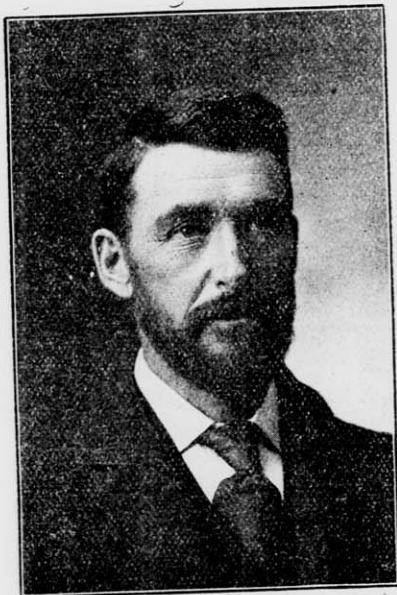


FOUL BROOD AMONG WISCONSIN BEES.

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The extent and importance of the beekeeping industry in Wisconsin is not realized by the masses of Wisconsin people.

Like all occupations beekeeping is a trade to learn and study. There are many valuable books on modern bee culture, and several subscription papers published. Three of these papers have over a thousand subscribers in Wisconsin. As secretary of the Wisconsin State Beekeepers' Society, last year I was requested to ask of its members and beekeeping friends the extent of our industry in Wisconsin for 1896. Owing to the dry seasons previous many bees had starved, and a large majority of owners of bees do not belong to any beekeeping society, or take any paper upon bee culture, so

that I was able to get only a very small report, which shows:
 51,709 colonies of bees in hives,
 valued at\$258,545.
 2,585,450 pounds of honey sold, 180,981.
 Beeswax and queen bees sold, 9,500.

Total.....\$449,026.

Foul Brood: What Is It?

Several hundred cases were also reported of a fatal and contagious disease among Wisconsin bees, known as "foul brood." This disease preys upon the larva of the bee, usually causing death from six to ten days from the egg of the queen bee. The honey from affected colonies is quite certain to contain the germs of disease, which are not easily destroyed, and if left where bees can get at it out of honey season, they will surely carry the disease home. The germs multiply with marvelous rapidity by division, so that a single infection will soon cause ruin to a whole bee-yard, if not properly and carefully treated. As I find many beekeepers who do not know the symptoms I will briefly describe some of the most common.

Symptoms.

1. The colony of bees seem weak, with lack of energy—loafing around—sometimes with litter around entrance of hive.
2. Inside the hive, some of the brood in patches, fail to hatch, the cappings shrunken, with here and there a cell with perforated capping, as shown in the engravings. The dead larva usually to one side of cell, shrunken, of a dark brown color.
3. The ropiness is one of the best indications. Insert a toothpick in the larva, and in removing it, if the larva adheres to it, drawing out in fine

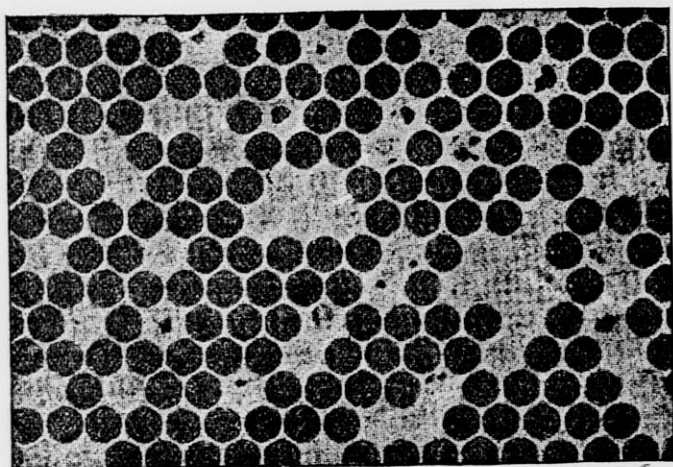


FIG. 1.

Showing Comb containing fowl brood.

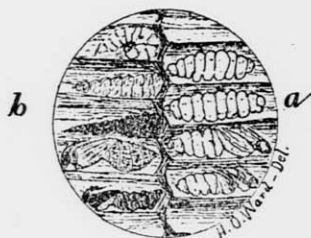


FIG. 2.

