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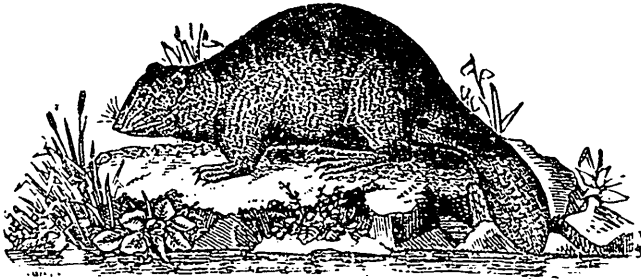
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Next Excursion to Paugan Falls.

September, 1893.

THE  
\* OTTAWA NATURALIST \*

VOLUME VII. No. 6.



THE BEAVER (*Castor Canadensis*, Kuhl).

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NARRATIVE OF A JOURNEY IN 1890, FROM GREAT  
SLAVE LAKE TO BEECHY LAKE, ON THE  
GREAT FISH RIVER.

From the Journal of Mr. James McKinley, officer in charge at Fort Resolution, H. B. Co.

By D. B. DOWLING, B.A. SC.

The "Barren Ground of Northern Canada," is the title of a book recently issued by Mr. Warburton Pike. It contains a popular description of his experience of travelling and hunting in the country north of Great Slave Lake, and on the Peace River. A few notes from the diary of his sometime fellow traveller, Mr. James McKinley, may be of interest, as supplementing in a somewhat more detailed way the description there given of the country between Fort Resolution, on the Great Slave Lake, and Beechy Lake, on the Great Fish River. A part of their route was through the hitherto unexplored region immediately north of the Great Slave Lake,—a very rugged tract, dotted with lakes, followed further north by a more even though somewhat hilly country, almost barren, extending to Aylmer Lake.

Of previous explorations in the region to the north-eastward of Slave Lake brief mention will be made.

The earliest we find was that of Samuel Hearne, commissioned by the Hudson Bay Company to undertake an overland expedition, to make explorations to the north west of the inland sea on which they had their posts, and also to search for a large river, on which a copper mine was said to exist. Leaving Prince of Wales Fort, on the Churchill, he made two unsuccessful attempts to reach this river and copper mine, but in the fall of 1770 he again started, and by the middle of July, 1771, had reached the Coppermine River. The map of his route, with the latitudes of points of interest, are inaccurate and untrustworthy, but it is quite certain that in the spring of 1771 he passed near, if not over, Artillery and Clinton Golden Lakes. Returning in the fall of the same season, he arrived at some point on the north shore of Great Slave Lake, and crossed through a chain of islands to the south shore, where he arrived about the beginning of 1772.

Other expeditions, including Franklin's two, have since passed by the more western route. These seem to have passed to the west of the district under consideration.

Owing to the long absence of Capt. John Ross of the *Victory*, in the northern seas, a relief and exploring expedition was organized under the command of Capt. Back, who intended reaching the north coast of America by descending the Great Fish River. This was supposed to flow in a north east direction, and reach the sea at no great distance from the longitude in which Parry's ship, "*Fury*," had been abandoned in 1824. It was known that Ross would endeavour to reach this spot and take some of the store of provisions piled up on the beach. Capt. Back, therefore, in 1833 reached Slave Lake, and advanced by Artillery and Clinton Golden Lakes to Aylmer Lake, and made an examination of the head waters of the Fish River. He then returned to the wooded country to winter. At the eastern end of Slave Lake he built his winter quarters, and called the house Fort Reliance.

On March 26th intelligence reached him of the return of Ross, so that the expedition now was for exploration only.

Early in the spring a start was made, and during the summer he successfully descended the river to the sea, and by fall had returned to his former winter quarters, where he passed the winter of 1834-5, and then returned to England.

