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THE OTTAWA NATURALIST

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THE GREAT LEOPARD MOTH

(ECPANTHERIA DEFLORATA, FAB.).

By Arthur Gibson.

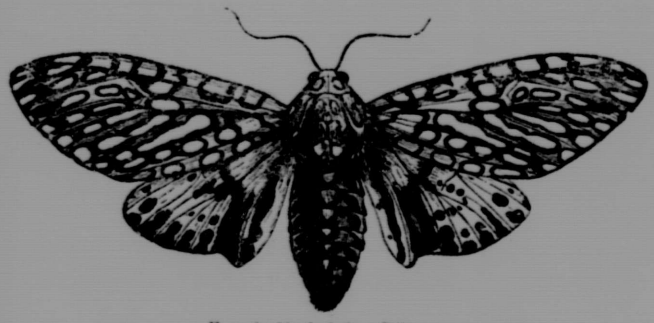
This insect, while southern in range, has been found in the larval state in autumn or early spring in western Ontario, but Canadian specimens of the moths are very rare in collections. In the annual report of the Entomological Society of Ontario for 1903, the Rev. Prof. Bethune published an article in which he recorded the finding of a single specimen of the larva of this moth at London, Ont., on May 6th, 1903. This was sent to the writer who made the following description of it, which was included in the above article:

Length 43 mm. General appearance—a stout, black larva, with stiff, shiny, jet-black bristles. Head 4 mm. wide, subquadrate, flattened in front, only slightly bilobed at vertex; black, shiny, excepting posterior upper part of cheek near segment 2, which is pale; suture and epistoma dull whitish; mandibles slightly reddish; hairs on face mostly black, reddish at tips. Body stout, dull black, with patches and streaks of velvety black on dorsum; distinctly yellowish in the incisures; lower lateral and ventral surface paler. Tubercles large, all black, excepting vi, vii and viii, which are a dark amber colour, each bearing a bunch of stiff, black, barbed bristles; from v, vi, vii and viii many of the bristles are tinged with dark red. Tubercles i, ii and iii are nearly the same size; iv elongate. Spiracles dull orange, anterior and close to, but above tubercle iv on abdominal segments. All the feet shiny brown tipped with black.

I was very glad indeed to have the opportunity of examining this caterpillar, as I had never before seen a living specimen. At the annual meeting of the above Society, held at Guelph, in October, 1906, Mr. J. B Williams, one of the Toronto members of the Club, exhibited two living larvæ of this handsome moth,

which had been taken by him, in the latter part of September, at Niagara Glen, Ont. Both of these larvae were different in appearance to the one described above, being distinctly reddish between the segments and almost without any yellow in the incisures. One of the specimens found by Mr. Williams was feeding on violet, which I think is a new food plant for the larva.

In the *Canadian Entomologist*, June, 1882, Dr. William Saunders says: "The larva of this insect is comparatively abundant in the autumn throughout most of the northern United States and in many parts of Canada." Of late years, however, these caterpillars have not been met with in Canada in any numbers; in fact, the three larvæ mentioned in this article are the only specimens which have been found in Canada, to the writer's knowledge, during the last fifteen years. One of the specimens found by Mr. Williams was given to the writer. It is now inflated and in the Government collection at the Central Experimental Farm.



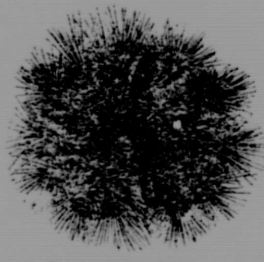
Female Moth (after Riley).

