

munication by Prof. P. H. Landois, in which it is stated that this pest is by far the most annoying and dangerous of all the insects affecting wheat or flour. In 1887 five articles appeared in English magazines, giving accounts of the appearance and habits of the insect as observed in English mills and warehouses. The first of these was by Mr. W. Thompson, of Stoney Stratford, who reported the first appearance of the pest in England. The most important English article, however, is by Miss Ormerod, who summarises the known facts concerning injuries by this insect, and gives details of a new attack which had been brought to her notice in the north of England during 1888. The state of affairs in the infested mill, as described by Miss Ormerod, was practically the same as was found to be the case in our Canadian mill. Her correspondent writes: "I have got quite a plague of moths in the mill, some of which, and worms, I send you; they get into the spouts and machinery and do no end of mischief, both by destroying the silks and stopping the flow of flour, etc., in the spouts by spinning their webs and hanging there. The mill is in constant work, and I should have thought this would have prevented them from lodging, but it does not seem to affect them at all."

The following statement by the manager of the mill which was so seriously affected in Canada is taken from Dr. Bryce's pamphlet, and is virtually a resumé of the different points as they were brought to my notice during the investigation.

"The first appearance of the *Ephestia kuhniella*, or flour moth, that we remember seeing was during the month of March last, 1889. The moth was seen flying about near a steam pipe in the basement of the mill. Little attention was paid to it, as from appearance it did not indicate any danger. In April there was an appearance of a few moths on the different floors of the mill, even at the top, but still there was nothing suspicious. In the month of May we were troubled with a few worms in some of our goods, and in June more of them appeared. In July they increased rapidly, and then we began to suspect they were from the fly which we had seen in the mill during the previous months and which was steadily increasing in numbers. About the middle of July we shut down for a day or so; took the clothing from our bolting reels and cleaned it and washed the inside thoroughly with soft lye soap and lime. We did the same with the elevators. When we started up again every corner and part of the mill had been thoroughly cleaned, as we supposed, and we commenced to work again, but after about four days we found our bolting reels, elevators, etc., worse than before. They were literally swarming with webs, moths and worms, even inside the dark chambers of the reels. We shut down again and made a more thorough cleaning by washing, etc. While this was going on we found there was no use to try and clear ourselves of the pest as the mill walls, ceilings, cracks, crevices and every machine was completely infested with moths, cocoons and caterpillars, and there was no use going on. It then occurred to us that a plague like one of the plagues of Egypt was upon us. The moth was different to any of which we had had any knowledge or experience, and we decided to apply to the Dominion Government for relief and assistance. We addressed the government entomologist, Mr. Fletcher, and sent him samples of the moth, caterpillars, webs, etc., and received a prompt answer which considerably alarmed us. This letter was followed by others almost daily from Mr. Fletcher and a visit from Prof. Saunders on the 17th of August. Mr. Fletcher visited us also on the 27th of August; but in the meantime Mr. Blue, the Assistant Minister of Agriculture for Ontario, visited us and took in the whole situation. It was explained to Mr. Blue that the Dominion Government had been appealed to by us, through Mr. Fletcher, the