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the bee-keepers of Western Ontario in a very few years. From my experience with the disease in the infected districts two years ago I can readily believe that it will overtake us in a hurry, unless radical measures to stamp it out are taken at once. Foul brood as we have known it in the past, is a mere bagatelle as compared with this new pest, and while it now seems to be under control in New York State, yet it has cost the state a lot of money to fight it, and it is a question if the work could not have been done more quickly and cheaply if it had been stamped out vigorously when the outbreak first was discovered.

There is something peculiar about the spreading of this disease. Unlike American foul brood, it will go all through an apiary in a few weeks when there is not a bit of robbing going on. The old-time disease that we have been familiar with is chiefly spread by robbing, and knowing this we have been trained to guard against this point of attack. Under this new disease's insidious methods of attack, we are almost entirely helpless, and it is all through an apiary in a hurry after the first cells of disease are noticed in a single colony. Where the disease is and has been raging, are situated some of Ontario's best bee-keepers, and naturally they feel sore when they see some who have never been near the infected districts, making light of the outbreak as though it were not anything out of the ordinary.

I do not wish to pose as a prophet, but I unhesitatingly venture to surmise that if the present condition prevails without checking, in a few years there will be a lot of sadder, if not wiser bee-keepers in the province than is the case now.

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DISEASES OF BEES.

Dr. Zander, Professor at the University of Erlangen, Bavaria, has published in the *Deutsche Imker aus Bohmen* the result of his investigations of diseases of bees. He, like Dr. Maassen, recognizes three diseases that affect the brood and which he finds due to three different microbes. He gives them a slightly altered name, and calls them (1) rare foul brood, (2) common foul brood, and (3) sour brood.

1. In Bavaria Dr. Zander finds the rare foul brood is caused by *Bacillus alvei*. This grows on various media, and has a foul smell similar to bad cheese or sweat; the foul brood mass is pasty and can be drawn out in short threads.

2. Common foul brood, which is much more prevalent, is caused by *Bacillus Brandenburgensis*. This grows on bouillon made of bee-larvae or brains, and the cultures emit a hardly perceptible odor of glue. The rotten mass is gelatinous, and can also be drawn out in threads. Both the above bacilli form spores.

3. Sour brood is caused by *Streptococcus apis*. This differs from the others in that it does not form spores. It, however, is of easy culture, and produces an acid odor resembling that of vinegar or lactic acid. The rotten mass is pasty, but does not draw out in threads.

He agrees with Dr. Maassen, and finds that in the common form the larvæ are attacked after the cells are sealed, but in the rare form the larvæ nearly always die before sealing. The diseased larvæ lose their pearly-whiteness and the skin becomes flabby, acquiring a yellow tinge. On endeavoring to remove it the larvæ goes to pieces. In the end it turns to a brown color. Only in sour brood can the larvæ be extracted from the cells whole. All these forms of disease are contagious, and may be found in the same hive at the same time, sometimes two of them combined in the same cell.—British Bee Journal.