

winter quarters in the spring. With me the successful wintering of all normal colonies from the time of setting them in until they are put out in the spring is attended with very little uncertainty. But I am compelled to admit that there are some seasons that I am not quite certain about the best time of setting out in the spring.

I find that it is no unusual thing, in colonies wintered inside, to find brood-rearing suspended from some cause, after it has been well advanced, suggesting that the favorable conditions for breeding had been exhausted. These suggestions are further strengthened when, on setting out such colonies, the queen resumes laying and the normal conditions are restored. Those bee-keepers who report their bees always breeding up strong and filling the hive with brood until late in the season, in confinement, have been able to secure a very desirable condition; one which I am free to admit that I have not always been able to secure. It is my experience that within the average season, brood rearing will begin earlier with colonies wintered inside than with those on the summer stands, although this is not invariably so. It is desirable when once it is begun that it should be continued uninterrupted, and when I discover that breeding is being suspended I cannot feel satisfied to leave the bees long inside, but set them out, and after they have had a cleansing flight and quenched their thirst, which I suspect may be the principal cause of the interruption in breeding, I set back the light colonies if I think it too early for them to remain on the summer stands.

When bees are first set out they are usually strong enough, if wintered well, to protect the brood against serious injury for several days of severe cold. The most serious results are to be feared from the brood being chilled late in the season when the bees have diminished and the proportion of brood is much greater and consequently much more exposed. I have no fears of serious results from cold on strong vigorous colonies at any season of the year; it is only those that are not strong and vigorous that give me the most anxiety.

It is a matter of economy then to have no light colonies, but we are compelled to accept things as we find them, and we find light colonies in the spring in most apiaries, and to care for such colonies is the part of spring management that causes the bee-keeper the most trouble. The use of the division boards for such to contract the brood nest, with natural stores placed back of it to which the bees have access, is undoubtedly among the best methods for building up such colonies; and if natural stores are not

at hand, combs filled with sugar syrup or honey may be used instead. I have never been quite able to understand why practical bee-keepers should advocate spreading the brood to induce extra efforts on the part of the queen. The very opposite practice, that of keeping the brood as compact as possible, has been much more satisfactory with me under all circumstances. Even when using the division board I prefer to add the combs, as they are needed, to the outside of the brood-nest.

To sum up the whole matter, then, in order to have strong colonies overwintering with bees at the beginning of the honey harvest, have them strong and well provided when they go into winter. They will then usually come out strong in the spring and build up and be strong for the harvest.

Strong colonies at all seasons are the key to success in bee-keeping.

H. R. BOARDMAN.

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THE HONEY ANTS.

THE honey ant is a small red insect, exceedingly demonstrative and active and found particularly in Texas and Mexico, and in considerable numbers in Colorado.

Their nests are prominent mounds in some cases, and again are low heaps spread over an area of twenty or thirty square feet, forming a community. As a rule they are nocturnal, working at night, though I have seen them at work in the bright sunlight at three o'clock in the afternoon and marching in a line perhaps seven feet wide and forty feet in length to a cottonwood tree, up which they passed, long and slender, coming down larger and full of a pure white liquid. It would strike even a casual observer as curious that these ants were carrying home a liquid that could hardly be stored away, ants not having, as a rule, storehouses for liquid provisions; but the honey ant overcomes this difficulty in a decidedly novel manner. Certain of the ants, either by agreement or selection, are utilised as receptacles for the honey food supply and become literally honey bottles. They are kept by the others in a separate apartment, about six inches long by four in height, that is a storeroom. Here, if the nest is carefully opened the ants or honey bottles will be seen hanging on the wall looking like ripe currants. The modus operandi that results is this as follows: The ants, at least the small ones, forage for food and find it in some cases in what are known as galls, curious enlargements of growths, often seen on trees and formed by the eggs of an insect