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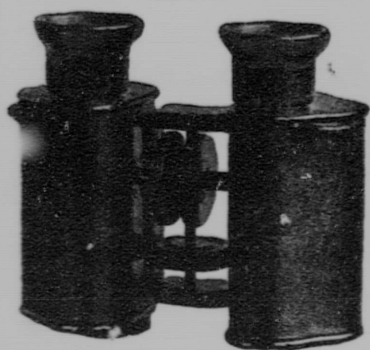
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THE OTTAWA NATURALIST.

VOL. XX.

OTTAWA, JANUARY, 1907.

No. 10

PRESIDENT'S ADDRESS.

W. J. WILSON, Ph. B.

The Ottawa Field Naturalists Club was formed I take it to study the Geology and Natural History of Ottawa and vicinity. This seems on the face of it to be a praise-worthy object, yet we are constantly met with the question—What is the good of it all? Only a few days ago I was asked if I thought it was worth while for a busy man or woman to spend his or her time in working for the Club. I naturally answered the question in the affirmative, and in the five minutes at my disposal this evening I will give some of the reasons why I think it is worth while.

It seems to me that a good knowledge of the botany of the district is in itself a good thing and the same may be said of the insects, birds, fossils, rocks and every other subject which we study. Some of these studies are of considerable economic importance. We frequently see crops in fields largely reduced in value owing to the abundance of weeds, which if the owner understood he might either destroy or largely reduce. It is a case where ignorance is not bliss. The study of the life history of insects has enabled our entomologists to point out the best and most effective way of destroying those that are injurious to plant life, and in this way have saved large sums to our farmers, gardeners and fruit growers. It is very useful to the contractor to know the quality of the rocks in his immediate neighborhood and where he can get the best material to use in the construction of buildings, etc. Now the detailed work that our members have an opportunity of doing year after year enables them to study these and kindred questions to the best advantage, and the Club has

unquestionably added materially to the sum total of our knowledge of local natural history and geology. I do not, however, wish to emphasize the material advantage particularly, as I think we are too apt to view everything in the light of dollars and cents. I believe our chief claim for the support and sympathy of the people of Ottawa rests on the much higher plain of educational work. While collecting information in regard to natural history and geology we keep in view the developing of a love of Nature Study especially among the younger members. It is not the purpose of the Club to make profound scientists of its members, but rather to lead them to observe and take an intelligent interest in the common things about them, thus giving an additional interest to every ramble through field and forest.

The name of the Club suggests its greatest usefulness, that is the field work. We are FIELD-Naturalists and our out-door excursions afford us the opportunity of doing our best work. This part of our work has often been referred to, but it cannot be too frequently reiterated. It is now generally recognized by colleges and educational institutions that the study of Nature from text books alone is useless, and many of them have gone to great expense to fit out laboratories in which the most practical instruction is given by bringing the student and the thing he studies directly together. This is what we do in our field-excursions. Those who join these excursions have an opportunity of studying the objects as they occur in nature and are led by suggestion rather than direct statement to find out all they can about them. The pleasure derived from the study of natural history objects is real and lasting. For instance, the sight of a plant will recall the first time you found it, and the time when book in hand you sat down and studied it till you found out its name, and all you could learn about it. Every season as you see it again it is like meeting an old friend.

Another important benefit the Club offers its members is the stimulus afforded by associating with those engaged in similar work. It requires a great supply of energy, enthusiasm and love for a study to keep on plodding along year after year. We have all seen students start out in the most commendable way and do good work for a short time; then the novelty having worn off

they began to tire of it, and soon if left to themselves drop it altogether. The Club in its special meetings of branches, soirees and excursions supplies the very thing that is needed in such a case and keeps up the interest till the work becomes a habit hard to break away from. I am quite sure with many members such a habit has been formed and it would be a difficult matter to keep them from following their favourite studies. These are some of the reasons why I think we are amply repaid for any work we do for the Club. People have of course the right to criticize our actions and ask such questions as I referred to at the beginning, and these criticisms and questions are no doubt productive of good.

