

Entomological Department.

Annual Address of the President of the Entomological Society of Ontario, 1873.

To the members of the Entomological Society of Ontario

GENTLEMEN,—Ten years have now gone by since a few of us met at the house of Professor Croft, in Toronto, and organized this Society. We commenced with less than five and twenty members, and now our Secretary informs us that we have over three hundred names upon our roll. A twelve-fold increase in a decade of years is certainly an evidence of progress upon which we may well congratulate ourselves, and which ought assuredly to stimulate all our members to use their utmost exertions for the maintenance and improvement of the Society. Those of us who from year to year have been entrusted by you with positions of office and duty in the Society, cannot but feel that it is for the best interest of our institution that more of its members should be led to take an active part in its work, and thus secure more efficiency in all our departments, and more certainty of a permanent development of all our operations. Hitherto the work has fallen upon a few of us, and we have endeavored to perform it as efficiently and heartily as we can, but we find that year after year our own professional and other duties make increased demands upon our time and attention, so that with all the desire in the world to devote ourselves to our favorite branch of Natural Science and the operations of the Entomological Society, we are unable to do so to the same extent as in earlier years. On this account—not from any diminution of zeal and interest on our own part—we are most anxious that more of you should take your share in the work and aid us in maintaining unimpaired the good reputation that the Society has already achieved. Each one, we are sure, can do something, and the united efforts of us all must assuredly be productive of satisfactory and permanent results.

Our sister Society—the Fruit Growers Association of Ontario—we rejoice to see is rapidly growing in public appreciation and favor, its members' list of over 3000 names, its well-attended meetings in various parts of the country, its judicious distributions of fruit for experimental purposes, and the vigor and zeal of its executive, are all matters upon which we may well congratulate its President, Directors and Members. That it may go on and prosper, and extend its work throughout our land, till every resident in the Dominion enjoys the fruit of his own vine and his own fruit tree, is our most hearty aspiration.

During the past year but little has occurred in an Entomological point of view that calls for especial notice on this occasion. A year ago I ventured to call your attention to the subject of Specific and Generic Nomenclature, which has been so unpleasantly exciting the minds of entomologists both here and almost everywhere else. My remarks, I was gratified to find, elicited a good deal of discussion in the pages of the *Canadian Entomologist*, and brought forth a very able paper upon the subject from the pen of Mr. W. H. Edwards, of West Virginia. The question, however, has by no means yet been set at rest and will no doubt continue to exercise us all for some time to come. At the Dubuque Meeting of the American Association for the Advancement of Science, a sub-section of Entomology was formed, and a committee of its adherents specially appointed to consider and report upon a series of rules upon nomenclature. Unhappily, owing to various circumstances, no report was drawn up, though I must in justice state, that my friend Mr. C. V. Riley, of St. Louis, took a great deal of pains to elicit the views of the members and to draw up some conclusions from them. Last month, at the Portland meeting of the Association—which, to my very great disappointment, unavoidable engagements prevented me from attending—a new committee was appointed to re-consider the subject, and we trust that some definite rules will have been decided upon by its members before the meeting of next year at Hartford, Con.

You will all, I have no doubt, be gratified to learn that, upon the suggestion of the sub-section of Entomology, the American Association unanimously passed a resolution inviting our Entomological Society of Ontario, as well as the American Entomological Society, to hold a general meeting of our members at Hart-

ford next year during their annual session. I trust that this invitation will be cordially accepted and that a large number of us may there meet our American friends and enlarge and strengthen those cordial feelings of scientific brotherhood which have so long pleasantly existed between us. I may add, as a notable token of the estimation in which our branch of science is now held, that the Association will meet next year under the presidency of our ablest American Entomologist—Dr. J. L. Leconte, of Philadelphia.

You have already heard from our Secretary-Treasurer's Report the satisfactory condition of our finances and other business matters; I need not therefore trespass further upon your patience and attention. Heartily thanking you, gentlemen, for your kindness towards myself and my colleagues during our term of office, and for the honor which you have conferred upon me by calling me to preside over you.

I have the honor to remain, with the best wishes for the advancement and prosperity of the Society,

Your humble and obedient servant,

CHARLES J. S. BETHUNE,

Pres. of Entomological Society of Ont.

Trinity College School, Port Hope, Sept., 1873.

Gizzards of Insects.