One result of the explorations of Dr. Ross on the shores of the Gulf of Boothia in 1853-4, was the obtaining of relics of the Franklin expedition from the Esquimaux, with the information that some at least of the party had reached the mainland, near the mouth of the Fish River, though they probably all perished in that vicinity. England at that time was engaged in the war in the Crimea, and could not at once fit out a relief expedition, but asked the Hudson Bay Co. to undertake and fit out an expedition to descend the Fish River, and search the coast in the vicinity of its mouth. This expedition was under the direction of Messrs. Anderson and Stuart, officers of the Company, who, in 1855, made the descent of the river, but were only partly successful in finding traces of the party, and returned to Fort Resolution the same season.

The next traveller giving any account of this district is Mr. Pike, as already noticed above.

During the season of 1889 Mr. Pike made a very interesting trip northward, to a large lake lying to the westward of Aylmer Lake, to

which he gave the name "McKay Lake," in honour of Dr. McKay, the Factor in charge of the Hudson Bay Co's posts in the Athabasca District. In this vicinity he spent some of the winter months, hunting the Barren-ground Caribou and Musk ox ere he returned to Slave Lake. It was his intention to go much further north the ensuing summer *via* the Great Fish River. With a view to encourage trade with the Esquimaux who hunted in that district, Mr. Jas. McKinley, the clerk in charge of Fort Resolution, joined with Mr. Pike in forming a somewhat large party. The proposed route was evidently to retrace Mr. Pike's steps northward to McKay Lake, thence coasting eastward to the outlet, and following the Lockhart River to Aylmer Lake, from the north east corner portaging to the Great Fish River, but after reaching Lac du Mort on this route, a short distance north of Slave Lake, the direction was changed to a more direct course, across country to the Lockhart River.

On the afternoon of May 7th, with dog trains and sleds or toboggans, the party left the Hudson Bay Co's establishment at Fort Resolution, and travelled principally on the ice of the lake northward along the eastern shore. On the 9th they crossed the lake to the group of islands called by Capt. Back, *Simpson's Group*. Turning more to the north east, their course for several days lay among the islands forming this chain, and on the 13th they probably reached the narrows, or within a short distance of that point. Here they met some Indians, and halted to engage them to accompany the party. Much objection was made owing to the scarcity of provisions, the Indians being in a starving condition and the travellers but lightly equipped. This necessitated a delay to hunt, and finally on the 23rd they all started and travelled about ten miles. On the 23rd the travelling was slow, and they went probably the same distance. Of that part of the lake the description given in the journal is as follows: "The lake on leaving camp widens out, is studded with rocky islands, and the banks on each side are high and rocky, sparsely covered with stunted pine and birch." The next day they travelled only about five miles on the lake to a small river, up which they turned, leaving the Great Slave Lake. "We found on following up the little stream a succession of falls, which were all frozen, with high banks of ice. These took us till evening to surmount, some

of the men packing and the rest helping the dogs. Climbed to the top of the hill and found a high, rolling, rocky country ; hardly any trees to be seen."

"May 25th.—Made a portage for four miles to a long, narrow lake. Then more rocky portages and small lakes till mid-day, when on account of the thaw we halted near a high cliff at a small, round lake. Started towards evening, and made a short portage into Lost Dog Lake. Made a couple of miles on this lake, and left by a low valley and camped in sight of Lac du Mort. Rocky ridges all around, here and there thinly strewn with small pines. If it were not for the lakes, which cut up the country, it would be impassable. They are generally more like a river than a lake. The portages are short, and continue to get lower the further we get away from the range of hills which skirts the north east shore of Slave Lake. The track is fairly straight. West of north is the general course.

"May 26th.—By mid-day reached the north end of Lac du Mort, where we were obliged to camp. Made about eight miles. This lake is rather large, with long bays surrounded by smooth, rocky hills or banks nearly destitute of timber. This gives it much the appearance of a lake in the rolling prairie.

"May 27th.—The party remained in same camp, hunting in the vicinity with apparently little success. Of the country seen, he says it consists of "long ridges of either smooth rock or piles of loose stones, similar to the edge of the lake, between which are mossy valleys or narrow lakes."

