

# Intriguing Chihuahuan Desert Yuccas in Cultivation

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## Introduction

Of all the bold, dramatic accent plants found in many southwestern landscapes, none seem to draw the eye more than the large, dominating yuccas from the Chihuahuan Desert region. Even as an individual, one plant is large enough to stand out and make a statement. All species are easily cultivated and thrive in landscapes in many parts of the arid southwestern United States. For many years, these plants have been transplanted from wild stands in Texas, however, now many are being grown from seed in the nursery industry and are becoming more available as container grown plants.

## Taxonomy

As with almost all plants, there are some ambiguities concerning the taxonomy of some of the *Yucca* species. This paper addresses yucca cultivation. The accompanying article by Matt Johnson delves into the taxonomy in more detail, however, to maintain some consistency, I will touch on the taxonomic questions concerning two species complexes. The first (alphabetically) involves *Yucca carnerosana* and *Yucca faxoniana*. The differences between the two pertain to the inflorescence length and the length of fusion of perianth parts. These may or may not be significant taxonomically; they are not significant horticulturally. *Y. carnerosana* and *Y. faxoniana* are quite similar vegetatively, and are considered one species in this manuscript, using the name *Yucca faxoniana* which has priority. The second group includes *Yucca rostrata* and *Yucca thompsoniana*. Some botanists have suggested that these two are merely clines or geographic forms of one species. This may be true botanically, but horticulturally they are quite different, and are treated as separate species. The third group consists of *Yucca treculeana* and *Y. torreyi*. There is very little to distinguish the two botanically or horticulturally, and they are treated as one species, with *Yucca treculeana* having priority.

## Cultivation

In general, *Yucca* species are easily cultivated in southwestern landscapes. All are quite drought tolerant once established, but will grow significantly faster when given supplemental water on a regular basis. This means applying water during the growing season every 10-21 days. The frequency of watering will vary with many factors including, age of plant, type of soil, and exposure. A young plant will grow

faster with irrigation that is more frequent. A plant in a sandy, fast draining soil will need more frequent irrigation than one in a heavy, clay soil. A plant in full sun will generally need more frequent irrigation than one in partial shade. There is no need to water established plants in the winter, in fact, too much water could be fatal. All the species discussed are cold hardy to at least 10F. They all grow best in full sun, although most will tolerate light shade.

## Landscape Application

All species are large, dramatic forms that are used in the classic sense of an accent plant to draw the eye to a particular area of the landscape. Because the yuccas do not have a dormant period, they make ideal companion plants to seasonal plants such as perennials and deciduous shrubs and trees. All of these yuccas make a bold statement whether planted singly or massed. For the best effect when massed, the landscape area should be relatively large. The effect is diminished when more than one plant is used in a small area.

*Yucca elata* Soap Tree Yucca

**Description:** Soap Tree Yucca is a trunk forming species that generally grows to 8 to 10 feet tall with 2-5 branches (Figure 1). Each branch bears numerous, narrow leaves which form a nearly spherical outline. The leaves are up to 3 feet long and about 1/2 inch wide. They have a white margin with fine marginal fibers. The flowering stalk which usually appears in summer, can reach 15 feet tall, and is composed of many white, waxy 4 inch flowers.

**Ornamental Features:** *Yucca elata* develops a bold, striking form that provides an impact in any low water use landscape. The very tall and very showy flower stalk is an added bonus in the summer.

**Culture/Maintenance:** Plants are hardy to at least 0F. They are very drought tolerant once established, surviving for two months or more even in summer without supplemental water. *Yucca elata* grows best in full sun, and unimproved soil. They are slow growing and should be purchased in at least a 5 gallon container. Growth rate will increase when supplemental water is applied. *Yucca elata* grows well in native, unamended soil. Plants are virtually maintenance free. Bare root specimens have difficulty setting out new roots if not cared for properly. If you are to buy a "transplanted" specimen, try to get one that has been re-established in a container.

**Identification:** *Yucca elata* is easily identified by the very narrow leaves with many, fine threads along the edges.

*Yucca faxoniana* Spanish Bayonet

**Description:** *Yucca faxoniana* is a large, arborescent species with a single trunk or occasionally as many as eight trunks forming a dense clump up to 10 feet in diameter (Fig-

ure 2). The heads are composed of many, 2 foot long, 2-3 inch wide leaves, and measure up to 4 or 5 feet in diameter. A 4-foot long panicle of white, 4-inch wide flowers will appear in spring and early summer. Most of the panicle rises visibly above the leaf crown, and produces a spectacular flower display.

**Ornamental Features:** The dominating form of a mature *Yucca faxoniana* is a remarkable sight. The huge, stout leaves and thick trunk create an impressive image that is not easily forgotten.

**Culture/Maintenance:** *Yucca faxoniana* can tolerate temperature extremes from winter lows of at least 10F to summer highs of over 115F. It is a drought tolerant species, surviving on about 11 inches of annual rainfall. The plant will grow a little faster if given supplemental water from late spring until late summer. Water about every 14-21 days; more frequent watering could cause rot. The growth rate is slow, and large container specimens are best for their initial impact. Place this species in full sun for best appearance and health. The plant is virtually maintenance free.