The Great Leopard Moth is the largest and one of the most beautiful of the moths of the interesting Family Arctiidæ, or Tiger Moths. The wings of both sexes are white. The rings and spots on the upper wings are black, or dark brown. Some of the rings near the base are covered with bright, steel-blue scales, and in some specimens the rings are filled in so as to look like black blots. The hind wings of the female, as shown in the figure, have more of the black markings than have those of the male. As is the case with many other arctian moths, the markings on all the wings of this species, however, are variable in number and shape. The abdomen is of a steel-blue colour above, marked, more or less down the middle and along the sides, with yellow or orange. The thorax is white, marked with spots or rings of black, and spots of steel-blue, the latter being in the centre. The head is white above and steel-blue in front. The

female is much the larger, measuring when the wings are expanded about three inches from tip to tip. A specimen in the collection of the Geological Survey Department is as large as the female shown here. The male differs from the female in being smaller and in having the wings more pointed. When expanded it measures about two and a quarter inches across. The markings, too, are less distinct.

Male Moth (after Riley).

In the Southern States this insect has sometimes been very abundant and the caterpillar has been given the name "Fever Worm" by the negroes, under the absurd impression that it is the cause of fever and ague.



Larva (after Riley).

The larva becomes full grown in autumn and curls up, passing the winter under logs or any other surface shelter it can find. According to Saunders and Riley, it feeds for the few days in spring, on grass or almost any green, low-growing plant, and then forms a loose cocoon inside of which it changes to a pupa. In this state it remains for from about two to three weeks. The specimen sent to me by the Rev. Prof. Bethune, was found in its winter quarters and had no food whatever after its capture.

On June 30th of the present year, Mr. Paul Hahn, of Toronto, took a freshly emerged specimen of the male moth, at Niagara Glen, Ont.

The food plants of the larvæ are Wild Sunflower (*Helianthus decapetalus*), Plantain, Willow, Poke-berry (*Phytolacca decandra*); Wild Cherry and Persimmon (Smith and Abbott), and violet, as observed by Mr. Williams.

LIST OF COLEOPTERA COLLECTED BY MR. J. M. MACOUN IN BRITISH COLUMBIA.

Determined by John D. Evans, assisted by Professor Wickham.

The numbers in column "A" indicate the number of specimens of the several species taken at Trail in 1902.

In column "B" at Osoyoos Lake, May 30–June 9, 1905.
In column "C" at Similkameen River, June 10–20, 1905.
In column "D" at Skagit River, July 2–20, 1905.

No		A	B	C	D
18c	Cicindela montana, Lec.				1
	Cicindela lauta, Casey?		2		
172	Opisthius Richardsoni, Kirby.	2			
195	Nebria Sahlbergi, Fisch.	1			
630	Amara carinata, Lec.		4	3	
670	Amara interstitialis, Dej		1		
678	" remotestriata, Dej.		1		
680	" gibba, Lec.			1	
710	Diplochila laticollis, Lec.		1		
1054	Nothopus Zabroides, Lec.		1		
1057	Piosoma setosum, Lec.		1		
1067	Discoderus parallelus, Hald		1		
1081	Harpalus amputatus, Say.		1	1	
	Harpalus sp.			1	
	Cœlambus, sp.		2		
1382	Ilybius viridiæneus, Crotch				1
1614	Berosus striatus, Say.			1	
1636	Helochares perplexus, Lec.		2		
3043	Hippodamia Lecontei, Muls.			1	
3051	Hippodamia parenthesis, Say.			1	
3066	Adalia frigida, Schn.		1		
3420	Dermestes caninus, Germ		1		
3425	Dermestes lardarius, Linn.	1			
3455	Orphilus niger, Rossi	2			
4105	Cardiophorus fenestratus, Lec.	1			
4245	Elater apicatus, Say.			1	
4253	Drasterius elegans, Fab.		1		
	Melanotus, sp.				
	Corymbites near hieroglyphicus, Say..	1			
4475	Corymbites fallax, Say			1	
4484	" cruciatus, Linn			1	
	" sp.			1	
	Dicerca, sp. Probably new species.	1			

