

entomologist and botanist, but has also had a long experience as a practical farmer in one of the best farming counties of England. In Belgium, Germany, France and Russia, good work is now being done in this line. Nor are our sister colonies behind hand. In South Australia, Mr. Frazer S. Crawford has studied the fungous and insect pests which attack the apple and pear, and his admirable report is an important contribution to science. The fungous "coffee leaf disease," *Hemileia vastatrix*, so injurious in Ceylon, has been reported upon by Mr. Marshall Ward, and the same disease has been investigated in the island of Fiji by Mr. P. J. Storck, with the satisfactory result of discovering what promises to be a successful remedy. Briefly, this consists in placing vessels containing a mixture of carbolic acid and water at short intervals through the coffee plantations. Mr. Storck found that the vapour given off had a most destructive effect upon the injurious fungus. I mention this fact, because the *Hemileia* being somewhat of the same nature as the *Fusicladium* or "black spot" on the apple, I am under the impression that good results might follow its application here in years when this disease is prevalent.

The Government of New Zealand has issued its report of the Joint Codling Moth Committee, and in Surgeon General Balfour's "Agricultural Pests of India," published by order of the Secretary of State for India, the planters of that Empire have a concise and convenient source of reference concerning most of the diseases which attack vegetation.

In the United States, in addition to the varied and effective work which is being done at Washington by Prof. C. V. Riley and his staff of able assistants, of which it is not too much to say that it is the most important in the world, there is a vast amount of work being prosecuted in this line at the various State Agricultural Colleges and Experimental Farms.

In the Dominion of Canada I may perhaps be permitted to mention the Entomological Society of Ontario, from whose members I receive much assistance in carrying on the work which devolves upon my office. Their annual reports, published by the Ontario Government, are valuable repositories of the latest discoveries and most successful methods of treating insect enemies.

Besides Ontario the only other Province which has recognized the necessity of having economic entomology studied, is British Columbia. During the past year the Rev. Geo. W. Taylor has been appointed Provincial Entomologist and I anticipate much good from this selection. The appointment will naturally give the farmers of that Province a means of obtaining information much more quickly, than when they had to write and receive a reply from Ottawa. In some cases before an answer could be obtained the attack had proceeded too far for the successful application of any remedy. In addition to this there is always the possibility of error creeping in through correspondence, which would be avoided were it possible to visit the infested district.

The report submitted herewith covers the observations of the season of 1887; but it has, on some occasions, been found necessary to refer to correspondence which took place during the previous summer. In carrying on the investigations here recorded I have been much assisted by other students in the science of entomology, and I wish specially to acknowledge my indebtedness to Mr. W. H. Harrington, of Ottawa, not only for aid in the identification of *Coleoptera* and *Hymenoptera*, in which orders he is a high authority; but also for invaluable assistance which he with Prof. Guignard, also of Ottawa, rendered me in the work of correcting the proof and seeing through the press my last report. This had to be done at the time when I was absent from Canada officially attending the Colonial and Indian Exhibition, to lay out and arrange the Canadian garden in which were exhibited the useful and ornamental plants of the Dominion. To Miss Eleanor A. Ormerod, the entomologist of the Royal Agricultural Society of England, my thanks are also due for copies of many valuable reports and for advice on several points with regard to the treatment of insect attacks. To Prof. C. V. Riley and his assistants at Washington, particularly Mr. J. B. Smith, I am also much indebted for the identification of specimens, as also to Mr. Henry Edwards, of New