

to much cold, to keep them quiet in a cellar temperature ranging from 47° to 52° throughout a long winter, and under such conditions they winter very well.

The entrances of the hives in the bee cellar should be left open—wide open in most cellars—and the bees should be disturbed as little as possible. Mice must be kept out of the bee cellar; they will do great harm to the bees and combs if allowed. The air of the cellar should be kept clean and sweet, and for this purpose in a cellar crowded with hives, the dead bees should be swept up and removed once or twice during the winter.

Beginners are often in doubt as to the best time to bring the bees into the cellar and when to take them out. The best time to take them in is as soon as possible after they had the last good flight that can be expected. In many places, this is early in November. The best date to bring them out is usually when the willows come into bloom, that is to say, when the blossom heads are showing yellow, if the weather is favourable. But on the coast and in other places where a considerable period of chilly weather may still be expected it will be wise to leave them in the cellar a week or two longer. If, however, the bees are very restless and the mouths of the hives are much spotted with dysentery, it may be advisable to bring them out before willow bloom in the early morning of a day that promises to be sunny and warm in order that they may get a good cleansing flight as early as possible. The best time of day to bring the bees out of the cellar is in the evening or early morning, because an immediate flight is not desirable, and may cause confusion and robbing. Laundered articles should not hang out to dry near the apiary after the bees have been brought from the cellar until they have made their cleansing flight.

### SPRING MANAGEMENT.

In many places it is an advantage to protect the colonies that have been brought out of the cellar with packing cases or paper covers, but at Ottawa where the spring warms up quickly in average seasons, this has not been found to be worth while; however, packed covers are desirable. It is important that the hives should be put in a place sheltered from cold winds, and the size of the entrance should be reduced.

The colonies may be examined on a warm day when the bees are flying freely. Those that have not as much as at least ten or fifteen pounds of stores should be given combs of stores to make up the deficiency, and colonies that are without queens or that have drone breeding queens, should be united to weak colonies that contain fertile queens. Very weak colonies may be saved by placing them over strong colonies with a queen excluder between.

It is wise to defer this first examination until after a few days of favourable conditions and nectar is coming in freely. In their first flight after the winter, the bees of the different colonies mix considerably, especially if wind blows through the apiary, and the large numbers of strange bees in the hive with no nectar coming in, are liable to cause the queens to be attacked, balled, and possibly stung, so that one or two of their legs may be paralyzed or they may even be killed, if the colony is opened and examined. Also at a later period the presence of a fertile queen can be more easily and quickly ascertained by noting the presence of capped worker brood, which can be distinguished from drone brood by its flat and not strongly convex cappings. Some queens do not begin to lay until some days after the colonies have been removed from the cellar. Further, there is a greater risk of brood getting chilled during early examinations than when the weather is warmer.