4607a	Langii, Mann				1
4610	Buprestis aurulenta, Linn.	1			
4999	Callops cribrosus, Lec.		1		
5158	Trichodes ornatus, Say. Not heretofore on record from Canada	2			
5232	Necrobia violaceus, Linn.		1		
5359	Dinoderus substriatus, Payk.	1			
	Aphodius, sp.				2
5517	Aphodius fimetarius, Linn.				1
5523	Aphodius ruricola, Melsh.				5
	Aphodius, sp.				1
5726	Diplotaxis subangulata, Lec. New to Canada			1	
5939	Trichius affinis, Gory	1			
5971	Asemum mœstum, Hald.				3
6232	Rhagium lineatum, Oliv.				1
6266	Acmæops subpilosa, Lec.			1	
6338	Leptura lætifica, Lec	1			
6341	" chrysocoma, Kirby	1			
6348	" crassipes, Lec.				1
6353	" vittata, Germ.			1	
6363	" aspersa, Lec.	1			
6729	Glyptoscelis albidus, Lec. Not heretofore on record from Canada			1	
6769	Graphops marcassita, Cr.		1		
10386	Scelolyperus Schwarzii, Horn	1			
6905	Galerucella nymphæ, Linn.	2			
6968	Haltica evicta, Lec.		1		
7291	Coniontis opaca, Horn.		1	2	
7325	Eleodes humeralis, Lec. Not on record from Canada			1	
	Eleodes sp.		2	2	
7728	Ditylus quadricollis, Lec. var vestitus, Lec.				1
8028	Nemognatha dichroa, Lec.		1	2	
8077	Epicauta puncticollis, Mann.			1	
	Epicauta sp.		1	1	
8092	Macrobasis maculata, Say.		4		
8158	Cantharis sphæricollis, Say		3		

BOTANICAL NOTES.

By James M. Macoun.

CAREX CONCINNOIDES, Mackenzie, Bull. Torr. Bot. Club, XXXII, 440.

C. Richardsoni, Cat. Can. Pl. II, 158 in part.

We have six sheets of this species from the Rocky Mountains, No. 64,020*, Laggan; No. 64,021, Pipestone Creek; No. 25,556, Elbow River; No. 31,762, Kananaskis; No. 7,464, Sulphur Mt., Banff (*Macoun*), and No. 22,294, Spray Valley, Banff (*N. B. Sanson*). Our British Columbia specimens are from west of Sophie Mountain (*J. M. Macoun*) and Spence's Bridge (*John Macoun*).

ERIGONUM POLYPHYLLUM, Small.

On rocky slopes, Sheep Mt., Waterton Lake, Rocky Mts., No. 12,944; South Mountain, Crow Nest Pass, No. 24,488 and mountains at Elbow River, Rocky Mts., alt. 7,000 ft., No. 24,487 (*John Macoun*). Described from specimens collected in Montana in 1897 but not before recorded from Canada.

THELYPODIUM LACINIATUM (Hook.) Endl.

Dry hillsides near Osoyoos Lake, B.C., 1905, No. 70,851 (*J. M. Macoun*). New to Canada.

CARDAMINE LYALLII, S. Wats.

Shaded banks of Whipsaw Creek, nine miles west of Princeton, B.C., 1905, No. 70,839. (*J. M. Macoun*). Our only Canadian record.

LESQUERELLA DOUGLASII, S. Wats.

Similkameen River, B.C., 1877. (*Dr. G. M. Dawson*). Osoyoos Valley, B.C., 1898. (*C. de B. Green*). Meyer's Creek, west of Midway, B.C., No. 70,852. (*W. Spreadborough*). Common around Osoyoos Lake, B.C., No. 70,853. (*J. M. Macoun*).

CLEOME INTEGRIFOLIA, T. & G.

Growing beside an old stable on the bank of the Kicking Horse River at Golden, B.C., 1906. (*R. Landells*). Doubtless introduced from the prairie region.

RHODIOLA ROSEA, L.

Sedum Rhodiola, Cat. Can. Plants, vol. I, pp. 165 and 528 in part.

* The numbers given here are those under which these plants appear in the herbarium of the Geological Survey of Canada.

