

flying. Frequently pollen has been gathered from flowers upon which the rain has fallen; this may have had fungi from the branches of the plant or tree conveyed to it by the rains.

The warm, wet weather of spring starts to life thousands of forms of microscopical animals and vegetable organisms. Trees, plants, ponds, pools, etc., become literally alive with groves and swarms. Through the water many of these forms find their way to the hive, bringing about unsanitary conditions, which, to a greater or less extent, influence the general health of the colony, giving rise to spring dwindling, and possibly dysentery, paralysis, etc.

I have seen yards badly affected with paralysis and dysentery cured in a few days by feeding artificial pollen and pure water in the hive, when the weather was too bad for bees to fly; or fed in the open air when the weather was fair. Good water, plenty of honey in the field, fresh pollen and hygienic environments, will generally put an end to paralysis, dysentery, and pickled brood.

Apiaries should be so arranged and located that plenty of sunlight and pure, fresh, dry air could circulate through them; the bottom-board should always be dry, even on the underside; many harmful molds and mildews spring up in the presence of heat and moisture, some grow in the dark better than in the light, many spores are carried into the hive and find a suitable medium in which to grow. Highweeds and grass should not be allowed to grow about hives, neither should the shade be so dense that a few hours' sunshine could not dry the ground.

Cheshire found the cause of some of these diseases to be a bacillus which he isolated. I have not been so

fortunate as to isolate a single species great amount that would infect a prosperous colony with paralysis or dysentery. In fact, during a good honey flow, with a prosperous colony and proper sanitation, it will be found a difficult task to infect such a colony with any disease and obtain immediate disastrous results. The most infectious, and one that is always present and more or less visible, is foul brood. Black brood, pickled brood, dysentery and paralysis all disappear during a good honey flow and hygienic surroundings; to this common-sense principle the "McEvoy method" owes its success.

Much has been said in conventional and written for journals on paralysis, yet little is known as to its cause. I have not had the time at my disposal to make a thorough analysis of the disease, but will give some of the results obtained. It appears, at first, as an indigestion; dissection shows obstruction in the way of casts of pollen and fungi in the true stomach, and intestinal tract; there seems to be an enlargement, as if engorged, of the tubules corresponding to the urinary apparatus of higher animals—a general displacement of the internal organs is common. The cecum, or threads, of various fungi are found in the uriniferous tubules and air-passages of those dead from the disease. All of these bring me to conclude that when an individual bee has a bad case of paralysis it is worthless if cured. What is usually meant by curing all diseases among bees, is stopping the infection from spreading to new individuals and not individual cures.

In dysentery dissection shows the dropsical condition, an extra amount of fluids in the circulatory system, fungus and pollen casts in the excretory organs, and in some cases