

larvae which have died of this disease have a very characteristic odor which resembles a poor quality of glue. This disease seldom attacks drone or queen larvae. It appears to be much more virulent in the western part of the United States than in the East.

European Foul Brood.

European foul brood (often called "black brood") is not nearly as widespread in the United States as is American foul brood, but in certain parts of the country it has caused enormous losses. It is steadily on the increase and is constantly being reported from new localities. It is therefore desirable that bee-keepers be on the watch for it.

Adult bees in infected colonies are not very active, but do succeed in cleaning out some of the dried scales. This disease attacks larvae earlier than does American foul brood, and a comparatively small percentage of the diseased brood is ever capped. The diseased larvae which are capped over have sunken and perforated cappings. The larvae when first attacked show a small yellow spot on the body near the head and move uneasily in the cell. When death occurs they turn yellow, then brown, and finally almost black. Decaying larvae which have died of this disease do not usually stretch out in a long thread when a small sick is inserted and slowly removed. Occasionally there is a very slight "ropiness," but this is never very marked. The thoroughly dried larvae form irregular scales which are not strongly adherent to the lower side wall of the cell. There is very little odor from decaying larvae which have died from this disease, and when an odor is noticeable it is not the "glue-pot" odor of the American foul brood, but more nearly resembles that of soured dead brood. This disease attacks drone and

queen larvae very soon after the colony is infected. It is as a rule more infectious than American foul brood and spreads more rapidly. On the other hand, it sometimes happens that the disease will disappear of its own accord, a thing which the beekeeper never knew to occur in a genuine case of American foul brood. European foul brood is most destructive during the spring and early summer, often disappearing in late summer or autumn.

Treatment of Infectious Diseases.

The treatment for both American foul brood and European foul brood is practically the same. It is impossible to give minute directions to follow in every case, but care and common sense will enable any bee-keeper to succeed in fighting diseases of brood.

Drugs.—Drugs, either to be given directly in food or to be used for cleaning combs, cannot be recommended for either of these diseases.

Shaking treatment.—To cure either of these diseases by shaking the colony is necessary first to remove all of the infected material. This is done by shaking the bees into new frames with clean foundation, care being taken that infected honey does not drop into the new combs. The healthy bees should be destroyed. If repeated, the infected combs may be saved, provided there is enough to make a new colony. It is safer to run the colony on one of the infected combs than to risk the queen's deserting. In the case of box hives or skeps, the infected combs may be drummed out into a new colony or preferably into a hive with new frames and foundation. Box hives are hard to shake, and the field