"May 28th.—Travelled to the end of Lac du Mort and portaged to the next lake." Here they thought they had found a c ache of meat, and spent a couple of days trying to thaw it out, but it proved a disappointment, and they halted still longer, hunting the country over to find the deer. They travelled now only short distances--a mile or two--towards reported bands of deer. Of the country he says : "We have now got past the last of the belt of hills which lie to the north of Lac du Mort. The country, looking ahead north, is a level or rather rolling field of snow as far as the eye can see. The snow is perceptibly deeper as we go north." "In the immediate vicinity the rocky ridges are often

covered with loose boulders, while between, lakes occupy the low ground ; a fine grass thinly shows amongst the moss, rather like bunch grass ; wood now and then in sheltered places." On the 3rd June they succeeded in getting among the caribou, and the journey was resumed.

" June 3rd. - Made a small portage to Bear Head Lake. Travelled in the night on account of the heavy thaw. Camped about midnight.

" June 4th.—Were obliged to pass the day in the same place on account of the heavy thaw. Since the caribou are apparently in more numbers to the east of the track we have been following, the Indians have decided to break off and cross to Capt. Blanc's route or Stewart and Anderson's track. The endless chain of lakes which intersect the barren, stony ridges, enables one to take any direction.

" June 5th.—Shifted camp across the lake to get wood, having burnt up all around this camp. Snow drifting like mid-winter. Found a fine clump of pines in which to camp. The lake is about two miles and a half wide at this point.

" June 6th.—Shifted camp a couple of miles to the end of Bear Head Lake. This is a lake I should say of about 10 or 12 miles in length, and of about two miles in width. Surrounding country still of rolling, broken ridges. The party remained in same camp till June 9th. Some further notes of the surrounding country observed on their hunting excursions are added. The country still the same as that to the west. Rolling ridges, broken rocks and loose stones, often of immense size balanced on a few smaller ones, are a very common feature. The ground is covered with several kinds of mosses, and a small plant bearing a small black berry. Cranberries are also to be found in the swamps, where there is also a short grass with a thin, round blade. Wood is getting scarce, and only to be found in sheltered spots.

" June 9th.—Off this morning and made probably 8 miles. Course, N. E., to strike Capt. Blanc's track, first on two small lakes and then on a long one, in appearance like a river, at the end of this we camped. After dinner we all started off hunting. The country still of the same appearance, but not a single stick of wood did I see. Noticed mica in small quantities, of a poor quality. The rocks are of small sizes, being split up by the frost and other causes.



“June 10th.—Heavy thaw, with water on the ice of the lakes. Made about 4 miles on small lakes, with short portages between. Wood is very scarce at this camp, and we can only find a few dry roots on spots where the snow is off the ground. The same bleak country. Red and gray granite rocks and ledges everywhere.

“June 11th.—Travelled about five miles in an easterly direction, on a long, narrow, winding lake. The hills are a good deal higher to-day, with rougher abrupt bluffs and broken rocks. Leaving the lake we made a small portage, and camped below a bank of fine sand of a red colour, on the edge of another lake at the end of the little rocks. This is on Stewart and Anderson’s route, where they canoed it to the Great Fish River. The bank of sand on which we are now camped extends for a couple of miles, and is perhaps half a mile in width. It is quite a pleasant sight after the monotonous rocks. It is formed into ridges, mounds and hollows like its rocky neighborhood, and bears a few small stunted pines here and there.”

Owing to the thaw the water from the melting snow had so accumulated on the lakes, that the party were obliged to wait until the ice and snow had so loosened as to rise above this. The snowshoes were no longer needed, and consequently had been abandoned. Four days were lost on this account, and on June 15th a start was made again, but the travelling was very bad, only about 5 miles being the progress for the day. The lake, from their account, would be about 15 miles in length, with many rocky islands and points. Good whitefish reported in it, though the party did not set any nets.