If time permitted I would like to enlarge on some of the work that might be profitably taken up by the Club, but I will only say that no one need think that all the information possible has been gleaned in any one subject. Those best acquainted with the district will tell you that the opportunity of finding an abundance of new material at least in some branches, is almost as good as ever, and an exhaustive study of these offers a splendid field for our younger members.

In conclusion I wish to acknowledge the Club's indebtedness to the citizens of Ottawa for the generous support they have at all times given it.

A new edition of Prof. John Macoun's Catalogue of Canadian Birds is now being got ready for the press by the author. This edition will be published in one volume instead of in three parts as before, and the author will incorporate in the new edition any notes on extension of range, breeding habits, etc., that may be sent him.

DESCRIPTION OF *EUPITHECIA FLETCHERATA*, A
GEOMETRID MOTH FROM OTTAWA,
NEW TO SCIENCE.

By GEO. W. TAYLOR, Wellington, B.C.

This moth is one of many interesting Geometridæ that have been sent to me by Mr. C. H. Young, and I propose to describe it as a new species in the NATURALIST in order that the attention of the Ottawa entomologists may be directed to it, and that the record of Mr. Young's success as a collector of rare species of Geometridæ may stimulate others to activity in this somewhat neglected field. The Ottawa list in this family is growing apace by reason of Mr. Young's industry, and every box he sends me contains some surprise in the shape of species that have not before been taken in the district.

EUPITHECIA FLETCHERATA, n. sp.

This is one of the broad-winged, medium-sized species of *Eupithecia*, in wing shape much like *Eupithecia latipennis* Hulst (which is quite common in Ottawa in the month of June), but is a trifle smaller. Expanse, 21 mm.

Palpi of moderate length, rather bushy, very dark (nearly black), with the extreme tips white. Front dark grey, with a fine black transverse line in front of the base of the antennæ.

Thorax grey, darker in front; a small white posterior tuft. Abdomen dark smoky grey; last segment darker, but in the male with a tuft of snow-white hairs seen only when the last segment is exerted; dorsal tufts black; a black lateral line.

Beneath, the pectus is white; the abdomen pale except the last segment which is dark grey; the legs are pale, except the tibiæ and tarsi of the 1st pair, which are dark with pale rings. Fore wings rather dark grey, with blackish cross lines enlarged on the costal margin.

The basal and intradiscal lines, with at least two intervening lines, are parallel to each other; they leave the costa at a sharp angle, turning at right angles when they reach the cell and running in an almost straight line to the inner margin; they are all farther from the base at the inner margin than at the costa.

The median line, which is double, takes much the same direction, including in its angle the distinct, oval, black, discal spot, and continuing in a wavy line to the inner margin.

The extra discal line appears as a large black blotch on the costa; it then runs in a regular outward curve to vein 3, then parallel to the median line to the inner margin; this line is emphasized by a series of eight black dashes on the veins.

Between the extra-discal and the submarginal lines are three dark lines, showing only as spots on the costa.

The submarginal line is faint, white, showing most plainly in a white dot between veins 3 and 4, and another between 1 and 2. Marginal line faint, black, broken at the veins. Fringe, basal half darker; dusky spots at the ends of the veins.

Hind-wings dark grey; the lines indistinct, but apparently all the lines of the fore wings are continuous, the most evident being the extra-discal and the submarginal; the first-named consists of black dashes on the veins (as on the fore wing) and so appears broader than the other lines.

Discal dot black, distinct. Fringe as on the fore wings. Beneath, fore wings bright grey. Costa with black marks showing the commencements of basal, median and extra-discal lines, and with another dark blotch in advance of the faint white submarginal line.

The extra-discal line and a dark shade beyond it are traceable across the wing to the inner margin, but the other lines can only be followed for a very short distance from the costa.

