

only a few behind. The latter, aided by those which return from the fields, not having been present at the time of the exodus, devote their attention to taking care of the queen cells, which are about to open, also looking out for the growing young. Each queen cell has been carefully guarded by special sentinels to prevent the occupants from getting out prematurely, because, if they did so, and there should be more than one queen in the hive at the same time, an awful fight would ensue. When the old queen has gone with the swarm and the proper moment has arrived, the remaining workers let a single young queen out of her prison. She knows that there are other young queens around and she walks about, uttering a note of challenge to them, which sounds like "peep, peep!"

The other queens answer her with a similar piping noise from their guarded cells. If she were permitted to do so she would bite open every one of their capsules in the rear and sting them to death, but the workers will not allow it. Sometimes in the excitement of swarming the guards fail to do their duty properly, and two or more young queens obtaining their freedom at the same time engage in mortal combat, each desiring to reign over the hive. It may be that the new queen will get disgusted and lead off a second swarm from the hive, upon which the workers will liberate another queen, and the business will proceed as before until the remaining workers consider that the hive cannot stand any more drafts from its population. Having arrived at this conclusion they will permit the queen at liberty to sting the others to death in their capsules, and will even help her in killing her rivals, because it is a recognized fact in the bee world that there cannot be two mistresses in the same house.

A few days after a new queen has thus been set to rule over the hive she is inspired to seek a mate and for that purpose flies out and high in the air, where drones from other hives are to be met with. Very often some accident will happen to her on this excursion. She may be gobbled by a bird or otherwise injured. Supposing that she does not return, the colony in her hive will necessarily become extinct, because there is no egg-layer to continue the family. Under such conditions it is usual for some of the workers, in their anxiety to perpetuate the species, to develop the power of laying eggs. Unfortunately, however, all the eggs they lay, being unimpregnated, produce only drones, and the population of the hive is wiped out very soon. It has been surmised that the chance of accidents befalling the queen

bees on their flights for mating purposes is contemplated by nature for keeping these in sects from increasing unduly.

AN EMIGRANT SWARM.

Before a swarm starts away from the hive to accompany a queen who seeks another dwelling place each bee goes to the stores of honey and fills its sack with a supply. One individual can carry a quantity about the bigness of a pea. This provision is intended to start housekeeping within the fresh locality. The swarm flies to a little distance and forms a cluster on the branch of a tree or elsewhere. This is a convention gathered for the purpose of considering further action. Scouts are immediately sent out in all directions to look for some convenient spot to make a home in, such as a hollow tree or a crevice in a rock. When the scouts return they will lead the swarm to the best place that has been discovered: but it is before they get back that the prudent beekeeper gathers in the bees and induces them to take up their residence in a hive which he provides by catching the queen and placing her with clipped wings in the hive, or by other means. In that case the returning scouts go back to the parent hive. If the queen is removed from a swarm by the beekeeper the workers set up a mighty roar and scatter in every direction looking for her.

At once upon taking up their abode in new hives the workers proceed to build their combs with wax from the honey they have brought with them, gathering more in the fields and constructing cells to contain honey and eggs. The queen, if she be a new one, goes out to mate, returns and proceeds to lay. From that time on everything goes on as has been already described. The queen continually keeps on laying, the nurse bees feed the larvae and the workers collect the spoils of the flowers for making and filling the combs. As fast as cells are filled with honey they are sealed over with wax. As autumn comes on and the weather grows colder the queen bee lays fewer and fewer eggs and more and more of the cells, not being required for reproductive purposes, are filled with honey. The bees spend the winter in a drowsy condition, clustered as closely as possible together between the combs and in the empty cells for the sake of warmth. Once in eight or ten days they wake up somewhat and eat a little honey. When spring comes they start in to work again, the drone eggs are laid and hatched, the swarming takes place and so on through the cycle of the year.—The Evening Washington Star.