June 17th.—“Started in the morning and travelled 8 or 9 miles to the north eastern end of the lake, and made a portage of about a mile, camping half way on it on account of the scarcity of wood. Here there are only bushes of stunted pines; the largest is not a yard in height. They are of a considerable size at the base, from which the branches spring; the whole is bent and crooked in every imaginable position, and generally dry at the top.

June 18.—Finished the portage, and travelled on a narrow lake about 5 miles, to where a little river joins it with the next lake in our route. The ice in it we found had gone, so we had to make a portage of about a mile and a half over the hills.

"The whole of this section of the country is simply a bed of stones; no gravel or earth of any kind, but the stones piled on each other with great holes between. The country much the same in appearance, only less large bluffs of rock, and now and again large areas covered with loose stones. No bushes, except on the borders of lakes, and occasionally small patches of grass in the hollows.

"June 19th.—Left the men packing down to the lake and started ahead to see some clumps of large pines. The bay we first reach is a long inlet, running north and south about six miles. At its northern end it widens out, forming a large, apparently circular lake of about ten miles in diameter. The narrows being three or four miles wide, we there took the western shore and passed over a pretty fair level country, having more soil and stretches of grass, and sandy hills and ridges, and several patches of pines suitable for building purposes and firewood. On the whole it is the best country seen since leaving Slave Lake. Parties who took the east shore of the bay report the country unusually smooth and level. All around the lake there is plenty of firewood. A small river runs out to the south from the north east end of the bay. Our party with the dog trains followed the east and south shores of the lake, and camped at the south east end, having made some sixteen or eighteen miles. Good travelling on the ice. Duration of sun light for the day, 20h., 40".

June 20th.—Left camp about mid-day and made a portage to the east of about two and a half miles into a long, narrow lake, running northwards. Went about two miles on this lake, and camped on a dry point. The country north of this appears level as far as one can see, and less covered with boulders and rock than that we have left behind. Small bushes of pines in clumps in the low ground. The travelling on the ice is much improved, owing to the surface water having drained off.

June 21st.—Taking the right side of the lake we found the country much more level than we had seen it. It consists of long, smooth, sandy ridges, covered thinly with bunch grass, while in the muskegs and on the edges of the numerous small lakes much more grass is to be found, with small pine bushes in the sheltered spots. We must now be getting very near to the so called last woods."

The party camped early after travelling about ten miles, as they had succeeded in killing sufficient deer to keep them busy the rest of the day cutting up and drying, and also a sufficient supply to give them a quiet Sunday in camp.

“June 23rd.—While the men were fixing up the sled for a start we went ahead, crossing a point on the south east side, where we found a small stream entering the lake. Here the Indians were successful in catching several fine trout, which we roasted for dinner. The country we found rocky, and intersected with small lakes. The party with the dog sleds made about eight miles.

“June 24th.—Made about four miles to the end of the lake, which is probably about twenty miles in length, and from two to two and a half in breadth. Then portaged over a mile to the north east end of another small lake, which we crossed about three miles, and pitched our camp. Wood is getting very scarce. In winter the little that is here must be covered deep with snow.

“June 25th.—From here we have to make a portage of four miles to a small lake on the course of the Lockhart River, which connects McKay Lake and Aylmer Lake. Found the river open between the lakes, and lots of water at the lake edge. Went about two miles on the north east bay of this lake to the outlet—the Lockhart River—and camped on the north bank. The native soil of the Musk-ox. Here a portage has to be made of over a mile over a rocky hill. On the road we saw a couple of Musk-ox heads killed a couple of years ago by one of our men. The country near the mouth of the river is smooth and sandy, with a good deal of muskeg. On the north bank a range of hills runs north east, having the general aspect of rocky and rough land. Aylmer Lake, as seen from this point, bends away to the south east. The river that runs below this hill is probably about a mile in length from the intermediate small lake to Aylmer Lake.

