SONORAN DESERT SERIES

NATIVE TREES

GUIDE TO LANDSCAPING

THE ARIZONA NATIVE PLANT SOCIETY

CONTENTS

The Arizona Native Plant Society

The Arizona Native Plant Society (ANPS) is a statewide nonprofit organization whose mission is to promote knowledge, appreciation, conservation, and restoration of Arizona native plants and their habitats. This publication may best be used in conjunction with other booklets from this series to develop native landscapes.

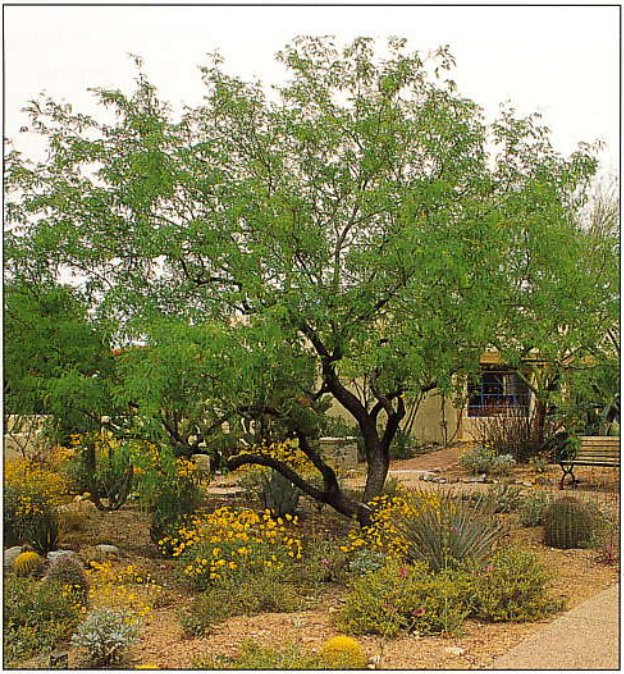
Why Plant Natives?

Creating a landscape in the desert should be a rewarding experience. A beautiful, native yard will bring endless enjoyment, attract butterflies, native pollinators and birds and give you more time to enjoy it than planting with non-natives.

The native plants of Arizona are those that existed here prior to European contact. These plants are the foundation of our native ecosystems because they have evolved here over thousands of years with animals, fungi, and microbes to form a complex network of relationships. Native desert species provide wildlife habitat, are more tolerant to the local climate extremes, are able to survive local soils, require less care and maintenance, use less water, less fertilizer, and are more resistant to pests and disease.

A Unique Resource on Using Natives

Water-efficient landscapes are called *xeriscapes.* The term comes from the Greek word *xeros,* which



Native trees such as this velvet mesquite at Tohono Chul Park in Tucson help provide a unique sense of place found only in the Sonoran Desert.

means dry. Selecting low water use plants and using water efficient irrigation techniques will help you get the most from the water used to establish and maintain your landscape. Many xeriscape landscape designs include low water use plants from other dry parts of the world, such as Africa and Australia. This booklet is a unique resource because it emphasizes the use of species native to Arizona to create beautiful, low maintenance landscapes.

Non-native plants come from other parts of the world and have become established here either accidentally or purposefully by humans. Problems develop when non-native plants become aggressive invaders spreading into the surrounding ecosystem and displacing native plants.

ANPS is actively working with coalitions of private landowners, public agencies, non-profit organizations, and grassroots activists to eradicate invasive species and eliminate their promotion and sales within the plant-growing industry. The landscaping choices that you make are important and can have wide-reaching effects. In many instances, it takes years to realize that a popular landscaping species may become invasive, then the hard work begins. Plant native!

Deserts of Arizona

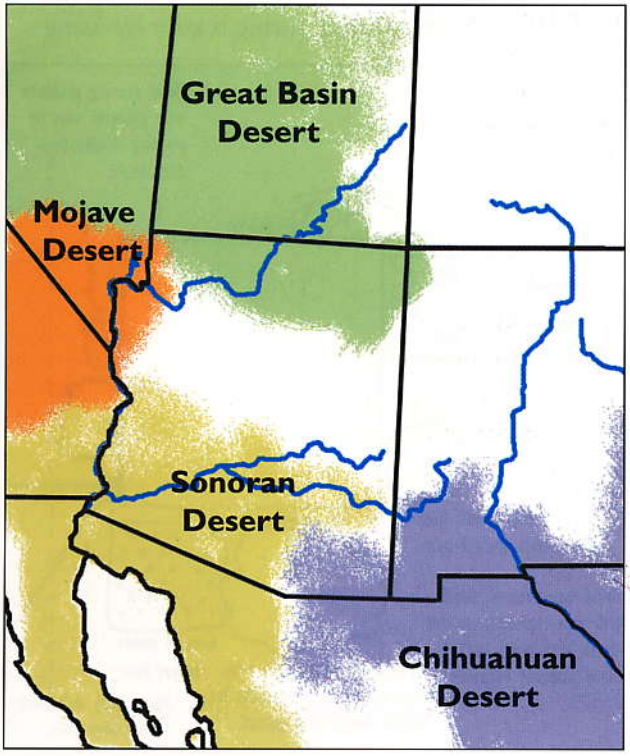
Four deserts are found in Arizona: the Sonoran, Chihuahuan, Mojave, and Great Basin, each with specialized plant communities. They are characterized by low precipitation and high evaporation and are inhabited by distinct plant and animal species. This booklet describes trees found in the Sonoran Desert appropriate for urban landscaping.

Extending from the southwestern part of the United States deep into Mexico, the Sonoran Desert spans 124,000 square miles. The vegetation of the Sonoran Desert in Arizona is derived from the humid tropics to the south and temperate zones to the north. The Sonoran Desert rarely experiences

freezing winter temperatures and thus contains a greater diversity of species and life forms than the other deserts. The Sonoran Desert is characterized by small trees (mostly legumes) and large columnar cacti, whereas the other three North American Deserts are dominated by low shrubs. The Sonoran Desert is said to have 2000 species of plants (source: A Natural History of the Sonoran Desert. Arizona-Sonoran Desert Museum).

The region is also distinguished from other deserts in America by the amount and seasonality of rainfall. The precipitation is bimodal with widespread, gentle rains throughout the winter and explosive, intense rains falling during the summer "monsoon," characterized by lightning and thunderstorms.

Within Arizona, the Sonoran Desert is commonly divided into the Lower Colorado River Valley and Arizona Upland with the latter having slightly more available water and cooler temperatures.