Our Canadian specimens of this species are all from the Atlantic coasts. Cape Chidley, Hudson Strait; Nain and Ford's Harbour, Labrador. (*Dr. R. Bell*). Port Burwell, Hudson Strait. (*Dr. L. E. Borden*). Battle Harbour, Labrador. (*Rev. A. Waghorne*). Nachvak, Labrador. (*A. P. Low*). Near mouth of Ungava River. (*W. Spreadborough*). Baddeck Falls, Cape Breton Island. (*John Macoun*). St. John Co., N.B. (*Prof. Fowler*). Magagnadavie River, N.B. (*J. Vroom*). Flowers yellowish-green.

RHODIOLA ALASKANA, Rose.

Dawson Harbour, Queen Charlotte Islands. (*Dr. G. F. Newcombe*). Leaves very pale and thin. Only Canadian record.

RHODIOLA INTEGRIFOLIA, Raf.

Sedum Rhodiola, Cat. Can. Plants, vol. I, p. 165 and 528 in part.

S. frigidum, Contr. Can. Bot. Pt. XVI.

On many of the high mountains in British Columbia. Our Rocky Mountain specimens are from Sheep Mountain, Waterton Lake; Moose Mountain, Elbow River; Cascade Mountain, Banff; Bow River Pass; Saddle Mountain, Banff. (*John Macoun*). Kananaskis. (*Dr. G. M. Dawson*). Specimens from west of the Rockies are from Old Glory Mountain near Rossland, and Tami Hy Mountain, Chilliwack Valley. (*J. M. Macoun*). Ilgachug Mountains. (*Dr. G. M. Dawson*). Flowers purple or purplish.

TILLAEASTRUM AQUATICUM (L.) Britton.

Centunculus minimus, Cat. Can. Plants, vol. II, p. 340 in part.

Tillæa simplex, Contr. Can. Bot. Pt. V.

T. Vaillantii, Contr. Can. Bot. Pt. XVI in part.

Our specimens are from Mount Stewart, Prince Edward Island, No. 8,705; Beauport, near Quebec, Que., No. 68,640; Kamloops, B.C., No. 8,706. (*John Macoun*). The only specimens of *T. Vaillantii* in our herbarium are those collected on Prince Edward Island by Mr. Churchill. Prof. Macoun's specimens referred to that species in Pt. XVI of these papers proves to be *T. aquaticum*.

POTENTILLA STRIGOSA, Pursh.

Dry soil at Lake La Hâche, Cariboo Road, B.C., 1906, No. 70,326. (*E. Wilson*). Western limit in Canada.

MERTENSIA VIRGINICA, D.C.

This species has been recorded only from Point Abino,

Lake Erie. Mr. W. C. McCalla collected it in 1897 near the bottom of the ravine of "The Twenty," Lincoln Co., Ont., Mr. J. Dearness reported it in 1902 from near Wardsville, Middlesex Co., Ont., and Prof. Macoun found it to be abundant in 1907 in Kettle Creek Valley, two miles south of St. Thomas.

LEONURUS SIBIRICUS, L.

Along the Côte des Neiges Road, near Montreal, Que., September, 1906. (*Dr. Robt. Campbell*). Only Canadian station known.

NICOTIANA LONGIFLORA, Cav.

Escaped from cultivation and naturalized at Côte des Neiges near Montreal, Que. (*Dr. Robt. Campbell*). Only Canadian record.

GALINSOGA PARVIFLORA, Cav.

Several records of the finding of this species in Ontario have been recorded in these papers, but the first record for Canada was overlooked. This was made in *The Record of Science*, Vol. VI, p. 402, by Dr. Robt. Campbell, who found it in the McGill College grounds at Montreal. Dr. Campbell writes that it is now well naturalized at Montreal, its favorite habitat being vacant uncultivated spaces between the side-walks and the fronts of houses.

PETASITES SPECIOSA, (Nutt.) Piper.

P. palmata, Macoun, Cat. Can. Plants, vol. I, 260 in part.

All our specimens from the vicinity of the Pacific Coast are this species. They are from Port Moody, Burrard Inlet, B.C., No. 14,672; Gordon Head, Vancouver Island, No. 14,671; Comox, V.I., No. 14,676, and Sooke, V.I., No. 11,596. All collected by Prof: Macoun. We have also several Alaskan specimens.