“June 26th.—From here we sent several men up the river to McKay Lake to bring back a large birch canoe, used by Mr. Pike last year, the Indians taking our baggage on their sleds. Got on the rocky portage and had dinner, and then started off on Aylmer Lake, but found

*To be Continued.*

## EXCURSION No. 3.

Taking advantage of the kind invitation of Mr. and Mrs. William Borthwick, which had been standing for some time, the Club made its third excursion for the present season, on Saturday, 8th July, to Borthwick's Springs, in the Township of Gloucester, some seven miles east of Ottawa. Mr. Borthwick has entered upon the production of fruit as well as the sale of it, and large plantations of small fruits have been made, with promise of great success. About thirty members attended. The trip was made in vans, starting from the Post Office at 2 p.m., and in spite of a violent thunderstorm which overtook them on the way, all reached the objective point without mishap shortly before four. Here they were hospitably received by Mr. and Mrs. Borthwick, and the weather soon clearing the party proceeded to inspect the spring. This lies in a marshy tract at the foot of the hill on which the house stands, and close to one of the branches of Green's Creek. A building has been placed over the spring, with appliances for barrelling and shipping the water, which is sold largely in and about Ottawa. It is of a rather pleasant saline taste, and is celebrated for its mildly aperient properties. An analysis made several years ago by Dr. J. Baker Edwards, of Montreal, is given below. The well known peat-bog, the *Mer Bleue*, commences a short distance farther to the east, and it had been intended to pay it a visit, but owing to the condition of the ground after the storm this had to be omitted. After a generous lunch, provided by the hostess, the Vice-President, Mr. F. T. Shutt, took the chair, and devoted a few opening remarks to the subject of mineral springs, their geological origin and chemical constituents. He then introduced Messrs. R. B. Whyte and John Craig, who delivered addresses upon the botanical specimens collected during the afternoon. Mr. Whyte drew attention to a number of beautiful flowers of easy cultivation, such as the Cone flowers (*Rudbeckia*) and native orchids, characteristic of that district, which should be found in every garden. The apt and striking way in which the distinguishing points between different species were described gave Mr. Whyte's lecture additional interest.

An addition was made to the local list of plants, in the shape of *Ranunculus sceleratus*, found by Mr. J. F. Whiteaves.

Mr. Craig spoke of the economic value of some of the grasses found in the vicinity, emphasizing the value of June grass for lawns, and the necessity of making a continual warfare on quack grass.

A vote of thanks to the host and hostess was moved by Capt. McElhinney, and gracefully acknowledged by Mr. Borthwick. The return journey was then undertaken and Ottawa was reached about sundown. A. G. K.

#### ANALYSIS OF THE WATER BY DR EDWARDS.

The specific gravity is 1.008. It is not aerated, nor is it alkaline. It contains (in 1000 parts) of saline and earthy chlorides, 11.9 grains, and of bromides and iodides, 0.4 grains. It contains, like some of its congeners, a small portion of strontium, and both bromide and iodide of magnesium. Of total solid saline matter, it contains per Imperial gallon of 70,000 grains, which I estimate to be combined as follows :

Chlorides, 833 grains per gallon, combined as

Chloride of Sodium.....	784.70
Chloride of Potassium.....	10.50
Chloride of Strontium.....	1.40
Chloride of Calcium.....	14.70
Chloride of Magnesium.....	21.70
Bromide and Iodide of Magnesium.....	2.80
Sulphate of Strontium.....	2.10
Sulphate of Calcium.....	15.40
Sulphate of Magnesium.....	19.60
Silica and Oxide of Iron, etc.....	4.90

Saline contents of one Imperial Gallon..... 877.80

### CHEMICAL ANALYSIS OF MANITOBA SOIL.

#### THE CAUSE OF ITS GREAT FERTILITY EXPLAINED.

In the American Chemical Journal, Vol. XIV, No. 8, is a particularly interesting article by Mr. F. P. Dunnington, in which comparative analyses by Mr. T. C. Whitlock are given of examples of (1) Soil, furnished by Dr. George M. Dawson, F.R.S., etc., from the prairie lands of Red River, taken at Rosser, about 15 miles west of Winnipeg, and (2) Tschernozem or Black Earth of Russia, from the district of Balashoff, in the government of Saratoff. The specimens are described as so similar in appearance that they cannot be distinguished by the eye.

