch. The Osprey now evidently despaired of escaping with its prey as the second Eagle which appeared to be a female, and was probably the mate of the other, pursued it so closely, it was forced to drop the fish, when the Eagle pausing for a moment in the air, went down with a rush and caught the fish before it fell in the water. In watching the Eagles we had almost forgotten the Deer, but Bob had not, for we could hear him approaching quite rapidly. We also heard C— and S— shoot once or twice. In a few minutes a deer jumped into the water from out the mangroves to be quickly followed by another, and close at their heels was Bob. On they came swimming rapidly towards us, nothing but their heads being above water. When they came within good range I gave the first the contents of my gun, turning it over, while K— fired at the second only wounding it however, and though we gave it another charge of buckshot, it swam around the end of the bar and escaped to Pine Island. We got the dog into the boat and going over tracked it for some distance into a mangrove swamp, but as the tide was rising, Bob lost the trail and we had to return without it much to our disappointment. Returning to the bar we took the Deer we had secured to the boats where we cut it up. As the sun was now getting down towards the horizon, the various kinds of birds began to seek their roosts or rookery,

as it is called. I stood there and saw flock after flock of Ibises, Pelicans Herons, Egrets, Spanish Curlews, Cormorants, etc. pass by, while the rookery was alive with them. High over all sailed the graceful man of war Hawks describing circle after circle with a scarcely perceptible motion of the wing. Having had something to eat, C— and I started for home, the others in the schooner going up the harbor in search of Flamingoes. We had a pleasant sail home and altogether enjoyed our hunt very much. I may mention that it was a "Coox" Bob had treed the first time, and our friends had to discharge their guns to frighten the Deer off the island, as they were not at all afraid of the dog. C— and S— could not get a shot at them as the mangroves were so dense.

Yours &c.,

R—.

Punta Russa, Florida.

A GENERAL DELUGE.

BY G. W. BROWN, M.D., ROCKFORD, ILL.

(Continued.)

But they neglect to tell of those illimitable ages, which if enumerated, no one could comprehend, probably not less than six hundred million years, during which every particle of matter, whether dust, or clay, salt, sand, pebble, boulder or rock, mineral or vegetable, found on the earth, or deep below its surface, of which the various geological formations are composed, whether stratified or otherwise, overlying the primary rock, more than twenty miles in depth, and in which the fossil remains of by-gone ages are entombed, have been wrested and torn from the elementary rock, worn down by rolling upon each other, and by the action of winds and waves and falling waters, has subsequently been deposited in the beds of oceans, to again harden into rock, giving us the sandstone and limestone formations, the coals, shales, clays and all other rocks and earths, other than the quartz—the parent of them all.

The mind is overwhelmed as it contemplates the eternity of years which have preceded us, as the eternity which lies beyond! Truly it may well be said: "We stand midway between two eternities!"

Puny man may seek to abridge the years, and shorten the geological ages; but the startling fact is ever before him that finite mind is incapable of fathoming infinity. He must become conscious that *change*, not *destruction*,

is the fate of everything; that Law, fixed and eternal, governs the minutest particles of matter as of rolling worlds.

Man lives his brief life, passes away and is succeeded by others. Another generation repeats itself. So it has always been—so it will ever be. There really was no beginning, there can be no ending.

We may render homage to a master mind who designed all, and called all into being, or insist that all is self-existent and eternal, and we shall find the result is the same. It saves one step in the grand scale of creation. The ancients thought the earth was a plane, and rested on pillars; that the pillars rested on a rock, and the rock on a turtle's back. But what does the turtle rest upon? was the inquiry of the sceptic.

The logic that there is no design without a designer, no law without a lawgiver, is only a repetition of the pillar, rock, and turtle theory as regards the earth.

The sceptic of to-day meets all our arguments in regard to a first cause with the syllogism: "All the works of the Creator give evidence of design. As no design can exist without a designer, therefore," say they, "the Creator must have had a designer." Astronomers found that the earth did not rest upon pillars; that there was no need of a rock for them to stand upon; nor a turtle's back to support the rock; so when humanity shall better understand the forces of Nature, self-inherent in matter, which calls world's into being and endows them with motion and life, there will be less need for trying to comprehend that which is incomprehensible. The Law governing the mighty machinery of the universe; which keeps all in equal poise; which causes the earthquake and the upheaval of vast mountain chains; which drains oceans and sinks continents; which fills the atmosphere with lurid flame; and staptles the people with its thunder crash; which gives rise to the winds, the waves and the tides, the heat of summer, the cold of winter, and the thousands of other incidents of well defined Law, once ascribed to the action of an *angry* God, is now well understood. As knowledge is further developed, other secrets of nature will be revealed, and the mythical causes will be further and further removed into the realms of the ignorant past.