SENECIO EREMOPHILUS, Rich.

Near streams in woods between Ashcroft and Clinton, B.C., 1906. (*E. Wilson*). Not before recorded west of the Rocky Mountains.

SONCHUS ARVENSIS, L.

Near Golden, B.C., 1906. (*R. Laudells*). Our only record west of Manitoba.

ANOTHER LOCALITY FOR ERUCA SATIVA.

To Mr. Macoun's report in the October issue of THE OTTAWA NATURALIST, of the discovery of the European plant *Eruca sativa*, in two widely separated parts of Canada, I am able to add another distinct locality; namely, Preston, Waterloo County, Ontario. The plant was found in flower about the first of August, in a small field of lucerne, which had been sown in June. It was present in considerable quantity, and had been passed over as ordinary mustard (*Brassica napistrum*), until one day when I went into the field and saw it at close quarters. The habit of growth, size and superficial resemblance of leaves and flowers contribute to this similarity to mustard. A glance was sufficient, however, to show that it was something new. On endeavoring to determine the species of the plant, I found myself beaten; and all our efforts to trace it out in both American and English botanies proved futile. On October 31st I took advantage of an opportunity to show my specimens to Dr. Fletcher, Ottawa, who having just read the aforementioned report, and also having seen the plant in Europe many years ago, identified it as *Eruca*.

There are several characters by which this plant can be quite readily distinguished from wild mustard. The leaves are always more or less deeply lobed pinnately. The flowers are not quite so brightly colored, and the petals are distinctly veined with purple. When the plant has developed pods, it can be known with certainty by these. The whole upper third of the pod is a flat empty beak.

A noteworthy peculiarity about the plants which I have seen is their extreme variability, apart altogether from the influence upon them of crowding by other plants, or of any of the conditions of growth, so far as I have been able to observe. This is shown most strikingly in the leaves and pods. In some specimens the leaves are only very slightly lobed, while in others they are cut in almost to the midrib. The pods vary in shape, those on some plants being shorter and plumper than on others. Some pods, too, are nearly smooth, while those on other plants have a dense pubescence.

I have not as yet been able to learn anything definitely about the source of the seed with which this weed was introduced. It seems probable that the infestations so far known about, may have entered the country together, since the medium in each case is the same; and that there may be therefore many more to be heard from when the weed becomes known.

H. GROH.

SKUNKS AS DESTROYERS OF POULTRY. TWO PERSONAL EXPERIENCES.

BY NORMAN CRIDDLE, TREEBANK, MAN.

It is well known that skunks have a fondness for eggs as well as poultry, but of the numerous accounts that are re ated from time to time, it is difficult to secure the authenticity necessary to make them of true scientific value.

Two instances of skunks robbing poultry houses have come under my observation recently, and as both had points of interest, they may prove worthy of relating.

The first of these occurred in October two years ago, when a young skunk dug beneath the foundation of a poultry house and killed six birds by seizing them by the back of the neck close to the head, and apparently sucking a small amount of blood from each. A most interesting feature of this attack was that the brains had been eaten from every one. The animal was trapped the next night while entering the building.

The other case which was that of egg sucking occurred here last spring.

Several hens were "sitting" upon eggs in nests about a foot from the ground. The nests consisted of boxes with only the fronts open, and then were partly closed with wooden bars some three inches apart to prevent the hens leaving the eggs excepting at special hours.

On the third of May it was noticed that nine eggs had been broken open and the contents eaten, as well as three bad eggs that were not in the nest. The hen was still sitting comfortably on the nest, and had apparently not been disturbed. There was a hole beneath the foundation of the building where the animal had entered. The next night ten more eggs went, and the following night eight more, which completed the settings of two hens. All the eggs were taken from beneath the hens and eaten in the nest without any sign of the birds having been disturbed in spite of the fact that the animal had to squeeze between the bars to get into the nest. The eggs were all opened at the large end, the top being taken off as if with a knife, without damaging the other parts of the shell. The shells were found next morning round the hens—not under them—which tends to confirm the theory that the hens had not been materially disturbed, as in that case some of the shells would have almost surely been found under them.

