

New Arid Land Ornamentals: Recent Introductions for Desert Landscapes

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Over the past decade, water conservation has become an increasingly important issue across the southwestern United States. This concern has led local horticulturists and landscape architects to explore the use of water-thrifty ornamentals from dry climates throughout the world. The Chihuahuan and Sonoran deserts in particular have yielded a vast array of successful landscape plants. Universities, growers, and plant enthusiasts have all participated in the collection, propagation, evaluation, and promotion of new plant introductions. A group of recent proven introductions, including trees, shrubs, ground covers, and perennials are included below with information on their origins, growth habits, cultural requirements, and potential uses in the landscape.

***Acacia redolens* Maslin, Desert Carpet™**

Native to inland areas of Western Australia, *Acacia redolens* Maslin has been used extensively in southern California and Arizona to cover large areas inexpensively. Seedlings of *Acacia redolens* vary widely in their growth habits, often reaching heights in excess of 1.8 m (6 feet). The Desert Carpet™ clone was selected from the first Phoenix freeway plantings for its prostrate growth habit, and was released by Mountain States Wholesale Nursery in 1984. Since that time, this groundcover has performed consistently on many projects, and years after installation has maintained a height of only 0.6 m (24 inches). One plant can spread to a width of 3.6 m (12 feet), although we have observed that the cutting-grown Desert Carpet™ plants are slower to establish and reach their mature size than seedlings. The slower growth rate and prostrate nature of this clone should reduce maintenance costs, since pruning is not necessary to control vertical growth. Instead of true leaves, *Acacia redolens* has thick, leathery, gray-green phyllodes. This plant blooms in the spring with small yellow flowers. Freeway acacia will tolerate low temperatures of -11.1° to -9.4°C (12° – 15°F), alkaline and slightly saline soils, and does not seem to be choosy about soil types. In coastal areas it requires little or no supplemental irrigation, but does require regular irrigation in hot desert regions. Desert Carpet™ seems to be disease and pest free.



***Baccharis* hybrid ‘Starn’ (P.P.A.F.) Thompson™**

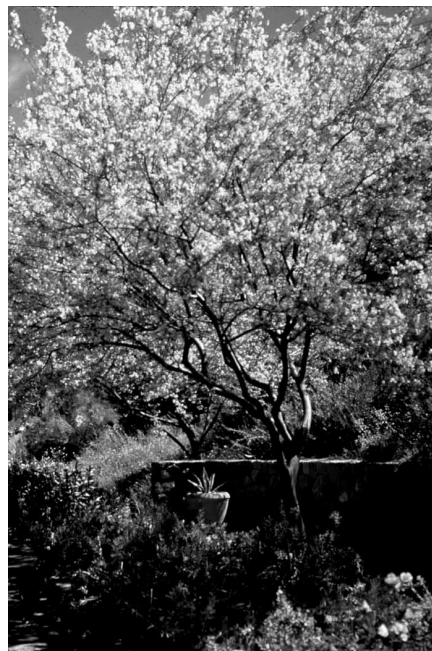
When Dr. Tommy Thompson and Dr. Chi Won Lee of the University of Arizona released *Baccharis* hybrid ‘Centennial’, it filled a great void in our plant palette. Their research has been carried on, and now the improved Thompson™ clone is available. Since *Baccharis* ‘Centennial’ is a female plant, it has two undesirable characteristics. First, it produces pappus, or white “fluff,” which litters the landscape and reduces the esthetic appearance of the plants for a short period of time. Also, since ‘Centennial’ is a female plant, it can be pollinated by nearby male *Baccharis sarothroides* Gray (Desert broom), and seedlings often result. This is why you sometimes see stands of ‘Centennial’ with taller *Baccharis* plants growing up through them. The Thompson™ clone is a male plant, eliminating these two negative characteristics. Also, Thompson™ was selected from the next generation after ‘Centennial’, and has 25% more *Baccharis sarothroides* for heat and disease resis-



tance. The growth habits and uses of these two clones are essentially the same: both grow to about 0.9 m (3 feet) tall by 1.2–1.5 m (4-5) feet wide, are evergreen with bright green foliage and inconspicuous flowers, and provide a low-maintenance, long-lived alternative for difficult locations.

***Cercidium* species ‘Desert Museum’**

This hybrid palo verde is a three-way cross between *Parkinsonia aculeata* L., *Cercidium microphyllum* (Torr.) Rose & I.M. Johnst., and *Cercidium floridum* Benth. ex Gray, and seems to combine the best qualities of all three plants. ‘Desert Museum’ grows very rapidly to 6.1 m (20 feet) tall and wide in 3 to 5 years, after which it needs little or no irrigation. It is completely thornless, and produces very little litter, with few seed pods. It has a sturdy, upright growth habit which requires very little pruning or staking. It blooms over a long period of time, with the heaviest bloom from about mid-March to May 1. It also tends to bloom again in June and August. The yellow flowers are larger than any of its three “parents.” It does not reseed like the messy *Parkinsonia aculeata*!



