

A Gift to Mexico



[1] The Plantation House Hacienda Restaurant and Visitors Center was designed in the style of an 18th-century plantation manor house and serves as the garden's headquarters. Here, visitors will find the botanical learning center and natural history library. The Hall of Flowers, within the visitors center, is the backdrop to weddings and events. Visitors to the restaurant will enjoy wonderful Mexican specialties, including homemade vanilla ice cream for dessert.

[2] *Cuitlauzina pendula* is an epiphyte found in the pine-oak forests of Mexico at mid to high elevations above 1,500 feet (460 m). This species was formerly known as *Odontoglossum pendulum*. It grows in high light with a winter resting period.

ORCHID FEVER OVERCOMES THE most learned botanist and the common gardener alike. Its effects gripped a mother and son team and helped them pursue a vision to create a world-class botanical garden in the mountain highlands of western Mexico. Inspired by their discoveries on weekend botanical safaris into the tropical mountains, a dream was born in which they discovered an urgent need for conservation measures and a raised awareness for the native orchids of the region.

Ending a successful career as restaurateurs in Florida, Bob and Betty Price took a west-coast sojourn to San Francisco, then headed south of the border to Puerto Vallarta, Mexico, looking for other adventures. They could never have imagined what the future held for them deep in the

mountains of the Sierra Madre Occidental in western Mexico.

The mountains surrounding Puerto Vallarta rise to more than 6,000 feet (1,830 m) above sea level and form a dynamic contrast between the mountains and sea below. These mountain highlands are a natural paradise for native orchids and thousands of other tropical plants. Puerto Vallarta is located on the same latitude as the Hawaiian Islands and has similar weather conditions. The main difference is the western coast of Mexico's pronounced dry winters and the monsoon summer wet season, when an average of 92 inches (2.3 m) of rain falls between May and October.

Soon after arriving in Puerto Vallarta, an event occurred that spurred Bob's interest in orchid protection. In the higher-income and non-Mexican

The Vallarta Botanical Gardens Creates the National Orchid Collection of Mexico

TEXT BY BOB PRICE
PHOTOGRAPHS BY JESUS REYES



neighborhoods of Puerto Vallarta and other Mexican cities, wild-collected orchids are sold door to door by rural low-income locals. One day, a man selling orchids showed up at Bob's door and unceremoniously dumped out the contents of his collection bag. Among the plants in the burlap sack were several blooming specimens of *Laelia rubesens*, plus plants of *Brassia* and assorted *Encyclia* species. Although wild orchid collecting is illegal, it is widespread in Mexico and the wildlife laws relating to orchid protection go unenforced. Bob asked the man where he found the orchids. Pointing toward the southeast, the orchid man answered, "There, in the mountains, señor!"

The region the vendor pointed toward was the Chamela-Cabo Corrientes, an area designated by the Comisión Nacional para el Conocimiento y uso de la Biodiversidad (CONABIO) for its importance in *Regiones Terrestres Prioritarias de México* (2000), based on its high biodiversity, which makes it one of the many areas in Mexico in great need of conservation. This region has a mixture of vegetation types, including tropical semideciduous forest, tropical deciduous forest, oak forests and pines. The area is highly valued for its ecological integrity and functions as a biological corridor. Its rate of endemism and species richness is remarkable. The greatest threat to the region is the deforestation in the last two decades, where approximately 30 percent of the forest on the coast has been lost.

Following the visit from the orchid vender, the Prices felt compelled to investigate. The next weekend, the team drove up into the mountains to see whether they could find the wild orchids. As the car climbed the steep and winding mountain road, driving became more hazardous because the driver was so distracted by the passing silhouette of epiphytes high in the branches overhanging the highway.



Suddenly the scenery changed, with the lush tropical vegetation of the coastal lowlands giving way to forests of large twisted oak trees mixed with tall pines. Upon finding a suitable place to pull over and park, they had barely left the car when they spotted a boulder encrusted by a giant cluster of *Sobralia decora* in full bloom. Finding a small pathway leading into the forests and away from the highway, the Prices photographed 11 different species that first day. They were struck with orchid fever.