**Identification:** Large, stout leaves with curly white marginal fibers readily identify *Yucca faxoniana*.

*Yucca filifera* Palma China

**Description:** *Yucca filifera* is a large, arborescent species that will eventually grow to around 30 feet tall and have a 20 - 25 foot spread to the crown. The plant is single trunked at the base and highly branched above (Figure 3). The trunk can reach 6 feet across, and is covered with rough bark. It may take many years for the plant to achieve this size, and we could realistically expect a size of perhaps 15 feet tall with a few branches to form a small crown. The leaves are nearly 2 feet long and about 2 inches wide. They have white threads along the edges and a stout tip. Flower stalks will grow to about 5 feet long and the fruit (on plants in the wild) hang down.

**Ornamental Features:** Young or old, the plants are attractive. Young plants are stout with densely packed, dark green leaves which provide interest in any landscape. Older plants will branch and develop a large tree-like form that will dominate the landscape.

**Culture/Maintenance:** This species is hardy to at least 15F and probably lower. The plant is drought tolerant, but will grow faster as a young plant if given consistent supplemental water throughout the summer. This may be as often as once every week or once every month. *Yucca filifera* should be planted in full sun and in a soil with good drainage. If the soil has good drainage, then the plant could be given water more frequently during the summer growing season. The plant is virtually maintenance free, although the sharp leaf tips can be trimmed off until the plant is above head height to eliminate potential accidents. This species seems to be pest and disease free.

**Identification:** *Yucca filifera* is easily distinguished from several other species by its stiff, green leaves with marginal threads.

*Yucca rigida* Blue Yucca

**Description:** *Yucca rigida* is a tall, trunk-forming species that grows to 12 feet tall and can have a spread of 8 feet (Figure 4). Plants will branch after flowering, and usually develop 3-5 branches, sometimes more. Powder blue leaves have a narrow yellow margin and very sharp tips. Individual leaves are up to 3 feet long and 1 inch wide. They are quite rigid, as the name implies, and should be given sufficient room to develop. Panicles of white flowers appear above the leaves during summer. Normally flowering does not occur every year.

**Ornamental Features:** Blue Yucca is an attractive plant for several reasons. First, the size of the plant makes it stand out in any landscape. Second, the powder blue leaves are striking when planted with green leafed plants. Third, the showy flower clusters stick up above the leaves. Finally, the dead leaves remain on the trunk and give the plant a "shaggy" look which blends in with a desert landscape.

**Culture/Maintenance:** Blue Yucca is cold hardy down to at least 5F. The plant is low water using, and quite drought tolerant once established. It is best grown in full sun or reflected sun. In habitat, *Yucca rigida* grows in rocky, desert soils. Under cultivation, it should be planted in soil that has good drainage. This species has a moderate growth rate, which can be increased by supplying water from spring through summer, being careful not to over-water. It does not need extra water during the winter. Choose the planting location carefully, allowing ample room for the leaf crown to develop without intruding on high traffic areas. As with other *Yucca* species, *Y. rigida* may have roots eaten by the larva of a beetle, and pretreatment should be considered.

**Identification:** Blue Yucca is not easily confused with any other *Yucca* except *Y. rostrata*. At maturity, their leaves separate these two. Leaves of *Yucca rostrata* are shorter, thinner, and more flexible than those of *Y. rigida*.

*Yucca rostrata* Beaked Yucca

**Description:** *Yucca rostrata* is an arborescent plant with a trunk to 10 feet or more tall (Figure 5). The plant is unbranched when young; an older plant may have a few branches near the top. Narrow, blue leaves with a thin yellow edge are up to 2 feet long and 1/2 inch wide. Clusters of pure white flowers appear in late spring and summer, and rise above the crown of leaves. In the wild, this plant tends to have a tall, narrow form without much bulk.

**Ornamental Features:** The blue leaves, narrow form, and tall, thin trunk of *Yucca rostrata* provide sculptural qualities

that enhance any landscape. Older plants have a spectacular flower display.

**Culture/Maintenance:** *Yucca rostrata* is hardy to at least 5F and possibly lower. It is easily grown in the landscape. The plant will develop its best form in full sun or very light shade. *Y. rostrata* will tolerate most desert soils, but seems to grow best in a rocky, well-drained soil without supplemental organic matter. The growth rate is moderate, speeding up slightly if given supplemental water from spring through early fall. No maintenance is required except to treat for grubs that may attack the roots. The cause is still not known, but may be due to over-watering, or excessive summer heat. A good program is to treat with diazinon granules once in spring and once in summer.

**Identification:** Beaked Yucca is similar to *Yucca rigida*, but is distinguished by its shorter, more flexible, narrow leaves. In addition, the forms at maturity are different. *Yucca rostrata* is taller and narrower with less bulk relative to its height. *Yucca rigida* is shorter, with a broader, bulkier crown.

