



A SELF-GUIDED WINTER TOUR

WELCOME to this winter tour of the UC Botanical Garden. The tour, which highlights a range of plants from around the world, is a circuit and takes about an hour and a half. It starts in the entrance oval and ends in the Californian Area. Look for the BLUE numbered markers to guide you to the featured plants.

The Entrance Plaza oval features “waterwise” plants (plants requiring minimal supplemental watering) and showcases how these plants can be utilized in gardens with stunning effect. In a planter box at the center of the oval, find:

1. WHITE TRUMPET PITCHER PLANT (*Sarracenia leucophylla*). *Sarracenia* are a type of carnivorous plant, a plant that can capture and consume small animals as a source of nutrients not otherwise available through their roots. The tall pitcher-like structures are the plants modified-leaf traps. Nectar trails lure insects to the slippery edges, causing them to fall in, while thousands of hairs pointing downward prevent them from climbing out. Acids and enzymes are secreted to dissolve the soft parts of the prey, leaving the insect exoskeletons to accumulate at the bottom of the pitcher traps. Carefully peer down inside and see if you can determine some recent meals!

Exit the plaza and turn left onto the upper road. Immediately turn left uphill three steps into the Southern African Area. Turn right to walk up the next set of stairs. At the top of the stairs, turn right and follow the stone wall path. On your left, locate an attractive shrub:

2. PROTEA EXIMIA. This lovely evergreen bush is native to the fynbos, or “fine bush” area of South Africa, a region that in some ways resembles the chaparral habitats of California. Flowers begin to cover the plant in late winter, early spring, with peak bloom around May. It is a member of the protea family, an especially prominent plant grouping in South Africa, South America, Australia and New Zealand. Many proteas do quite well in California gardens, this species, also known as rose-spoon Protea, in particular. They attract birds and butterflies but are not favored by native bees.

Continue your walk along this hillside path and back down to the main road. As you turn left onto the road, look up at the hillside to locate:

3. EUPHORBIA COERULESCENS & AFRICAN MILK BARREL (*Euphorbia horrida*). With their green succulent stems and spine-like thorns, these plants may look like cacti, but the two groups are not at all closely related. Their cactus-like form has adaptations to help them survive severe environments with irregular rainfall, the same problem that cacti face. (To see the varied forms of many actual cacti look across the road to the **Deserts of the Americas Collection**.) Not all plants in the family Euphorbiaceae are adapted to dry conditions. In fact, the rubber tree (*Hevea brasiliensis*) is a water loving euphorb native to the rain forests of Brazil. Another member of this family is the well-known poinsettia (*Euphorbia pulcherrima*), a decoration on many winter holiday tables.



*Continue a short distance up the main road. Turn right taking the downhill path into the **Asian Area**. Pass through the decorative wooden gateway. This structure honors UC Berkeley professor Chiura Obata (1885 – 1975), a prominent Japanese American artist and instructor, and Haruko Obata, his wife, an accomplished practitioner of ikebana (Japanese flower art). The Japanese Pool is home to our colony of newts. Be sure to read the sign just after the gateway to learn about these fascinating animals.*

**PLEASE ENJOY WATCHING,
BUT DO NOT DISTURB THE NEWTS OR THEIR EGGS.**

4. CALIFORNIA and ROUGH-SKIN NEWTS (*Taricha torosa* and *T. granulosa*). These salamanders, which resemble lizards but are amphibians, appear with the winter rains and remain here in the Japanese Pool throughout spring.

Cross the large stepping stones and enjoy the play of water and rock which, in Japanese garden philosophy, inspires peaceful contemplation. The larger rocks and the stone snow lantern across the water were brought from Japan for the 1939 Golden Gate Exposition and World's Fair on Treasure Island and were later donated to the Garden.

Walk up the stone steps and turn right to enter a forested canopy of rhododendrons. On your immediate left is:

5. RHODODENDRON GRANDE Subsection GRANDIA. The Garden is home to a collection of nearly 300 kinds of *Rhododendron*. They range in size from the small alpine shrubs of the Tibetan Plateau to large graceful trees that form the flowering forests of the Himalayan foothills. This native Himalayan species, which came to the Garden as a tiny seedling in 1933, reaches heights of 15 meters (45 ft) in its forested homeland. It blooms profusely in February and March.

Continuing along this path, look on your right for:

6. RHODODENDRON ARBOREUM Subsection ARBOREA. At a time when temperatures could still drop below 0° C (into the low 20's F) and the inclement weather in the Bay Area is warning other flowers to stay tucked in the bud, this rhododendron begins to light the winter skies with a deep red glow. It is the national flower of Nepal and is featured in the Garden's logo. It is also one of the first Asian species to have been described for science — in 1796 in Uttar Pradesh, India. In its native habitat its red blooms are displayed against a backdrop of the snow-clad Himalayas. "Arboreum" means tree-like, and it is not uncommon for plants to reach heights of over 25 meters (75 ft) in the wild!