The orchid safaris became twice-weekly events for the team. At the same time, they observed that nurseries in the city didn't grow orchid plants for sale. Instead, Bob, after visiting every nursery in Puerto Vallarta, saw they were selling the collected wild orchids exclusively. Conversations with long-time residents of the city confirmed that formerly even the trees within the suburban neighborhoods were once "dripping with orchids," but these had long ago been collected. Bob stated the obvious solution: "What this place needs is a botanical garden."

With all the botanical beauty surrounding them, the Prices decided that building a place to both showcase and protect the flora of the region was not only a compelling project, but also

a crucial stepping stone toward orchid habitat protection. Always big fans of botanical gardens in other great cities, the pair decided to spearhead the project. Bob became obsessed with visiting botanical gardens on the Internet and seeing how they are created and operated. Through his study, Bob accepted the reality that a significant portion of the family's resources would be invested in the purchase of the land and in the gardens' infrastructure.

Bob and Betty searched for more than a year to find the right location to build the garden. A suitable site was found just 30 minutes south of Puerto Vallarta near the mountain hamlet of Las Juntas y Los Veranos in the Cabo Corrientes region. At first sight, this overgrazed 20 acres (8 ha) surrounded by lush forest at 1,300 feet (400 m) above sea level sprouted a field of dreams for the Price family. That dream culminated in the founding, from the ground up, of the Vallarta Botanical Gardens.

This 20-acre (8-ha) botanical show-place opened to the public on November 15, 2005. Although the Vallarta Botanical Gardens houses collections of hundreds of native and nonnative tropical species, Bob and Betty, along with their staff and board of directors, have a special interest in the region's orchids and are determined to create an internationally recognized National Orchid Collection of Mexico in a world-class setting. A stepping stone toward this overall larger goal was the opening of the George and Mary Ellen Holstein Mexican Orchid and Vanilla Conservatory. This 3,000-square-foot (280-sq-m) open-air structure welcomed the public in February 2008 and is a display area for the garden's collection of many orchid species, including vanilla orchid vines. Here visitors can see and learn about the source of vanilla flavoring and importance of these special native orchids. Different species of vanilla orchids have already climbed into the rafters of this unique and lovely natural showcase.

VISION The gardens is striving to create a venue in a world-class setting that pays proper tribute to Mexico's rich orchid flora and increases worldwide interest in the culture of Mexican orchid species. Its National Orchid Collection of Mexico will display the most complete collection of

The Mexican Orchid Conservation Problem

IN the Mexican state of Veracruz, to measure the richness and volume of the epiphytes that are traded illegally on local level, scientists Alejandro Flores-Palacios and Susana Valencia-Díaz monitored an illegal sale point in the city of Xalapa for 85 weeks. They recorded 27 traders, 207 species and 7,598 plants. Nineteen species were known for Mexico, but not to Veracruz; two others had been collected in Veracruz, but had never been reported before for Mexico.

About 25 percent of epiphyte richness in Veracruz and 47 percent of the state's epiphytic orchids are traded illegally. — *Bob Price.*



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different Mexican orchid species anywhere in the country.

By working toward this goal, the gardens wishes to create a collection that is internationally recognized and demonstrates goodwill that transcends politics and international borders. It wants to communicate a powerful message of sharing and social change through orchids and to increase worldwide interest for Mexican orchid conservation.

PROGRESS Preliminary plans are under way now to build and house the national collection. As sponsors and donors are being sought and architectural plans are being considered, plants that will eventually fill the grand open-air conservatory are arriving from all over the country. Private donors have been crucial to the success thus far, but a wider donor base will need to be found to bring this plan to full fruition.