After the above damage had been done a thorough search

was made for the robber, which was at last discovered between a snow drift and a building in a hole formed by the thawing of the snow beneath. By means of smoke and some poking (which occasioned a very strong odour) a skunk was dislodged and shot. It proved to be a female that would have shortly produced young. It was broadly striped and measured 27 inches in length, with an additional three inches of hair on the tail. The weight was seven pounds two ounces.

A VIVIPAROUS SNAKE.

On a small island one and a half miles above the Chat Falls, Ottawa River, Mr. E. E. Lemieux on October 1st last, killed a large milk snake (*Natrix sipedon*) in which he found forty-one young snakes averaging about 8 inches in length. It was killed at 10.30 in the morning when the sun was shining brightly, and when first seen was taking a sun bath quietly coiled up on a flat rock close to the river. It measured four feet from head to tip of tail. It was not skinned until the following morning, when the young snakes were of course all found to be dead. The were coiled singly and crowded together. On the morning of October 3rd—another bright day—a live young snake of exactly the same size was found under a stone near the same spot, probably one of the same family.

As this seemed a very late date at which to find the young of this snake still unborn, Dr. Leonard Stejneger, the well known herpetologist was written to and the following is his reply in part:

"This snake brings forth living young, 40–50 at a time, during the autumn. In New York the records cover a time from August 17th to September 30th. Several other snakes of similar habits are known and the births of the young often cover a much longer period. It does not seem probable that the female carries the young over to spring. In the first place I know of no record of very early births of these snakes; second, I know of no record of females having been captured while hibernating which had fully ripe embryos; third, there seems to be no good reason why the young should not go immediately into hibernation themselves; and further, even if such an abnormally late brood should perish it would mean very little in the economy of so prolific a species."

In this connection it may be said that there is no foundation in fact for the popular belief that female snakes swallow their young when danger threatens. J. M. M.

AN UNUSUAL VISITOR TO THE EXPERIMENTAL FARM.

On Friday morning, the 22nd of November, about 11 o'clock, a fine female Virginian deer suddenly made its appearance on the Experimental Farm. When first I saw it, it was bounding across the Farm, south of the Director's house. It ran forward across the main driveway towards the river road. Then turning it ran northward a few yards, then across the Farm north of the Director's house towards the poultry buildings. Here I lost track of it and saw it no more. I subsequently learned that it ran from there towards the northern boundary of the Farm, where there is a Forest Belt 65 feet wide in which it found temporary shelter. It made several attempts to get over the wire fence along the boundary of the Farm, and finally got its head entangled in the wires so that it was held fast. In making further attempts to extricate itself, it tried to leap over the fence and in doing so was much injured and was almost dead when discovered by two German women living nearby, who finally despatched the animal and took possession of it.

The occurrence of such large wild animals near cities and large towns is always interesting, and generally attracts a good deal of attention. During the previous day, in the afternoon, several shots were heard near the Farm, and it is not at all improbable that the deer was being hunted and had taken refuge over night in a part of the Forest Belt above referred to. When I saw it, it was very quick in its movements.

WM. SAUNDERS.

CHUBBS' NESTS.

In the May number of the "American Naturalist" of this year, Dr. A. W. G. Wilson presents an interesting note on the characters and location of nests made by the fishes described as Chubb (*Semotilus corporalis*, Mitchill). Dr. Wilson gives excellent illustrations of the nests themselves which attain a height of nearly four feet, and are made up of stones of various sizes. The name which the Indians give the fish in question, *Awadosi*, seems to be particularly appropriate, inasmuch as the word signifies "the stone carriers." The heaps of rocks observed and described by Dr. Wilson are rather conspicuous phenomena, and could be readily mistaken for cairns or other accumulations which have a semblance to artificial construction.

