

Help us save the most threatened
plants around the world.



norfolk
botanical
garden

The Garden of Tomorrow

“We’re building an immersive sanctuary dedicated to the preservation of the world’s most endangered plants and preserving the opportunity to study their potential benefits. We’re expanding our ability as a community resource supporting education and helping build a sustainable future.”

— NBG President & CEO Peter Schmidt.



Conservation in Action

While we have been eagerly waiting to begin the Garden of Tomorrow expansion, we have also been working diligently behind the scenes. Our team has conducted research and collaborated with colleagues from other botanical gardens across the United States and the world to increase our conservation efforts by protecting the most threatened plants in the world. This past year we acquired two excellent examples: *Musa haekkinenii*, a newly discovered species of banana from Vietnam that was generously donated to us in partnership with the Fairchild Botanical Garden, and the *Brighamia insignis*, now believed to be extinct in the wild due to the devastating loss of its only pollinator, the Green Spinx moth of Kauai. These rare and threatened plants are amongst others that will soon have a new home in our 26,000 sq. ft. Perry Conservatory set to open in 2025.



NBG President & CEO Peter Schmidt is working alongside NBG staff, Board of Directors and volunteers to build a lasting legacy of beauty and resilience that will inspire and benefit generations to come.



NBG Horticulturist Michelle Baudanza earned certification through the U.S. Department of the Interior to collect endangered species for protection in The Garden of Tomorrow's Perry Conservatory.

To increase our collection efforts Curator of Herbaceous Plants Michelle Baudanza recently requested that Norfolk Botanical Garden be listed as a cooperating institution in the Plant Rescue Center (PRC) Program through the United States Department of the Interior's Fish and Wildlife Service. We are now officially certified along with dozens of other botanical gardens, arboretums, zoos, and research institutions throughout the country. This will allow us to obtain confiscated plants illegally imported into the US and use them as an educational opportunity or to propagate for conservation. This certification also allows NBG to work more easily with other botanical gardens to acquire and share rare and endangered plant specimens.



Little Leaf Palo Verde Tree

Parkinsonia microphylla

\$150,000



Photo by Stan Shebs (CC BY-SA-3.0)



Photo by Jerry Oldenettel (CC BY-NC-SA)

The little leaf palo verde tree is an indicator species of the Sonoran Desert, meaning it is a fundamental component of this desert ecosystem. Our specimens were rescued from imminent destruction due to urban development in the Apache Valley/Superstition Mountains area adjacent to Phoenix, Arizona.

This tree has high ecological value as a nurse tree for many desert plant species. In particular, it is key to the survival of the saguaro cactus. Unique in appearance, the little leaf palo verde tree features classic adaptations to the harsh desert environment—a multi-stemmed tree with small leaves and thorny branches spreading and twisting upward. It naturally drops its leaves in times of drought stress, but the lime green bark allows the plant to continue photosynthesizing. It produces small, creamy white flowers that are edible raw or cooked.

Its edible seeds have a flavor reminiscent of tender garden peas. While not yet considered threatened or endangered, this tree's greatest ecological threat is habitat destruction from urban development.



Photo by Chic Bee (CC BY 2.0)

Giant Saguaro
Carnegiea gigantea

\$100,000



The saguaro (pronounced suh-war-oh) cactus is the largest and most iconic cactus of the US Desert Southwest. Our specimens were rescued from imminent destruction due to urban development in the Apache Valley/Superstition Mountains area of the Sonoran Desert in Arizona. Its immense architectural presence makes it a spectacular standout in any desert collection. In its native habitat, saguaros are considered a keystone species where it strongly influences the plant and animal communities in the ecosystem in which it grows. The decline and removal of a keystone species is detrimental to the survival of that ecosystem.

With the extreme climate conditions found in the Sonoran Desert, saguaros require the critical association of a nurse tree in order for the next generation of seedlings to survive. While not yet considered threatened or endangered, the greatest ecological threat to saguaros is urban development. As with almost all desert plants, they are incredibly slow growing and therefore slow to repopulate. Our specimens range from 8 inches tall to 8 feet tall; 8 feet is the tallest that can be shipped to us from Arizona.



Growth rate:

- 8 inches tall = 10–15 years old
- 8 feet tall = over 50 years old
- Doesn't produce arms until 75 years old
- Produces flowers at 30 years old
- Average life span 150–175 years
- Ecological value increases with age



Ironwood Tree

Olneya tesota

\$100,000



Photo by Eugene, (Gene) Sturia (CC BY-SA)



Ironwood trees are hallmarks of the Sonoran Desert. While a thriving tree is a valuable resource for wildlife and serves as a nurse plant for various desert plant species, the everlasting heartwood of a dead specimen is a remarkable wonder of nature.

Natural mineral deposits in the heartwood make it toxic to decomposers like fungi and termites. The trunks slowly weather away over centuries and can persist for over 1,600 years.

This trunk is easily over 1,000 years old and rescued from imminent destruction due to urban development in the Apache Valley/Superstition Mountains area of the Sonoran Desert in Arizona. Its size, shape, age and life history make for an unusual focal point and interesting conversation piece in our new Perry Conservatory.