Everyone knows that turkeys, fowls, geese and many other birds that take their food by the peck, are supplied with gizzards, and that such birds swallow grains of sand, small pebbles, and other hard substances with their food. The action of the gizzard upon this mixture may be easily understood; the hard substances are made to do the duty of teeth, by crushing and grinding the softer ones to a pulp, so that teeth in the mouth of a fowl would be out of place. Many who know all this may not be aware that several insects have gizzards too, and still more wonderful. The gizzards of insects are much more complicated affairs than those of birds. If the gizzard of a cricket be laid open, it will be found lined with rows of formidable teeth—a good substitute, you will say, for the sand and pebbles taken into the gizzards of birds at every meal; and as these teeth are permanent, they no doubt save the possessor of them a vast deal of trouble, unless indeed the cricket should ever be subject to the toothache. The gizzards of insects are not all alike; some are lined with teeth, some with plates, some with horns, and some with bristles, but in every instance the apparatus is a very wonderful one. In a pretty little beetle not uncommon in some localities, and with a name much longer, perhaps, than the longest to be found in the register, the gizzard is about the size of a common pin's head, and is armed with more than 400 teeth; imagine what the number of muscles must be to set all this machinery in motion, and keep up its action upon the food. In some species it amounts to many thousands.

SCALE OF HAWK MOTH.—However much we may have differed from each other in the character of our pursuits through life, one experiment we have nearly all of us tried in our tender years and failed in—I mean that of catching a butterfly or moth on the wing without rubbing off a quantity of fine powder from its body and wings. In light colored moths this powder is so much like fine flour or meal that it is probably from this circumstance that they get the name of "millers." Place a single particle of this fine powder from the wing of the hawk moth under the microscope. It is not much unlike a feather, with a stem at one end, as if it were made to fit into a socket; and so it really did when it was in use. In butterflies and moths (even the little pest that takes such unwarrantable liberties with our boas and muffs) thousands of these sockets may be found on both sides of each wing, and they are so arranged that the scales that are planted in them lie in very regular rows, each row overlapping a portion of the next, like tiles on the roof of a house. All the colors and beautiful markings on the wings of these insects are entirely owing to the different colors of the scales themselves; and if these are brushed off, the socketed surface in which they were planted will be as nearly colorless as a fly's wing. The fine dust, then, that glistens on your thumb and finger when you have rudely held a butterfly's wing between them, is a pinch of beautiful scales of curious forms and many different colors, and in a few insects these scales, when examined in a proper light through the microscope, are so inconceivably dazzling and beautiful, that they are not to be surpassed by the most brilliant clusters of precious stones in anything but size and value.—*H., in The Field.*

Miscellaneous.

Boot-Blacks.

Englishmen visiting this country are apt to forget that servant-girls refuse to perform several services devolving upon them in the old country. Cleaning boots is one of these. In England the master of a house where even only one servant it kept sends his boots to the kitchen every morning to be cleaned, and if he comes to the United States he naturally supposes the same office will be done for him by the same hand. When the Rev. Newman Hall was in Oberlin, the guest of President Fairchild, on the morning after his arrival sent his boots below for an obvious purpose. They were not returned to him when the bell called him to the breakfast room, and he appeared in his toilet slippers. Pres. Fairchild noticed this, and he also noticed a pair of strange boots in a strange place. He would probably have as soon thought of asking the kitchen-maid to verify a quotation for him as to black his visitor's boots, and so he blacked them himself. The Oberlin Times in narrating this anecdote, divertingly adds:—"This is only another circumstance confirming the truth that no man, whether his station be high or low, ever comes to Oberlin but that in departing he carries with him, in some form or other, more or less of the native polish of the place"—*Farm Journal.*

DISCARDED PAPERS.—Here is a hint for Young Men's Christian Associations.—Most American travellers throw away much of their reading matter at their journey's end. But in England, at each station can be found a box fastened up, very similar to our letter boxes, into which the traveller puts his papers, books, etc. These are, in turn, collected by men, who carry them to hospitals, homes for old men and women, and similar institutions, where they are gladly received.

DANGER FROM WET CLOTHES.—Few persons understand fully the reason why wet clothes exert such a chilling influence. It is simply this. Water, when it evaporates, carries off an enormous amount of heat in what is called the latent form. One pound of water in vapor contains as much heat as nine or ten pounds of liquid water, and all this heat must, of course, be taken from the body. If our clothes are moistened with three pounds of water—that is, if by wetting they are rendered three pounds heavier—these three pounds will, in drying, carry off as much heat as would raise three gallons of ice-cold water to the boiling point. No wonder damp clothes chill us.

Advertisements.

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