ANALYSIS.		
	Manitoba.	Russia.
Sand	59.82	53.71
Silica, amorphous	5.45	12.80
Ferric oxide	4.00	4.13
Alumina	7.14	6.04
Titanic oxide	.64	.63
Lime	.61	.75
Magnesia	.61	.21
Sulphuric oxide	.03	.06
Carbonic oxide	.37	.02
Phosphoric oxide	.13	.16
Potash (with trace of Soda)	1.91	1.97
Organic matter	12.49	14.91
Containing humus (soluble in ammonia)	( .45)	( .44)
“ total nitrogen	( .44)	( .31)
Water	6.86	5.04
	<u>99.76</u>	<u>100.43</u>

“With the exception of the amounts of carbonic acid, and of the proportion of the silica which is amorphous, the composition of these two specimens is almost identical.

“The peculiarly large amounts of organic matter and nitrogen, as well as of the principal constituents of the ash of plants, lime, potash and phosphoric acid, are all to be noted and accord with the well known exceeding fertility of each of these soils.

“The soil from Manitoba is described by Dr. Dawson as spread with great uniformity over the Red River Valley, a wide prairie on the first or lowest prairie level of the north western country. It has a depth of say one to four feet, and consists of the superficially modified parts of the sediments of a later glacial or post-glacial lake, which at greater depths are found in the form of well bedded silts. . . . . The surface is a dark mould, composed of the same material as the subsoil, but mingled with much vegetable matter. . . . . The uniform fertility of this soil cannot be exaggerated.

“The Tschernozem or Black Earth of Russia has long been famous by reason of the heavy crops which it has, in many localities, annually produced for almost a century. Prof. Krassnof, in a paper (Proc. Geol. S. Amer. 1891, p. 68,) describes it as distributed over the steppes of the

south eastern portion of European Russia. He concludes that this black colour is due to an accumulation of vegetable matter from the herbaceous plants of the poorly drained steppes of the post-glacial deposits which overlie the loessoid clays, so difficultly permeable to water. At the close of this paper he draws attention to the close correspondence which exists between the climate of Russia and that of the prairie land of Minnesota, and suggests the probable similarity of the soils of these regions.

“The above analyses make it to appear that the Tschernozem and the soil of the Red River prairies are similar in chemical composition ; they occur in the same latitude, with the same general relief and climate, and from the above quoted authorities are judged to have a similar geological history ; may they not, therefore, be properly considered as of the one variety of soil, “Black Earth.”

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#### BOOK NOTICES.

SCUDDER, S. H. A Brief Guide to the Commoner Butterflies of the United States and Canada. 12mo., 12 + 206 pp. Henry Holt & Co., New York.

In our August, 1892, number we gave notice of a Butterfly book for boys which Mr. Scudder had in preparation. We took occasion then to point out the advantage of all young people having some hobby in natural history, and looked forward with pleasure to the early appearance of this work, which should, we thought, act as a first stepping stone from which young students might find an easy entry to one of the most attractive fields of study offered to us by Mother Nature. Such a book, which was much wanted, has now been prepared by Mr. Scudder in his characteristic manner, and has been published by Messrs. H. Holt & Co. as a neat duodecimo of convenient form, well printed and got up. This little work treats only of the commonest butterflies, such, in fact, as any energetic collector in the Northern States or Canada is pretty sure to take within a year or two. It is to be followed by a more complete Manual of the Butterflies of North America, north of Mexico, to be issued at an early date, and prepared in a similar style to Gray's Manual of the plants of the Northern States. Mr. Scudder's Brief

Guide will, we believe, be the means of inducing many to take up the study of butterflies, who have been prevented from doing so for want of a suitable and accurate book. The introductory chapters, treating generally of the nature, structure and habits of butterflies are very concise, covering the ground well, and with the concluding chapters where instructions are given for the collection, preservation and rearing of insects, provide the beginner with all that is necessary to make him a good naturalist. J. F.