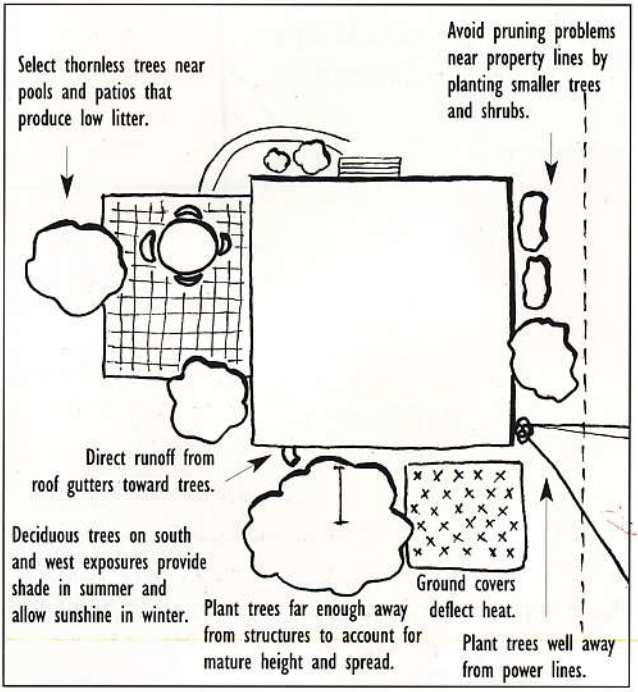


Tree Selection & Landscape Design

Trees should be one of the first plants you put in your landscape. They will provide needed shade relief for you and the rest of your landscape plants as well as food and shelter for native wildlife. Trees also provide natural compost from shed leaves, flowers and fruit, important for soil development.

Landscaping with trees can help to decrease some of the harsh effects of the desert climate as plants provide shade, increase the energy efficiency of homes, and extend living space from the indoors to the outdoors.

Landscape contouring, water harvesting, and utilizing gray water are three ways to provide water for your trees while reducing use of water from your tap. Likewise, you can maximize your home energy savings by strategically locating deciduous trees. Reduce summertime cooling costs by locating trees with dense canopies to shade east and west windows and walls. Trees that shade the air conditioner but do not obstruct air flow can cut cooling bills by 10%. Lower heating costs during winter by using



deciduous or open-canopied trees that will not block low southern sunlight.

Getting the "right tree for the right place" is essential: Trees have a great impact on the function and aesthetics of a landscape. Even native trees can be a problem if planted in the wrong place.

Typical problems related to inappropriate tree choices include:

- Damage to sidewalks and buildings from root systems and rubbing branches.
- Hazards to humans from thorns, falling branches, or planting near powerlines.
- Maintenance issues— leaves in pools and growth near structures that require frequent pruning.

Tips on Selecting Trees

To avoid these problems, consider the following questions when making your tree choices:

How do you want the tree to function for you and the landscape? Do you want shade? Do you want a sculptural element? Do you want privacy?

How much space is available for tree growth and how big is the tree at maturity? Consider both horizontal and vertical space! Check for overhead wires and buried utilities!

What kind of growing conditions will the tree have? What is your soil like? Is irrigation available? What is the sun exposure? Are there existing plants that will compete for sun and moisture?

What level of cleanliness do you require? Is pod and leaf litter okay, or will it clog the pool filter and make the patio a mess?

What is a tolerable level of maintenance? All trees require some pruning, cleanup and other care on occasion, but some are much less work than others. How much of that work do you want to do or can you afford to have done by an arborist?

If you still have trouble deciding, call a horticulturist or arborist for assistance. The advice might cost you now, but a good tree choice will save you money and prevent headaches in the future.

Tips on Using This Booklet

In this booklet we use descriptions for the *growth rate, water use,* and *life span* of Sonoran desert trees. We define slow-growing trees as those that grow less than 2 feet per year. Moderate growth is 2 to 4 feet per year and fast growth is more than 4 feet per year. Short-lived plants exist for 20 years or less, a moderate life span is 20 to 40 years, and long-lived plants exist for 40 years or more. We describe water use as low (survives on <10 of rain), moderate (requires 10 to 20 inches of rain) or high (>20 inches of rain). High-water-use trees are often restricted to washes in natural communities and require access to groundwater or regular irrigation during periods of below normal rainfall. Some trees native to the Sonoran Desert, such as Velvet Ash, Arizona Sycamore, and Arizona Walnut, were not selected for display in this booklet because of their high water use in unnatural settings.

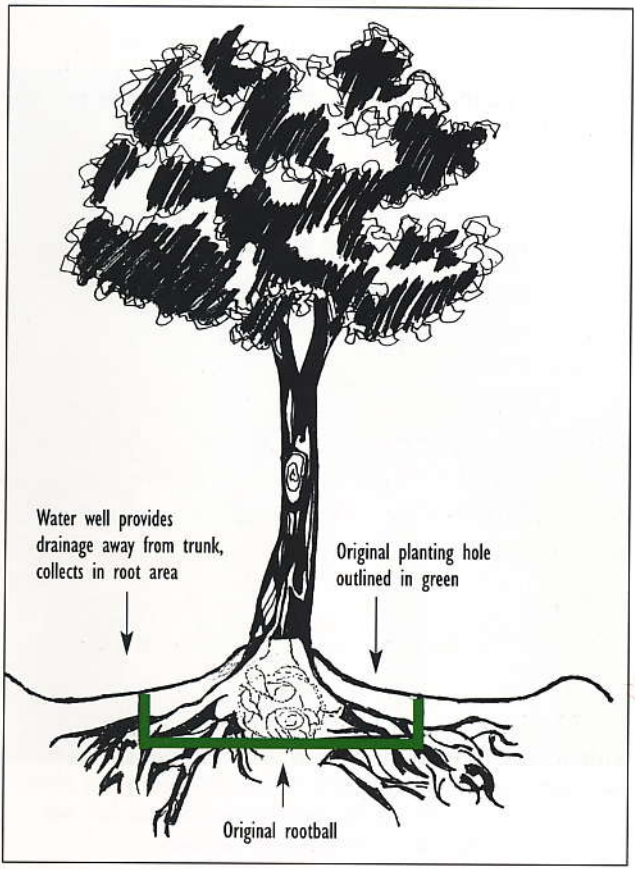
Planting and Maintenance

Before you dig, call your local Blue Stake Service or utility company to avoid damaging underground utilities. With the desert's mild climate, you can plant trees any time during the year. If you have a choice, planting during fall and spring will save you from having to worry about diligent watering during the hottest months of the summer or rare but possible freezing events during winter that might stress your new tree.

