

TALKS ON INSECTS.

UNDER THE PATRONAGE OF PROF. FLETCHER, THE
DOMINION ENTOMOLOGIST.

BY W. HAGUE HARRINGTON. -NO. I.

"He prayeth best who loveth best
all things both great and small."

Well my dear young friends, it has been decided that we are to have a regular department for the study of insects. Oh! some of you will exclaim, there will be no fun in reading about insects; those horrid flies and mosquitoes are all nasty little pests, and we are sure that there is nothing of much interest or value to learn about such tiny things. Wait a moment my young grumblers. You have surely forgotten the exquisite butterflies with their jewelled wings; the beetles with their curious forms and markings; the ants in their underground dwellings; the bees gathering nectar from the blossomed fields; the fierce dragon flies darting swiftly upon their prey; the grasshoppers fiddling in the hot sun, and many other forms of no less interest.

Do you not think that you would care to know more about all these; to find out how they are formed; where they live and what they feed upon, and what good or evil service they may render us? There are many thousands of them to be found in this glorious Canada, which stretches its vast form from the Atlantic to the Pacific, and northward to the Pole; which contains such mighty lakes and rivers and mountains; such boundless forests and prairies, and so many pleasant peaceful vales and fruitful plains. Some kinds of insects may be found over almost the whole of this enormous territory, but the majority have a less extensive range, and some are confined to limited areas.

Of some the life histories are fully known to us, but of a greater number little or nothing is known, but these, with the help of our young friends, we hope to become gradually familiar with. When you get started in your observations and begin to know some of these six-footed pigmies you will become so enchanted by the study of them, that you will ever after find them a source of great pleasure, and you will wonder how others can be so blind to their manifold attractions, or so abusive of them. Certainly there are a few that annoy us occasionally with their tiny sharp and poisoned darts, as the African pigmies worried Capt. Stairs and his companions in their toilsome march through the Dark Continent, but when we further look into these we will find that they have many redeeming qualities, and that some of them do us far more good than ill.

The division of natural history which deals with insect life has received the name Entomology, a term made up from the two Greek words *entomon*, an insect, and *logos*, a discourse. It means simply then a talk upon insects, and in our talks we hope to make the subject so simple that the youngest listener may understand and be interested. At the same time it will be our aim to treat every topic in such an exact manner that our statements may always be relied upon, for it is found in looking over some of the periodicals for young people that the articles which they occasionally insert on insects are frequently vague in their descriptions and incorrect in many of their details; apparently they are prepared by writers who have not made a special study of the subject, and who have thus made some mistakes.

We shall have many drawings to make our descriptions clearer, and we will tell you how the creeping

caterpillar grows into the soaring butterfly; how the ants manage their homes and herd their tiny cattle; how the hideous and voracious water monsters become the dragon flies that flash through the pastures; how the grubs, which bore and tunnel in the tree trunks, change to the long-horned beetles which gather on the blossoms; how the mosquito comes from the pools, and how the house-fly lives and dies. There will be no lack of subjects to talk about, and we hope you will add to our list by sending insects and by asking about any forms that may specially interest you.

Perhaps some of you are asking "What are insects?" and we may conveniently close this first talk by a few words in reply to this supposed question. The word Insect comes from the Latin *insectum*, which, like the Greek *entomon*, signifies "cut into," because the portions of the body known as the head, throat and abdomen are so distinct; indeed the body of some insects, for example as the wasp, are cut almost into three parts. The head bears the eyes and mouth-parts, and also a pair of feelers called antennæ, or horns, which in some beetles attain a great length, and which in some insects are very strangely shaped. The throat, or chest, in the typical insect, bears three pairs of legs and two pairs of wings. In beetles the front pair of wings is modified to form covers for the hinder pair, while in flies the hinder pair are replaced by two minute appendages known as ballancers. In low forms such as the flea, and the scale-insects, the wings are all wanting, while in the butterflies and moths they attain their greatest size and magnificence.

There are usually four well-marked stages in the life of an insect;—the Egg, which, though small, is often a very curious and beautiful object; the Larva, which, as a grub or caterpillar, hatches from the egg, and which is always a voracious and often a destructive creature; the Pupa, or chrysalis, which is a state of apparent sleep, but during which the ugly caterpillar is changing to the gorgeous butterfly, the soft grub to the busy bee, or the wriggling maggot to the restless fly. The perfect insect is known as the Imago, (a Latin word for image) and the life in this final stage is often brief in comparison with the duration of the larval one.

In addition to the true six-footed insects, there are others that are like them such as the spiders and hundred-legs, which in our talks we will call insects. These have no wings, but have additional legs, and their bodies are not divided into three strongly marked parts, nor have they four different stages of growth.

Entomology means more than the mere collecting of insects, and we wish to urge on you the importance of studying it in the true scientific spirit, that is the spirit of careful observation. Go into the garden and into the fields, and find out for yourselves what the insects are doing and then in a very short time you will be more truly entomologists than if you were merely to gather a large collection of insects of whose habits you know nothing. Our next talk will be on how to collect and preserve specimens; after which we will begin to tell of some of our common and curious insects, and later you will hear simple explanations of the way in which the bodies of insects are made, and how the many different kinds are distinguished, and arranged in order.

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AWKWARD FOR JONES. -Enfant Terrible—"Please Mr. Jones, are you a cannibal?" Jones—"No, my dear. Why do you ask?" Enfant Terrible—"Why, I thought you must be a cannibal, because I heard mamma tell papa that you live on your wife's relations."