The genuine student has no theories predicated upon early teachings. The great book of Nature is wide open before him, penciled by unerring Law, and everything must be tested

in the great crucibles of Reason and Truth. The dross is only consumed. The pure gold is made brighter by every test applied to determine its genuineness.

The Sanscrit is probably the original of all modern European languages. It contains the roots of the Latin, Greek, Celtic, German, and Slavonic. It is the ancient tongue, which prevailed throughout Hindostan, and from the Gulf of Bengal to the Arabian sea, extending to the Himalaya mountains on the north. The language has not been spoken for many thousand years. The sacred books of the Brahmanis were written in it, and, hence, have been preserved to modern times, without alterations common to a living language, as our ancient literature has been transmitted to us through the Greek and Latin. Scholars find the original of many of our myths in the Sanscrit, the story of "William Tell" being one of them, though the scene of it is now located in Switzerland, and the occurrence is made to have transpired within a few hundred years.

We stated in a former article that the account of a general deluge was undoubtedly copied by Jewish historians—priests, Josephus tells us,—from Babylonian records, while the Israelites were captives in that country. The Babylonian history, without question, was the source from which the flood of Deucalion, as well as that of Noah, was derived; but the story was older than Nineveh or Babylon; it was transmitted to them from a still older civilization; it came to those ancient people through the Sanscrit literature, the common fountain from which Chaldea, Assyria, Persia, and Egypt, were supplied, and from which the Phœnicians drank second hand, as did the Hebrews.

The geography of the old Sanscrit books describes the world as "a circular plain, with a slightly convex surface, sloping gently on all sides to a surrounding ocean. Beyond this ocean, which incloses the world in a vast river-like circle of waters, was a circular range of mountains, beyond which none but the most powerful gods could pass. In the centre of the world, at the highest point of its surface, stood Mount Meru, with Jambudwipa, the primeval home of the Aryan race, spread out around it," bordered by six other grand divisions of the earth.

These mountains bordering the ancient ocean supported the vast vault which spanned the heavens. Above this vault was the home of the superior gods. From their hand direct

came light, and heat, and dews, and rains, and all other blessings; and, when the gods were angry, winds, and storms, thunderbolts and earthquakes. The sun and stars were made expressly for man, as were the seasons, with seed-time and harvest. The earth rested upon pillars, while under it were immense fires, in which the demons were confined, and here the wicked were doomed to dwell; while above the vault were the Elysian fields, the home of the blest.

This wild astronomical and theological theory of creation was the prevailing idea among all peoples, five and six thousand years ago. Indeed, the true theory in regard to the solar system has been taught by the learned but a little more than three hundred years, the great mass of the uneducated still entertaining a belief in the ancient system, and are still quoting their sacred books in confirmation of it. The Phœnicians taught this flat-earth-and-vaulted-firmament theory at home, and in all their colonies. It was a part of the religious belief of all the nations bordering on the Mediterranean. It was believed by the cultured Greeks, as by the more modern Romans. The whole system of theology of all these nations was built upon this idea; and this was also true of the Hebrews, as their books furnish incontrovertible evidence. True, Herodotus, the Greek historian, ridiculed this teaching, and wrote:

"I cannot but laugh, when I see numbers of persons drawing maps of the world without having any reason to guide them; making, as they do, the ocean-stream to run all around the earth, and the earth itself an exact circle, as if described by a pair of compasses."

The reader will please remember that this was the idea entertained by him who gave us a history of the "flood," the "opening of the windows of heaven" through which to let down the rain, and the breaking up of "all the fountains of the great deep." This conception of the deluge came from Indus; it was as old as the most ancient civilizations; but it had been modernized with advancing thought as was the story of William Tell—as have all the myths which the learned have exploded—their origin lost in the sands of time, so antiquated that no one can trace their beginning, or learn when they were not believed as facts.