Marginal line distinct; base of fringe pale, otherwise as above.

Hind wings pale with 3 intra-discal lines marked on the costa and again on the inner margin.

There are also 2 extra-discal lines composed of distinct dots on the veins.

The outermost of these is parallel to the outer margin; the other runs in a straight line from the inner margin, in the direction of the discal dot, to vein 3, then in a regular curve to the costa. These two lines are therefore not parallel, being rather close together on the costa and farthest apart on vein 3. This is a peculiarity that I have not noticed in any other eastern *Eupithecia*.

Three or four dots on the veins indicate another line between the two just mentioned.

Discal dots distinct on all wings.

Described from two specimens collected by Mr. C. H. Young and labelled respectively Ottawa 3. viii. 06 and 10. ix. 06, and named in honor of Dr. James Fletcher, of Ottawa.

One of these specimens is in my cabinet, thanks to the generosity of Mr. Young, the other is retained in his own collection.

ENTOMOLOGICAL BRANCH.

The first winter meeting (1906-07) of the Entomological Branch was held at Dr. Fletcher's house at the Experimental Farm, on the evening of the 7th November; six present.

The Chairman suggested that the same plan of managing the meetings as had been followed in previous seasons should again be adopted this year, viz: asking each member present to speak for a short time, either upon specimens brought for exhibition or upon work done during the past season.

Mr. Arthur Gibson exhibited the cases of Tiger Moths of the genus *Apantesis* in the Experimental Farm collection, drawing attention to the rarer species and giving notes on the life-histories of many which he had reared from the egg. Twenty-six different species and varieties from all parts of Canada were included in this collection.

Mr. Andrew Halkett showed specimens of *Aleyrodes vaporariorum* an insect allied to the plant lice but with the appearance of very minute moths. This insect has been exceptionally abundant and destructive to garden plants during the past season. Dr. Fletcher stated that it had been sent in from many parts of Canada and had been particularly troublesome in gardens where bedding plants which had been propagated in greenhouses were used. Specimens had been received from Edmonton, Port Arthur and many places in Ontario, and also from Montreal.

Mr. J. W. Baldwin showed a box of noctuid moths which were selected from a collection he had made at sugar on two nights at Graham's Bay, Britannia. Among the most interesting were a

nice variety of *Paragrotis ochrogaster*, *Xylina signosa*, *Hadena modica* and a very handsome specimen of *Bomolocha baltimoralis*.

Mr. W. H. Harrington spoke of some insects observed during the season. He had noticed specimens of *Heodes hypophleas* flying at Meach Lake in the last week in October. He also described and enquired if any other members had noticed a large pocket gall on the upper side of the leaves of the American Hornbeam. No one present had seen this gall.

Mr. C. H. Young reported that he had also noticed a late occurrence of the small Copper referred to by Mr. Harrington and that he had also found the larvæ of *Feniseca tarquinius* and of a *Syrphus* fly feeding on the Woolly Aphis of the Alder on Oct. 3rd last.

Dr. Fletcher showed some insects from the Holy Land and again referred to late occurrences of insects. He had a brood of the larvæ of *Euclyptus antiochia*, which he had collected in the Arboretum of the Experimental Farm on the 27th Oct. The larvæ were on a willow tree most of the leaves of which had been frozen, and they were themselves much numbed by the cold at the time they were collected, the thermometer being almost at freezing point, and there had been several sharp frosts some nights before. Specimens were also shown of the Asparagus Beetle reared from larvæ collected this year for the first time at Ottawa. Several were found late in the season at the Experimental Farm, the beetles emerging Oct 30.

Mr. Halkett spoke of seeing the Tiger Swallow-tail in enormous numbers up the St. Agathe line of the C. P. R. early in June. He also spoke of the remarkable abundance of *Rheumaptera hastata* during the past season, and also of *Pteromalus puparum*, the parasite of the White Cabbage Butterfly, in pupæ found at Picton, Ont. These occurrences were discussed fully by those present.