Along this path, on your left, is:



7. MAPLE (*Acer davidii* var. *davidii*). Notice the striped green bark of this shade-tolerant “snake bark” maple. Some snake bark maples have dramatic grey and coral stripes on the bark. Armand David (1826-1900), for whom this plant was named, was a French (Basque) missionary and plant collector in China.

*Continue to the end of the path. At the paved road, turn left. Walk uphill a very short distance. On your right in the **Australasian Area**, near a group of long-leaved cordyline plants with red berries, look carefully for a rare conifer.*

8. WOLLEMI PINE (*Wollemia nobilis*). The Wollemi pine is an example of a plant that is close to extinction in its natural habitat. It belongs to an ancient family (Araucariaceae) native to the Southern Hemisphere. The Wollemi pine was known only from fossils dating as far back as ninety million years until a small population was discovered in 1994 in a small canyon nature preserve in the Blue Mountains near Sydney, Australia. It has since been distributed to botanical gardens around the world. Notice the dark colored dangling cones.

Continue up the hill. At the top of the hill make a sharp right onto a narrow path bordered by lush tree-ferns. Plants in this area are native to the warmer, wetter areas of Australasia such as northern New Zealand. Behind the second shaded bench on your right, is the imposing tree:

9. RIMU (*Dacrydium cupressinum*). This mighty cone-bearing tree from the rainforests of New Zealand belongs to the podocarp family, a group that once flourished throughout the Southern Hemisphere. A mature rimu can reach heights exceeding 45 meters (135 ft) and live to almost one thousand years. Once used to carve the iconic Maori long boats that could carry up to eighty men, the wood from this tree was also valued by New Zealand colonists for its useful timber and logged almost to extinction. It is now actively conserved and is successfully recovering in nature preserves.

*Retrace your steps to the road and turn right to walk uphill. Facing you, growing around the rocks at the entry to the **South American Area** (Bed 600), is:*

10. GAULTHERIA PUMILA. In winter, the comparatively large bright pink-purple fruits can stand out against the small evergreen leaves of this plant. In spring it will produce white or pinkish flowers. The leaves and stems of many plants in the genus *Gaultheria* are the source of the distinctive flavoring “wintergreen” used in the manufacture of toothpaste, gum and candy. This plant belongs to the heather family (Ericaceae), as do rhododendrons and manzanitas.

From this juncture, take the level road on the right and find a few feet ahead the impressive:

11. GUNNERA CHILENSIS. This plant, sometimes called “the umbrella plant” because of its huge (rough) leaves, grows in wet, disturbed environments. Gunneras host nitrogen-fixing cyanobacteria with special tissue at the base of their petioles (leaf stalks). That symbiotic relationship (housing the bacteria in exchange for nitrogen) allows these plants to flourish in nutrient-poor soils.



Continue walking along the path. The **South American Collection** is on your left – uphill – while on your right is flora from **Australasia**. After a distance of about 50 paces, on your right, by the stone steps leading downhill, you will see the striking:

12. QUEENSLAND BOTTLE TREE (*Brachychiton rupestris*). This young tree, a native of Queensland, Australia, can grow up to 18 meters (60 ft) in the wild. Able to store water in its succulent trunk, it is easy to see how the Queensland bottle tree earned its name and why it is a popular “waterwise” landscaping choice. Native Australians historically carved holes into the soft bark to create reservoir-like structures as a source of water.

Along the path on the opposite side is the **South American Collection** sign which describes an ancient relationship between Australian and South American plants. Continue under the canopy of the coigue tree (*Northofagus dombeyi*) and take the next set of stairs uphill. At Bed 605, turn right. At the corner of the bed on your left is the tall:

13. BRAZILIAN PRINCESS FLOWER (*Tibouchina cardinalis*). Vibrant magenta-purple blooms stand out against the soft reddish green foliage of this evergreen shrub native to Brazil. Its more purple relative, the *T. urvilleana*, also known as princess flower or princess tree, has become a popular and eye-catching horticultural choice for San Francisco Bay Area gardens. In Hawaii, however, it is classified as a noxious weed because of its high potential as an invasive species displacing native plants. The name ‘urvilleana’ refers to the 19th century French explorer Jules Dumont d’Urville. Accounts of his many adventures — especially in the Antarctic where he named the Adele penguin for his wife — make for fascinating reading.

Make a left hairpin turn around the *Tibouchina* and continue uphill. At the top of the stairs turn right. Walk along this wide path until you come to a garden bench on your left. On the opposite side of the path look for:

14. FRUTILLA DEL CAMPO (*Retanilla ephedra*). In the same family as our familiar California-lilac (*Ceanothus* spp.), this drought-tolerant hardy shrub can withstand Chile’s — and California’s — dry summers. Its profusion of white winter flowers is followed by deep green fruit shaped like small apples. The tough, green, leafless stems resemble those of ephedras, but their botanical relationship is very distant.

Just ahead, turn left and walk up through the pergola into the **Garden of Old Roses**. Continue upward to the sculptural armillary sphere, an early astronomical and navigational instrument. Enjoy the spectacular views of the bay, to the Golden Gate Bridge and beyond on a clear day!

