

who not promptly acquiesce in the decision, I simply say that I have entered the lists as Mr. W. F. Clarke's champion, he being totally unfit to hold his own on this question; and that I am prepared to do battle in his behalf against all and sundry who may feel disposed to take up arms against him. There lies my glove!

J. HOLDERNESS.

Let us suppose this whole matter is settled, for just now at any rate. We need the space in the JOURNAL for other more *seasonable* articles.

Allen Pringle in L. S. Journal.

APRIL WORK AND OTHER MATTERS.

THE bees are still in winter quarters, or ought to be, in this climate. They are wintered for the most part in Canada in cellars and on the summer stands, more or less protected. A few are buried and a few stowed away in lofts, granaries, etc. A quarter of a century ago when bee-culture was still in its primitive stages in this country, and when the "old box hive," as it is now called, was the standard hive in use, the bees were mostly wintered outside on their summer stands without any extra protection. And they used to winter in that rough way very well, often coming through the rigors of the severest Canadian winter in good condition. The question, how this is to be accounted for is often asked, and the question is a pertinent one in view of the fact that we have at present such difficulty in getting our bees successfully through the winter and spring with all of our increased knowledge and improved hives and appliances. I think the seeming anomaly may be explained on the following grounds: In the first place the bees of those days in the old-fashioned hives almost always had first-class food for winter, and abundance of it, as there was no extracting done then, and the honey gathered in the early summer and thoroughly ripened and capped-over remained in the hive for winter food—the surplus taken from them being mostly from caps on top after the hive had been well filled. A further cause of the successful wintering of their bees by our forefathers with their limited apiarian knowledge may be found in the fact that only the strongest colonies were allowed to face the music of winter—the weaker ones being all "taken up" in the fall, i. e. "brimstoned," and that means digging a hole, putting sulphur in it, lighting it, setting the hive over it, and smothering the industrious little creatures to death, and then taking possession of their stores. A still further cause would no doubt be the peculiar construction and arrangement of the combs by

the bees, which, in many cases, instead of running parallel to each other as we now force them to do by means of our movable frames, converged from the inner walls of the hive towards the centre, thus materially favoring compact clustering and facility in reaching the food in the cold weather. A final factor in the problem would, I think, be the natural protection afforded them by the forests, which have now mostly disappeared, leaving the bees which are outside without artificial protection, exposed to the piercing winds of winter.

If these are the true causes of the phenomenal success of old time wintering under what is thought such adverse conditions, the apiarist of to-day may learn a lesson from each and every one of them. First, let him put a little check on the extractor, and leave the bees plenty of honey, and of the best quality for winter. Double up all weak colonies, and try to carry none but strong ones through. Meet the requisites of compact clustering and convenient food by spreading the frames a half inch or so in the fall and giving freedom and space to the bees above the frames in winter. When wintered outside, protect them by means of sawdust or chaff packing or otherwise. Under such advantageous circumstances as surround the modern apiarist, he certainly ought to be able to carry his bees through the winter and spring more successfully than his grandfather did.

The most important part of the work among the bees for April consists in looking after the stores to see that they have plenty of food, attending to the colonies that show signs of bee-diarrhoea, and setting out of winter quarters. As brooding has now commenced, there will be an increased consumption of food, and those short of stores should be amply supplied. If there is honey on hand saved over in frames (as there ought to be) supply those in need with these. If not, make a somewhat stiff candy of extracted honey and number one granulated sugar, and place in cakes over the frames under the quilts where the bees can reach it. The candy may be made by warming the honey and mixing the sugar, leaving it for several hours in a warm place till the honey and sugar get thoroughly incorporated. It must of course be of such consistency that it will not melt in the degree of heat under the quilt and about the bees—say 60° to 80° Fah. Colonies showing signs of disease and restless, ought now to be carried out to the summer stands for cleansing flight. This ought to be done on a fine, warm, calm day, and they must be carried back to the cellar at night, provided the time has not come for leaving them out. This brings us to the question of