

## STORIES of New Jersey

now function as storage rooms for the plant's food. On the back bulbs are small, dark, spongy, woodlike "eyes" which are forced into activity by the cut on the rhizome. These "eyes" then produce new stemlike growths which afterward become pseudo-bulbs. It is the pseudo-bulb, also containing food, that puts forth the flower. Not until a year after the rhizome has been partly cut is it completely severed from the parent plant. With its two or three back bulbs, from which the new pseudo-bulbs are growing, it is potted, ready for the three or four years of exacting care and treatment that must precede the first bloom. Orchids grown this way make up 80 percent of the total crop.

The second method--raising orchids from seed--is even more painstaking and difficult. Ordinarily eight years of careful nursing must elapse before the plant blooms. But this is the only way to breed new types of hybrids so essential to the industry.

In every orchid seed pod of the *Cattleya* species there are about 300,000 tiny seeds. In groups of 200 the seeds are usually placed in flasks or test tubes containing a solution of the nourishing agar. The agar is an inexpensive item; only five pounds at \$3 a pound are required to supply 1,600 test tubes. When the plantlets have developed several tiny leaves and a root system about one-quarter of an inch long, 50 or more of the hardiest from each tube are transplanted into one large pot. They are held firmly in place by a mixture of sphagnum moss, charcoal and osmunda. This last substance, an essential of orchid culture, is a porous, nitrogenous peat composed of roots from the *Osmunda* fern, found in the swamps of Morris and Sussex Counties.

Several months pass. Then 30 of the most promising plantlets out of each group of 50 are transplanted, five to a pot, and the weaklings are destroyed. At the end of the second year, when the plants have grown one inch high, each is given a separate pot. Four years of individual nursing follow before the plant can flower; six before it can produce a complete crop. The crop each plant produces varies: in the native habitat hunters have seen plants with as many as 300 blooms. Once a plant reaches maturity it can, with good care, bloom for many years. In one of the New Jersey ranges there are several orchid plants which have bloomed continuously since 1889.

Inside the low, warm, steamy glasshouses of the orchid range, plants are arranged neatly on both sides of long, narrow aisles on concrete benches, iron stagings or stadiumlike tiers. Many are suspended from the roof on wire hangers. Some ranges are equipped with an irrigation spray system, but generally, dampening the greenhouse floors provides proper humidity. In winter the water is warmed before being sprayed.

The water supply or lack of it plays a large part in determining the "rest period" or dormant state which is so vital to the health and productivity of the orchid plant. The grower must learn by experience when to withhold water to induce the rest period, when to provide water so that the plant may continue its growth.

Unlike most flowers the orchid does not open if removed from the plant while a bud. The crop is not cut, therefore, and packed for market until in full bloom. Once cut, the flowers are carefully tucked into individual tubes containing water and taken to the sorting room, where the orchids are classified as to kind, size and color. To enable the flowers to live for a week or two without wilting, they are placed in a refrigerator for several hours to "harden."