

large yields of honey may be obtained. I must, therefore, rate extra-prolificness in queens as their most valuable trait. Along with this I look for strength of body, limbs and wings; in fact, a general compact, symmetrical and well-developed form, combined with activity. Such a queen, showing, herself, all of the race characteristics of the breed to which she belongs, and whose workers likewise show race characteristics of their class, will be very likely to reproduce herself in her queen progeny, and, through the latter, will give colonies which are typical of the race to which they belong.

#### Manner of Securing Cells

If considerable numbers of cells are required, it is always better to have a colony of Carniolan bees, Caucasians, or some one of the eastern races as cell-builders, since they produce much greater numbers, even fifty to one hundred cells in a single batch being quite common. Being also excellent nurse bees, the food supplied to the developing larvæ is abundant, insuring more perfect development than is the case with the nurse bees of less prolific races. The first step is to make queenless a very populous colony; on the third day thereafter the colony may be put in condition to receive queen cells. There is no need of rejecting many of the cells which may chance to have been formed in this colony, since, if properly managed, they may be made to produce most excellent queens. For convenience, these incipient cells may be cut out and attached with melted wax at regular intervals on a top bar. The larvæ ranging in age from forty to sixty hours are to be removed with a slightly bent toothpick, and, in their place, are to be put, with the same instrument, larvæ from twelve to thirty-six hours of age, taken from the colony of the chosen queen. This substitution of young larvæ insures a full amount of food from the very beginning—even a superabundance. In choosing the cells to be placed on the bar, only

those having large bases upon which a normal-sized cell may be built, should be taken. Here, again, race peculiarities have to be considered, since the queen cells ordinarily formed by eastern bees are not as large in diameter as those produced by Carniolans. It is therefore well to use care in this selection.

The next step consists in the removal of all unsealed larvæ from the populous colony which has been queenless during the preceding two or three days. The object of this removal is to force the bees to turn their whole attention to the fitting and it is, therefore, or more queen cells that are supplied to the bars. Should honey-gathering not be going on freely, the colony engaged in the nursing of these queen cells is to be fed daily a pint or more of syrup, care being taken, likewise, that an abundance of pollen is present in the hive. If the weather is cool and changeable, particular care should be taken to afford the bees every facility for the retention of the natural warmth of the brood nest. Since, in substituting larvæ from the breeding queen chosen, those larvæ having an age of twelve to thirty-six hours had better be selected, it may be counted that the young queens will all emerge twelve and one-half to thirteen and one-half days after the transferring or substitution of the larvæ takes place. It is, therefore, easy to provide nuclei (queenless colonies) for the reception of each one of these queen cells. If, however, it is inconvenient to do this, the cells have been placed at regular intervals upon the top bars, it will not be found difficult to provide a small nursery, which may merely consist of a series of wooden cages with wire-doors or small wire-cloth compartments having a cell or cup in which a small quantity of food may be placed, the cages being placed at such intervals that a bar containing the cells, when placed over the cages, permits each cell to fall into a separate compartment. It is