Walk back down through the pergola and cross the road. At the left corner of the stairs, in the “**South American Matorral**” (Bed 610), notice the distinctive:



15. ANCHOR PLANT (*Colletia paradoxa*). The anchor-shaped segments seen on this tough vigorous shrub are not leaves but photosynthetic stems, each tipped by a single sharp spine. The leaves, located at the base of its flower stalks, are so miniscule they are almost invisible. When the anchor plant flowers, it is covered by creamy aromatic blossoms that attract bees. This plant belongs to the same family as the California-lilac, and like that plant, has nitrogen-fixing nodules on its roots.

*Walk down the steps—flanked on either side by large mounds of *Ephedra chilensis* plants. Turn immediately right and continue downhill. On your left notice:*

16. CHILEAN WINE PALM (*Jubaea chilensis*). The abundant sugary sap of this distinctive palm is the source of palm “honey” and palm wine. As many as 100 gallons may be collected from a mature palm — either by tapping the bole (trunk) or by felling it. In the wild it is uncommon, but it is extensively cultivated.

*Follow this steep path straight down until you reach the road. Cross the road into the **Crops of the World Garden**. Close to the entrance, on your right, look for an evergreen shrub.*

17. TEA (*Camellia sinensis*). A hot stimulating and refreshing drink is made from the leaves picked from the growing tips of this plant, which is related to the showy garden camellias. Tea is grown in mountainous tropical areas of the world in acidic mineral-rich soils with plenty of moisture. India, China, Sri Lanka, East Africa and Argentina are major producers. The trees are cultivated on large plantations where they are pruned to about waist height to facilitate picking. Used medicinally in China for thousands of years, tea is now one of the most significant beverages in the world. Black, green and white teas come from the same plant species but are processed in different ways.

*Return to the main paved road and walk downhill with **Eastern North America** on your left. Just ahead on the right, take a gravel path into the **Chinese Medicinal Herb Garden**. Spot a small citrus tree with glossy leaves.*

18. MANDARIN ORANGE (*Citrus reticulata*). In traditional Chinese healing systems many foods are considered medicine and incorporated into medicinal formularies. Uses for the mandarin orange include aiding digestion and controlling inflammation. Its wild relative, and perhaps ancestor, *Citrus tachibana*, is grown in the Garden’s Asian Collection.

*Cross over the ornamental bridge ahead into the center of the **Herb Garden**. Many of the plants grown here are from European folk traditions. Across from the sundial, notice a young tree in a clay planter:*

19. LAUREL (*Laurus nobilis*). The leaves of this evergreen tree were used to create the original crown of laurels in ancient Greece from which we get the terms “baccalaureate” and “poet laureate.” Also known as bay laurel, its leathery, dark green, aromatic leaves are prized in cooking and aromatherapy.



*Walk down the wooden steps to leave the **Herb Garden**. Turn right onto the main paved road. At the end of the **Cycad and Palm Garden** will be the restrooms on your left. Here you will find an impressive new addition to the Garden.*

20. PETRIFIED LOG. This huge piece of petrified tree trunk is from Petrified Forest National Park in northeastern Arizona and dates back roughly 200 million years! During petrification, organic materials in the tree are slowly replaced by minerals, essentially turning the tree into stone. One end of the log has been polished to further reveal its beauty.

*Continue along the main road, and just after going over the Strawberry Creek bridge, turn left into the **Californian Area**, Across from a Garden bench is:*

21. LEMONADE BERRY (*Rhus integrifolia*). This large shrub, with its leathery evergreen leaves, is native to chaparral plant communities of California. Look for the lemonade berry's small, sticky clusters of flower buds—it will be in bloom from February to May. The dark red fruits that follow have a tart flavor which gives the plant its name. The berries are a significant food source for birds and small mammals, while its thick sprawling form provides excellent animal shelter, making it an important wildlife plant.

Take this path between the lemonade berry and the bench. As you walk, notice the rocky planting of our new California desert bed on your right. Continue straight, and just before reaching the main road, look to the right to find:

22. COAST SILK TASSEL (*Garrya elliptica* 'Evie'). Admire the silvery gray catkins (long flower clusters) dangling in the breeze. These catkins are male flowers. The coast silk tassel belongs to a group of plants whose male and female flower structures occur on separate plants. In early spring, the new bloom of white male flower clusters offers a spectacular sight.

*Turn right to admire the Garden's recreation of a **pygmy forest**. The pygmy forest of Mendocino County—a plant community of stunted trees and shrubs—is like an ecological island due to its shallow inhospitable soils, which are nutrient poor and highly acidic with an underlying concrete-like clay layer (hardpan). Only about 40 plant species tolerate these harsh conditions, including the Bolander pine and the Mendocino or pygmy cypress.*

Take the road uphill to end your tour at the Garden entrance. We hope you have enjoyed this winter walk and will return to experience each changing season.

UCBG Website: <http://botanicalgarden.berkeley.edu>

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