The mythical teachings in regard to a general deluge are not the only fabrications which have puzzled humanity, and, because of being interblended with a religious education,

have paralyzed investigation through many generations. The Egyptians taught that the world would be alternately purified by water and fire; that these were parts of the system which the Creator employed to prevent man from growing in power, and gaining a mastery over him! The teachings of barbarian races, slightly changed, have survived the ages; they have entered into the religious beliefs of the world, and will be as difficult to eradicate from the common mind as any other inherited error of so ancient an origin. Thos. Moore has well written:—

"The lover may
Distrust that look that steals his soul away;
The babe may cease to think it can play
With heaven's rainbow; alchemists may doubt
The shining gold their crucible gives out;
But Faith, fanatic Faith, once wedded fast
To some dear falsehood, hugs it to the last."

It is to be regretted that scientists are not permitted, without subjecting themselves to sectarian abuse, to pour in a flood of light upon the ancient fallacies which have crept into all our early teachings. Were they at full liberty to give the public their honest thoughts we should soon have a truer conception of the past, and a more exalted idea of the future; but ere that "good time coming" shall dawn upon the world, it is possible that many years may intervene.

Commencing with the story of creation, as borrowed from the Hebrew writers from countries where they had been slaves, wherein it is represented that the whole planetary and stellar systems are the out-growth of six days' labor, (not the production of a single mind, as the English reader finds it in his translation; but the task of *many gods*, as a correct rendering of the Jewish narrative, will show), with all the long incidental errors, following this first incorrect teaching, and ending with the looking forward to a general destruction of the material universe, when a grand conflagration will envelop all in universal ruin; when earth, and moon, and sun, and stars, will be "rolled together as a scroll," and disappear, while darkness and chaos succeed the present order of things, much is found that needs revision. He who is sincerely honest is hopeful that the day will not be too far distant when every false teaching shall receive that consideration it deserves; when every myth shall be exploded, and the sunlight of Truth shall illuminate all the dark corners of the world. This grand consummation of desire will usher in the *real* millenium, when "knowledge shall run to and fro as the waters cover the great deep."

THE BIRDS OF PREY OF NOVA SCOTIA.

By J. BERNARD GILPIN, A.B., M.D., M.R.C.S.

IN making this list I have personally identified, with one or two exceptions, every species in it. I will not say that no other specimen may be added, but that if hereafter noted, it will be a very rare one to have escaped my notice of more than thirty years. Personal identification of each species also by the writer, even if in a narrow limit, adds always to the interest and value of a paper. In classification I have used Key to N. American Birds, by Dr. Coles, 1872, of the value of which it scarcely needs any mention from me. I have found, with one or two exceptions, all the birds of this Order common to North Eastern America, in Nova Scotia, and noticed those I expected to find and failed. From their nature and food they are rare everywhere, and one who has witnessed the scarcity of all animal life in our forest, and the little bird life even in our cultivated fields, is not surprised by finding a greater scarcity of this Order. The innumerable flights during the autumn of what are called shore birds, chiefly composed of the Genera TRINGA, TOTANUS and closely allied species in their autumn migrations, attracts numbers of the Genus FALCO. Our marshes, especially after mowing, which lays bare the runs of field mice, and the haunts of frogs, snakes and other reptiles, attracts the harriers and buzzards, and the sea shores of the Bay of Fundy, at ebb tide, left in far-reaching and muddy flats abounding in stranded fish, bring the eagles and fish hawks for their prey, the latter seizing its living prey from the shallow pools, whilst the former, when not plundering the fish-hawk, contents himself with the dead and stranded fish. Except the grouse, the hare, and perhaps shrews in the depth of the winter forest, or a white weasel or jay bird, or a red squirrel now and then, the stern winter has locked in snow and ice everything that makes food for the few owls that hibernate with us. The few eagles and fish-hawks I have dissected, I have found fat, even in winter; the hawks generally thin. I have never identified any kites in Nova Scotia, but my son has observed fork-tail hawks in the air, which I have also seen, but very rarely, most probably the Genus NAUCLERUS.

LIST OF RAPACIOUS BIRDS OF NOVA SCOTIA.

FAMILY STRIGIDÆ—(Owls).

- Bubo Virginianus*—Great horned owl.
Otus vulgaris (var. *Wilsonianus*)—Long-eared owl.

