

Palo Verde 'Desert Museum'

Thorn-less hybrid Palo Verde

Parkinsonia x. 'Desert Museum'

Cercidium hybrid 'Desert Museum'

Fabaceae

Basic Description: This tree is easy to identify by its bright green bark. It has small leaves that create filtered shade. A semi-deciduous tree with leaves reacting to environmental factors rather than seasonal ones. Water availability will trigger leaves to open and lack of water will trigger leaves to drop. Green bark will allow photosynthesis to occur even when lacking leaves. This species grows up to 30 feet tall and 40 feet wide. It grows as a standard or multi-branched in the Gardens. It is a thorn-less Palo Verde species.



Bloom & Fruit Description: Blooms spring through summer with bright yellow flowers throughout the canopy. Seed pods are green and then turn to tan. Seeds are highly nutritious and abundant. They are an especially important food source in arid regions.

Cultural information/Uses/Human Interaction: The Genus *Parkinsonia* is named for John Parkinson (1597-1650), an English herbalist/botanist. Palo Verde means “green stick” in Spanish and refers to the bark of the tree. The Desert Museum name comes from the ASDM (Arizona Sonora Desert Museum) where the species was discovered and propagated.

This Genus is one of 16,000 members of the *Fabaceae* (legume) family. In order to grow, plants require specific nutrients including phosphorus, potassium and nitrogen. Plants can draw potassium and phosphorus as minerals directly from the soil. Nitrogen, which is an air-born gas, cannot be directly used by plants. Specialized bacteria have to convert nitrogen into nitrate, within the soil, in order for plants to be able to access it. Legumes harbor nitrogen-fixing bacteria in their roots. The bacteria convert nitrogen into nitrate, causing legumes to have higher levels of nitrogen compounds than other arid plants. When they decompose, they release the nitrates into the soil. They actually improve the soil in which they live. All plants have some level of nitrogen, but in arid regions where decomposition is slow, plants with high levels of nitrogen compounds, like legumes, significantly increase the soil’s nutrient level.

Other members of the legume family in the Gardens include: Palo verde, mesquite, Texas ebony and acacia.

Distribution/Range/Habitat: The 'Desert Museum' species was discovered in Arizona by Mark Dimmit as a naturally occurring complex hybrid. A grove was discovered that had characteristics of three different *Parkinsonia*. Those trees were Blue Palo Verde (*Parkinsonia floridum*), Mexican Palo Verde (*Parkinsonia aculeata*) and Foothill Palo Verde (*Parkinsonia microrphyllum*)

Comparison with Palo Brea: Although they look similar, Palo brea will usually bloom first in the season. The flowers will grow close to the branches and give the appearance of a yellow wand or staff. The Desert

Museum will bloom after the Palo brea and will have a lacey or wispy appearance. The Palo breas are ONLY along the Center building. The Desert Museums are on the circle around the Great Lawn and spread through the rest of the Center Gardens. We do not have palo brea in the Center Gardens, but have both Desert Museum and the Blue Palo Verde on the Historic Estate.

Cultural Requirements: Prefers full sun. It's a fast growing tree and will grow faster with more water, but will result in a weaker trunk and heavy canopy. Does best receiving low water to allow slow growth.

Propagation: Through cloning, and seeds

Wildlife/Plant relationships: Popular with birds, insects, especially native bees, and mammals. Some studies have found more than 20 bee species utilizing a single tree.

Disease/Pathology/toxins: Susceptible to palo verde beetle larvae in roots.

Status: X

Resources:

Arizona Sonora Desert Museum
Tucson Botanical Gardens
Arid Zone Trees