The International Union for Conservation of Nature (IUCN) provides a Red List of Threatened Species that is a critical indicator of the health of the world's biodiversity. The IUCN Red List classifies the ironwood tree as Near Threatened due to overharvesting for fuel, illegal poaching for the tourist market, and habitat loss due to urban development.



Ocotillo

Fouquieria splendens

\$50,000



Photo by Stan Shebs (CC BY-SA-3.0)

○cotillo (pronounced Oh-co-TEE-yo) is a small shrub/tree comprising the characteristic plant community of the Sonoran Desert. While it may bear a similar appearance to a cactus with its thorny branches, it is not actually related to them. Its unique appearance is typical of desert plants with its small leaves attached to thorny, coral-like branches forming a slender vase shape - an excellent specimen to highlight the distinctive beauty of the desert.

In Spanish, ocotillo translates to “little torches,” a reference to the cluster of red tubular flowers formed on the end of its stems. These specialized flowers reflect a coevolution with hummingbirds for pollination. Like many desert plants, ocotillos are drought deciduous meaning they drop their leaves in times of extreme drought. Even though they may look dead, the plant is fully alive and photosynthesizing thanks to its green bark. Once the rain returns, leaves start to grow back within 24 hours. This cycle is repeated multiple times a season. Each time the plant goes dormant, a line forms on the stem making it easy to observe the growth spurts in-between the rains. In the wild, it can live upwards of 100 years. Our specimens were rescued from imminent destruction due to urban development in the Apache Valley/Superstition Mountains area of the Sonoran Desert in Arizona. While not yet considered threatened or endangered, the greatest ecological threat to ocotillos is human activity.



Also known as Ālulu, Vulcan palm, Hawaiian palm, and cabbage on a stick, *Brighamia insignis* is neither a palm nor a cabbage. It has a stout trunk, leaves that will indeed remind you of cabbage, and fragrant star-shaped yellow flowers. It is, or more accurately “was,” native to just two islands in Hawaii, where it lived on steep, exposed seaside cliffs. This palm is considered a desert plant due to growing in a hot climate with the ability to tolerate long periods of drought conditions.

Unfortunately, it is now listed as critically endangered or possibly extinct in the wild on the IUCN Red List. There were a number of factors that led to its demise including hurricanes, landslides, and human-introduced invasive plants and animals. However, the single biggest factor was the extinction of its sole pollinator, a type of hawkmoth. Without the moth, *Brighamia insignis* cannot reproduce on its own, and must rely on human intervention to carry on.

Vulcan Palm

Brighamia insignis

\$50,000

Upon first glance, this tree appears otherworldly with its tapered trunk of scaly brown bark topped with a rounded crown of repeatedly forked white branches that are punctuated with a terminal rosette of blue-green succulent leaves. Dangerously beautiful, the whitish bark on the branches is a powdery coating that reflects sunlight but the scales on the bark have razor sharp edges. Tall spikes of yellow flowers produce copious amounts of nectar making it an essential food source for birds, insects and mammals.

Indigenous to the rocky savannahs of Namibia and the South African region called Namaqualand, the native San people use the hollowed branches to make a holder or quiver called “choje” for their arrows. While this national symbol of Namibia is protected by law in South Africa, it is listed as Vulnerable by the IUCN as it is under threat from a warming climate.



Tree Aloe or Quiver Tree
Aloidendron dichotomum

\$50,000



Tree aloes are icons of the southern African deserts. As the name implies, they are a close relation to the aloes we know as houseplants. *Aloe* x 'Hercules' is a striking cross between two tree aloes - *Aloidendron barberae* from southern and eastern Africa, and *Aloidendron dichotomum* from Namibia and South Africa. It's a fast growing tree reaching heights of 25–40 feet with a 15 foot crown of thick branches with tidy clusters of triangular grey-green leaves.

As the tree matures, the older, lower leaves fall off exposing a smooth gray, very straight trunk. Their orange tubular flower spikes are a favorite of butterflies and hummingbirds and offer a vibrant pop of color against the backdrop of its grey-green leaves. Having tree aloes in our desert collection expands our ability to illustrate how common adaptations to drought have evolved multiple times in similar biomes across the globe.



In 2022, one of the parent plants of this hybrid, *Aloidendron dichotomum*, became listed as Vulnerable to Extinction on the IUCN Red List. The primary threat is anthropogenic climate change followed by habitat destruction and poaching for the ornamental plant trade.

Hercules Aloe
Aloe x 'Hercules'

\$25,000

The Madagascar palm is not a palm at all, but rather a succulent with a dramatically spiny trunk, crowned by a cluster of foliage that grows in a palm-like manner. When the white flowers bloom, they only add to its exotic appearance. It is native to the spiny forests of Madagascar where it has adapted to a unique, but harsh environment. According to the IUCN Red List, this species is considered Threatened due to habitat loss and poaching for the ornamental plant trade.

Being an island that has been geographically isolated for eons, Madagascar is home to many plant and animal species that occur nowhere else on earth. Unfortunately, it is estimated that only 10% of Madagascar's land remains in its original natural state.

Approximately 17% of the Earth's land environments are protected.

