

## Plant Collecting in Mexico<sup>®</sup>

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Over the past 25 years I have made more than 20 plant collecting trips with Gary Hammer, one of my former students, to all areas of Mexico. We have collected both well known plants and plants new to horticulture. The known plants were collected to sell through his nursery, Desert to Jungle Nursery in Los Angeles, or through plant shows and the new plants were propagated by us and introduced through his nursery. We have made collecting trips to a number of other countries, Australia, New Zealand, Thailand, and South Africa among others, but this talk and the slides will focus on Mexico.

Mexico is an excellent destination for plant collecting because it is close by; it has an amazing range of plants, most famously orchids, bromeliads, cacti, other succulents, cycads, and euphorbias; and it has a wide range of climates because of its varied geography. Horticulturists interested in tropical plants, desert plants, temperate plants, or alpine plants can find them all in Mexico.

Tropical lowland areas of Mexico are rich in aroids, orchids, palms, ferns, philodendrons, and bromeliads. Desert areas have cacti, echeverias (*Echeveria*), caudiciform plants in many families, and even tillandsias (*Tillandsia*).

In the higher mountains there can be cloud forests at the 6000 to 9000 ft elevations where the trees are full of epiphytes such as orchids, tillandsias, and even cacti. One striking plant in the area is the upside-down growing orchid *Encyclia citrina*.

At these same elevations there can be dryer forests of deciduous oaks or pines with seasonal rainfall, again with orchids and tillandsias, but also with agaves, pinguiculas, euphorbias, and other plants that are well adapted to coastal California.

At slightly lower elevations the climate is subtropical and there can be enough year-round moisture to keep the trees full of epiphytes.

The state of Michoacan is famous for its plants and varied habitats. Of particular interest to a California horticulturist are the high elevation areas with scattered deciduous oak and pine forests, where the rainfall is seasonal, summer, and there can be light frosts in the winter. This area is famous for the orchid *Laelia speciosa*, that blooms in the oak trees just before they leaf out with the spring rains.

In the state of Vera Cruz on the Gulf of Mexico the climate is rainy year-round. There is a broad band of land above the tropical lowlands at about 1000 ft elevation that is subtropical, and rich in interesting plants. The trees are heavy with bromeliads, orchids, peperomias (*Peperomia*), ferns, and other plants that grow well in the warmer areas of Southern California. These areas are rapidly being cleared for coffee plantations or cattle ranches.

Mexico is also full of cliffs and barrancas whereon grow many tillandsia species, and lava flows home to many cacti and caudiciform species. Newer lava flows tend to be very dry and you can find interesting caudiciform species of *Cissus*, *Convolvulus*, *Asclepias*, *Bursera*, and *Euphorbia*. Older lava flows have decomposed more. The soil holds more water, and even in summer rainfall areas like the areas around Cuernavaca, you can find a rich array of plants. Penstemons, echeverias, ferns, peperomias, *Achimenes*, terrestrial orchids, *Sedum*, *Agave*, interesting sedges, both

terrestrial and epiphytic bromeliads, selaginellas (*Selaginella*), and several begonia species all call this area home. Interestingly these areas often burn during the dry winters, and many of the plants retreat back to succulent bulbs, rhizomes, or roots during this stressful time.

To emphasize the effect of elevation in this varied geography, it is possible to stand in the banana plantations in Vera Cruz State and look up at the permanently snow capped peak of Pico de Orizaba, not many miles away.

During the 1970s and early 1980s we collected many of the tillandsia species native throughout Mexico. Mexico and Peru are the centers of evolution of the over 600 species in this genus, and many grow quite successfully outdoors in coastal California. Some species are native to very small areas, and we have discovered several species new to science. During this period we also collected many orchids, but because of the tightening CITES (Convention on International Trade in Endangered) regulations, seed propagation of these species in the United States and habitat loss, we no longer collect orchids.

A typical example of habitat loss has occurred with the cycad, *Dioon calathamni*. Its native range is limited to a few square miles of ridge and hillside, most of which has now been cleared through Mexico's drive to become self sufficient in corn production. These hillsides are useful for 1 or 2 years, if the rains are not too severe and are useless for crops after that.

Currently we are more interested in finding new forms within known species. *Cuphea hyssopifolia* is an excellent example. Until fairly recently all the plants of this species seen in California were obviously all of the same cultivar that someone had introduced many years ago. In the wild in Mexico you see many variations from the typical pink form and in the nurseries they have this same variation because they propagate the plants from seed. *Cuphea* are all cutting propagated in California.

Retail nurseries, landscaped areas at hotels, and people's gardens are all fruitful sites for plant collecting and we have found some of our most interesting plants there. Retail nurseries in Australia, New Zealand, and South Africa have been very fruitful in the past. Seed catalogs from those countries are also very useful.

There are still new plants to be found in the wild, and *Stachys albotomentosa* is an excellent example. We found this in Hidalgo State growing with heucheras and agaves in oak/pine forests at high elevations that were just short of being cloud forests. This herbaceous plant has gray leaves, a low spreading habit, short spikes of salmon flowers, drought tolerance, and recently was the "new thing" in Los Angeles gardens. Californians are always looking for the next "new thing." Being the first to find it can be lucrative, or at least satisfying.