

BROOD-DISEASES.

The diseases that attack the larvæ are American foul-brood, European foul-brood, and sac brood. Both of the forms of foul-brood are very deadly, and once they get a foothold in a district they will, if unchecked, wipe out every colony. The bees themselves are unable to cope with them; hence it is utterly futile for a bee-keeper to conceal the fact that there is something wrong with his bees, in the hope that the trouble may disappear. If left alone, a slight case of infection, once it gets headway, will spread, not only over every colony in that apiary, but in the district.

When the first edition of this bulletin was written no known cases of foul-brood were in the Province, but the developments then in progress, and accelerated later, brought, as was to be expected, several outbreaks. The first case was found in the bees of a settler who came from Ontario; the second originated in a hive specially imported from England; the third was brought by a settler from Oregon. The last case is specially noteworthy because the germs appear to have lain dormant in the hive three years before they attacked the larvæ.

In the summer of 1914 a serious outbreak of American foul-brood was found to have occurred in Vancouver City. It apparently originated in an apiary into which a number of queens imported from outside the Province had been introduced in 1912. Last summer the disease was found in seventeen apiaries in Vancouver, which gives us some idea how speedily it spreads once it has got a foothold. One apiary of twelve colonies had dwindled to only one, and this was found to be diseased. One bee-keeper who bought half a dozen of the empty hives with combs found he had conveyed the infection to as many of his colonies. A couple of empty hives with combs from the affected district that were taken to Chilliwack started a new centre of infection, and from these in turn the disease was carried to near Coquitlam by an unlucky purchaser. To sum up, American foul-brood was found in twenty apiaries, affecting forty-six colonies, all of them from one source of infection in three years. In every instance the diseased bees, hives, and frames were destroyed by fire.

To thoroughly stamp out the infection will need not only the unremitting care of the Inspector responsible for the district, but, in addition, every bee-keeper must help by notifying the Department of Agriculture the moment he suspects there is anything wrong. We have seen that the germs may be dormant for at least three years, and the Inspector knows of one instance where the infection was carried by a new hive-body in which a swarm had been housed for only three weeks. Our bee-keepers must for a long time to come view with suspicion any article of beeware that they know has been in contact with bees in an affected district, especially a hive in which bees have been kept.

Generally speaking, foul-brood is conveyed by honey from one hive to another, colonies weakened by the disease being robbed out by their stronger neighbors, but the germs are often found in every part of an affected hive and on the bodies of the inmates.

The importation of bees into the Province has practically ceased since the issuing of an order by the Hon. Minister of Finance and Agriculture under authority of clause 10 of the "Foul-brood Act," requiring the quarantining of all bees for nine months at the point of entry. The Department of Agriculture does not wish to hinder the importation of queens for the purpose of improving the stock, but it does recommend that all bee-keepers refuse to patronize any queen-breeder who cannot produce a copy of a certificate from a Foul-brood Inspector that his apiary is free from disease. The United States post-office authorities refuse to admit queens to the mails unless they are from certificated apiaries, and it is to be sincerely hoped that other countries will follow this example.

AMERICAN FOUL-BROOD.

American foul-brood has been so named because the germs that cause it were first isolated on this continent. The symptoms of the disease are thus described by an authority:—