The Orchid Plant

The orchid plant family varies widely in habitat, ranging throughout the tropics, over the temperate zone of both hemispheres, and even reaching into the fringes of the Arctic.

There is a similarly wide variation in type, with several systems of classification. The first division is into monopodial and sympodial groups, referring to the habit of growth. The monopodial, including the Vanda and Aerides, grow continuously from a central crown, which eventually appears atop a long stem that has frequently lost its lower leaves. Phalaenopsis, although monopodial, is stemless, but yearly grows a pair of leaves from the characteristic crown.

The leaves of monopodial orchid plants are heavy, leathery, fleshy, and capable of storing some quantity of moisture, but the plants must never be allowed to dry out completely. The leaves of Vanda teres, like pine needles, do not resemble leaves, but are three to four inches long, very slender, round and succulent, and taper to a point.

The sympodial group, of which Cattleya, Laelia, and Coelogyne are notable examples of this orchid plant, has a creeping rootstock, with each new growth springing from the base and alongside the last year's growth. The new growth appears as a swelling or 'dormant' eye that at the proper time will 'break' or begin to grow. In some genera, such as Laelia and Coelogyne, the growths will break in several directions, but in Cattleya usually in only one.

The pseudobulb, a characteristic of sympodial orchid plants, is a reservoir for food and moisture against times of drought and dormancy. It differs widely according to the different genera. The pseudobulb of Cattleya is longish, smooth, and rounded; while that of Laelia may be slightly flattened, even in some cases assuming a many-sided angular form. Certain species have pseudobulbs that resemble small pineapples.

The pseudobulbs of Odontoglossum and Miltonia are much flattened and compressed; those of Coelogyne are very round, short, and prolific; and those of Cymbidium very large, rounded, and stocky. Dendrobium in many species lacks pseudobulbs, but even the long cane-like flower stems, along which the leaves grow in pairs, are capable of storing food and moisture.

Orchid plants may also be classified as saprophytic, terrestrial, semi-terrestrial, and epiphytic. Here we will not be much concerned with the saprophytes, natives of temperate zones, since they either lack flowers entirely or have small inconspicuous flowers of interest only to the botanist.

Lacking chlorophyll, the valuable green substance in leaves by means of which is accomplished photosynthesis (the manufacture of carbohydrates, sugars and starches, through the action of the sun or light on carbon dioxide and water), the saprophyte is forced to obtain sustenance from the pre-digested food of decaying organic matter in the soil. The terrestrial orchid plant are also found in the temperate zones of both hemispheres. Among them are the tall Sobralia, graceful Cypripediums, Spiranthes, and fairy-flowered Habenaria. Most showy of these, the Cypripedium or well-known 'lady's slipper,' has a wide range of habitat in the United States and has attractive foliage as well as flowers. However, few of the terrestrial orchid plants transplant well from their marshy homes, and it is perhaps best to seek them out and enjoy them in their native habitat.

By far the largest, most varied, and most showy of the orchid plant family are included in the semi-terrestrial and epiphytic groups. These are tropical or subtropical and live on trees in the rain swept coastal jungles or on bare rocks in the hotsun.

Their elevation ranges from sea level to two thousand feet above sea level. They abound through parts of Asia, the islands of the South Pacific, Australia, New Zealand, Africa, and South and Central America. The Himalayas and the Andes are also congenial to lovely orchids.

The epiphytic orchid plants are widely and wrongly considered to be parasites because they grow on other plants, notably trees. The plant 'home' is actually used only for support. In addition to the roots that cling to trees, these orchids also have aerial (epiphytic) roots that are sent forth to secure

nourishment from the soluble mineral salts in the moisture-laden air and from the humus washed down into the crotches of trees and cracks of rocks.

The supply of such nourishment is plentiful in some seasons and scant in others, a fact that no doubt accounts for the five to seven years required for the slow growth from seed to bloom.

In her selection of plants, the grower may arrange her collection to include representatives of all of the above-mentioned divisions and also plan to have plants coming to bloom all through the year. The epiphytic orchids, however, are of paramount interest to the grower, and we shall consider them in some detail in the following paragraphs.

Botanical names of orchids are usually long and confusing and difficult to pronounce, and at first seem to offer a serious obstacle to the further study and understanding of the family