Dr. Fletcher showed three fine cases of *Plusias* belonging to the Entomological Division and drew attention to those of rarest occurrence. He also exhibited Dr. Folsom's "Entomology" and spoke of it in flattering terms. The value of Dr. Smith's "Glossary of Entomological Terms" was also pointed out.

J. F.

Meeting held at Mr. Gibson's on 20th November, eight members present, including Mr. T. N. Willing, of Regina, Naturalist to the Province of Saskatchewan.

The minutes of the previous meeting were read.

Mr. Halkett showed a specimen of *Dytiscus harrisii*, female, which he had kept alive for some time in an aquarium.

Mr. Harrington exhibited a collection of the most striking local species of *Dytiscus* as well as some rare species of *Coleoptera* from Vancouver Island, including *Calopus aspersus*, *Chariessa elegans*, *Buprestis adjecta* and *Ischalia vancouverensis*.

Mr. Young showed a beautiful collection of micro-lepidoptera of over 2,000 specimens, nearly 200 of which had already been named by Mr. Kearfott, and which included several species new to science. The remarkable neatness and skill shown in mounting were much admired by all present.

Mr. T. N. Willing spoke of the work which is being done in natural history in the North-west Territories and of his efforts to establish at Regina reference collections. Considerable progress had already been made and he hoped that in the near future much more would be done than had been possible in the past. Mr. Willing showed several boxes of insects which he had taken in the West. Insects injurious to crops were not as yet very noticeable in the West, but with the increase of mixed farming and with more land under cultivation these would doubtless appear.

Mr. Baldwin showed a neat cabinet case which he had made himself, including the compressed cork. This was well filled with a fine series of *Catocalas*, and other moths taken at sugar at Graham's Bay, Britannia. The specimens were in perfect condition, and no less than 34 good specimens were taken covering six species of *Catocala*.

Mr. Metcalfe told of his experience in using the floating water net for aquatic insects, which had been very unsatisfactory.

Dr. Fletcher showed a sample of flour badly infested by the beetles and larvæ of *Plinus fur*. This is an occasional pest only of cereal foods but had been sent in three times this autumn. He spoke of the destruction of the seeds of the Silver Maple by a small Nitidulid, *Epurca rufa*, which had been very abundant at

Ottawa last spring, every seed containing over a dozen of the larvæ. A fine melanic *Bombus* from the West was shown, but the species could not be recognized. Specimens of *Galeruca externa*, collected by Mr. Norman Criddle at Aweme, Man., were also shown.

Mr. Gibson showed an inflate of the larva of *Ecpantheria deflorata* which had been found feeding on violets at Niagara Glen, Ont., by Mr. J. B. Williams, of Toronto, and also exhibited samples of currants and walnuts infested by the larvæ of *Plodia interpunctella*.

A. G.

INFUSORIAL EARTH NEAR LAKE WINDEMERE, B.C.

At a meeting of the Natural History Society of British Columbia held at Victoria, on the 19th November, Mr. Anderson exhibited specimens of infusorial earth taken from beneath the surface soil of a dried-up lake about three miles west of Lake Windemere. Prof. Shutt and he were asked last September, whilst travelling through the Upper Columbia Valley, to visit the place which is owned by a Mr. Ellis and partner. On reaching the place, it was found to be in a long valley the lower end of which was shut off by a natural dyke some twenty feet in height, and from forty to fifty feet wide at its base. The extinct lake was immediately above the dyke, fifteen to twenty acres in extent, the valley containing some six hundred acres, they were told. The lake site from all appearances, had been comparatively recently covered with water, as the surface was thickly covered with water plants resembling moss, probably a species of *Myriophyllum*, in a semi-dried state. Ploughing had been attempted, but owing to the nature of the plants alluded to, it was found impossible to do so; discing was then tried, but with equally poor success. On account of the damp state of the vegetation, burning was also found to be impracticable. Mr. Ellis expressed the belief that only way to get rid of the trouble was to rake it all up and stack it. Interspersed amongst the vegetation, and covering the ground,