H. M. A.

MEETING OF BOTANICAL BRANCH.

The first meeting of the Botanical Branch of the Field Naturalists' Club for the season 1907–8, was held Thursday, December 5th, at the house of Rev. G. Eifrig. There were present: Messrs. Attwood, Blackadar, Campbell, Whyte, Dr. Fletcher, and the undersigned.

The chairman exhibited mounted specimens of some of our rarer plants, as *Calypso borealis*, found June 12th, 1907, plentifully near High Falls, Que.; *Gentiana crinita*, of a darker blue than most years; *Spiranthes cernua*, very luxuriant this year at the only locality where these two species are found in the vicinity of Ottawa; *Lycopodium inundatum*, *Habenaria obtusata*, *Lobelia Dortmanna*, these three from Algonquin Park, but the last found by Dr. Fletcher also, at Meech Lake, near Ottawa. *Habenaria blephariglottis* from Mer Bleue, *Lonicera hirsuta*, etc. Of the last named it was remarked that it is very rare in the Ottawa district. It was found many years ago near South March, Carleton County. It is, however, abundant at Nepigon, north of Lake Superior, and succeeds well under cultivation. It is difficult to propagate except from seed or from offsets from the roots.

The illustrated work on farm weeds by Clark, Fletcher and Criddle, recently issued by the seed commissioner's office, was examined and discussed. A copy had been kindly furnished to each member of the section by seed commissioner Clark, and all expressed unstinted praise and admiration of the way this highly practical, useful and at the same time beautiful work had been conceived and executed. The colored plates of the weeds and seeds are a revelation in their life-likeness and exactness. It is a work of which the Department of Agriculture may well be proud. All expressed their gratitude to Mr. Clark for his kindness.

Dr. Fletcher exhibited a specimen of the large and remarkable sclerotium of the *Polyporus tuberaster*. This brought to light a bit of nice original investigation successfully conducted by the Doctor. From time to time these black, hard balls, rubberlike in appearance and heavy, had been sent to the Experimental Farm from the West, with the question: What is it? They were always found several inches under ground, mostly adhering to or in the neighborhood of some roots of willows, poplars, etc. No satisfactory answer could for a long time be given, till it occurred to Dr. Fletcher to insert a notice in some western papers, asking that these things be sent to him in a fresh state. This was done and he planted several of them

and had the pleasure of finding one day a large *Polyporus* having grown from the large sclerotium below. Photographs were taken of this by Mr. Shutt. Dr. W. G. Farlow of Cambridge, Mass., had at the same time been making the same experiments, and while pictures from here were sent to him, some of his were on the way here. He determined the species as *Polyporus tuberaster*.

G. EIFRIG.

MEETING OF ENTOMOLOGICAL SOCIETY OF ONTARIO.

At the recent annual meeting of the Entomological Society of Ontario, held at Guelph, on October 31st and November 1st, the 44th since the founding of the Society, three of the local members of the Club were honoured by being elected to the executive of the Society. Dr. James Fletcher was unanimously elected President for the ensuing year, Mr. C. H. Young was appointed Director of the Society for District No. 1, and Mr. Arthur Gibson was elected as the Delegate to represent the Society at the next meeting of the Royal Society of Canada. Papers of a scientific and economic nature were presented by the above gentlemen, and also by Mr. H. H. Lyman, of Montreal, Rev. Prof. Bethune, of Guelph, and Mr. C. W. Nash, of Toronto, all members of The Ottawa Field-Naturalists' Club. In addition to papers by various contributors, two important lectures were delivered; one on "Work in Massachusetts to control the Brown-tail and Gypsy moths," by Mr. A. H. Kirkland, of Boston, who has been connected since the beginning with this work, the most extensive and successful experiment in practical entomology which has ever been attempted; and the other by Dr. E. M. Walker, of Toronto, on "Collecting and rearing Dragonflies at the Georgian Bay Biological Station in 1907." Both of these lectures were well attended and were listened to with great interest and profit by all present.

COUNCIL MEETING.