Currently, the garden's display areas house more than 150 species of orchids. Bob and his horticulture staff have made connections all over Mexico

to introduce themselves and their gardens to others with orchid collections. They have found the contacts they have made are excited to support such a grand effort, and orchids are graciously being made available to them.

To further the garden's mission, Bob was instrumental in the establishment of Puerto Vallarta Orchid Society, which now boasts more than 60 members. The society is dedicated to the study, preservation and understanding of the special cultural practices of native Mexican orchid species.

CHALLENGES These are some of the opportunities the gardens will explore.

Local Practices At least 30 percent of the region's land has been decimated by slash-and-burn agricultural practices. Without thought to plant, animal or human health, hundreds of thousands of acres of species-rich forest have been plowed into piles and burned. With subsequent cattle overgrazing, lush forests have been quickly

[3] *Vanilla inodora* grows naturally on the pathway in the Chocolate, Coffee and Vanilla Garden. A superb ornamental even when not in bloom, plants of this species have so far refused to be propagated or transplanted. The flowers, which can last up to three days, are long lasting by vanilla standards.

[4] Young biology students from Preparatoria Regional Jacobo Magana wave goodbye from beside the aquatic plant pool after a field trip to Vallarta Botanical Gardens.

turned into erosion-ridden wastelands. Charcoal production is also a major industry in the oak-pine highlands. Cut oak is made into charcoal by roasting oak logs in special brick ovens. Oak trees are a major host species for the areas orchids.

Barriers to Conservation Conservation efforts in Mexico are led by university scientists, NGO's (non governmental organizations), and small volunteer environmental groups. Government support and enforcement



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are nearly nonexistent. The gardens is becoming instrumental in supporting environmental efforts, partnering with scientists in the United States and Mexico to plan conservation strategies with local landowners and help define the status of threatened species in the region. Current conservation plans focus on various orchids, including *Laelia rubesens*, *Laelia crawshayana* (syn. *bancalarii*), *Encyclia adenocaula*, *Encyclia kennedyi* and *Prosthechea* (syn. *Anacheilium*) *trulla*.

Conservation Infrastructure The gardens is building an infrastructure from the ground up to support the first comprehensive orchid conservation efforts in the region. It is establishing the first responsible local nursery with an *in vitro* laboratory capable of developing propagation protocols for threatened Mexican orchids of the Cabo Corrientes region. The protocols developed can be passed on to commercial growers to help eliminate wild collecting and reduce the extinction pressure of illegal collecting. The garden staff and board members act in a leadership role to develop a network of landowners and local conservation groups to promote and develop a system for *ex situ* conservation over the long term. This system will become the foundation for *in situ* conservation and recovery, as needed, for the threatened species. Grants for conservation studies have been obtained

from the San Diego County Orchid Conservation Committee and from the American Orchid Society (see page 10 in the Lindleyana section of this issue).

THE STAGE IS SET The gardens has initiated a field survey, working with local botanists and landowners to explore and document threatened orchid populations. They propose to augment conservation efforts to include a seed collection and propagation program following the proposed urgent actions published in *Orchids: Status Survey and Conservation Action Plan*, (IUCN 1996, Hagsater and Dumont, Eds). The gardens is expanding its existing nursery to carry out *in vitro* seed propagation of threatened orchid species, to define and document specific propagation needs and to initiate planning for an *in situ* and *ex situ* conservation program. Funds have been obtained from the American Orchid Society to host a planning charrette (an intense period of design activity) in 2008. This charrette will bring together orchid specialists, landowners and scientists from Mexico and the United States to develop a comprehensive orchid conservation strategy for the region.

PRIVATE TOUR Trails throughout the property take visitors to see hundreds of different types of native and nonnative tropical plant species. The staff has planted 6,000 native blue agaves (*Agave tequiliana* from which

tequila is made), and has reforested with native tropical hardwood trees. The horticultural staff has planted 400 native *Tabebuia* (*T. rosea* and *T. guayacán*), mountain pine and mahogany trees in this once-deforested cattle grazing area.