— World Economic Forum/Protected Planet Report (International Union for Conservation of Nature (IUCN) and the United Nations Environmental Program (UNEP) – 2021



Madagascar Palm
Pachypodium lamerei

\$25,000



Fishhook Barrel Cactus
Ferocactus wislizeni

\$25,000



Fishhook barrel cactus is as descriptive as the name implies. It is a stout, barrel-shaped cactus with its entire ribbed outer surface lined with a dense cover of both straight and hooked spines resembling fish hooks. A closer look at the spines reveals large, thick spines which protect against herbivory and small thin spines which help reflect the heat. The ribbed or pleated outer surface swells and shrinks with moisture. It is also known as the compass cactus as it tends to lean toward the southwest. Large, old specimens may even fall over from leaning too far.

Bright and cheery yellow to red-orange flowers appear at the tip of the barrel and are prized by pollinators. The fruits are sought after by wildlife and traditionally used by locals to make jams and candy. Average height is 2–5 feet with flowering beginning after 3 years. Our specimens are both single columns and multiple columns which is rare. All are rescued from imminent destruction due to urban development which has led to this species being listed as Vulnerable to Extinction on the IUCN Red List.

This particular myrtle cactus specimen features a unique crested growth form. Instead of its typical narrow and columnar stems, it displays wide fan-like stems that appear to bubble up and elegantly cluster over each other. A standout among desert plants, this unusual form is naturally occurring throughout its native habitat in northern and central Mexico. In the wild, it tends to form colonies providing critical plant habitat and resources for wildlife.

Its scientific and common names are inspired by the resemblance of their small dark fruit to that of the European blueberry, *Vaccinium myrtillus*. The fruits are edible and taste sweet and plum-like. This highly adaptable species is fast growing and often used as rootstock for rare and slower growing cacti.

The fruits are very popular in its native region of central Mexico (from Tamaulipas to Oaxaca) where it is seasonally offered in markets as garambullos. The fruits also have medicinal qualities while the dried out stems have a variety of uses among the local people.



Blue Myrtle Cactus
Myrtillocactus geometrizans f. cristatus

\$25,000



False Agave

Furcraea macdougallii

\$25,000

Rare in cultivation, and unfortunately extinct in the wild, this species of *Furcraea* is native to Mexico and sought by plant collectors for its attractive ornamental attributes. These dramatic succulents are often mistaken for true agaves as they bear a striking resemblance with their rosette bases and razor sharp upright leaves. The main difference between the two boils down to flower morphology. This species of *Furcraea* has distinctly vertical sharp-edged leaves. When it blooms, it sends up a dramatically tall flower spike, but as a monocarpic plant it will only flower once, followed by the main rosette dying shortly thereafter. The next generation is carried on by seed and stem produced bulbils.

Furcraea are the source of a sisal-like fiber called fique that has been used for centuries to fabricate textiles, packing materials and handicrafts. As this species matures, it develops a tree-like trunk allowing it to reach a height up to 20 feet making it the tallest of the agave relatives. Visually, it resembles a cross between an agave and a palm tree. As of 2019, this species is listed as Extinct in the Wild on the IUCN Red List.

The *Agave guiengola* is often referred to as the “dolphin agave” because its broad and surprisingly soft silvery-blue leaves resemble the skin of a dolphin. This agave is among the most rare as it is endemic to a very specific habitat: limestone cliffs of the Cerro Guiengola Mountain in the Mexican State of Oaxaca. Its 10–20 foot flower spike is also most unusual as it flowers all along the stalk as opposed to the more familiar agave species whose flowers are concentrated at the very top of the spike. These flowers are a vital food source for bats and produce incredible amounts of nectar.



This beautiful ghostly-blue agave is one of the few that prefers a little shade. It can get up to 4 feet tall by 4–6 feet wide, and after many years it will flower. However, like all agave species it is monocarpic, meaning that once the mother plant flowers it will die, but hopefully not before releasing viable seed, or sending up “pups” near the base. This is a rare agave, and unfortunately its populations are fragmented, and it is listed as Endangered on the IUCN Red List. Because of where this plant naturally occurs, the main threat to its existence is from marble quarrying, followed by plant poaching for the nursery trade.



Dolphin Agave
Agave guiengola

\$25,000



Totem Pole Cactus

Pachycereus schottii f. *monstrosus*

\$25,000

This is a one-of-a-kind plant in any collection as it exhibits a very unusual and uncharacteristic growth form. Reflected by the use of '*monstrosus*' in the botanical name, this plant exhibits an abnormal growth habit usually caused by a naturally occurring genetic mutation. While the typical growth form features numerous tall columnar stems with a series of evenly spaced ribs and periodic thorns, the mutated form exhibits smaller nearly thornless stems with irregularly spaced ribs and knobby, knuckle-like protrusions.

In the wild, this botanical oddity is only found in two small populations about halfway down the Baja Peninsula in Mexico. Its limited range is due in part to the mutation rendering the plant sterile, or unable to reproduce by seed. The population persists from stem sections that periodically fall off and root into the ground, essentially creating clones of the original mutated plant.

The exquisite and elegant tree-like yucca features a rosette of striking sword-like powder-blue leaves resembling a pom-pom popping out of the top of the trunk. As the plant grows, old leaves bend down toward the trunk creating a long shaggy skirt. Massive clusters of white flowers are produced on towering 3 foot tall yellow-orange stalks. Flowers are exclusively pollinated by the yucca moth which is camouflaged to be as white as the flower.