Planting your tree too deep can suffocate the rootball, cause rotting of the trunk, and kill your tree. Plant your desert tree in a hole that is 2-3 times as wide as the tree's container but no deeper than the original rootball. Areas of poor drainage (slower than 1 inch per hour) may require additional dig-

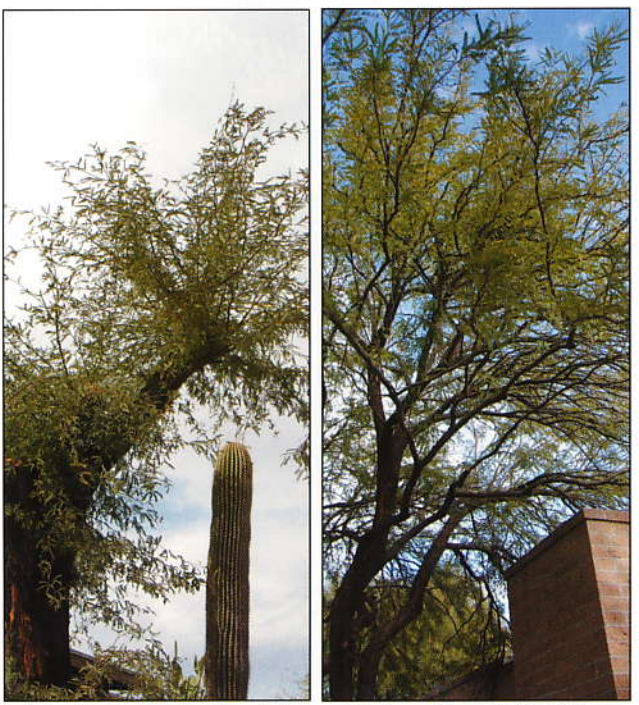
ging to encourage movement of water. If you encounter caliche (cement-like calcium layer), you should break through this layer to allow good drainage and permit roots to go deep.

Gently remove tree from the container and free roots from bottom and sides. If rootbound, use a knife to slice along the edge of the rootball to loosen roots. Remove any large rocks from the hole and place the tree in the hole as upright as possible. Backfill the hole around the rootball and allow a slow stream of water from the hose to settle the soil; this will remove air pockets without packing the soil too tightly. Create a shallow water basin 3 to 4 feet across or at least as wide as the tree canopy for watering and to collect storm runoff. Continue to augment this basin as the tree grows. Cover the area with 2 to 3 inches of organic mulch or rocks to conserve soil moisture and prevent weed growth.



If support is necessary, stake only loosely; rigid staking prevents development of trunk strength. Trees need wind movement to build structural tissue. Remove stakes and ties when the tree is self-supporting (usually no more than 6 months). During the tree's first year, maintain good soil moisture, especially during hot, dry months. Deep, slow watering, one to three times per week, depending on drainage, temperature, and rainfall, is recommended. Lawn sprinklers do not provide deep infiltration and will encourage roots to stay near the surface causing problems later with blow down.

Established plants generally will not need extra watering during the year if rainfall is sufficient. They may require additional amounts of water during periods of hot weather; a deep soak once or twice a month. Extend the watering basin outward as the limbs spread to allow for spread of roots and good anchoring of the tree. If you use drip irrigation, periodically move emitters outward to pro-



Left: Topping trees or lopping off limbs results in weak growth that destroys the tree's form and shortens its life. Right: Pruning cuts made flush with trunk or branch help maintain the tree's form and health.

mote lateral root development. After about three years or so, your tree will benefit more from a long deep drink from a hose once or twice a month. During the hottest months, drip emitters will no longer cover a broad enough area to water the whole root system. Excessive watering and use of fertilizers can cause native trees to grow too fast and contributes to the likelihood of trees blowing over during windy days.

You should not begin any pruning until your tree is established. You can usually start pruning a branch or two after it has been in the ground for a year. You don't want to prune too much at a time as trees need a good complement of leaves to provide food for growth. Be careful not to remove too much foliage during the hottest point of the summer to prevent sun scald.

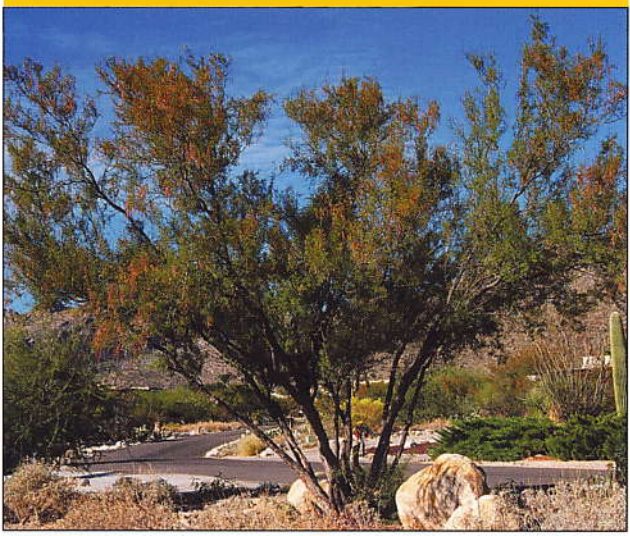
Look at your whole plant carefully to understand how it grows naturally. Visualize how you want it to look, then prune accordingly. The object of pruning a tree is to keep it healthy, or to help shape it. They will usually grow in such a way as to balance themselves, but sometimes it can be helpful to prune branches that grow too thickly and obscure light reaching the interior leaves of the tree. Prune as little as possible to maintain natural form and control encroachment on structures or sidewalks.

Make your cuts clean by using sharp tools. Prune back to a joint or junction with another branch. Never top a tree or cut the uppermost growing stems. Don't leave nubs or "eye pokers" sticking out; prune close to the main branches, but leaving a slight ring or collar, necessary to heal the cut.

Native plants can sometimes become susceptible to damage by insects and disease, especially if stressed. You can find solutions on how to control these pests at local plant nurseries, through the cooperative extension service, or in some of the books listed on page 47. See the ANPS website for additional information: www.aznps.org.

White-thorn Acacia (Largoncillo)

Acacia constricta *Fabaceae*



Corman

Description

A slow-growing, long-lived shrub or small tree, reaching 10 to 20 feet tall and almost as wide.