and to a depth of at least six feet, were fresh water shells innumerable, of all sizes, such as are to be seen in the specimens exhibited. Mr. Ellis had dug down for about six feet, but realizing that there was a danger of striking a subterranean water course which might rise and inundate the land, he desisted. Flowing into the valley and past Mr. Ellis' house, is a small stream which loses itself lower down, but reappears some distance below the natural dam alluded to. The land below the dam is considerably lower than it is on the upper side, giving a good opportunity for drainage, so Mr. Ellis and his partner are running a tunnel through the dyke in order to ensure safety against possible flooding; a very wise precaution. Crops of different kinds had been attempted on parts of the land; some parts gave good results whilst others showed acidity. There was a rank growth of weeds belonging to the *Cenopodium* family, growing on portions of the site of the lake. Oats in places grew rank but the straw showed lack of phosphoric acid and potash and were in patches quite stunted. It was reported that within the memory of some of the inhabitants in the vicinity the lake site had been covered with water but of that no definite information was obtainable.

Among the most recent additions to the library of the Geological Survey is the "Nature Library" in ten volumes. This great work published by Doubleday, Page & Co., covers the whole natural history field, and though perhaps to be classed among "popular" rather than "scientific" books, every volume has been written and edited by a specialist.

NATURE STUDY, No. XL.

MANUAL TRAINING—THE MECHANICAL HOBBY.

By MARK G. MCELHINNEY, L.D.S., D.D.S., Ottawa.

What appears to be a reasonable definition of the word Hobby is, a pursuit followed for its own sake, a result of certain mental activities requiring expansion. Upon the ordinary pursuit become a hobby, there falls the spirit of art—work for the work's sake and the reward to the soul of the worker. To hobbies may be traced many great inventions and not a few of our most useful institutions. The very use of the term as indicating an enthusiastic devotion to one subject instead of a perfunctory performance of daily duty is a keynote to the whole subject. It is only when a pursuit becomes a hobby that it develops beyond the level of mediocrity. There is nothing to prevent one's hobby and one's vocation from being identical, or to their running on parallel lines. Happy is he whose vocation and hobby are inter-relative, because knowledge gained in one may be applied to the betterment of the other. Every successful man has his hobby; the individual that cannot become enthusiastic on some one subject in life is never likely to rise above the average in anything. Even the enthusiasm apparently wasted in a thoroughly unpractical hobby is not really lost, for the data accumulated in its cause may become available for many purposes. The introduction of Manual Training to our educational system is a happy indication that we are awaking to the fact that our methods in the past have been one-sided. The old methods overlooked one of the most important of faculties, that which contains the incentive to *do* things. It is good to know things—it is better to be able to do things. While to know may produce a useless pedant—to be able to do develops a thinking and self-reliant character.

Under our methods of education, manual labour has fallen somewhat into disrepute. There has been too great a rush into professional and commercial life, because, to put it plainly, the trades are not considered so respectable, and the greatest ambi-

tion of the mediocre intellect is to be thought respectable—at any cost.

Why it should be thought more honourable to draw a plan for laying bricks than to lay them; why the carpenter and the machinist should be considered less honorable than the physician and the lawyer, is hard to understand, except as an effect of false education.

In 1880 William Morris, the best pupil of John Ruskin, and himself an Oxford man, said: "We no longer believe in a class that is called, or set apart. Every man has a divine call to make himself useful to his fellows and the hallucination that some are called to do nothing but give advice, will soon fade away. Industrial education is both moral and spiritual. The man who fails to use his body every day in a certain amount of manual labor is a menace to the State and a danger to his inmost self. Safety lies in a just balance between head and hand."