***Yucca treculeana*** Palma Pita

**Description:** *Yucca treculeana* or Palma Pita generally has one or two (sometimes as many as 8) main stems that are unbranched or with two or three branches (Figure 6). The plant grows to 15 feet tall and has a leaf spread of up to 6 feet across. A branched specimen can reach about 10 feet across. The dark green, rigid leaves are about 3 feet long and 2 inches wide, tapering to a sharp point. The inflorescence is about 2 feet long with much of it below the leaves. Individual flowers are rounded to slightly bell shaped, cream colored with a dark purple tinge. Flowering usually occurs in spring and early summer, but some plants will flower at other times. *Yucca treculeana* is widely scattered on mesas, slopes, and flat plains in Chihuahuan Desert and grassland vegetation from 3,500 to 5,000 feet elevation throughout much of western Texas and extreme southern New Mexico.

**Ornamental Features:** Palma has an attractive flower display and a bold, dramatic form that can be a dominant specimen in a desert landscape.

**Culture/maintenance:** *Yucca treculeana* is a hardy species, tolerating winter lows of at least 10F or less. The plant can be grown in a harsh desert soil and full sun with very little water. The moderately slow growth rate can be increased by thoroughly watering the plant every 2-3 weeks in spring and summer. Watering frequency will vary with soil type; let the soil dry out between water applications. The old leaves will hang persistently on the trunk, and should not be removed as they provide protection from sunburn and cold.

**Identification:** *Yucca treculeana* is easily separated from the thin, blue leaved plants such as *Y. rigida* and *Y. rostrata* by leaf characteristics. *Yucca treculeana* is distinguished

from similar leaved species by its overall appearance. The stem, leaf, and inflorescence characteristics all need to be considered when separating *Yucca treculeana* from plants such as *Y. faxoniana* (including *Y. carnerosana*), *Y. filifera*, and *Y. schottii*.

All photographs were taken by the author.

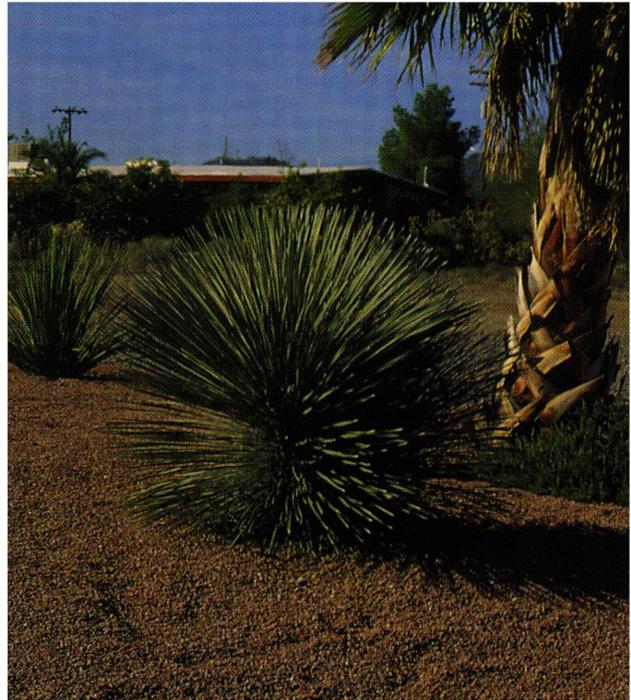


Figure 1. *Yucca elata*

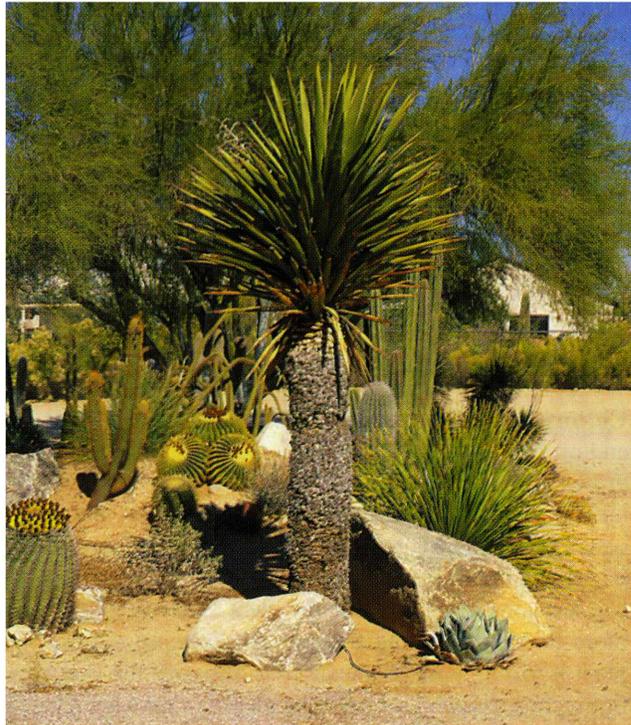


Figure 2. *Yucca faxoniana*



**Figure 3.** *Yucca filifera*



**Figure 4.** *Yucca rigida*



**Figure 5.** *Yucca rostrata*



**Figure 6.** *Yucca treculeana*