- Bubo virginianus palustris*—Short eared owl.
Syrnium laponticum (var. *cinerinum*)—Great grey owl.
Syrnium nebulosum—Barred owl.
Nyctio virens—Snowy owl.
Nyctio idula (var. *fulviventris*)—Hawk owl.
Nyctale Tengmalmii (var. *Richardsonii*)—Tengmalm's owl.
Nyctale Acadica—Saw-whet owl.

FAMILY FALCONIDÆ.

- Circus cyaneus* (var. *hudsonius*)—Marsh hawk.
Accipiter fuscus—Sharp shin.
Accipiter Cooperii—Cooper's hawk.
Astur atricapillus—Goshawk.
Falco saxeus—Gersfalcon.
Falco communis—Duck hawk.
Falco columbarius—Pigeon hawk.
Falco sparverius—Sparrow hawk.
Buteo borealis—Red tail hawk.
Buteo lineatus—Red shoulder hawk.
Archibuteo lagopus (var. *Sandii Johnstonii*)—Rough legged buzzard.
Pandion haliaetus—Fish hawk.
Aquila chrysaetos—Golden eagle.
Haliaeetus leuccephalus—Bald eagle.

You will find in this list, taken as regards its nomenclature from Coles' Key, that many generic as well as specific names are changed from Wilson, Audubon, Nuttall, Richardson, and even Baird, or other recent writers. The greatest change is with the specific. Whilst we accept the changes from the older authors as the necessary progress in the science, yet we can see in the differences from the modern ones that one principle rules them, a nearer return to truth, to the principle of returning to the specific given by the first discoverer of the species, allowing him the exclusive right of naming, and finally in birds almost identical in both continents the allowance of geographical variation from one common origin. This of course is the most philosophical way of settling points beyond our reach. Field naturalists can scarcely be allowed the privilege of criticising, which must be the result of intimate knowledge of large collections and libraries, and, as respects the author of the Key, still larger experience of field life. Yet one may be allowed to say that anything that reclaims the science from the divisions of sub-families and sub-genera, and innumerable lists of synonyms made, not for truth but for personal exaltation, must be hailed with pleasure by all true naturalists. Of the family of owls which inhabit our Province, the Halifax museum, with the exception of the great grey owl (*S. laponticum*), contains an excellent collection of every species I have identified myself. The great grey owl was taken some years ago in Pictou County, and a specimen was in the collection of the late Dr. McCulloch, of Pictou town. This is the only recorded instance I know of its being here. The great horned owl (*B. Virginianus*)

is common. It both breeds and winters, usually keeping in the thick forests, seldom coming out in the clear country. I have seen its young in the spring, and the adult at all seasons of the year. A specimen shot at Digby, Feb. 1876, when feeding upon a black duck, was nearly white, washed by pale ferruginous, and barred and spotted light brown. The pure white chin remained unchanged, as it has done in every individual I have examined, how much otherwise the plumage may have been altered. Though not resembling Richardson's figure, I thought it may have been the Aretle variety. Our camp fires attracted them when camping on the shores of a forest lake in Digby county, Sept., 1871. By answering their wild teline cries, we kept them about us the long night, unseen, yet continually shifting from one spruce fir to another, amongst which our camp was pitched. Their prey is nocturnal, and thus less likely to be known. Grouse, hare, and even ducks may be readily captured by this powerful bird, which uses its beak as well as its claws in destroying life. A poor pet crow, the favorite of the village at Annapolis, visiting every house for its bone, and sleeping now in an old porch, now in an unfinished church, or under the eave of inhabited houses, alarmed the inmates, beneath whose eaves it had sought a roosting place, by its shrill cries one calm midnight. On going to its rescue a large nocturnal bird of prey floated away. At sunrise it was found dead on the grass beneath, no doubt a victim of this powerful nocturnal prowler. Of the short eared owl (*B. palustris*) and the long eared owl (*O. vulgaris*), they may be said, though not rare, still not very common. I have Mr. Downs' authority that the short eared nests in Nova Scotia, near Halifax. Probably both do, yet the number of both that appear during winter proves migration to be the chief cause of their presence with us. Of the barred owl (*N. nebulosum*), my notes give May, as the month I identified him in the breeding season. I have no doubt he winters with us, but my notes have no monthly dates. The hooting of this owl comes down on the night wind to you like the loud broken laughter of many men. A stranger would easily suppose he was near a large logging party. The majestic snow owl (*N. nivea*) I do not think nests with us. He is usually a winter visitor, though I saw him once, August, 1854, on Sable Island, with all his feathery alpine plumage, sitting upon the hot sand, the snowy, thick muffled claws