***Chilopsis linearis* (Cav.) Sweet, Lucretia Hamilton™**

Desert willow trees occur along washes throughout the southwestern US and northern Mexico. This small deciduous tree has narrow, light green leaves that give it a weeping appearance. In the summer, the tree is covered with fragrant, trumpet-shaped flowers. In the wild, the flower colors range from white to purple, although a pale pink to lavender flower color is the most common. The Lucretia Hamilton™ clone was selected for its intense, deep pink to purple flower color, as well as its small stature. While many desert willow trees can grow to 7.6 m (25 feet) tall and wide, this clone seems to stay below 5.4–6.1 m (18-20 feet) tall and wide. After flowering, long narrow seed pods are produced. Plant *Chilopsis linearis* in full sun and well-drained soil, and in regions where temperatures do not drop below -17.8°C (0°F).



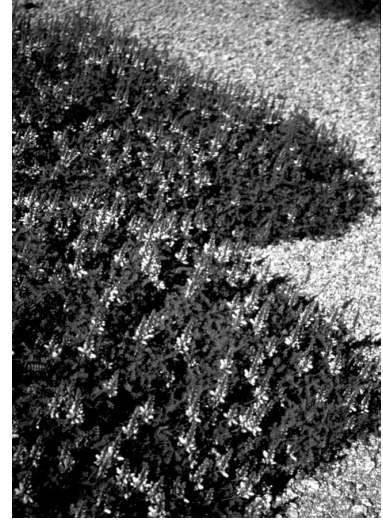
***Chrysactinia mexicana* Gray (Damianita)**

This small, compact shrub grows to 0.6 m (2 feet) tall and wide, and bears a very strong resemblance to turpentine bush, with needle-like green leaves and yellow daisy-like flowers. However, damianita blooms from March to September, while turpentine bush blooms from September to November. Combining the two plants would be a great way to prolong the color display! Damianita has wonderful-smelling foliage, and would be a great selection for sensory gardens. Damianita is a very tough, durable plant, tolerating extreme heat and cold, down to -17.8°C (0°F). Plant in full sun, and almost any soil. If this plant starts to look woody, prune it back severely in the early spring. Damianita ranges from New Mexico to west Texas and northeastern Mexico, at elevations of 609–2134 m (2000–7000 feet).



***Dalea capitata* Sierra Gold™**

This well-behaved ground cover grows to about 20 cm (8 inches) tall by 0.9 m (3 feet) wide. Because of its compact size, Sierra Gold™ is a good selection for tight planting areas, such as small planters or medians. Its fine-textured, light green foliage has a fresh, lemony scent. Rabbits seem to avoid it! Yellow flowers carpet Sierra Gold™ in the spring and the fall. This plant is hardy to at least -15°C (5°F), but it will be deciduous at -3.9°C (25°F). The one drawback to this plant is that the whiteflies seem to like it, so some insecticide applications will be necessary in heavily infested areas around Phoenix. Plant in full sun for best results. No soil amendments should be necessary. In hot desert regions this plant requires some supplemental irrigation from spring to fall. Although most dales native to Arizona and Mexico tend to rot out if overwatered, we have observed this plant thriving right next to turfgrass, where it receives heavy irrigation. More testing is needed to determine if it will tolerate coastal areas, or regions with high rainfall.



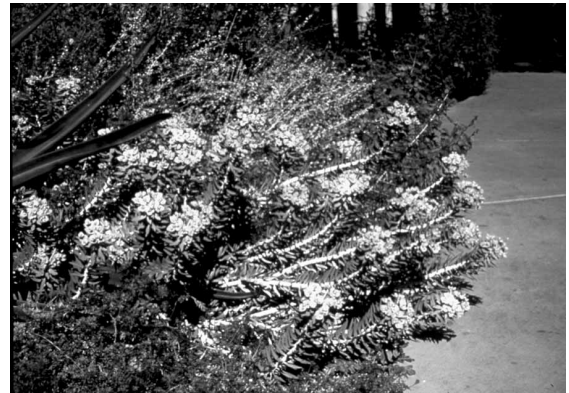
Dasyliirion longissimum

This user-friendly accent plant is a great selection for high-traffic areas such as walkways and near entries. This grasslike plant does well in containers, and its symmetrical form provides a striking focal point. Its thin, stiff green leaves are completely unarmed, and have smooth edges. Eventually, its single trunk can grow to 1.8 m (6 feet), topped by a 1.5 m- (5-foot-) wide rounded head of leaves. The older, bottom leaves can be trimmed off to expose the trunk. *Dasyliirion longissimum* is native to Mexico, and is hardy to about -8.3°C (17°F).



***Euphorbia biglandulosa* Desf. (Gopher Plant)**

This evergreen perennial or subshrub has a very unusual form and appearance. Its arching stems angle out and up, and can reach a length of 0.6 m (2 feet). The plant grows to 0.9 m (3 feet) tall by 1.2 m (4 feet) across; with narrow, fleshy grey-green leaves. Broad clusters of chartreuse flowers occur at the tips of the arching stems, usually in the late winter and early spring. Flowers are followed by small brown seed pods that explode upon ripening. The stems usually die back after fruiting, leaving a small clump of grey-green foliage near the ground. Plant *Euphorbia biglandulosa* in full sun or light shade, in a well-draining soil. It is cold hardy to -15°C (5°F).