- Stems are reddish purple; young plants have paired inch-long white thorns (Acacia means hard, sharp point), although older branches are often thornless
- Small, feathery, winter-deciduous leaves
- Yellow, fragrant, puffball flowers appear in late spring and in late summer with sufficient water
- Thin reddish-brown pods 2 to 5 inches long
- Tolerates poor soil

Comments

- Pollen may be mildly allergenic
- Consider planting with evergreen species because this tree remains deciduous for long periods, leafing out later in spring than most desert trees

- Especially beautiful in winter rains, the white thorns contrasting with red bark
- As a shrub or in a clustered planting, makes an excellent barrier plant
- As a small patio tree, the delicate foliage casts filtered shade that is suitable for many smaller underplantings
- Attracts birds and other wildlife
- Adds nitrogen to the soil

Maintenance

Can be pruned to achieve single trunk. Pod litter can be messy but disappears quickly. Thrives on natural rainfall once established, but infrequent (once per month) deep irrigations will increase growth rate and maintain appearance. Drops leaves with extended drought.

UA Campus Arboretum

Sweet Acacia (Huisache)

Acacia farnesiana *Fabaceae*

Geiger

Description

A fast-growing evergreen tree reaching 35 feet tall and wide, but generally smaller in most desert soils.

- Naturally multi-stemmed but can be pruned to a single trunk
- Small, paired, white thorns occur frequently on the branches
- Leaves are finely divided with a lacy appearance and cast moderate shade
- Showy, sweet-smelling, yellow puffball flowers in late winter and/or spring

Comments

- Excellent shade or patio tree with lush appearance
- Adds nitrogen to the soil
- Tough, tolerates drought
- Relatively high maintenance: High pod litter and

pruning of water sprouts (new branches that arise from the rootstock)

- Also sold as *Acacia smallii* or *A. minuta*

Maintenance

Avoid excessive watering to prevent rapid, weak growth that may lead to 'blow down' by high winds. Periodic deep watering maintains best appearance. Must be pruned to achieve single trunk especially in fast-growing and young plants; pod litter in fall. Spines can be a problem near paths.

Geiger

Catclaw Acacia (Uña de Gato)

Acacia greggii *Fabaceae*

Corman

Description

A long-lived shrub or small tree, with a slow to moderate growth rate. Reaches 10 to 25 feet high with a wide, spreading canopy.

- Can be pruned into an attractive single or multi-trunked tree
- The name "catclaw" refers to the curved sharp thorns on stems and branches
- Winter-deciduous gray-green leaves; small and finely-divided, producing moderate shade
- Fragrant creamy flowers in cylindrical spikes appear in April and May
- Curly reddish-brown to tan pods 1–3 inches long, drop within a few weeks

Comments

- Older plants often have a gnarled growth form that can lend a sculptural element to the landscape

- Very drought and cold tolerant
- Ideal for landscapes without irrigation
- Effective screen or barrier shrub
- Attractive to birds and other wildlife
- Excellent for honey production

Maintenance

Prune occasionally to improve form or prune to single stem.

Growth rate is improved with deep soil and ample water, but no supplemental water needed once established.

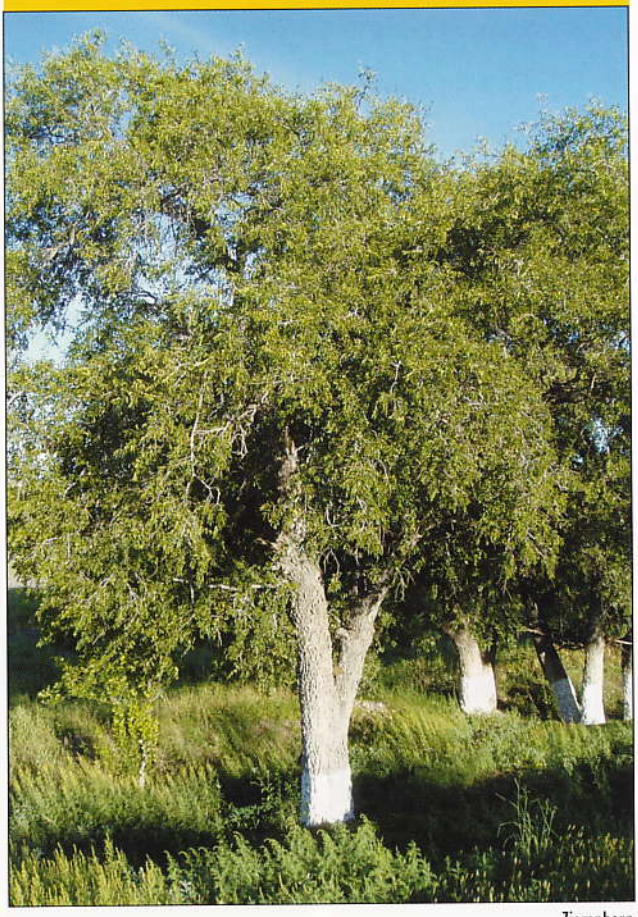
Thorns snare clothing and skin. Large pods produce litter, but they decompose rapidly.

UA Campus Arboretum

UA Campus Arboretum

Netleaf Hackberry (Acibuche)

Celtis reticulata *Ulmaceae*



Zierenberg

Description

A slow-growing tree 20-40 feet tall with a similar canopy width.

- Gnarled, undulating branches and unusual knobby bark provide landscape interest even when the winter-deciduous tree is leafless
- The word *reticulata* refers to the netted venation of the leaves, which cast moderate shade in summer
- Birds relish the pea-sized red berries and nest among branches and foliage

Comments

- Pollen mildly allergenic
- Excellent shade tree
- A close relative, Desert Hackberry (*Celtis pallida*), is naturally a multi-stemmed evergreen shrub, and makes an effective screen or barrier plant.

Maintenance

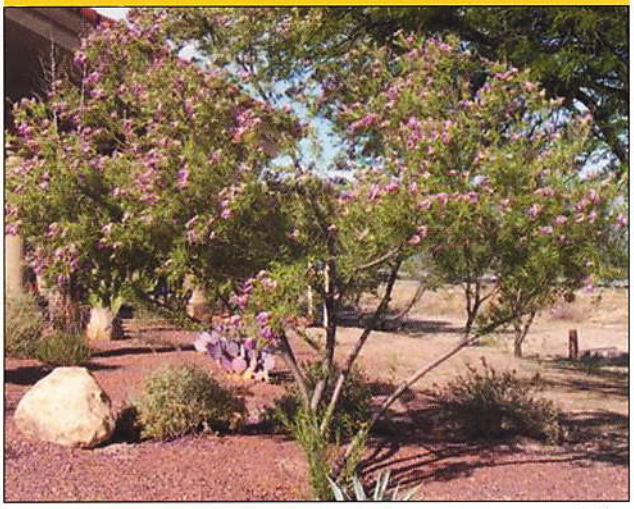
Young plants may have long, low, spreading branches that require pruning. This tree grows at a moderate rate and needs deep irrigation once or twice per month in lower elevations when established. More frequent irrigation will promote faster growth when young. Prefers deep soils.