reposing on sand that bent your touch. A few years after the island had been stocked by domestic rabbits, this bird made his appearance, in 1827, and ever after paid it an annual visit. I saw him patiently watching the burrow mouth, instantaneously to seize its emerging owner. He is usually our winter visitor, and like other species sometimes comes in flocks. In the winter of 1876 Mr. Egan, at Halifax, had fourteen specimens at one time. The settlers told me they sat like pigeons upon their barns, coming out of the forest at dusk. There had been no storms or local reasons for this migration which extended into New England. The hawk owl (*S. ulula*), is also a winter visitor. He shows himself sometimes in flocks. Some years ago there were more than a dozen brought into Halifax, then not seen for years, and of late returning singly. Of Tengmalm's owl (*N. tengmalmi*) I have seen but few specimens, and believe it very rare. Four are the utmost I have seen in Nova Scotia. The Saw-whet (*N. acadica*) is common and resident, keeping the deepest forests as his abode, frightening the Indian at his bivouac, who never will answer him or allow any one to do so in his camp, for fear of impending misfortune. Yet he, too, appears sometimes in flocks in the open. During the spring of 1879, Mr. Egan had numerous specimens offered him. The little red owl (*S. asio*), so common in New England and also in Newfoundland (Reek's Zoologist, 1869,) I have never seen here, in which Mr. Downs joins me. In its migrations it passes perhaps north of us. In ending my remark on our owls, I may say that about four have been identified as nesting with us, the others are winter visitants, and that with the exception of the Great grey owl, there are excellent specimens of each species in the Halifax museum.

In passing to the diurnal birds of prey, the FALCONIDÆ, we find more power and strength developed in each individual, though denuded of their soft coating; the hind toe (in the owls very small comparatively) greatly increased, a greater propensity to use the claw than bill, and a greater ardour of temperament, and power of wing action. This family naturally separates itself into the harriers, the falcons, the hawks, the buzzards, and the eagles. I mean as regards Nova Scotia, since the kites and vultures never come to us. Of the harriers, resembling the owls in a facial circle, we have one species (*C. cyaneus*), a geographical variety of the old world harriers.

(To be Continued.)

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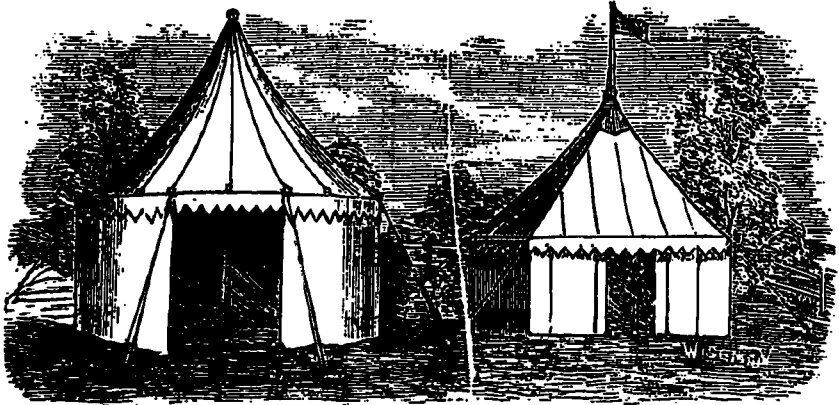
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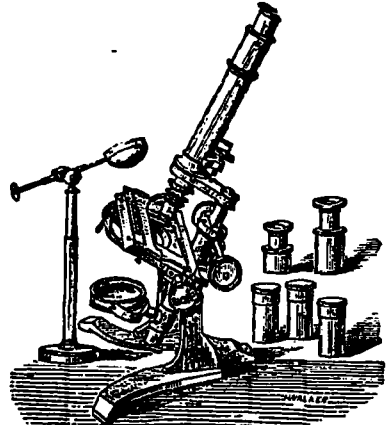
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