and that is the odour, while not exactly foul, resembles greatly that from a cabinet maker's glue-pot; and when the disease is pretty well advanced in the hive, the odour will make itself manifest upon lifting the cover or quilt, even before exposing the brood. If other colonies are affected, and the disease spreads, it is probably American or ropy foul brood."

EUROPEAN FOUL BROOD.

The germs of this disease were first discovered in Europe, hence the name. The appearance of this form of foul brood is thus described: –

"Adult bees in affected colonies are not very active, but do succeed in cleaning out some of the dried scales. This disease attacks larvæ earlier than does American foul brood, and a comparatively small percentage of the diseased brood is ever capped; the diseased larvæ which are capped over have sunken and perforated cappings. The larvæ when first attacked show a small yellow spot near the head and move uneasily in the cell; when death occurs they turn yellow, then brown, and finally almost black. Decaying larvæ which have died of this disease do not usually stretch out in a long thread when a small stick is inserted and slowly removed; occasionally there is a very slight 'ropiness,' but this never very marked. The thoroughly dried larvæ form irregular scales, which are not strongly adherent to the lower side-wall of the cell. There is very little odour from decaying larvæ which have died from this disease, and when an odour is noticeable it is not the 'glue-pot' odour of American foul brood, but more resembles that of soured dead brood. This disease attacks drone and queen larvæ very soon after the colony is infected. It is, as a rule, much more infectious than American foul brood and spreads more rapidly. European foul brood is most destructive during the spring and early summer, often almost disappearing in late summer and autumn."

PICKLED BROOD.

This is the name given to a disease of the brood about which very little is at present known. Many of the symptoms are very like those of European foul brood, but the cause of death is supposed to be starvation, excess of heat or cold, or poison in the food. We have seen that there may be a sudden stoppage of nectar at certain seasons; consequently, in a hive that is short of stores at such a time, thousands of the young must literally starve to death. In extremely hot weather, when ventilation is deficient, the inside temperature of the hive may become so hot as to cook the young larvæ; on the other hand, a sudden drop in temperature will cause the bees to contract their cluster, exposing many of the young so that they freeze to death. Then in the fruit-bloom season some ranchers spray before the blossoms fall with a poisonous solution, and, of course, the bees that visit such an orchard not only die of the poison, but frequently are able to empty their load into the cells before succumbing. The poisoned honey kills any brood to which it is fed.

We see, therefore, that the presence of dead brood in a hive demands instant consideration. The first question to be asked is, what is the likelihood of starvation? The condition of the stores should answer that. Next, has any one in the neighbourhood been spraying blossoms with a poisonous mixture? The bee-keeper should know by the season, the number of dying bees round the hive, and the habits of his neighbours. In the same way he will probably know the facts about recent temperatures. When the disease is due to any of these causes the bees in due course clean out the cells, and there is no trouble with subsequent brood. Should, however, neither starvation, heat, cold, nor poison account for the condition, or should the diseased brood continue or increase, then help should be solicited from the Department of Agriculture. As a diseased hive weakens, bees from other hives rob it of its stores, thus conveying the germs to all the hives in the vicinity.