Zierenberg

Zierenberg

Desert Willow (Mimbre)

Chilopsis linearis *Bignoniaceae*



P. Titus

Description

A moderate to fast-growing, naturally multi-stemmed tree up to 30 feet tall with an open and spreading growth habit. Desert willow can also be grown as a large shrub.

- Gracefully drooping, thornless branches with long, narrow, winter-deciduous leaves that cast light shade in summer
- Clusters of funnel-shaped white, light to dark lavender, or pink flowers are most profuse during May and June, but blooms sporadically through the summer.

Comments

- Plant with evergreen shrubs to lessen winter starkness
- Many nurseries carry selected podless forms with deep purple flowers and a longer flowering season. The flowers grow on new wood, so light pruning can stimulate more blossoms.
- Flowers attract hummingbirds

◆ Fruits are long thin capsules full of winged seeds carried by wind.

Maintenance

Supplemental watering should be deep and infrequent. Watering encourages fast growth and prolific foliage and flowers.

Pruning is required if a single trunk is desired.

P. Titus

Geiger

Kidneywood (Palo Dulce)

Eysenhardtia orthocarpa *Fabaceae*

Zierenberg

Description

A thornless shrub or small multi-stemmed tree 20 feet tall and 12 feet wide, with a fast rate of growth.

- Older limbs and trunks have shaggy tan bark
- Winter-deciduous, gray-green foliage, pleasantly aromatic when crushed
- Vanilla-scented spikes of tiny white flowers bloom in late spring and summer

Comments

- Excellent choice for narrow spaces

- Kidneywood provides nesting habitat for birds
- Flowers attract butterflies
- Leaves appear later in the spring compared to other desert trees

Maintenance

Irrigate when young for faster growth. Prune to be more tree-like if desired. It is easy to maintain, is thornless, and because the leaflets and seeds are small, litter is minimal.

Zierenberg

Millard

Goodding Ash

Fraxinus gooddingii *Oleacae*

Slate

Description

- Slow-growing, large shrub or small tree to 25 feet tall with a spread to 15 feet, upright growth habitat
- Tree has smooth gray bark and branches lack thorns.
- Small, finely divided bright-green leaves cast light to moderate shade that drop suddenly just before releafing
- Inconspicuous flowers followed by small winged seeds

Comments

- A tidy tree, suitable for patios

- Verdant foliage provides a lush, cool effect
- Found by botanist Gooddingii in 1934 near Nogales, Arizona
- Not readily available in nurseries but can become more common if requested
- Little Leaf Ash, *Fraxinus greggii,* is native to Mexico, Texas, and New Mexico but is not found in Arizona (except at nurseries and planted landscapes)
- Velvet Ash, *Fraxinus velutina,* is also found throughout the Sonoran Desert but is restricted to riparian areas because of its high water requirements

Maintenance

A tidy tree, can be pruned to a single trunk, although it develops several trunks. Will survive with little water but regular watering maintains best appearance and improves growth rate.

Zierenberg

Feather Tree (Quebracha, Tepeguaje)

Lysiloma watsonii *Fabaceae*

Corman

Description

Moderate to fast-growing, multi-stemmed tree, 15 to 30 feet tall. May be sold as *Lysiloma microphylla* or *L. thornberi.*

◆ Thornless, with a gracefully spreading canopy and a feathery appearance

◆ Large, finely-divided, nearly evergreen leaves are deep green in color and produce dense shade. Don't be alarmed when the tree drops its leaves briefly in late spring; the new leaves will quickly reappear. Leaves will also drop during low temperatures in winter. New leaves will appear when the weather warms.

◆ Small creamy white puff-ball flowers are produced in May to June followed by long brown seed pods that decompose quickly.

Comments

◆ Soft and lush small patio tree or screen that is a good choice for shading the south side of your house.

- Frost-sensitive plant, best for warmer parts of Tucson
- Produces dense shade that limits growth of understory plants

Maintenance

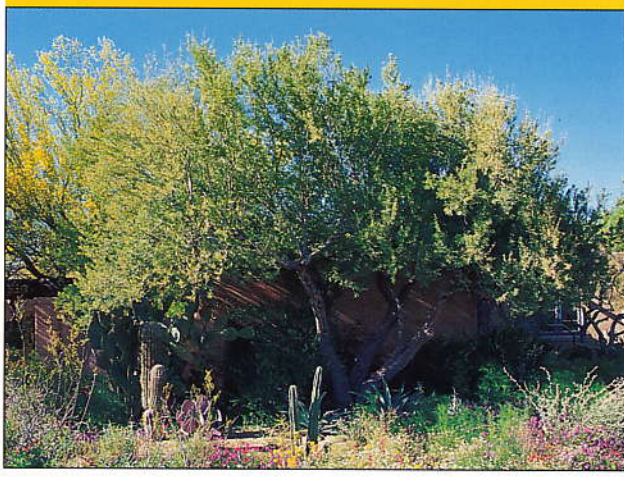
To develop into a tree, water deeply and regularly and select 1 to 3 vigorous shoots (depending on whether you want a single or multi-trunked tree). Gradually remove lower side branches as the top develops. Requires little water once established. Leaves will become chlorotic (turn yellow) if over-watered or soil drainage is poor. Some leaf and pod litter. If branch tips are damaged by frost, remove them after growth resumes in spring.

Zierenberg

Zierenberg

Desert Ironwood (Tesota)

Olneya tesota *Fabaceae*



Millard

Description

A long-lived (up to 500 years!) nearly evergreen tree, growing 30 feet tall and wide, with a slow to moderate growth rate.

- Unpruned, the dome-shaped crown extends nearly to the ground
- Branches with small but vicious paired recurved thorns
- Lush, dense gray-green foliage persists year round, but leaves replace themselves in early spring after a leaf drop. Leaves may also drop as a result of severe winter frosts or drought but will regrow
- Mature trees often shed their leaves on limbs that will flower a few weeks before May and then re-leaf when the summer rains arrive
- Dramatic pale-pink to lavender pea-like flowers appear in showy clusters,covering tree in late spring

Comments

- Excellent choice as a focal point tree or as a large screen for hot, arid sites

◆ Provides excellent habitat for both wildlife and the establishment of other plant species

◆ Is an important "nurse tree" providing needed shade for saguaro seedlings and other native plants. Annual leaf and flower drop adds nutrients to soil.

◆ Fresh soft seed pods are edible. Provides food for wildlife.

