

THE APIARY

Foul Brood

The germ disease known as "foul brood" has evidently caused more or less trouble to bee keepers from very early historical times, for references are made to some such disease before the Christian era by Aristotle in his works on husbandry. It is only, however, during the last twenty-five years that the plague has become universal and for this the expansion of the honey producing industry is responsible. The trade in bees and queens and their consequent transportation from one country to another, carrying infection with them has spread "foul brood" into almost every part of the civilized world.

Scientific investigation has shown that our knowledge of "foul brood" is very far from complete, but that there are several forms of bacilli causing the group of diseases known as "foul brood" seems certain. Of these the disease known as American foul brood is the most widely spread and disastrous in its effects.

SYMPTOMS OF FOUL BROOD.

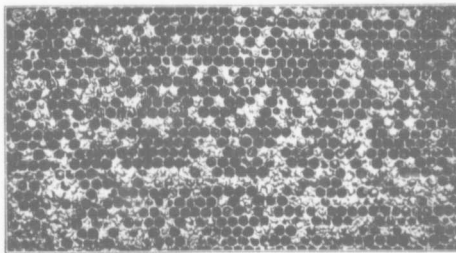
The brood in the combs will be badly scattered, with many empty cells. The cappings here and there are sunken and some of them perforated in the centre. On opening one of these cells there will be found a dead larva lying at one side of it, somewhat shrunken and varying from light brown in color to almost black, according to age. But so far all these symptoms may be present as the result of chilled, overheated, or starved brood. To determine whether the disease is the real foul brood or not, run a thin splinter of wood into the dead larva and then draw it slowly out. If the matted mass adheres to the end of the stick and draws out like glue it is probably a case of foul brood. In all other forms of dead brood, with perhaps one exception, this ropiness does not appear, but with foul brood it invariably appears.

There is another symptom, and that is the odor, which while not exactly foul, resembles that from a glue pot. When the disease is well advanced in the hive this odor will make itself manifest upon lifting the cover even before exposing the brood. If other colonies are affected in a similar way

and the disease appears to spread it is unquestionably a case of foul brood.

The following method of curing foul brood originated with Mr. McEvoy, of Woodburn. It has been tested widely and found generally successful. He says:

"In the honey season when the bees are gathering freely, remove the combs in the evening and shake the bees into their own hives; give them frames with comb foundation starters on and let them build for four days. The bees will make the starters into comb during the four days and store in them the diseased honey which they took with them from the old comb. Then in the evening of the fourth day take out the new combs and give them comb foundation to work out, and then the cure will be complete.



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By this method of treatment all the diseased honey is removed from the bees before the full sheets of foundation are worked out.

All the old foul brood combs must be burned or made into wax after they are removed from the hives, and all the new combs made out of the starters, during the four days, must be burned or made into wax, on account of the diseased honey that would be stored in them.

All the curing or treating of diseased colonies should be done in the evening, so as not to have any robbing done or cause any of the bees from the diseased colonies to mix and go in with the bees of sound colonies. By doing all the work in the evening, it gives the bees a chance to settle down nicely before morning and then there is no confusion or trouble.

This same method of curing colonies of foul brood can be carried on at any time from May to October, when the bees are not gathering any honey, by feeding plenty of sugar syrup in the evenings to take the place of a honey flow. If foul-broody colonies were worked with in warm days, when bees are not gathering honey, it would set them robbing and make them spread the disease; for that reason all work must be done in the evenings when no bees are flying.

Where the diseased colonies are weak in bees, put the bees of two, three or four hives together, so as to

get a good-sized swarm to start the cure with, as it does not pay to spend time fussing with little weak colonies.

When the bees are not gathering honey, any apiary can be cured of foul brood by removing the diseased combs in the evenings and giving the bees frames with comb foundation starters on. Then, also, in the evenings feed the bees plenty of sugar syrup, and they will draw out the foundation and store the diseased honey which they took with them from the old combs; in the fourth evening remove the new combs made out of the starters and give the bees full sheets of comb foundation and feed plenty of sugar syrup each evening until every colony is in first-class order in every respect.

Make the syrup out of granulated sugar and put one pound of water to every two pounds of sugar, and then bring it to a boil. As previously stated, all the old combs must be burned or made into wax when removed from the hives and so must also all the new combs made during the four days.

The empty hives that had foul brood in, do not need any disinfecting in any way. I have handled many hundreds of colonies in the province of Ontario, and cured them of foul brood without getting a single hive scalded or disinfected in any way, and these colonies are cured right in the same old hives. In my judgment, resulting from experience, it is the greatest folly to waste any time over the empty hives, as there is no more reason for scalding empty hives that foul brood has been in, than there would be to scald the feet of all the bees that travelled over the diseased combs. No colony can be cured of foul brood by the use of any drugs. All the old combs must be removed from any diseased colony, and the honey got away from the bees before brood rearing is commenced in the new clean combs. Foul brood apiaries are cured every year in the province of Ontario by my methods of treatment, which are given here."

Though savage bees rarely do serious injury, it is well to remember that the owner of such may be held responsible for mischief, and, therefore, it is the better plan to place the apiary at a distance from the highway and neighbors' premises. Damage away from the apiary may have been done by anybody's bees, and it is not possible to lay the onus on a particular hive.

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