This relationship is crucial as each needs the other to survive. Fruits bear a resemblance to a bird's beak hence the common name. Nearly all parts of the plant have practical uses from fibers from the leaves to soap from the roots. Highly prized as an ornamental, its native range is limited to the extremely arid regions of Brewster County, Texas and the northern Mexican states of Chihuahua and Coahuila. The population of this yucca is abundant in the wild thanks to effective conservation efforts.



Beaked Yucca
Yucca rostrata

\$25,000



Universally regarded as one of the most spectacular columnar cacti, this baby blue beauty hails from the semiarid ecoregion of northeast Brazil locally known as the Caatinga. Locals refer to it as *facheiro-azul* or blue torch. This stunning blue color is created by a waxy coating on the surface of the stems to help prevent water loss.

As it grows, it can either take on a shrubby appearance or remain a single trunk with numerous upright blue branches lined with uniform ribs that are adorned with yellowish spines and a woolly fuzz. This woolly fuzz is so characteristic that it inspired its genus name, *Pilosocereus*, which loosely translates into woolly candle. As a bat pollinated cactus, its lovely large white flowers open only at night. It is a long-lived species attaining impressive heights of over 30 feet after several decades of growth.



Photo by Krzysztof Ziarnek (CC BY-SA 4.0)

Blue Torch Cactus

Pilosocereus pachycladus

\$25,000

Madagascar is renowned as a biodiversity hotspot with over 90% of its plant life found nowhere else on the planet. One of these treasured endemics is the African ocotillo, a plant of conservation concern included on the ICUN Red List due to deforestation. Visually, African ocotillo, with its deliberately thorny, coral-like branches ornamented with small rounded leaves and red flowers, is a near twin to the ocotillo native to the desert biome in North America. While both plants grow in semiarid regions of their native countries, they are not related. They are prime examples of convergent evolution where unrelated plants exhibit the same physical adaptations and strategies to survive similar environmental conditions found across the globe.

Within the local culture, African ocotillo is highly sought after as medicine, building materials, charcoal, as well as for other practical uses.



African Ocotillo
Alluaudia procera

\$25,000



Cholla Species

Cylindropuntia species

\$25,000

Cholla cacti are defined by highly segmented cylindrical stems densely covered in small bristles and an intense complement of sharp spines. A closer look at the stems reveals raised areas called tubercles creating an attractive diamond-like pattern. Large, shrub/tree-like species are often easily spotted because of their whitish glow in the sun. This is generated by the sun's rays being reflected off the papery sheath covering the spines. Wicked spines, coupled with the easily dislodged stem segments, can attach to a passerby earning them the curious nickname "jumping cholla."

Native and common in the Sonoran Desert, it plays a vital role as a nurse plant protecting various plant seedlings as they develop, thus increasing their chances for survival.

A star attraction of the Sonoran Desert with its tall, thicket-forming columnar stems (up to 15 feet), the senita cactus only grows within a small, narrow band in the U.S, along the southern edge of the Organ Pipe Cactus National Monument and in the Mexican states of Sonora and Baja. This exceptionally narrow range makes it one of the rarest of the big three cacti celebrated in Arizona.

A distinguishing characteristic setting it apart from its tall cacti counterparts is the formation of hairy tufts at the ends of mature branches. Night blooming flowers are produced at the end of these stems. The subsequent fruits are protected by a thick arrangement of downward pointing spines. These hairy tips are reminiscent of beard whiskers hence the common name senita which means “old one” in Spanish.



Senita has a highly specialized pollinator relationship with the senita moth. In exchange for pollination, the moth lives out its entire lifecycle solely on this cactus. This is a fine example of mutualism where the survival of each species is dependent upon the other. This is only the third known example of a profoundly strict pollination-related mutualism.



Senita - Old Man Cactus
Lophocereus schottii

\$25,000



Moroccan Mound

Euphorbia resinifera

\$25,000

This slow growing North African species is native to the Atlas Mountains of Morocco. Its spiny columnar appearance superficially resembles a member of the cactus family. However, this succulent is actually a member of the euphorbia family. This represents a great example of convergent evolution where two unrelated plant species exhibit the same physical adaptation and strategies to similar climatic conditions in separate parts of the world. It has high ornamental value for its tidy, perfectly rounded growth habit.

As a euphorbia, this particular species has a long medicinal history that can be traced back to the 7th century. The milky white sap of this euphorbia naturally contains resiniferatoxin, an ultra-potent compound similar to capsaicin (found in hot peppers), which registers 16 billion Scoville Units (a measure of heat in hot peppers). The hottest pepper currently known measures 16 million units. In its pure form, it can inflict deadly chemical burns. However, it has immense promise in cancer pain management.

Don't let the scientific name fool you, jojoba (pronounced ho-HO-ba) is native to the Sonoran Desert where it's a companion of giant saguaros, ironwood and ocotillos. While this evergreen, silvery-gray shrub is a highly valued member of the desert ecosystem, its ethnobotanical uses take center stage. For centuries, indigenous people used the seeds for food and medicine.

Today, the oil produced from its seeds makes it one of the most economically valuable plants native to the Sonoran Desert. Normally picked by hand, 90% of the seeds harvested are for the cosmetic industry with some industrial application. Jojoba plantations have popped up in many arid regions across the globe allowing the native population to remain stable.