To show how hopeful is our cause, tokening as it does that reform will come from within, I quote President Eliot, who recently said in a speech before the Independent Club of Buffalo: "I shall never be satisfied until one half the curriculum at Harvard is devoted to doing things instead of talking about them."

The introduction of manual training into our schools will do much toward the restoration of the dignity of labour. It is not the duty to be performed that should measure the standing of an occupation but rather the manner in which the duty is performed. Here is where the ethical value of a mechanical hobby applies. It has accomplished for individuals here and there what manual training endeavors to do for the numbers. It stimulates the individual to attain excellence for its own sake and such an effort cannot fail to be reflected in his regular vocation.

The growth of the Mechanical Hobby during the past 20 years has been rapid and widespread, as is well illustrated by the fact that formerly tools and materials for amateurs were few and expensive, while to-day dealers in such supplies are numerous and make special efforts to cater to the requirements of the amateur. To-day everything the amateur requires can be obtained quickly and cheaply in any city.

Professional men and men in sedentary occupations are the principal buyers, and the result must be that there shall be a drawing together of the various classes and the formation of a bond of sympathy between them which cannot fail to benefit both.

The handicraftsman shall reap a value in respect and consideration and progress made in the direction of that goal toward which Tolstoi looks so earnestly. However little I may regard Tolstoi the mystic, I have a large respect for Tolstoi the humanitarian.

It has been said that the Mechanical Hobby trains the faculty of observation and stimulates the desire for knowledge, and I am convinced that the reason for the poor work turned out by the average artizan is not so much low wages and the desire for cheap goods on the part of the public as it is to carelessness on the part of the workman.

The workman who studies carefully the requirements and observes closely the best examples of work done in his own line cannot fail to improve as a workman and will succeed proportionately.

The workman who can and does turn out the best that is in him can always find those who are willing and able to pay for his product.

The Mechanical Hobby is a quiet but powerful spirit working out the salvation of character and opposed strongly to the prevailing commercialism which is madly given to measuring all things, even men, by the sordid standard of dollars and cents.

In hundreds of factories, thousands of workmen turn out tens of thousands of chairs daily.

Down in his cellar or up in his garret or out in his woodshed the Amateur Mechanic will make an oak chair in six months, working at odd moments, putting his time, his labour, his thought, his individual self into that chair.

He knows each piece of wood, each joint, each screw—yes each scratch that refused so stubbornly to be rubbed out.

What are the tens of thousands of factory-made chairs alongside of this one?

It may be inferior, it may be wholly execrable—it matters not. The valuable element lies in the spirit in which the work was done.

The workman is bettered by the effort—his ultimate product may be a masterpiece.

This is the true inwardness of the Constructive Hobby.

Carpentry is one of the primitive arts and although the earliest implements that have come down to us are of stone and bronze, I believe that their survival is due to the permanent nature of their material and that wooden implements were made in times long preceding those of stone and bronze.

The first primeval savage who made anything, probably fashioned a war-club.

He looked at the product with pride, repeated that formula still so dear to the amateur "I made that myself", and immediately the real ascent of man began.

The next time that savage looked about him, things took on a new aspect and the design argument was born.

Of course the reasoning of this primeval man was founded upon a fallacy—he had created nothing, simply changed the form and the making of the club was as natural a part of the evolution of man as the putting forth of a bud is of the growth of a tree but he was some thousands of years in finding that out. What we are thankful for is that he did something and endeavored to find a reason and was no longer a beast on all-fours.

Carlyle defines man as the "tool-using animal." The great phrase maker discovered a greater truth.

The history of the use of tools is the history of the material progress of the race, and only under conditions of satisfactory material progress can the intellectual and ethical developments reach their highest attainments.

Carpentry is an art which has reached a most useful and beautiful development.

The tools required are comparatively few and inexpensive, and as a Hobby it well repays its votaries.

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