Maintenance

No water required in deep soils once trees are established, but grows faster and looks better with infrequent deep watering. Prefers deep alluvial soils. Small seed pods ripen during summer and drop soon after.

Kinsey

Kinsey

Blue Palo Verde (Palo Verde)

Parkinsonia florida *Fabaceae*

Corman

Description

Blue palo verde is a short-lived, fast-growing, naturally multi-stemmed tree 25 feet tall with widely spreading branches that droop to the ground. Generally found in or near washes. This tree needs a fair amount of room when mature. Has a tendency to self-prune when stressed.

- Blue-green twigs, leaves, and bark add a distinctive color to the landscape
- Small-spined twigs form a dense canopy and provides shade even when leaves fall in response to drought. Tree is winter deciduous.
- For about two weeks in late March or April the tree is a vivid splash of yellow flowers so dense the branches cannot be seen
- Produces abundant small pods that provide food for birds and other wildlife

Comments

◆ Palo verde pollen is allergenic, however pollen does not travel far from the tree and flowering season is very brief

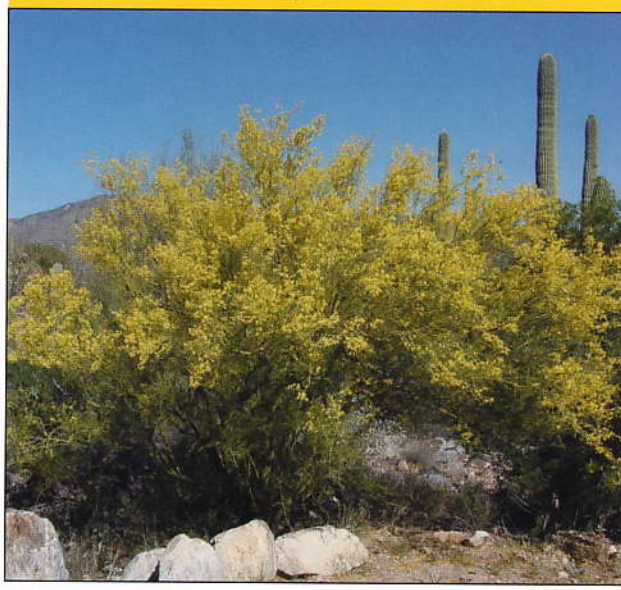
Maintenance

Requires little additional water, but regular watering will produce moderate growth rate. This tree needs a fair amount of space when mature. Prune during the warm season; this tree does not take well to winter pruning. Regular pruning will lighten heavy, low branches that may break during storms or obstruct walkways. Large cuts never heal over and may develop heart rot. Occasional mite infestations deform new growth and are difficult to control. Seeds of palo verde sprout readily from pod litter so pull quickly where you do not want them to grow.

Kinsey

Foothills Palo Verde (Palo Verde)

Parkinsonia microphylla *Fabaceae*



Kinsey

Description

A slow-growing, long-lived, single or multi-trunked small tree up to 30 feet tall and wide

- Stiffer, more upright thorn-tipped branches and smaller leaves than blue palo verde, and found growing on rocky hillsides.
- Tolerant of heat, cold, and poor soils
- Drought and cold deciduous
- Pale yellow flowers appear for two weeks in late April or early May, following flowering of the Blue Palo Verdes.

Comments

- Formerly classified (and may still be sold) as *Cercidium* species
- Small mature size is ideal for many yards
- Good choice for full-sun locations

- May form hybrids
- Provides important nesting habitat for native birds

Maintenance

Irrigation will promote faster growth in young trees: needs no supplemental water once established. Moderate pod litter. Pruning may be required to keep thorny branches away from walkways.

OTHER SPECIES

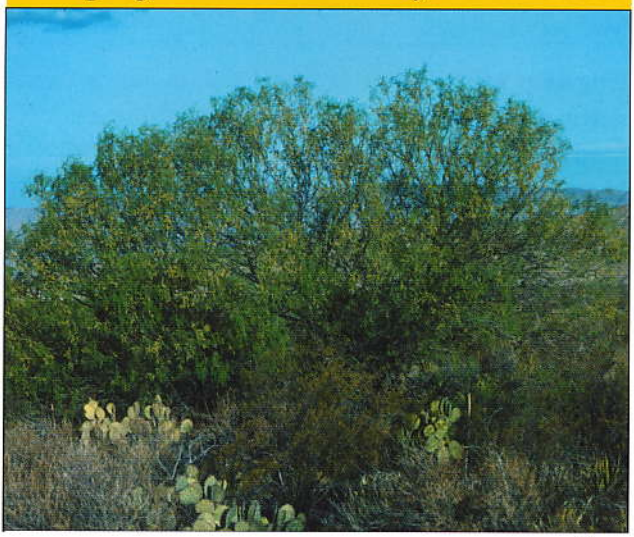
Natural hybridization does occur between species of palo verde. 'Desert Museum' palo verde is a complex hybrid (not naturally occurring) that is fast-growing (6 feet or more a year), has an upright branching habit that requires little pruning, is completely thornless, and has very large, bright yellow flowers that appear for more than a month each spring. It provides light shade under which other plants can grow.

Parkinsonia aculeata is not recommended because of its sparse foliage and weedy nature.

Kinsey

Western Honey Mesquite (Mezquite)

Prosopis glandulosa var. *torreyana* *Fabaceae*



Johnson

Description

A small to medium-sized tree 15 to 30 feet tall and as wide with a moderate growth rate.

- Twigs often have large thorns
- Bright-green divided leaves are shed in the autumn. New leaves grow in early spring
- Produces spikes of fragrant yellow flowers in late spring. Abundant long seed pods, often mottled with red or purple, form in summer

Comments

- An ideal shade tree with attractive, bright green foliage. There is no color like "mesquite green" in early spring.
- The pithy pods are sweet and can be ground in a hammer mill after drying to produce a nutritious and sweet tasting flour. Provides food for javelina and coyotes.
- Bees produce good honey from mesquites

- Spiny twigs should be considered when selecting a site for planting
- All mesquites are nitrogen fixing; making nitrogen available in the soil for other plants through special nodes on their roots
- The pollen is an allergen, though heavy so doesn't travel far
- Makes a beautiful, multi-stemmed, wide-spreading shade tree

Note: Texas honey mesquite, *Prosopis glandulosa* var. *glandulosa,* is a Chihuahuan desert tree, and is not native to Arizona. However, it is becoming established along highways. Its leaves are larger than western honey mesquite. See photo below.

Maintenance

If desiring a walk-under tree, you will need to prune small, horizontal-tending branches when young.

Mesquites are winter deciduous. Be sure to water deeply through its first summer so tap root will go deep and anchor the tree. After established, should only need supplemental watering in hot summers with little rain.