Jojoba
Simmondsia chinensis

\$25,000



This diminutive (about 1 foot tall) desert dweller probably holds the award as one of the spiniest cacti of the US Desert Southwest as its cylindrical stems become nearly obscured by innumerable downward pointing spines. Developing into an appealing dense cluster of stems, its imposing array is quite attractive en masse. Natural color variation of the spines is a reflection of geographic influence.

Gorgeous magenta flowers precede equally gorgeous and spiny red fruits that taste like strawberries. While abundant in its native Sonoran and Mojave Desert range, it is listed by Arizona's Native Plant Law as Salvage Restricted. This designation means protected plants may not be removed from any lands, whether private or public, without the permission of the land owner and a permit from the Arizona Department of Agriculture. The greatest threats to population of this cacti are human activity and urban expansion.



Photo by Miwasatoshi (CC BY-SA 4.0)

Strawberry Hedgehog Cactus

Echinocereus engelmannii

\$25,000

This highly sought after cacti, native to the rocky outcrops of South America, has a very unusual and uncharacteristic growth form making it a botanical wonder. Reflected by the use of 'monstrosa' in the Latin name, monstrose plants exhibit an abnormal growth form usually caused by a naturally occurring genetic mutation.

This distinctive cactus features a cluster of cylindrical, upright branches with a deep grayish-blue color. Tree-like, up to 15 feet, and structurally appealing, its irregularly shaped, twisting stem with ribbed stems featuring prominent knobby growths make it a textural scene stealer. Trumpet-shaped white flowers open only for one night to be pollinated by moths and beetles. The resulting fruit resembles a large apple that is edible. It is becoming an important cash crop in Israel where it is cultivated.



Monstrose Apple Cactus
Cereus repandus f. *monstrosus* 'Monstrose Apple Cactus'

\$25,000



Creosote bush is a highly specialized shrub that dominates the desert landscapes of North America, specifically the Mojave, Sonoran, and Chihuahuan Deserts. Despite its common name, it is not the source of commercial creosote. However, it is a most fascinating plant with a myriad of adaptations, ecological relationships, and ethnobotanical uses. Most notably it is known for the strong perfume that its waxy, resinous leaves release after a rain. This aromatic resin is composed of many volatile oils such as terpene (a compound found in pines), limonene (citrus), camphor (pines and rosemary), methanol (wood alcohol), and 2-undecanone (spices) – all contributing to that signature creosote smell. In its native range this creosote smell is known as the “smell of rain.” The fragrance is actually a survival strategy to ward off herbivory since the rains bring the return of a food source – fresh green leaves.



In times of extreme drought, the small drab-olive leaves will fold up and alter their angle to minimize direct exposure to the sun's rays. The branches are alive with a microcosm of fungi, algae and bacteria which harmlessly live on the branches and provide nutrients to the soil as the rains wash over them, giving it a competitive edge in a harsh climate. Remarkably, it can produce small yellow flowers with as little as 12 mm of rain! These strategies make it an ideal nurse plant fostering the growth of other seedlings as well as supporting numerous desert creatures. When used in moderation, chemical compounds found throughout the plant have been used to treat everything from the common cold, ulcers and nausea through teas and tinctures to topical applications to treat muscle pain, skin conditions like acne, fungal infections, bacterial infections, cold sores and wounds. It's a true champion of overcoming the odds as specimens can survive in the harshness of the desert for thousands of years.

Creosote/Chapparal Shrub

Larrea tridentata

\$25,000

An intriguing and charming little cactus growing no more than a foot tall with precisely arranged spines geometrically radiating out in the Fibonacci spiral. The spiral is most noticeable when viewed from the top of the plant. The Fibonacci spiral occurs quite often in nature. The arrangement of scales on a pine cone or the rays on a sunflower are common examples. In the simplest of terms, the proportions of the spiral follow the mathematical principle that each quarter in the spiral is as big as the last two quarters.

Ecologically speaking, it is one of the largest groups of cacti with over 200 species. All but a few are endemic to Mexico where its population is under threat from habitat loss and illegal poaching. Its cute ball shape and crown of colorful flowers make them a highly desired ornamental escalating conservation concerns.



Pincushion Cactus
Mammillaria species
\$25,000

Desert Biome



Tropical Biome



The traveler's palm (*Ravenala madagascariensis*) is a palm in name only. In fact, it is more closely related to the common bird of paradise (*Strelitzia* species). While the exotic flowers indeed look like those of a white bird of paradise and the seeds are wrapped in an unusually colored bright blue fiber, the architecture of the plant is its main attraction. It has a distinctive, fan-shaped, flat spray of stalks, each topped with a banana-like leaf. This unusual array has enticed gardeners to plant it far from its native Madagascar into tropical landscapes and conservatories around the world.

The species is very important to both the wildlife and people of Madagascar. The flowers are rich in nectar and this attracts several lemur species to the plant. In exchange for the nectar, the lemurs pollinate the plant. The people of the island know that at the base of each leaf they can find water, making this plant a welcome relief to thirsty travelers, hence the common name. The flat spray of foliage also generally aligns east to west, so the tree can also be used as a crude compass.