A meeting of the Council of the Ottawa Field Naturalists' Club was held on October 8th in the Normal School with the 1st Vice-President, Mr. A. E. Attwood in the chair. Members present were: Rev. Mr. Eifrig, Messrs. H. H. Pitts, A. Gibson, E. E. Lemieux, and T. E. Clarke, Miss A. L. Matthews, Miss Q. Jackson, and Miss I. Ritchie.

Mr. J. F. Power, B.A., of the Normal School staff was elected an ordinary member of the Club.

The series of fall excursions having proved so successful, it was decided to hold a sub-excursion to Britannia on October 12th, Rev. Mr. Eifrig to be in charge.

An informal discussion on the programme of soirées for the approaching winter brought out so many good suggestions that the Club may rest assured of a repetition of the success that attended the lecture programme last season.

REVIEW.

PENHALLOW, D. P., Prof. "Manual of the North American Gymnosperms." 8vo. 374 pp. Illustrated with 55 plates, &c. Ginn and Company.

In this admirable work, Prof. Penhallow, of McGill University, gives a concise account of the anatomy of the North American Gymnosperms, and a full treatment of their histological characters. The work deals with our Canadian as well as other American species, together with references to Japanese as well as Australian forms. Fossil plants referable to the Gymnosperms, which are so well-known in the extinct forests of the Coal formations of old, so far as they are being and have been studied, are included. This work is invaluable to all students of recent as well as fossil botany. There are chapters also which have a decided practical side and the economic problems involved in many instances add to the value of the work. Many interesting revelations await the reader and student who will follow the path led by Dr. Penhallow in this most valuable contribution to our knowledge of the minute structure of the Gymnosperms.

H. M. A.

THE OTTAWA FIELD-NATURALISTS' CLUB.

LECTURE PROGRAMME.

1907

Dec. 10.—General Exhibition of Specimens.

Address by Dr. J F. White.

Personal Experiences in the Field during the past season:

Dr. S. B. Sinclair, "Education and Forestry." (Illustrated).

Dr. James Fletcher, "Mountain Sprites."

Dr. H. M. Ami, "A Talk on the Centenary of the Geological Society of London."

Mr. F. T. Shutt, "Rain and Snow."

Mr. A. Halkett, "Observations in the Provinces of Alberta and Saskatchewan." (Normal School).

1908

Jan. 7.—"Some Sanitary Considerations in the Construction, Heating, and Ventilation of Dwellings." P. H. Bryce, M.D.

Report of the Zoological Branch. (Carnegie Library).

Jan. 21.—"The Honey Bee and other Bees." Dr. James Fletcher.

"The Life and Work of the Honey Bee as observed from Spring to Fall," Mr. Percy H. Selwyn.

Report of the Entomological Branch. (Carnegie Library).

Feb. 4.—"The Height-of-Land Country between the St. Lawrence and Hudson Bay Waters." (Illustrated). The President, Mr. W. J. Wilson, Ph. B.

Report of the Geological Branch. (Normal School).

Feb. 18.—"Wheat, its Improvement and Uses." Dr. Charles Saunders. (Illustrated).

Report of the Ornithological Branch. (Normal School).

Mar. 3.—"The Time and Place for Nature Study in the Public Schools," Dr. John Brittain, Macdonald College.

Report of the Botanical Branch. (Normal School).

Mar. 17.—"What is the Shamrock?" Prof. John Macoun.

ANNUAL MEETING. (Carnegie Library).

All the Lectures are Free and Open to the Public. Each Meeting will begin at 8 o'clock sharp.

The Ottawa Field-Naturalists' Club, 1907-1908

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THE RIGHT HONOURABLE EARL GREY,
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Entomology: W. H. Harrington, J. Fletcher, A. Gibson, C. H. Young, J. W. Baldwin.

Conchology: J. F. Whiteaves, F R. Latchford, J. Fletcher, S. E. O'Brien.

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Zoology: E. E. Prince, A. Halkett, W. S. Odell, E. E. Lemieux.

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