

honey, but they would raise more brood, as their method of distilling water in their clusters operates to more advantage at low temperatures. There would be no condensation of moisture on the walls of the hive. If we cover the brood chamber of a hive in winter with a pane of glass there will be no condensation on the glass so long as the bees are in their winter clusters, but condensation will take place when the bees raise the temperature of the hive above that of the air. In hives with inclined floor boards water will frequently be seen dripping from the hives. It is most apparent in spring, but sometimes seen in summer and fall. I have never seen the bees touch this water, and I take it that for some reason bees will not make use of the water from condensation on the wall of the hive.

If we cover the brood chamber of a hive in summer with a thin sheet of cotton or linen cloth so as to give the bees time to fasten it and to plaster the underside with wax and propolis the bees will winter safely in the hive; and it will make no difference to the bees whether quilts are placed over the cloth or not. If we give the bees no time, however, to make the top of the brood chamber tight, but in the fall cover with loose quilts and chaff cushions the strong winter wind will sometimes blow through the hive and the bees will not winter well. It will be necessary to keep a crooked wire to pull out dead bees at the entrance, but a colony wintering properly will have no dead bees to pull out at the entrance.

The bees commence foraging in spring for some time before they abandon their winter clusters, and as they cannot raise brood in spring, to any extent, without bringing water into the hive, one of their first efforts is to find water. They will carry no water from running brooks or creeks

because the water is too cold, and they will not take water placed for them in the apiary for two reasons, one is that it is also too cold, and the other is that the bee-keeper nearly always puts salt in the water, and the bees want no salt. Bees will take honey mixed with turpentine and carbolic acid but it is the honey they want and not the other ingredients, and they have been known to take enough honey dew into the hive to kill the colony, showing that the old bees can carry poisons that will kill the young bees. What the bees will not take when mixed with honey has not yet been found out. The bees in spring try to find stagnant pools in which fermentation and decomposition have raised the temperature of the water above that of the air. The more the pool is teeming with animal and vegetable life the warmer will be the water, and the more the bees will resort to it. That they sometimes carry disease into the hive from stagnant pools there can be little doubt, but they will not carry cold water.

There is an effect of the bees in Australia which the bee-keepers there call the "disappearing trick." The bees of strong colonies in spring will in a very short time nearly all disappear, while, strange to say, the weak colonies will not be affected. The bees in strong colonies leave their clusters much sooner, and often to their disadvantage, than the bees in weak colonies, and are then, for raising brood, wholly dependent on water from outside. When bees go out hunting for their accustomed warm pools, and cannot find them, they likely do not return to the hive. It is astonishing how strongly ingrained in animal nature are acquired instinctive habits. There is in Norway a lemming-rat that occasionally migrates in vast numbers into the sea, and this "disappearing trick" of the