Traveler's palms are edible, for both humans and livestock, and it is also used in traditional medicine. Although its habitat is decreasing, the traveler's palm is not currently listed as threatened. This is good, because in some communities it is the most popular choice for building materials used in home construction and is harvested for flooring, walls, and roofing. This eases the pressure on other, more threatened, slower growing species.



Photo by H. Zei; (CC BY-SA 3.0)

Traveler's Palm
Ravenala madagascariensis

\$100,000



Photo by Rhododendrites (CC BY-SA 4.0)

Corpse Flower

Amorphophallus titanum

\$100,000

Corpse flower is a botanical wonder and one of the most well-known conservatory plants. Unfortunately, it is listed as Endangered on the IUCN Red List of Threatened Species. There are likely less than 1000 individual specimens left in the wild on the island of Sumatra where it is native. Fortunately, there are many growing in botanical gardens around the world, but it would be a shame if these were the only places where this unusual plant grew.

There are two reasons why this plant is a wonder. At up to 12 feet tall, it produces the largest flower in the plant kingdom, like a giant calla lily, to which it is related. The other unusual thing about this flower is its fragrance. In full bloom it smells like rotting meat hence the common name of corpse flower. It does this to lure pollinators that are attracted to decomposing flesh. Its “meaty” color helps with the allusion. Despite the terrible stench, or because of it, this spectacular plant will draw many visitors during its brief time in bloom.

First arising 250 million years ago, cycads are one of the oldest groups of plants on earth. They were once a major plant group and were present across the globe. They have survived ice ages and several mass extinction events, including the one that killed off the dinosaurs. They still persist today, though playing a minor role in the plant world. Unfortunately, 70% of the 300 species that remain today are endangered, with several close to extinction, making cycads one of the most threatened groups on the planet. The major threats are a combination of habitat loss and plant poaching, making it more difficult for the plants to reproduce successfully on their own.

One of these endangered cycads is the Queen Sago (*Cycas circinalis*), a native of southern India and Sri Lanka. Traditionally, this plant has been harvested to use medicinally and as a food source. However, the plant takes careful processing to remove toxins before it can be eaten, and even then, some residuals may be present. The fronds of this plant are also harvested for use by the floral trade where the dramatic palm-like foliage is valued for both its appearance and long shelf life.



Photo by Siddiq Hasan (CC BY-SA 4.0)

Queen Sago
Cycas circinalis

\$50,000



Sometimes also known as “sacred banana,” this ultra-rare, beautifully variegated banana was once only allowed to be owned by Hawaiian royalty. Not only are the leaves beautifully variegated, but the fruit is as well! Hawaii has no native bananas, and no one knows where this particular banana originated from, but was likely brought in as a gift from Asia or from a nearby island.



This banana will always remain rare because the variegation cannot be reliably replicated through tissue culture. This is because the ‘Ae Ae’ is a somatic variegate also known as a chimera. Propagation is done from pups of large specimens.

Royal Hawaiian Variegated Banana
Musa ‘Ae Ae’

\$50,000

One of the most unique ecosystems is the tropical elfin forest (a.k.a. dwarf forest). These occur at high elevations and they are characterized by dwarf or stunted vegetation and a low number of vertebrate animal species, primarily bats and hummingbirds. The smaller plant size is in response to high winds that occur near mountain tops and ridges. Taller plants would be subject to wind damage, so plants in the elfin forest respond by not only growing shorter, but also by producing sturdier trunks and branches, as well as stronger root systems.

The central mountains of Puerto Rico are home to several tropical elfin forests, and during the 20th century some of these areas were put into protected status so that their unique plants and animals would not be lost. One such plant is the elfin tree fern (*Alsophila dryopteroides*, sometimes listed as *Cyathea dryopteroides*). Normal tree ferns are quite large for ferns and develop stout, log-like trunks. The elfin tree fern grows underneath other plants and only gets about 2' tall by 3' wide. The species has always been rare, but it is possible that there are only about 100 plants left in the wild. The major threats to their continued existence are strong hurricanes, more aggressive plants that thrive in areas disturbed by hurricanes, and human activities such as communication tower and powerline maintenance.



Photo by Dick Culbert (CC BY-SA 2.0)



Photo by Octavio Rivera Hernández (CC BY-NC 4.0)

Elfin Tree Fern

Alsophila dryopteroides

\$25,000



This rare *Philodendron* is commonly referred to as the “holy grail” among aroid collectors. It is a critically endangered species due to habitat loss and there are currently only six known wild specimens left. In fact, the remaining plants are located on a privately owned farm which is heavily guarded 24 hours a day. Native to the Brazilian state of Espírito Santo, they mostly grow as epiphytes or hemi epiphytes.

Wild specimens can reach up to 65 feet tall, with individual leaves over 2 feet long. The elongated petiole and long narrow leaf make the leaves of large specimens look like they are floating in midair. Due to its rarity and slow growth rate, specimens are very costly. NBG was fortunate enough to obtain an ethically sourced seed grown variety from Silver Krome Gardens in Florida.

Philodendron Santa Leopoldina

Philodendron spiritus-sancti

\$25,000

Just like clothing and home décor, houseplants go through phases where some might be passé, others are in-style today, certain choices will always be classics, while some are just downright hot. One plant in that last category is the variegated monstera plant (*Monstera deliciosa* 'Variegata').