***Hesperaloe parviflora* (Torr.) J. Coult., ‘Yellow’ (Yellow yucca)**

A clumping perennial with long, gray-green leaves, *Hesperaloe parviflora* grows slowly to form a grasslike clump 1.0–1.2 m (3–4 feet) tall and wide. From spring through fall, it produces 1.5 m- (5-foot-) tall flower spikes. Red-flowering plants have been a staple in southwestern landscapes for many years. This is simply a yellow-flowering selection. Use this tough accent plant in full sun. Since it also tolerates reflected heat, yellow yucca is a reliable plant to use along sidewalks, in parking lots, etc. Tolerant of temperature extremes, yellow yucca is cold-hardy to at least -17.8°C (0°F). Once established, it requires little or no irrigation. All in all, yellow yucca is one of the toughest and most maintenance-free plants.



***Hymenoxys acaulis* (Pursh) K. Parker (Angelita Daisy)**

This perennial is native to the southwestern US, where it occurs most often at elevations from 1219–2134 m (4000–7000 feet), on dry rocky slopes and mesas. Angelita daisy bears a strong resemblance to *Baileya multiradiata* Harv. & A. Gray ex Torr. (desert marigold). However, the foliage is green rather than gray, and the flower is a deeper gold color. Forming rounded clumps to fifteen inches tall and wide, *Hymenoxys acaulis* is a wonderful plant to use as a border in front of larger shrubs. If water is available, it will naturalize in the landscape. In Phoenix, this plant blooms all year, with especially heavy bloom in the spring and fall months. This prolonged bloom period results in many dried flower stalks, which can make the plants look scruffy. We recommend cutting off the old flower spikes occasionally to rejuvenate the plant and initiate new flower production. Angelita daisy seems to prefer well-drained soils and full sun. It is very cold hardy, heat tolerant, and drought tolerant.



***Leucophyllum candidum* I.M. Johnst. Thunder Cloud™**

As with all of the other *Leucophyllum* species, this clone blooms when the humidity is high. The silver, pubescent foliage is a perfect foil for the masses of indigo flowers that appear in the summer and fall months. Thunder Cloud™ was selected and trademarked by Benny Simpson of Texas A&M University. His clone is highly valued because of its small, dense growth habit. Unlike most of the larger *Leucophyllum* species, Thunder Cloud™ remains reliably small, to three feet tall and wide. This plant is cold hardy to at least -12.2°C (10°F). Plant all of the *Leucophyllum* species in full sun and well-drained soil. Avoid overwatering.



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***Leucophyllum langmaniae* Rio Bravo™**

Trademarked by Mountain States Nursery, this clone has a nice, compact growth habit very similar to *L. frutescens* ‘Compacta’. Rio Bravo™ has become very popular because of its bright green foliage and rounded, dense form. It has lavender flowers and will eventually grow to 1.5 m (5 feet) tall and wide. Like the *L. candidum* species, it requires well-drained soils and full sun. It is hardy to -12.2°C (10°F).



***Muhlenbergia capillaris* (Lam.) Trin. Regal Mist™**

We feel that this ornamental grass shows great promise for many different regions of the country. Native to humid southeastern Texas, this grass has adapted extremely well to the hot, dry conditions of deserts in Arizona and Nevada. In fact, it has performed incredibly well in Las Vegas, which is cursed with poor soils, high winds, high summer temperatures, and cold winters. Regal Mist™ is also happy in heavy soils, with ample irrigation. In short, it has worked everywhere it has been tried, so far! It is hardy to at least -17.8°C (0°F). Regal Mist™ has narrow, dark green, glossy leaves. It grows quickly to form a rounded clump to 0.9 m (3 feet) tall and wide. The flower spikes on this grass have attracted a lot of attention... they form misty masses of pink to purple flowers in October and November. We recommend cutting this plant back in early spring to cut off the dead flower spikes and any dormant foliage.



***Penstemon* species**

There are so many wonderful *Penstemon* species to try in the garden, that is difficult to select just a few. Most of the penstemons are perennials with a basal rosette of foliage, which send up spikes of tubular flowers in the spring and early summer. They add incredible color to the landscape, and attract hummingbirds as well! Penstemons come in a wide range of colors, including blue, purple, pink, and red. After they finish blooming, allow the flower spikes to dry on the plant. Then cut off the spikes and sprinkle the seed in the garden to increase next year's mass of color. There are two new species to try: *Penstemon triflorus* Heller, which has short, 46 cm (18 inch) spikes of dark pink-purple flowers which occur along the stem in clusters of three; and *Penstemon clevelandii* Gray, native to southern and Baja California, with spikes of clear, bright pink flowers to 0.6–0.8 m (2–2.5 feet) tall.