SCUDDER, S. H. *The Life of a Butterfly*. 12mo. pp. 186, 4 plates.

Under the above title Mr. Scudder has written in untechnical language a charming little book, in which while recounting the life-history of the Milk-weed Butterfly, he compares it with other species and succeeds in condensing into a remarkably small space an account of the most interesting features in the lives of the whole tribe of butterflies. It has been prepared for the general reader, and the hope is expressed that it "may perhaps gain for butterflies the serious study of some who had before looked at them as merely pretty creatures,—types of the frivolous,"—we feel sure that it will do this and much more besides. We recommend it heartily to all boys and girls of healthy mind, to naturalists and to thoughtful readers. J. F.

## ENTOMOLOGY.

Edited by J. FLETCHER.

*Hypomolyx pineti* Fabr. This large pine-weevil has not been previously recorded from our district, but a dead specimen, in good condition, was found at Casselman (June 10th) in the leaf of a pitcher-plant. Among the contents of leaves examined *Cytillus sericeus* appeared very frequently. A small, pale crustacean was also not uncommon, and seemed to thrive in its prison cell. W. H. H.

*Adimonia rufosanguinea* Say. At the Mer Bleue this pretty little Chrysomelid was very abundant upon *Kalmia augustifolia*, and occurred also occasionally on other plants. Hitherto I had generally taken this species upon the wild cherry. W. H. H.

*Aphodius prodromus* Brahm. This European beetle appears to be extending its range westward. Dr. Horn, in his monograph of the sub-family (1887,) recorded it from Maine and Montreal. Several



years ago I received a specimen from my brother in Campbellton, N.B., and soon after specimens from the late Mr. Caulfield, of Montreal. This year Mr. Fletcher took several at the Experimental Farm at the end of May, and I captured one at Eastman's Springs. W. H. H.

*Desmocerus palliatus* Forst. On June 14th I took a pair of these beautiful longicorns upon an Elder bush, and on the 26th received one from Col. Chamberlin, which he had taken in his garden in New Edinburgh. The larva lives in the stems of the Elder, and the beetles, though not common, can usually be found by a careful examination of the shrubs in June. It is perhaps the handsomest of our Cerambycidae, especially when alive and in the sun light. It is almost an inch long, of a deep steel-blue colour, and with a bright yellow band across the base of the elytra, from which it derives its name of the Cloaked Desmocerus. W. H. H.

*Ditylus caruleus* Rand. While at Casselman (June 10th) two fine examples of this usually rare beetle were taken, almost accidentally. The first crawled up on a log where we were collecting *Tritoma humeralis* in fungi, and the second came crawling up to us as we were lunching. This beetle seems to inhabit swampy areas, as last June we captured specimens in a beaver-meadow at Sudbury, and another was taken about the same time at the St. Louis Dam by Mr. J. A. Guignard. The western species of this genus seem to be more abundant, as numerous specimens have been received from British Columbia. W. H. H.

*Ergates spiculatus* Lec. A fine female of this beetle has been received from Rev. Father Dontenwill, O.M.I., now principal of St. Louis College, New Westminster, B.C., who a few years ago was a frequent attendant at our Monday afternoon lectures. *E. spiculatus* is the largest beetle found in Canada, and belongs to the Longicorns or wood-borers. The present specimen measures  $2\frac{3}{8}$  inches from the front of the head to the end of the body, and  $\frac{5}{8}$  inch across the base of wing cases. J. F.

*Argynnis Triclaris* Hüb, in the Ottawa District. I was much surprised and pleased at taking a few specimens of this rare butterfly in the *Mer Bleue*, on 13th and 14th June. It is a northern species found in Labrador, at Hudson Bay and in the Rocky Mountains. The size and general appearance when on the wing are similar to *A. Myrina*, but the

flight is stronger. It was no easy matter to run them down over the soft sphagnum swamp as they dodged amongst the stunted spruces, with the thermometer ranging between 80 and 90 degrees. J. F.