They easily set the look of any tropical plant collection with striking coloration and distinctive exotic foliage. This look also makes it easy to see why this plant is so coveted, with collectors paying previously unheard-of prices for a houseplant. Variegated monstera plants are difficult to reproduce from seed, so cuttings, carefully tended by greenhouse technicians, are the only viable way to get new plants, hence the cost.



Variegated Monstera
Monstera deliciosa 'Variegata'

\$25,000



Heliconia is a genus of tropical plants that are fairly widespread in Central and South America, as well as in limited locations of the Pacific. Attracted by their beauty, people have spread them around the world. One such species is *Heliconia caribaea*, which as its name implies is native to several islands in the Caribbean. The tall leaf stalks can get over 10' and arise dramatically out of the ground, topped by banana-like foliage. The common name of lobster claw comes from the bright red, exotically zig-zagged flower structure, which is valued by florists. Not only are the plants beautiful, but they are also edible.

Heliconia caribaea and *Heliconia bihai*, both island species, have a complex relationship with their pollinator. One species of hummingbird does the job for both plants, but the female hummingbirds, with their smaller bodies only pollinate *H. bihai*. The larger males only pollinate *H. caribaea*. This is not a matter of choice on the hummingbirds' part, the flowers of each of these *Heliconia* are correspondingly sized to fit the specific gender of the hummingbird. Nature is full of these unique relationships, which is why it is so important that ecosystems in their entirety are protected so that plants and animals both thrive.

Lobster Claw, Wild Plantain

Heliconia caribaea

\$25,000

The species name of this Borneo native is derived from the Latin word “cuprum” meaning copper, referring to the metallic orange and red hues of the almost iridescent leaves. Commonly known also as jewel alocasia or mirror plant, it is regarded as one of the most beautiful of its genus. Growing only 12 to 18 inches tall, it makes a stunning groundcover. Due to the unusual color of the leaves it has been highly sought after, and it is the only Bornean species to have been in continuous cultivation since its introduction around 1860.



Jewel Alocasia/Mirror Plant
Alocasia cuprea

\$25,000



This Brazilian endemic bromeliad discovered in the late 1800's is amongst the world's largest, with leaves up to six inches wide and five feet long. A mature specimen can hold almost ten gallons of water between its leaves! It is predominantly a lithophyte, growing in Atlantic Forest on mountain cliffs. The magnificent red inflorescences can reach nearly 10 feet tall, but they can take up to 40 years to flower. However, flowers can last 5 months and are an important food source for various insects, birds, and moths.



