

Importance of
the Commit-
tee's work.

mentioned, and the newspapers all over the country have been always most courteous, and have published promptly any letters or suggestions that I have found it advisable to put forth, and thus I have been able to relieve many farmers whose crops were being injured. But I know of no better means of disseminating information than are afforded by this Committee, whose members pay especial attention to agricultural questions, and who, coming from all parts of the Dominion, are through their constituents brought into contact with a large number of men who are specially concerned in the results of our experience and observation.

Classification
of insect pests.

The first and most important part of my work, and that to which I shall, probably, devote the whole of my attention, before long, is Entomology. The two divisions, Entomology and Botany, have now become so large that they each require, the attention of one man. In the beginning of this season I applied to the Honourable Minister of Agriculture to be allowed to issue bulletins regarding the most injurious insects and fungous diseases of plants, which farmers have to contend with,* and shortly afterwards issued a bulletin in which I treated of the insects which had been most frequently complained of by my correspondents. In speaking of the various injurious insects, it is convenient to divide them under three heads—first-class, second-class and third-class pests. The first-class pests are those that every farmer should know something about. They are the most frequent and destructive, and should he lack the knowledge or be unable to apply the remedy he is apt to lose a large proportion of his crop every year. In the second class are those that, while they are injurious when they occur, do not occur every year, and whose multiplication is due to exceptional circumstances. The third-class embraces those which seldom occur in large numbers and do not occasion severe loss. Now, it is not necessary for the agriculturist to direct attention to the whole of these, and I should say that there are only about fifty insects that the farmer need bother his head about. In this bulletin, copies of which I have placed on the table, are given the general rules upon which we apply remedies to check the ravages of injurious insects. Everybody must recognize the enormous damage that some of the most important crops of our country sustain through the injuries of insects; but everybody does not know that the remedies for these injuries are simple and can be easily applied. Systematic observation and study have taught us that the injuries are done in two ways—either by the insect consuming the substance of the plant, or by the juice being sucked out of it and the plant thus left to wither. These two kinds of injuries are due to the fact that the mouth parts of insects are either in the form of biting jaws or of a hollow tube. Those possessing the first kind of mouth parts masticate solid food, while the others subsist upon liquids as sap. The remedies for these two classes of insects are quite different, and this shows the great importance of knowing the life history of insect enemies. As an illustration of this fact, here is an insect which has been brought here this morning by a member, to be identified. It is the American silk worm moth, (*Telea Polyphemus*). Now, if this were submitted to an Economic Entomologist as an injurious insect, and he did not know its life history, it would give him food for thought, and it is such as these we must make use of for experimental purposes. Here is an insect which

Biting insects.
Suckling in-
sects.

A knowledge
of life history,
necessary for
successful
treatment.

*The bulletin referred to here and in pages following is Central Experimental Farm Bulletin, No. 11, intitled: "Recommendations for the prevention of damage by some Common Insects of the Farm, the Orchard, and the Garden," by James Fletcher, Entomologist, published by the Department of Agriculture in May, 1891.