

stand up and say that ready made combs will cause the storing of any more, brood chamber stores included, than when they build comb, save in the rare cases of a very sudden and profuse flow? My experience says very little is gained. I am willing to be convinced, but only by proof. I, too, used to tell that wonderful story of so much honey lost when wax was secreted; but when I cannot get the extra yield when extracting, and find wax secreted and plastered about the hives in useless waste in spite of combs ready made, I conclude I will have to allow of the wasted honey till I get a strain of bees that will not secrete wax.

Bees Diarrhoea

—G. M. DOOLITTLE.

It is asserted by some that the only disease which bees have during the winter that is worth mentioning, is diarrhoea, which appears usually in February and March, after a steady cold winter. That such a state of affairs only exists under like circumstances, has caused some to look upon diarrhoea as the effect of a cause, rather than a disease, myself being one of this latter number. We have also been told that the cause of this disease is pollen, honey dew, cider mixed with the stores, extreme cold, dampness, etc., but it seems to me that none of these are the PRIME cause, for the bees can eat any food that they will partake of, during weather when they can fly every few days and not be effected in the least; while extreme cold and dampness produce no bad effects unless long continued. Let us look at the thing rationally and see if there is not a cause for the trouble not usually spoken of, a cause that does not occur in the native home of the bee. If I am correct, the honey bee is a native of a warm climate, where it has a chance to fly every few days all winter, or where winters are really unknown, and so it happens that we do not see bees soiling their hives and combs at any time, except after a long continued confinement. If we had June or September weather all of the while, would bees die of the so-called diarrhoea, as they often do some winters? All know that they would not. Suppose any person from some peculiar environment was obliged to remain all they ate for two or three weeks, and after nature gave out, would any physician in the land say they had

diarrhoea? I think not. So, then, we see, as nature has made it a necessity for bees to fly to void their excrement, it is their being obliged to stay in their hives longer than nature allows that causes this so-called diarrhoea. If it were not so, why do we read many times from various writers, "my bees were suffering badly with diarrhoea, when a fine day occurred, which gave them a chance to fly nicely and now they are all right?" Also, why do bees not have this disease down in Texas and Florida? Can any reader understand how a bee, just ready to die with such a dangerous disease, can be cured of such an epidemic by a few moments flying, only on the grounds given above? That nature has made the bee capable of containing their excrement longer during confinement in cold weather than in warm, is a self evident fact, and is about the only reason why we can keep bees here at the north at all, for bees will soil their combs and hives in one-fourth the time with a temperature of 70° to 80° that they will in one from zero to 45° above. One reason for this is that with the higher temperature, they remain active, and so consume food to supply the waste tissue, while with the lower temperature, that semi-dormant or quiescent state which requires but little food, and which is so conducive to a long retention of the faeces. If bees are kept in constant commotion from any cause, such as rats, mice, or the apiarist disturbing them too often, they are placed in the same condition they are if kept too warm, and a like result follows; hence quietude is one of the great requisites for safe wintering, when bees are surrounded by environments different from those in their native climate. When bees remain in that quiescent state which is required for safe wintering, a pound of honey a month suffices the whole colony, and in this state a colony would pass five months of confinement and be in a normal condition, but if the colony becomes uneasy under their confinement they will eat from five to seven pounds a month, and soil their hive and themselves so as to cause their loss in from eight to ten weeks from the time they commence to eat so voraciously. Looking toward perfect quietude and a control of appetite, cellar wintering has proven about the best plan, because from the even temperature maintained the bees need but little food to keep up the necessary warmth they require during this period of partial activity which our northern winters compel them to pass through. As but little food is required, the body of the bee easily contains all of the waste material after digestion,