

the facts I have given it will easily be seen that it is a family of very small and insignificant beetles that we have been dealing with, but although small, the amount of damage it does is larger than that done by any other family of beetles. Now, in the case of the larger wood-boring beetles they do not do damage, but good, and if it were not for them in a short time we should have no forests. That seems rather a wild statement to make, but looked at carefully it is a very true one. In the immense forests of Brazil, Mexico and southern countries, numbers of trees have been blown down by storms, and if there were nothing to assist the process of decay there would be such a tangled mass of fallen trees that nothing else could grow on the space covered by them. But the wood-boring beetle steps in and deposits its eggs on the bark of the tree, and in a very short time the whole mass of timber is perforated thoroughly by these immense beetles, places for moisture are formed, and in a very short space of time the tree decays and is reduced to dust, which, mingling with the earth, induces new vegetable life. I do not think, however—certainly I have never observed it—that any of the curculionidæ do the least good. I do not know that there is one good point about the family curculionidæ at all; the only beetle I know of that has been made of any use to mankind is one of the larger curculio, the grubs of which are eaten by the natives of some countries, and deemed very delicious. Generally then they are injurious, and being such a small beetle it escapes the eyes of many insectivorous birds, and at any rate it is a very hard, unpalatable thing. I think they are the hardest shelled beetles in existence, taking a small, hard steel needle to pierce them. There is one thing in connection with this subject that needs alteration; there has been little or no individual research either in this country or in England. We find in the reports of the entomological societies of Canada and other countries that the same facts are being brought before us dozens of times, and these facts are the result of the researches of men who lived a number of years ago, and, after all, many of the papers written by able men are but recapitulations of the work done by others. Now, this is not the case in other branches of entomology, and I think it a pity it should be allowed to be so with Curculionidæ. To give one instance of the small amount of interest and study that has been devoted to curculionidæ in Canada, I may state this: During my stay in England I visited some twenty of its best museums. In the South Kensington branch of the British museum, which contains the best entomological collection in the world, our Curculionidæ were represented fairly. In the Oxford museum, the second finest in the world, there were barely one hundred specimens of our Canadian Curculionidæ. In other countries the Curculionidæ were better represented in their larger and more showy insects, but there were only about one hundred specimens out of our five hundred species. It is my wish, if I can secure help from any entomologist in Canada, to send over this fall a fairly representative collection of our Curculionidæ, and I only hope I shall be able to get that help. I cannot do very much myself, being unable to move from one locality to another, and I hope I shall have help from everyone who is able to give it, and if such persons will only try to assist me in getting specimens I shall be doubly obliged. I think it is only right that the Dominion should be better represented than it is at present in England.

Mr. MORDEN.—Does the ordinary plum curculio attack cherries and pears, or is it a different variety.

Mr. BILLUPS.—The ordinary plum curculio this year destroyed nearly ninety per cent. of the crop of a cherry tree. The tree was unsprayed and not protected in any way, being one I left in that way as an experiment. This tree was situated some two hundred yards from any plum tree.

Mr. MORDEN.—What about pears?

Mr. BILLUPS.—I have specimens in a bottle here; I think there were about thirty pears on the tree, and none had less than one, and some three or four bites of the plum curculio.

The SECRETARY.—It also affects the apple?

Mr. BILLUPS.—Yes, that is a pretty well known fact, but I have not made any experiments.