

own its demise, but manufactures stages of hibernation to bolster up his claims. My horse hibernates on one of those stages, or I would like Mr. Clark to set the limit where stages of hibernation cease to exist.

ABEL GRESH.

Weedville, Pa., April 4th, 1888.

This is not intended as a continuation of the hibernation controversy, and therefore need call forth no replies. If we have given more space to some matters in the past than was their due, we will try and do better in the future. We do not object in the least to being "hauled over the coals." It does us good.

For the Canadian Bee Journal.

The Hibernation Theory Settled by Mr. Holderness.

IT SEEMS to me, at this time, that some wise man who has always been considered an authority has said: "Too many cooks spoil the pie." Now, it seems to me that too many would-be authorities, dabbling in this hibernation theory, have spoilt the whole business; for I am sure if it had been left entirely in the Rev. Mr. Clarke's hands he would have settled it long ago to his own satisfaction at least—for I don't think any one but himself cares anything about it. But, seeing the matter remains a matter of doubt to many worthy people, I have concluded to drag myself away from my business long enough to settle the matter definitely and to the satisfaction of everybody, so that after this writing all who have taken an interest in the matter may employ their valuable time in discussing something else. Hibernation may be understood as meaning a state of repose for a period of longer or shorter duration according to surrounding circumstances. In the case of honey bees, we know that this state of repose is not as profound as it is with bears, woodchucks and chipmunks, to say nothing of ants and other insects which remain perfectly still during the hardest freeze that our coldest winters can produce. They do not lay anything up for winter consumption, but wait patiently until the appointed time, and they come forth to resume their active life. A colder snap than usual may make the bear shiver in his den for anything we know, but it does not induce him to exercise himself in order to keep his blood in circulation, nor does he have any store of provisions laid up upon which to gorge himself, and thus run the risk of losing his life by a fatal dose of dysentery. How-

ever, this is the bear's definition of hibernation. Now let us take a look at the bees, which we know keep up a constant movement from the outside of the cluster to the inside, where the temperature is higher. If the temperature in the hive is exactly right, the movement is so quiet as to be hardly noticeable; but let the temperature run up too high or sink too low, and then there is a fuss. In any case they wake up periodically to supply the demands of the inner bee, and this is where the difficulty in wintering successfully seems to come in, for if the food is not exactly right dysentery sets in, and the unfortunate bees become physically defunct, to the great disgust of the enthusiastic bee-keeper. Nevertheless this is the bee's definition of hibernation.

Let us continue this style of reasoning to its legitimate conclusion and see where it will land us. We have seen that the bear and the woodchuck and other living things sink into a state of repose so profound that they do not seek food until the long northern winter is past, but the bee wakes up at short intervals to partake of food, which seems to be necessary to its continued existence, no matter what the weather may be. Now let us get at man's definition of hibernation. Like the busy bee, if the temperature is exactly right, he goes to bed at half-past twelve, that is, if he is not addicted to late hours, and from then until breakfast time his repose is so profound that the baby might cry itself to death for all he, the mighty lord of creation, would know about it. But let the temperature sink away below zero, and then like the bee again there is a fuss, for he generally wants to know why in thunder Mrs. So-and-so didn't put more bedclothes on. On the other hand, if the temperature should raise in the night, he would like to know if she had borrowed all the spare bedclothes in the neighborhood for the vile purpose of sweating him to death. Anyway he gets through the night somehow if he is tough enough, like the bee with the winter, and rouses himself in time enough to fill up the inner man with the choicest things on the table, after which, like as not, he sinks into another state of repose, though not so profound. It will be seen by the careful reader that hibernation or periodical intervals of repose belongs to all living things upon the face of the whole earth, so that my client, W. F. C., is perfectly right when he says that bees hibernate in the winter. And now, having settled this vexatious question in an entirely satisfactory manner, and in order to save time and trouble, I cheerfully accede to all prominent bee-keepers the privilege of copying this document; and if there are any