*Diplax costifera* Uhl. Two specimens of this rare dragonfly have been taken this summer by Master Stephen MacLaughlin, in Powell's Grove. One specimen was taken here some years ago by Mr. T. J. MacLaughlin, but the exact locality was not then noted.

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## BOTANY.

Edited by W. SCOTT, B.A.

*Aphyllon uniflorum* at London, Ont. Some fine specimens of this interesting Orobanch were found on June 2nd in Mount Pleasant Cemetery, near London, Ont. They were growing in the grass, the large purple corollas having a very attractive appearance. This is the first record of the plant being found near London. Some more specimens were found in the woods on June 10th. The same plant has been collected also by Mr. J. Dearness, of London, in the Township of MacGillivray, Ont. J. ALSTON MOFFAT, *London, Ont.*

*The Mayflower.* Some beautiful specimens of *Epigaea repens* have been received from Fort Coulonge by Miss McKellar, of the Richmond Road. Members of the Club will always hear with interest and satisfaction of new localities in our district for this floral treasure of the spring. R. H. COWLEY.

*Erythraea Centaurium*, Pers. (Centaury.) I found this elegant little member of the Gentian family growing in some numbers among grasses and flowering at the end of August at Roach's Point, Lake Simcoe. Gray's Manual (revised edition) gives as localities, "Waste ground, shores of Lakes Ontario and Michigan." The only Canadian record mentioned in Macoun's Catalogue is "Sandy wastes on Sable Island, off the coast of Nova Scotia. Collected July, 1870, (*Mrs. Almon.*)" I therefore thought that this note might be of interest to the readers of the Naturalist. C. J. S. BETHUNE, *Port Hope, Ont.*

## GEOLOGY.

EDITED BY H. M. AMI, LL. D., F.G.S.A., ETC.

*On a small collection of Fossils from the Trenton Limestones of Port Hope*:—Port Hope is situated on the north shore of Lake Ontario, near the mouth of Jones's Creek, a stream which is slowly cutting for itself a bed in the hard Trenton limestone. In former ages it was a stream of much greater dimensions, and evidences of raised beaches are seen along both sides of its valley. The higher ground is here occupied by clays, mostly glacial, and sub aerial denudation has played a prominent part in making for the town its peculiar orographic site above the present level of the lake.

On the occasion of my last visit I saw an outcrop of limestone, at the Rapids near the Bridge and foot of the main business street, from which a number of fossils were obtained, or noted. They were all typical or rather common Trenton forms, and are here recorded only because I have so far seen no list of fossil remains from this locality. The species are as follows:—

1. Crinoidal fragments. 2. *Heterocrinus simplex* v. *Canadensis*, Billings. 3. *Stictopora acuta*, Hall. 4. *Prasopora Schwyni*, Nicholson, (= *P. lycoperdon*, Rones.) 5. ? *Diplotrypa Whiteavesi*, Nicholson. 6. *Lingula* sp. 7. *Orthis testudinaria*, Dalman. 8. *Leptena sericea*, Sowerby. 9. *Strophomena alternata*, Conrad. 10. *Anazyga recurvi-rostra*, Hall. 11. *Vanuxemia Montcalensis*, Billings. 12. *Modiolopsis* sp. indt. 13. *Trochonema umbilicatum*, Hall. 14. *Orthoceras* sp. 15. *Dalmanites callicephalus*, Green. 16. *Asaphus platycephalus*, Stokes. 17. *A. Canadensis*, Chapman. 18. *Calymene senaria*, Conrad.

It would thus appear that the light grey, somewhat bituminous and impure limestones of Port Hope belong to the Trenton and well up in that formation. With time to collect along Jones's Creek, a careful observer should obtain much interesting material. H. M. A.

## THE NEXT EXCURSION

Will probably be to Pagan Falls, on the Gatineau Valley Railway. Arrangements are being made for as early a date in September as possible.



## 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*, shall not be more than 1500 feet in length, nor more than 600 feet in breadth. A location for mining *Iron*, 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 1892. )

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