Prosopis glandulosa var. *glandulosa,* Texas Honey Mesquite Millard

Screwbean Mesquite (Tornillo)

Prosopis pubescens *Fabaceae*

Zierenberg

Description

A moderately drought tolerant, deciduous tree 15 to 25 feet tall, spreading 10 to 20 feet wide. Fast growth rate.

- Trunks and limbs have shaggy bark
- Gray twigs have needle-like spines
- Lacy foliage of small, blue-green divided leaves creates an open canopy that casts light shade
- Bright yellow flowers on small spikes in spring
- Striking clusters of pods that look like coiled springs hang like ornaments from the tree and provide food for quail and doves

Comments

- Good patio tree and overstory tree for growing cacti and succulents underneath
- Good fill tree for narrow spots
- Used to be found along Santa Cruz River sys-

tem, so will need periodic watering, unlike other mesquites, especially during drought

Maintenance

Requires deep soil. Performs poorly in shallow rocky soils.

Irrigate young plants for faster growth. Needs minimal irrigation when mature, but supplemental water gives best appearance.

Prune to encourage a tree form, if one is desired. Some pod litter and if left on the ground, seedlings can be a nuisance under well-watered conditions.

Zierenberg

Geiger

Velvet Mesquite (Mezquite)

Prosopis velutina *Fabaceae*

Kinsey

Description

A medium-sized tree up to 40 feet tall and wide with loose spreading crown, and fast to moderate growth rate.

- Spiny twigs, but generally no thorns when mature
- Fern-like foliage has short dense hairs that cover leaves and fruits give them the appearance of "velvet." It is winter deciduous in areas of frost
- Produces fragrant spikes of yellow flowers in April and sometimes again in August with the rains

Comments

- Strong southwestern sense-of-place
- Excellent shade tree, but needs a fair amount of room due to horizontal branching
- Older plants can develop an appealing, picturesque form
- The pollen is an allergen. If sensitive, plant away

from living area, as pollen doesn't travel far. Honey bees and native bees attracted to flowers; good honey is made from mesquites

◆ Pods similar to honey mesquites provide food for wildlife and can be ground into flour for human consumption. Abundant pod litter attracts wildlife

◆ Potential buyers should be aware that non-native mesquites, including Chilean and thornless hybrids, are often mislabeled. In addition, it is not yet clear if these non-natives are causing detrimental hybridization with our native mesquites

Maintenance

Deep-water for faster growth, to develop the tap root and encourage height when first planted. Deep irrigation is not as important when trees mature. May require a stake to encourage upright growth, but if staked, do it so the tree can move with wind in order to develop trunk strength.

Slime flux, a bacterial infection (black oily ooze from trunk) seldom has an effect on tree health but can stain paved surfaces and vehicles. Clean pruning tools with bleach solution to prevent spread to other trees.

Kinsey

Smoke Tree (Corona-de-Cristo)

Psorothamnus spinosus *Fabaceae*

Anon

Description

A fast growing, short-lived, densely branched, multi-trunk shrub or tree to 20 feet tall with a similar spread.

- Twigs are dull bluish gray and end in a non-threatening thorny tip
- Tiny leaves are produced only with ample water. Tree photosynthesizes through the branches and trunk
- Tiny, pea-like, vivid, indigo-colored flowers appear for a week in early summer, making a beautiful desert show.

Comments

- Generally leafless and twiggy but interesting for its smoky gray color and spectacular masses of indigo flowers
- Tiny oil glands on leaves and stems produce aromatic fragrance

- Good choice in arid, sandy sites
- Performs poorly in shallow rocky soils, requires deep soils
- Seems to periodically undergo major twig die-back. Simply clean out the dead branches and the tree will regrow during summer months

Maintenance

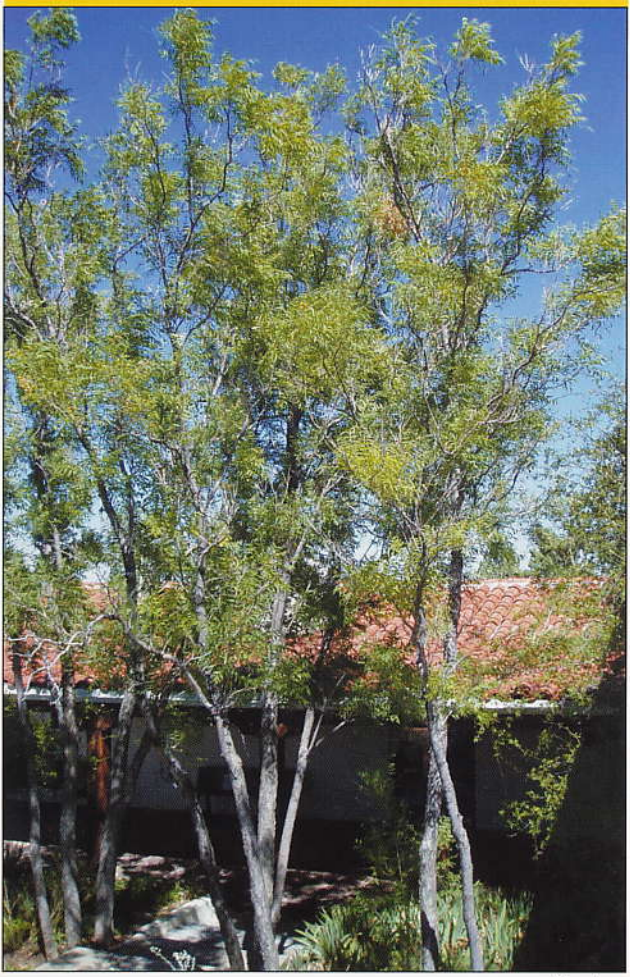
Deep-water when young for faster growth. Not necessary when tree matures. Pruning and supplemental watering in summer will encourage vigorous growth.

Anon

Johnson

Soapberry (Jaboncillo)

Sapindus drummondii *Sapindaceae*



Zierenberg

Description

- Thornless, upright tree, 15 to 30 feet tall with a canopy spread to half that distance; slow to moderate growth
- Winter-deciduous leaves are similar to walnut leaves. Attractive fall color in golds and yellows
- Tiny white flowers in dense, branched clusters at ends of stems in spring and early summer
- Persistent orange-colored fruit and unique bark

are visually appealing during the winter

Comments

- Excellent patio tree that casts light shade
- Abundant spring flowers and will grow almost anywhere
- May produce root sprouts that will develop into a grove of trees if allowed to remain
- Fruits contain an alkaloid, *saponin,* which is highly poisonous. Seeds soaked in water and slightly mashed produce a soapy liquid and have been used for soap in the past—thus the common name. Take precautions if children or pets have access to this tree. Good bird habitat
- Sometimes called *Sapindus drummondii* var. *drummondii.*

Maintenance

Irrigate when young for faster growth. Deep, infrequent waterings are most beneficial for mature trees.

