

## NOTES FROM OTTAWA.

Mr. H. F. Hudson, Field Officer of the Entomological Branch, in charge of the Entomological Laboratory at Strathroy, Ont., has given up his Entomological work and has joined the First Battery of the Canadian Field Artillery of the Second Contingent which is expected to leave for England for service abroad early in 1915. He is now in training with his company at London, Ont. The good wishes of his many Entomological friends will go with him.

Mr. J. B. Gareau has been appointed a Field Officer and Inspector of the Entomological Branch and commences his duties on January 1st. Mr. Gareau is a graduate of the Quebec Forestry School and during the last two years has been an officer of the Forest Service of British Columbia. He has also studied under Prof. Kellogg at Stanford University, California from which institution he was appointed. Mr. Gareau will continue the work formerly carried on by Mr. Hudson.

## POPULAR AND ECONOMIC ENTOMOLOGY.

## DEFORMED APPLES AND THE CAUSES.

BY L. CAESAR, GUELPH, ONT.

It is a very common occurrence in almost every district to find apples that are so deformed that they have to be rejected as culls. Neglected orchards have usually, as one would expect, the greater proportion of such fruit; there are, however, exceptions where the best cared-for orchards suffer severely. Although most of the causes of these deformities have now been discovered there are still some cases that have not yet been solved.

**Insect Injuries as a Cause.**

The chief insects to which malformed apples may be attributed are Plum Curculio, Apple Curculio, Leaf-bugs or Capsids, Aphids, Apple Maggot or Railroad Worm, Leaf-rollers and Green Fruit-worms. Each of these will now be discussed in turn.

**Plum Curculio.** Many apples and pears are deformed as a result of the egg-laying and early feeding habits of this small snout-beetle. The injury in such cases is done while the fruit is still small. The eggs in these apples or pears either fail to hatch