There are 20,000 square feet (1,860 sq m) of shade house and nursery. Native oak (*Quercus*) species are being grown from acorns in the nursery to establish the Mexican Oak Collection. Many hiking trails wind through the garden forest ecosystem; one especially lush jungle trail has been converted into the Chocolate, Coffee and Vanilla Garden with artistic plantings of these important tropical crops. There is also a Tree Fern Grotto, Aquatic Plant Pool and separate collections of carnivorous plants.

The River Walk is a fascinating and energizing experience where the sparkling Los Horcones river flows among and over huge white granite boulders, creating a symphonic background for the numerous varied bird songs. Visitors are invited to take a break and a dip into the fresh water or rest on a bench and watch the many species of tropical birds that live in or travel through the gardens.

The design for the impressive stately open-air Plantation House Visitor Center was based on an 18th century plantation manor house. The Plantation House Restaurant welcomes



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garden visitors for tropical drinks and delicious Mexican fare. Locally made handicrafts and locally grown coffee and organic vanilla “beans” (capsules) are available in the botanical garden store.

The gardens integration into the local community and participation in ecological preservation programs transmit a powerful message of sharing and social change through orchids. Moreover, the gardens’ efforts demonstrate that goodwill transcends political and international conflict. Worldwide support of this unique undertaking will enable these remarkable gardens to continue to share their ongoing conservation and environmental message with the people of Mexico and the world beyond.

References

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- Hagsater, Eric, and Vinciane Dumont, eds. 1996. *Orchids: Status Survey and Conservation Action Plan*. Gland, Switzerland: IUCN.

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[5] *Brassavola cucullata* is an epiphyte with white spidery blooms found in Mexico, the West Indies, Central America and northern South America in low-lying humid and dry forests. This specimen was in Puerto Vallarta on the oceanfront above the saltwater splash zone on the western-facing surfaces of granite boulders. It was unaffected by hours of scorching afternoon sun.

[6] *Encyclia adenocaula* is a striking epiphyte found from Mexico to Nicaragua in pine-oak forests at elevations of 1,000 to 5,000 feet (300 to 1,500 m). Plants of this species can have more than 100 flowers open at once on each inflorescence. Due to over-collecting, *Enc. adenocaula* is rare.

[7] The Vallarta Botanical Gardens Plantation House.

About Vallarta Botanical Gardens

BUILDING A FUTURE Funds for the nonprofit Friends of Vallarta Botanical Gardens, A.C.’s research efforts have been obtained from San Diego County Orchid Conservation Committee and the American Orchid Society. The Stanley Smith (US) Horticultural Trust funded trail maintenance and safety railings throughout the Coffee, Chocolate and Vanilla Garden.

The gardens is seeking corporate or individual sponsors to build the orchid conservatory to house the National Collection of Mexican Orchids and for ongoing operating costs of this special project. Tax deductible contributions can be made to: Friends of Vallarta Botanical Gardens, A.C. c/o Dee Daneri, Treasurer, 11 Pinecrest Drive, Fortuna, CA 95540 (e-mail funddevelopment@vallartabotanicalgardensac.org for more information).

IF YOU GO The Vallarta Botanical Gardens is on Route 200, about a 30-minute drive south of Puerto Vallarta. For public transportation, take the El Tuito bus that is boarded in the Zona Romantica.

The gardens is open Tuesday–Sunday from 10 am–6 pm; closed Monday.

Entrance fee per person is 30 pesos (a little less than US\$3). School-age children enter free and garden members have unlimited free admission. School groups and their teachers are also admitted free of charge and are given guided tours.

Transportation for individuals and groups can be arranged through toureprs@mail.com (tel 011-52-1-322-294-0240, fax 011-52-322-224-9996).

TO LEARN MORE More information about Vallarta Botanical Gardens is available through its Web site (www.vallartabotanicalgardensac.org). — Bob Price.