

## Comments on *Chamaedorea* Palms

DAVID BARRY, Jr.

The American genus of *Chamaedorea* offers palms that are both beautiful and useful. Their beauty rests upon a variety of form and structure that is characteristically delicate and diminutive. Their usefulness is derived from a combination of resistance to cold, tolerance to shade and a utilitarian size.

Numerous species of *Chamaedorea* palms will withstand several degrees below 32° F. while palms of other species native to the same forests will suffer and die at temperatures several degrees above freezing. Such endurance on the part of *Chamaedorea* is of especial value to growers in semi-tropical areas. Hardiness does not apply to all species of *Chamaedorea* but it is a characteristic that is common to many species. It is typical of the plants that are found in cultivation in Southern France, Italy, Florida, and the coastal belt of Southern California. Most of these plants are native to Mexico and Central America.

One theory advanced to explain the hardiness of *Chamaedorea* is that eons ago they were highland plants accustomed to cold, were washed down to live in the lowlands, and retained their hardiness in spite of the change in elevation.

A clump of *Chamaedorea Arenbergiana* in Riverside, California, an interior city, affords an example of hardiness. It has withstood 18° F. by being provided with a covering of cloth. After allowance is made for the extent to which the protection modifies the cold, 18° F. remains a very low temperature for a palm from the tropics to endure.

*Chamaedorea* palms live on the floor of the forest and therefore are shade-loving plants that adapt themselves to the light deficiency usually found in interior rooms and in porches and patios. In such places the plants grow to natural proportions and do not become leggy.

Clump-type *Chamaedorea* are the "hotel-lobby" plants in several of the large hotels in Italian cities. In spite of light deficiency the plants are in thrifty condition and give the appearance of having been in their respective locations for years.

*Chamaedorea* palms make fine house plants. They do not readily become so large that they have to be removed. Because many species come from regions where there is scant rainfall at certain seasons, they are drought-resistant, and, as a consequence, resistant to neglect. In general, these palms are in pleasing architectural scale in the average home.

The reed-like, graceful silhouette of bamboo is attractive to the eye and is presently very popular decoratively. Bamboo, however, grows poorly in the shade and also sheds its leaves freely. In contrast, the clump-type *Chamaedorea*, or the single-stemmed types that are assembled in clumps, afford the appearance of bamboo under interior conditions without its cultural weaknesses.

*Chamaedorea* comprises a group of palms of many sizes and shapes. Leaves vary from single, unbroken planes, the size of a hand, to long fronds of many leaflets. Leaflets vary in width, shape and color. In some species they are narrow and bright green; in others narrow and glaucous; in some dark green and broad; in some S-shaped, or sigmoid.

*Chamaedorea* palms vary considerably in size. At one extreme is *Chamaedorea humilis*, from Chiapas, that will flower when in a four inch pot and at a height of one foot. It presents in miniature the symmetry of a great tree palm. From this dwarf and other species much like it, the sizes range to heights of fifteen feet in such species as *Ch. Tepejilote* and *Pacaya*. Within these extremes of size the palms fall into two general classi-

fications,—single trunks or multiple trunks.

Floral structures are of many shapes. Some of the spadices, the floral branches that carry flowers and fruit, extend through and above the canopy of leaves, whereas other spadices grow out of the naked trunk below the crown of leaves. Flowers and spadices vary to a remarkable extent among species, and in some plants between sexes of the same species. This immense variation in structural detail is a headache to the taxonomist, but does afford much charm and interest to the grower-collector of these plants.

*Chamaedorea* palms are not as abundant in cultivation as they should be because of difficulty in obtaining seed. An exception is the palm that is grown at the present time in the United States under the name *Neanthe bella*. Many hundreds of pounds of seed are imported each year from Mexico. This species is more extensively grown in the United States than any other palm. It is a standard house plant and is generally available in chain stores. This palm may be eventually established as *Chamaedorea elegans*, or as *Collinia elegans*. In spite of its generic name, *Neanthe* is as much a *Chamaedorea* as any other palm of the genus.

Seed collecting in the wild is not ordinarily easy because seed is found only on the female plants, and its thin skin offers little protection against drying out and riddling by insects. The seed is small, averaging less than one-quarter of an inch in diameter, and is quickly dispersed on the forest floor.

Before planting, seed should be kept in plastic bags or in slightly damp, moisture-retaining material. Plant the seed in similar material below the surface a distance equal to the width of the seed. By the way, this is a standard rule for planting all kinds of palm seed. Keep the containers in a warm place and expect germination within a month to a year.

A dependable source of seed is from a stock of, say, six or more plants of the same species. Most of the species do not set seed when away from their native haunts because insects are not present to transport the pollen from the male plants to the female plants. A few species of which *Chamaedorea Tepejilote* is an example, will set their own seed because the male plants produce such an abundance of pollen that it makes its own air-borne way to the flowers of nearby female plants. In most cases, however, it is necessary to hand-pollinate in order to set seed. The sex of the male plants can be readily determined by observation of pollen within their flowers. The flowering season lasts for several weeks, during which time groups of female flowers on the inflorescences attain receptivity. The female flowers remain open and receptive for only two or three days. Evidence of receptivity is the opening of the corolla to expose a pistillode that is glistening with nectar to which pollen readily adheres. It is helpful to have several male plants with flowers maturing over two or three weeks in order to have fresh pollen at hand. If enough male plants are not available to afford fresh pollen when needed, keep pollen fresh by placing it in plastic bags in a refrigerator.

Pollen is of two kinds, that which is abundantly produced and falls readily from the flowers and that which is sticky and can not be shaken from the flowers. The best way to collect pollen of the first kind is to hold a sheet of transparent plastic under the inflorescence and to tap the branchlets to which the flowers are attached. The pollen will collect on the plastic as a white dust where it is readily discernible and easy to pick up with a fine brush, with which it can then be applied gently to the female flowers. With the second kind of pollen a different method is recommended. Male flowers should be removed from the spadix and the three sections of the corolla (like thickened

## PRINCIPES

---

sepals) should be detached from each flower. Pointed forceps are useful for this task. A quantity of stripped male flowers should be placed in a small receptacle and air-dried for two to four hours. The sticky pollen will thus become dry enough to adhere to the bristles of a fine brush, which should be used to stir the flowers in the receptacle. Then the pollen can be applied to the female flowers as above.

The flowers will swell a few days after pollinization. The branches of the inflorescence will gradually become orange-red, and this bright color, in contrast to the shiny black of the seeds, makes an ornamental addition to the appearance of the palm. The period from pollinization to ripeness of the seed takes about a year. To hand-pollinate successfully these palms is easy, pleasant, and a rewarding experience.

The opportunity to hybridize is of course at hand. In deference to the taxonomic difficulties presented by the genus and to give botanists a better op-

portunity to bring order out of chaos that exists between species, before exposing them to the confusion between hybrids and species, no urging to hybridize is forthcoming here.

Collectors can exchange plants with one another with as much ease as do orchid or bromeliad growers. Groups of each species should be exchanged in order to offer plants of both sexes. Except in their larger sizes *Chamaedorea* palms are easy to ship by air in light cartons.

Because of the ease of growing palms from seed the United States Department of Agriculture makes a general prohibition against the importation of palm plants.

With more air routes and construction of new roads in the tropical Americas, obtaining *Chamaedorea* seed from known and yet-to-be-discovered species will be easier and within the reach of more people. The pleasure of growing *Chamaedorea* palms is destined to become a common experience.



*MORTAL ENEMIES – Israel and Egypt, besides being neighbors, have at least one thing in common: both have issued postage stamps adorned with palms.*