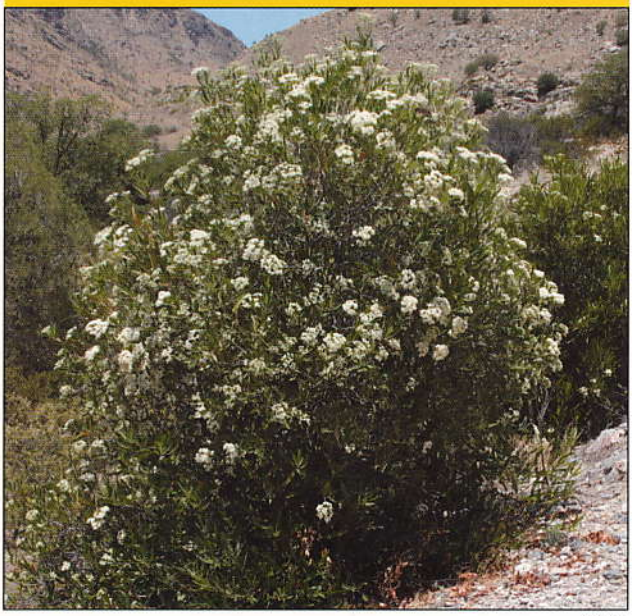
Abundant fruit and leaf litter. Root sprouts may require repeated removal.

Harris

Anon

Arizona Rosewood

Vauquelinia californica *Roseaceae*



Kinsey

Description

A slow-growing, evergreen shrub or upright tree to 25 feet high and 8 or more feet wide.

- Rich, dense evergreen foliage of slender, dark green serrated leaves
- Clusters of white flowers appear in May to June, followed by tiny one-seeded capsules

Comments

- Dense and bushy from the base upward; useful for massed plantings or boundary hedging in desert landscapes as an excellent alternative to the toxic, non-native oleander
- Tidy plant with minimal litter
- Butterfly host plant

Maintenance

Irrigate when young for faster growth. For mature

plants, infrequent but deep watering in summer is needed.

May be pruned to encourage a tree shape if desired.

Geiger

Kinsey

Resources

Arizona Municipal Water Users Association. © 2004. *Landscape Plants for the Arizona Desert: Guide to Growing More Than 200 Low-Water-Use Plants.* 47 pp.

Bowers, Janice E. © 1993. *Shrubs and Trees of the Southwest Deserts.* Southwest Parks and Monuments Association, Tucson. 140 pp.

Brown, D. E., (ed). © 1994. *Biotic Communities of the Southwestern United States and Northwestern Mexico.* The University of Utah Press, Salt Lake City. 342 pp.

Duffield, Mary R. and Warren D. Jones.© 2001. *Plants for Dry Climates* Revised Edition. Perseus Publishing, Cambridge 216 pp.

Elmore, Francis H. © 1976. *Shrubs and Trees of the Southwest Uplands.* Southwest Parks and Monuments Association, Tucson. 214 pp.

Johnson, Eric A; and Scott Millard.© 1997. *Pruning, Planting, & Care: Johnson's Guide to Gardening: Plants for the Arid West.* Ironwood Press, Tucson. 160 pp.

Jones, Warren D. and Charles L. Sacamano.© 2000. *Landscape Plants for Dry Regions: More than 600 Species from Around the World.* Fisher Books, Tucson. (Perseus Publishing, Cambridge) 366 pp.

Lamb, Samuel H. © 1989. *Woody Plants of the Southwest.* Sunstone Press, Santa Fe. 177 pp.

Mielke, Judy. © 1993. *Native Plants for Southwestern Landscapes.* University of Texas Press, Austin. 310 pp.

Miller, George O. © 1991. *Landscaping with Native Plants of Texas and the Southwest.* Voyageur Press, Stillwater 128 pp.

Orth Epple, Anne.© 1997. *A Field Guide to the Plants of Arizona.* Falcon Press Publishing Company, Helena, 347 pp.

Phillips, S.J. and Wentworth Comus, P. (eds) © 2000. *A Natural History of the Sonoran Desert.* Arizona-Sonora Desert Museum Press, Tucson. 628 pp.

Shuler, Carol. © 1993. *Low Water Use Plants for California and the Southwest.* Fisher Books, Tucson (Perseus Publishing, Cambridge) 138 pp.

Turner, Raymond M., Janice E. Bowers, and Tony L. Burgess. © 1995. *Sonoran Desert Plants: An Ecological Atlas.* University of Arizona Press, Tucson. 501 pp.

University of Arizona PDF files on horticulture. http://cals.arizona.edu/pubs/quarterly.html

Arizona Native Plant Society

Publications committee

Greg Corman, Gardening Insights; Carianne Funicelli, ANPS; Erika Geiger, ANPS; Matt Johnson, Desert Legume Program; Jon Titus, ANPS; Priscilla Titus, ANPS; Nancy Zierenberg, ANPS

Project coordinator

Erika Geiger, ANPS

Cover illustration

Lezle Williams, Laughing Crow Studio

Additional illustrations

Nichole DiSante, page 9; Mary Hershdorfer, page 6

Booklet design and print production

Ironwood Press, Tucson

Photography

University of Arizona Arboretum, Greg Corman, Erika Geiger, Art Harris, T. Beth Kinsey, Matt Johnson, Scott Millard, Pamela Slate, Priscilla Titus, Nancy Zierenberg

Acknowledgments

We acknowledge the ANPS Urban Landscape Committee for their hard work and dedication in launching the original ANPS booklet series almost two decades ago. The committee also thanks Ken Morrow, Pamela Saalbach, Barb Phillips and Lisa Floyd Hanna for their contributions. Thanks, too, to Centennial Museum, and HB Wallace Gardens for allowing photo of Goodding ash.

The information in this booklet is true and accurate to the best of our knowledge, and is offered without guarantees. The Arizona Native Plant Society disclaims all liability in connection with the use of the information contained in this booklet.

Arizona Native Plant Society
PO Box 41206
Tucson, AZ 85717

Printed in the United States on recycled paper.

FOR MORE INFORMATION ON LANDSCAPING WITH NATIVE PLANTS, VISIT THE ANPS WEBSITE AT WWW.AZNPS.ORG