

It's 6:30 in the morning, a cat wanders out of a greenhouse, inside a phone rings. "Orchid greenhouse," answers a cheerful Julie Norman, who oversees the Arboretum's vast collection of 9,000 plants. For 25 years she has been caring for the orchids and closely managing the microclimates of five greenhouses. The thriving collection is one of the five largest and most diverse public collections in the United States.

Julie is working in one of the greenhouses where she tends plants. Orchids were among the first group of plants to be featured in the Arboretum's living collections, dating back to the early 1950s. Today, the collection has grown in diversity to 162 genera and 2,079 species. It includes donated and purchased orchids as well as others from three collecting expeditions and some from the USDA Plant Rescue Center Program. In between monitoring temperatures and watering, Julie discussed orchids as a job.

What was your opinion of orchids before you began caring for them daily?

I thought orchids were exotic and only knew of the most commonly cultivated orchids at that the time, which were cymbidiums and cattleyas.

What are the challenges of managing such an extensive collection?

The biggest challenge is keeping the mechanical features of the greenhouses in proper working condition. The glass greenhouses were completed in 1956, 1957, 1959 and 1960 so they have on-going maintenance issues as does the most recently built orchid greenhouse which was completed in 1989. These aging greenhouses make it a challenge trying to maintain the proper temperatures and humidity levels for so many different orchid species housed in one greenhouse. All of the orchids are handwatered which is time consuming, particularly in the summer, but it gives me a chance to observe the individual plants. Weed and pest control are always on-going challenges.

What are your favorite orchids? Why?

I actually do not have a favorite orchid because each orchid is so diverse in its color and form that it has its own unique beauty.

Is there an average life span for an orchid?

Orchid growing is not a modern hobby. The Chinese have been growing orchids in China for over 2,500 years. The species grown then were the small-flowered terrestrial (ground-growing) cymbidiums. Orchid growing as we know it today was adopted in England by the wealthy class when the tropical regions of the world were opened to European trade in the 1700s. Some of the divisions of the original plants exist in collections today. The Arboretum's oldest orchid dates to 1958.

Was there ever an orchid that you just couldn't coax into a Southern California lifestyle?

There have been some very challenging orchids to grow, some of which just didn't make it and are now residing in the big orchid place in the sky.

What is the best part of your job?

The best part are the living things, plants and people, along with making L.A. County a more beautiful place by showcasing the Arboretum's orchid collection to a worldwide audience. It's also nice to have a cat in the greenhouse.

Which orchids would you recommend to the home gardener for indoor or outdoor?

The orchid that I would recommend for indoors is the *Phalaenopsis* and the *Cymbidium* for outdoor growing.

Phalaenopsis once so precious is now so ubiquitous from supermarkets to Costco that it is no longer perceived as special. Is that good or bad for the image of orchids?

It is both good and bad. The change in status of the orchid has come about because of improvements in orchid propagation as well as improved cultural practices. Orchids are now available in mass quantities to the mass audience which simply makes them attainable so now anyone can grow an orchid. At the same time, it limits the number of unique mom and pop growers as well as orchid diversity and contributes to the image of the orchid as being less esoteric and exotic.

Do you have orchids in your house or garden?

I have two cymbidiums at home. I don't have much space since I only have a postage-stamp-size garden. I come to the Arboretum, my second home, to take care of other orchids.



The Arboretum's collection consists mainly of species orchids typically found in the wilds as well as hybrids propagated by growers. Opposite: Laelia superbiens variety alba; Above: Phalaenopsis manni; Julie Norman in the greenhouse; Rhycholaelia digbyana.

HOW DO I CARE FOR MY PHALAENOPSIS?

Generally the best way to care for an orchid is to replicate conditions of its native habitat. The *Phalaenopsis* found in stores are mass-produced hybrids. Their natural wild habitat is tropical Asia and Australia where the plants, also known as moth/butterfly orchids, grow in trees and directly on moist cliff faces where there is plenty of shade and high humidity. To create such conditions indoors, Julie offers these tips:

Water is especially critical. Plants should be thoroughly watered and then not watered again until nearly dry or when 65% of the water has evaporated—pick up the pot and if it feels light, it's time to water.

Humidity is important. The recommended level is between 50 to 80% with some air circulation to avoid bacterial and fungal problems. This can be achieved in the home by setting the plants on trays of gravel partially filled with water so that the pots never sit in water.

Fertilize on a regular schedule, especially if the weather is warm when the plants are actively growing. A balanced water-soluble liquid fertilizer (such as 20-20-20) is best with twice-a-month applications. If your plant is growing in a

bark-based medium, apply a high nitrogen fertilizer (such as 30-10-10) every fifth feeding. Some growers apply fertilizer at one-quarter strength with every watering. I refer to this as "weakly weekly" and it is best when the plant is in warm, humid conditions. When cooler or overcast, fertilizer should be applied twice a month at weak strength.

Light is generally easy to provide for the *Phalaenopsis* as they grow easily in a bright window without direct sun. An east window is ideal in the home; shaded south or west windows are acceptable. The best rooms for the plant, providing they have adequate light, are the kitchen and the bathroom since these rooms are generally more humid.

A single *Phalaenopsis* spike usually flowers for two or more months. After the last bloom falls, cut the stalk where the lowest flower appeared and cut just above a node. This will encourage the flower stalk to send out a new spike of blooms if the plant is healthy and the variety is prone to secondary spikes. The new spike should develop and bloom in three months. After the last flower on the secondary spike has faded, cut the flower stalk near the base of the plant just above a node.



Norman, Julie. 2013. "Orchid whisperer: Julie Norman tends a large and diverse collection." *Exploring the arboretum: magazine for the members of the Los Angeles County Arboretum and Botanic Garden* 2013:summer/fall, 10–11.

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