

them and should be carefully guarded against. The conditions necessary for safe wintering are briefly as follows: A dry, frost-proof cellar with a temperature between 38° and 45°, sufficient honey (say 25 pounds), perfect freedom from any shaking or jarring, complete darkness, sufficient ventilation to allow the moisture in the hive to escape, and freedom from rats or mice, which work great havoc with both combs and bees during the winter.

The time when colonies should be removed from their winter quarters depends almost entirely on the weather. If the ground is free or almost free from snow and the temperature fairly warm, the sooner they are placed on their summer stands the better. After such a long period of inactivity many of the bees have lost their full power of flight, and it is therefore advisable to choose a warm still day, with sunshine, on which to give them their liberty. After even one day of exercise the bees are able to take care of themselves and do not leave their hives unless the weather is favorable. If they are given their first flight on a cold windy day, even if the sun is shining brightly, the chances are that hundreds of bees, if not thousands, will fall to the ground and never regain their hives, particularly if rain or snow should follow the next day.

A colony of bees should, in the early spring, consist of a queen and 25 to 30 thousand worker bees. The drones, or male bees, do not usually appear in the hive until the middle or end of May, though they are sometimes found in very strong colonies much earlier. The queen is the mother of the entire colony. Her one and only duty seems to be to lay eggs, and it is said on the best authority that to lay two thousand in twenty-four hours is quite within her power. In shape the queen resembles the workers more than the drones but is longer than either, and like the workers she possesses a sting but will not use it on anything below bee royalty—that is to say, on some other queen. Unlike the workers and drones a mated queen never leaves the hive except with a swarm. The average age of a queen is probably three years, but modern bee-keepers re-queen their colonies oftener as a young queen is usually much more prolific than an old one. The worker bees, as their name implies, perform all the duties of the hive. The average life of the workers during the summer months is probably not more than eight weeks, and often less. It seems as though they actually work themselves to death, as those that are hatched late on in the summer live much longer, in fact through the six months of winter when they have no work to do. The duties of the worker bees from spring to fall are manifold,