

is storing and capping. From the middle to the end of October all colonies ought to be reweighed, as almost always a few, to the owner's astonishment, will be found short, after having been supplied a month or two before with what was at the time considered an abundance of stores for winter. It never pays the apiarist to "skimp" his bees of winter stores. And it must be remembered that enough to put the bees through is not enough, economically considered. Like the Dutchman's beer, in wintering bees "too much is just enough." That is to say, the bees ought to have so much stores over and above their actual needs that they will not fear to begin to brood freely in the cellar in the spring, and keep it up until the fields again begin to yield.

After supplying all deficiencies of food, the next most important work for October, where it has not been already done, is to pack the bees up warm and dry, and then *leave them alone* till it is time to carry them into the cellar or other winter repository.

#### HOW TO WINTER.

This is the great problem of bee-keeping. It is the hackneyed subject of apiarian literature but it will always be in order till bees can be wintered without unnecessary loss. The apiarist who can carry his bees successfully through the winter and spring is the one who will make bee-culture pay. There are various methods, most of them possessing more or less merit; and the best method will, of course, vary with climate and other conditions. For our Canadian climate my own preference is for *cellar wintering*.

During the past twenty-five years I have tried several methods, and have settled down upon the cellar as the best. I can winter bees outside on the summer stands either in double-walled, packed hives, or otherwise packed in chaff or sawdust, but there is much more work and a little more risk than in the cellar. A good cellar for wintering ought to be frost-proof, dry and well ventilated. True, success may be achieved with either one of these conditions absent, provided all other conditions are favorable. The first named is the most essential, ventilation next, and dryness last. When the temperature of cellar is right, and the colonies properly fixed up, humidity can do but little harm. If the apartment maintains a temperature between 40° and 50° through the winter, it will do. An even temperature of about 45° would be better, at all events up to about the first of March, when brooding commences; then and thence forward it ought to be a little higher.

#### TIME TO SET IN.

Bees ought to be placed in winter quarters before the hard freezing weather sets in. I have been getting mine in earlier and earlier from year to year, with good results. As a rule November is the month, though it may be prudent to put them in in October sometimes. The lower tier ought to be up a foot or two from the cellar floor, and the strongest and heaviest colonies should be placed in the lower tiers. The lightest should be on top so that they may be readily supplied with stores should they run short, and for the additional reason that they will be warmer on top. As to the vexed question of removing the summer propolized quilts, or not, in the case of strong colonies in a good cellar it makes but little difference. From weaker colonies they had better be removed, substituting therefore clean cotton quilts, on top of which place several thicknesses of warm woolen quilts. A space should be left below the quilts for a bee passage across the frames. This may be made by simply placing 2 or 3 inch-square sticks across the frames under the quilts. In placing the hives in tiers one above another, the second tier should not quite touch the upper quilts of the lower tier, and so on to the top. Close the entrances of hives before carrying them in, and carefully avoid all jarring or disturbance of the bees. After carrying them in, and just before leaving the cellar or apartment, reopen all entrances wide. Where the cellar will admit of it, the portion occupied by the bees ought to be partitioned off entirely apart from that used by the family for vegetables, etc.

ALLEN PRINGLE.

From Gleanings.

#### DRONES.

DO THEY SOMETIMES CONGREGATE IN SWARMS IN ANY PARTICULAR LOCALITY NEAR THE APIARY.

LET me give some facts that have come under my own observation regarding drones. About the middle of May, 1887, while walking south down the creek one day, looking at the prospect for white clover, I heard what seemed to be a large swarm of bees to the east of me. There was no honey being gathered at the time; and its being so early in the season, I was sure it was not a swarm. My curiosity led me to the spot whence the sound came, and there in countless numbers above my head were drones darting hither and thither after each other, and after everything else that chanced along. The area covered by them was about the same as a large swarm of bees; but the intensity of the noise they made was equal to that of three swarms of bees. Only the lower drones could be seen. The bulk of them were high in the air, 100 feet or so. By going a few rods to any side, the sound would come from the common centre, which showed that they were all together.