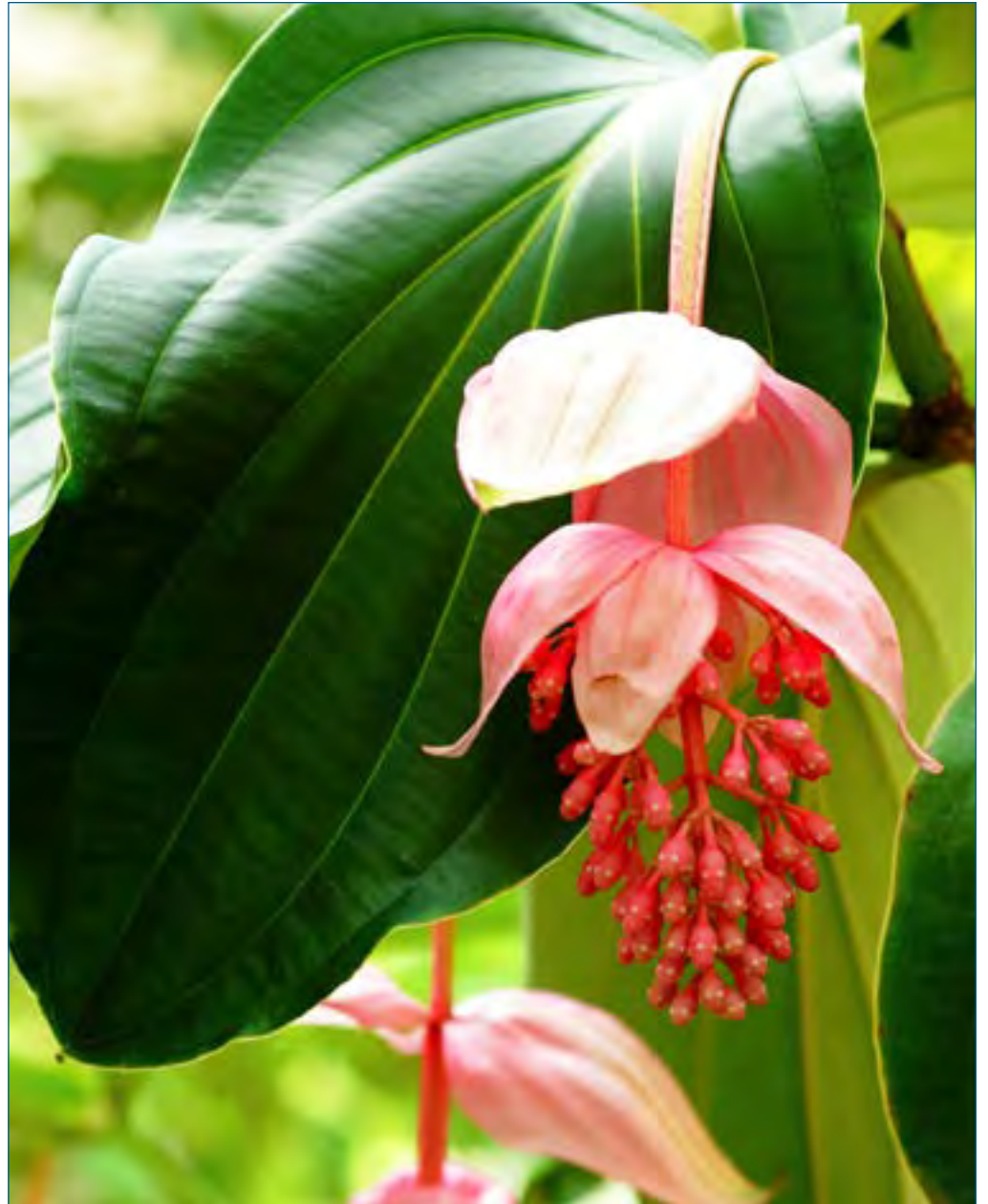
Imperial Bromeliad

Alcantarea imperialis

\$25,000

Arguably one of the most beautiful epiphytes in the world, showy medinilla is also the symbol of Lakapati, the friendly Filipina goddess of fertility. Its native range is within the diminishing rainforests of the Philippines. Famous plant writer, Rob Herwig once described it as “the Rolls-Royce of houseplants,” and it is easy to see why with its large, glossy-green wavy leaves and cascading pink blooms that somewhat resemble clusters of pink grapes. It is prized by serious plant collectors around the world.

While a showpiece of any tropical collection, this stunner is a rather delicate plant that is difficult to propagate and very particular about its growing conditions. Interestingly, the fruit of this beautiful plant is currently being studied for its flavonoids, tannins, saponins and alkaloids, all of which have significant promise in a variety of medical therapies.



Showy Medinilla/Rose Grape

Medinilla magnifica

\$25,000



If tropical plants could win a popularity contest, the 'Pink Princess' would be crowned Prom Queen. This highly sought-after tropical vine is native to Central and South America and features heart-shaped leaves with gorgeous blush-pink variegation. This rare variegation is naturally occurring thanks to a "one-in-a-million" genetic mutation where each leaf has its own unique expression of the variegation. Some are entirely pink with splashes of light and dark green or a perfect blend of both. Technically speaking, an ideal combination features more green than pink as the green is chlorophyll which allows the plant to sustain itself through photosynthesis. While easy to care for, propagation of this variegated beauty takes precise attention to detail contributing to its high popularity and scarcity.



'Pink Princess' Philodendron/Blushing Philodendron

Philodendron erubescens 'Pink Princess'

\$25,000

Tree philodendrons are the epitome of lush tropical foliage. Their natural home is within the tropical regions of South America, and their large, deeply-lobed, glossy green leaves are the real showstoppers as they can grow up to 5 feet long in ideal growing conditions. With an overall height of 15 feet combined with those deeply lobed leaves, tree philodendrons are plants that command attention. Those lobed leaves are not just prized by plant collectors; as a unique adaptation they are thought to help the plant withstand wind damage, deter herbivory, and aid in camouflage. As the plant matures, it produces adventitious or support roots which superficially attach to nearby trees allowing the plant to climb through the canopy. As it climbs upward, strong aerial roots grow downward to keep the plant firmly in place. As a coveted ornamental plant, it has been given the Royal Horticultural Society's Award of Garden Merit.



Tree Philodendron
Thaumatococcus danianus

\$25,000

The Garden of Tomorrow — Additional Naming Opportunities



Skywalk Viewing Platforms
\$500,000

The second-story indoor and outdoor elevated Kay & Al Abiouness Skywalk provides aerial views of the tropical rainforest biome and leads outdoors to two viewing platforms overlooking one of the largest and most beautiful rose gardens on the East Coast. Explore the stunning biodiversity of four separate biomes housed in the new state-of-the-art Perry Conservatory, where a tropical rainforest meets the deserts of the West Coast. The elevated skywalk leads guests from the two-story tropical oasis to the outdoors where visitors will also have views of the green roof of the Brock Entry Pavilion. Elevator is available.



Rain Gardens
\$500,000

In the landscape surrounding The Garden of Tomorrow project, Norfolk Botanical Garden is utilizing rain gardens, a nature-based solution proven to mitigate the ecological challenges associated with stormwater runoff. These specially designed gardens feature native plants and function to enhance water quality, reduce flooding, support local wildlife and beautify the landscape. Your name will be featured on a special plaque.



Threatened species need a refuge
before they are lost.

We are their refuge.
We need your help.

With climate change and habitat loss, it is increasingly important for botanical gardens to act as safe refuges for both plants and people. The 26,000 sq. ft. Perry Conservatory will protect some of the most threatened plants from around the world and demonstrate conservation in action.



For more information about these sponsorship opportunities, please contact Cathy Fitzgerald, COO and EVP of Philanthropy at cathy.fitzgerald@nbgs.org or (757) 441-5830 ext. 319.

Your investment supports the acquisition, ongoing care and unique habitat of our collection.