

that seems to be their prevailing trait, their strongest point. They are useful to keep the bees out of mischief. There are other things we need not to be mistaken about. People may reasonably differ about honey plants, because difference in locality may alter honey plants. But the physiology of bees must be the same everywhere. How is it, then, that learned people are to be found in the United States of America and in Canada, and no doubt in the wise old Mother Country, England, and in the rest of the world, who can't believe that "bees can bite?" You send out a query to the "smart" bee doctors of the world and ask them seriously if "bees can bite," and it might be safest for you to "fix to run." "Dr. Wiseman" asserted a good many years ago that bees are physically unable to "bite," and that has "settled it," for the rest have followed. Not a single scientific experiment has ever been published to show that bees are incapable of biting fruits. Some years ago the writer, from practical observations, was led to conduct scientific experiments to settle the question as to whether or not the honey bee is physically able to penetrate the skins of ordinary fruits. I first demonstrated that it is not the habit of the honey bee to attack the skins of sound fruits, but I observed at the time that in the heated season they can cut away any substance used in hive-building, except iron and glass. During the heated season of summer, when the bees have nothing to do, they will sometimes enlarge the entrance to the hive, and I have several colonies now flying from different parts of their hives, through holes they have nibbled at the corners of the hives. My bees often cut round, smooth holes in paper quilts, and in enamelled cloth covers. These smooth round holes suggested a scientific experiment. A round hole in the quilt where the bees were at work, enlarging the hole. Over this hole was placed a large ripe grape, and the bees being in the habit of cutting at that place promptly, but the skin of the grape and extracted its juice. A large wild goose plum was next tried, and it was cut through in due time. Finally, an early harvest apple was put on trial, and the bees cut its smooth rind. It will be seen that these bees cut these trial fruits in their efforts to cut their way through the quilt. This was proven by the fact that when a cluster of grapes were used, only the berry over the hole was cut, and the bees having moved the single grape over the hole as an obstruction, they were found crawling over the rest of the cluster without harming any more of them. These experiments as fully proved that bees do not habitually attack the sound

skins of fruits, as they proved that bees are physically able to bite through the covering of any ordinary fruits. I intended to refer to some other interesting matters, but this article is too long now.

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## Methods of Securing and Managing Swarms.

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The season of 1896, in point of swarming, has been a remarkable one. The bees lightly set at naught all the accepted canons of bee-keepers respecting that function. Lack of great strength had little restraining influence, and abundance of room, even in the brood-nest, none at all.

Swarming began the last of May, continuing just a month, during a very moderate flow of nectar, ending abruptly when that flow was at its best at the height of basswood bloom, though even then the secretion of nectar was very light. Not more than one or two per cent. of the colonies did anything at all in the supers before casting swarms, and many did not wait to fill the combs in the brood-nest. Under such circumstances it is safe to say that it would be wise to cease efforts to determine the best methods of securing and managing swarms, on account of any bright prospect of speedy success in breeding out the swarming instinct, or even of any satisfactory invention that will practically allay it. Indeed it is a very serious question whether, if this object could be secured in either of these ways, it would be satisfactory to more than a very small percentage of apiarists.

There are always more or less losses from various causes to be made good, and there is no cheaper or more satisfactory way of doing this than through the increase by swarming. The loss of even a few colonies each winter during a series of unfavorable years, where there is little or no swarming, with occasional failure of queens and lack of stores, often best met by the uniting of colonies, sometimes makes the aggregate reduction in numbers rather startling. Then the serious item of the rearing of queens comes in, which must be done artificially if increase is secured without swarming. No doubt as good queens can be secured in this way as those obtained from cells built and cared for under the