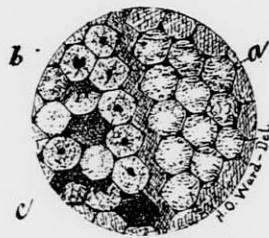


FIG. 3.

Figs. 2 and 3 contrast between
(a)—pickled brood, and (c)—fowl brood.

thread-like appearance, then springing back as rubber being stretched, it is a likely case.

4. The peculiar odor of fowl brood resembles a cabinet glue-pot. In the early stages of the disease it may not be noticed, but a little later it will upon opening the hive. I have seen some cases where this peculiar odor was offensive several rods away.

There is also a great amount of dead brood in the hives this year in Wisconsin, owing to the extremes in the weather. In some respects this dead brood, called by Dr. Howard "pickled

brood," resembles the early stages of fowl brood, and seems to be contagious. The cappings in some cases are perforated, and the larva within has dark color, heads shrunken to a point, and often the entire larva standing on end against the side of the cell will not be over half the natural size. Upon removing this larva the skin will be found quite tough, containing a watery matter, free from smell, or the ropy appearance found in fowl brood.

In such cases during honey flow season it can be cured if treated as fowl brood, and in many cases by removing

the queen and a few days later removing all queen cells and giving plenty of healthy bees and brood combs containing eggs from a sound colony, it can also be cured. Fine salt sprinkled on the dead larva does no harm, and in some cases hastens bees to carry it out. If this dead brood continues in the hive for some time, and becomes a foul matter, I have known of cases this year in Wisconsin where it either developed into real foul brood or was a proper medium to receive and propagate the germs.

Please do not forget that no old combs, hives, honey or dead brood in any age ought to be left exposed where bees can reach them, as that is too often the cause of seriously spreading the disease. In several apiaries this season I have found large piles of hives, some containing old combs with diseased honey and brood in them, and bees from the same and neighboring yards carrying home the disease.

It is poor practice to borrow combs and implements, or to buy queen bees, unless you know they are not diseased. If all colonies are kept strong with plenty of unsealed honey near the brood, and surroundings perfectly clean, it is a great preventive.

Treatment.

The best time to cure foul brood is during the honey gathering season, but with great care and plenty of good feeding it can be treated at other seasons. If you have hives that you know to be clean and free from the disease, use them, and later thoroughly clean the old hive, as it may contain germs of disease. To cleanse this hive give it a good scraping, and then use boiling water, long enough to melt every particle of comb in it. Drive corner nails in to prevent the hive from warping, and dry in the shade. This may not be necessary, but it is always safe. In the evening after the bees have

ceased flying, cage the queen while removing all the combs.

Either place a clean hive of the same color on the old stand, or the old hive, well cleaned, putting five clean frames in it with foundation starters two inches wide. Shake all bees with caged queen on the starters, closing the hive, not the entrance, for four days. At the end of four days in the evening, remove all frames and replace them with full sheets of foundation, and shake the bees with released queen on frames. Should the colony be weak, it is best to double them up, as a few strong colonies are worth more than several weak ones.

Necessity of Thorough Renovation.

All combs and frames first taken from the diseased colony should be burned, letting nothing escape, as there lies most of the danger. True, the wax may be melted and the honey boiled and saved, but nothing short of a half hour's honest boiling and stirring will be safe. Solar extracted honey or wax is not safe to use. If you wish to save all brood from diseased hives, it can be put in clean hives in outside of beeyard, filling a hive with such combs, closing entrance two days, and keeping the hive shaded. Then open the entrance when much of the brood will be hatched, and the bees should be treated with foundation starters, the same as the old, diseased hive. The starter combs and old brood combs should be burned or boiled. I do not believe in destroying property that can be saved, and there is no need of it in curing foul brood, if properly treated, but in very many cases it is not economy to save the little wax or honey that would be obtained from the first set of diseased combs.

Any Wisconsin beekeeper who wishes a copy of the book upon the subject of foul brood can get it free of charge, by writing me for the same.