

On your trip through Phipps Conservatory, look for the plants that correspond to the circled numbers on the map. Then, turn the map over to learn more about each of these interesting and exciting plants!

Welcome to Phipps!

We are so excited that you have come to visit us today! We have created this special map to help you explore our rare Victorian glass conservatory. A "conservatory" is a building made of glass, where plants are kept all year long. Since we teach about, study, label and arrange our plants, Phipps is a botanical garden as well as a conservatory.

How to use this map:

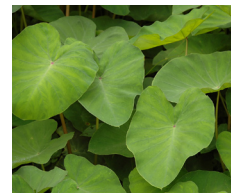
Wherever you see a number on the map of the conservatory (next to the "#" sign,) turn the paper over, and look for the matching number on the **back** of the map, and read the plant information. Make sure to match the name of the plant on the map with the name on the small, black label in front of the actual plant. This way, you can make sure that you are reading about the correct plant!

Some plants don't have labels:

The Miniature Orchid Collection (#2) is immediately to your left when you enter the Orchid room. Bromeliads (#4) are located throughout the Orchid & Stove rooms; you can see what they look like in the picture on the right. There is also a picture of Elephant's Ear (#13), which is found throughout the conservatory.



Bromeliad



Elephant's Ear

#1 Chinese Fan Palm (*Livingstonia chinensis*)

How do you think that this plant got its name? It's because its leaves were used by people as fans, due to their shape and size. People all over the world use plants for many different things: for food, as medicine, to make shelter, clothing, ships and even musical instruments.

#2 Miniature Orchid Collection

Technically, a "miniature" orchid is one that is no more than 6 inches tall (not counting the flower.) The blossoms on these orchids can be as tiny as a grain of rice! Phipps' miniature orchid collection was donated in 1996, and is comprised mostly of species originating in the cool, mountainous regions of South America.

#3 Vanilla Orchid (*Vanilla planifolia*)

Vanilla flavoring, used in cookies, cakes and ice cream, is one of the most expensive flavorings in the world, costing \$3 to \$5 per ounce! This costly, but tasty flavor comes from the seed pods of the Vanilla orchid. The pods must be laid out in the sun, and then rolled in blankets at night in order to develop the flavor. Over half of the world's supply of vanilla comes from Madagascar, where workers on vanilla orchid farms spread pollen from flower to flower by hand to ensure pollination and bean production. Each flower is only open for a few hours each year, and it must be pollinated during that time in order to make a bean.

#4 Bromeliads

These tropical plants come in a variety of colors and can grow either on the ground (terrestrial) or on other plants (epiphytic.) Their leaves are arranged so that they create a "cup" in the center of the plant. Water collects in this reservoir and supports insects, spiders, small frogs and sometimes even rodents. Flowers also form in the plant's center. One type of bromeliad grows a very sweet yellow fruit, right in the middle of the plant. Can you guess what it is? That's right, it's pineapple!

#5 Chocolate Tree (*Theobroma cacao*)

Chocolate, one of the world's favorite sweets, comes from the seeds inside the fruits of this tree, which must be harvested, cleaned, fermented and pressed to yield chocolate liquor. This "liquor" is then mixed with milk, butter and other things to create what we know as chocolate. Oddly, the fruits and flowers of this tropical under-story tree grow directly on its trunk (a phenomenon called "cauliflory.")

#6 Annatto (*Bixa orellana*)

This shrub or small tree is native to the American tropics. It produces abundant pink flowers and red fruit that is covered in spines. The seeds from inside this fruit yield a bright orange pigment which is used as a dye for foods like cheese, rice, salad oil and fish. Parts of the plant can be used to soothe burns and headaches, and to treat tonsillitis.

#7 Banana – (*Musa species*)

The average American eats 25 lbs. of bananas each year, making it the 2nd most consumed fruit, behind apples. Bananas, the fruits of this herbaceous (not woody) plant are grown on a large scale on

commercial plantations in the tropics, including South and Central America and Southeast Asia. Wild bananas have lots of tiny black seeds, but the kinds that we eat are bred to be seedless. There are many different types of bananas, some that are sweet and creamy and eaten for desert, and others (called plantains) are very starchy and are used like potatoes.

#8 Coffee Tree (*Coffea arabica*)

The seeds from this tree (called "beans") are roasted, ground and mixed with hot water to create a drink that is very popular all over the world. Coffee contains a powerful stimulant: caffeine. The average American drinks 3 cups of coffee each day!

#9 Saguaro Cactus (*Carnegiea gigantea*)

These tree-sized cacti can take 75 years to grow an "arm." They, like most cacti, have "skeletons" or "ribs" inside their stems for support. These skeletons are made up of woody tissue. The Saguaro cactus is protected by state laws and is on the endangered species list. These cacti bloom at night, and are mainly pollinated by fruit bats.

#10 Golden Barrel Cactus (*Echinocactus grusonii*)

Native to the Southwestern U.S. and Mexico, this barrel-shaped cactus has clusters of spines which shade its stem from the searing sun of its desert home. These spines are also designed to protect the water-rich stem from being eaten by thirsty animals, just like the soft-looking but sharp fuzz on top of the plant. Native Mexican and American Indians use the spines as fishhooks, and the cacti themselves have been used as compasses, since they tend to lean towards the Southwest.

#11 Century Plant (*Agave americana*)

This desert plant can take up to 100 years to make flowers! Our Century plant is a lot older than you are! It stores a lot of water in its thick leaves, which classifies it as a "succulent." From the flowers, a sweet liquid called "agua miel" ("honey water") is collected to produce a drink called "polque." The leaves also yield fibers, known as pita, which are suitable for making rope, matting, cloth and embroidery.

#12 Ponytail Palm (*Beaucarnea recurvata*)

How does this plant survive dry desert life? By storing water in the base of its stem, this plant can live without water for months! For that reason, it makes a great houseplant for forgetful plant owners. It is not a palm at all, but a large succulent that is native to Mexico.

#13 Elephant's Ear (*Alocasia species*)

Can you guess how this plant got its name? Because its large leaves look like an elephant's ears, of course! This plant comes in a variety of different colors, including green and black, and it has an edible stem. The stem must be thoroughly cooked before eating it, or it can cause irritation and swelling of the throat and tongue.

