Volume 22, number 4, May 2005

The Sabal

Huisache, Sweet Acacia, Cassie, Texas Huisache *Acacia farnesiana (A. Smallii)*

by Sue Griffin

Family Leguminosae (Fabaceae)

Description: Huisache is a lovely, intensely fragrant vase-shaped tree native to South Texas and Mexico. The small, ball-shaped bright gold flowers are borne in profusion from February through April accompanied by a magnificent perfume that signals the first sign of spring in the lower Rio Grande Valley; the branches are armed with paired spines up to 2" long. Huisache is an evergreen to deciduous or semi-deciduous tree. The canopy is rounded, stiff, and open to lacy. Bark:is reddish-brown, forming ridges and furrows with age.

Foliage/texture: Small, twice pinnately compound green to gray-green foliage, fine texture, stems and trunk brown and well armed with 1" white, stipular spines underneath foliage that break off in skin and infect. Note that *A. farnesiana* is slightly coarser textured than *A. smallii* because of stiffer habit and smaller size.

Origin: Altiplano highlands of central Mexico north of Mexico City north to the Big Bend area of south Texas. Naturalized and cultivated as an agricultural and ornamental tree all over the world in warm, arid climates. Also, planted in coastal areas of tropical Africa. Grown throughout India.

Habitat: Huisache grows on the heavier, wetter clays and clay loams of the Rio Grande Plains to Big Bend National Park. It is an extremely durable plant, adapted to most soils as long as they are well drained.

Landscape Usage: Although thorny, Huisache is an excellent multiple trunk tree for small spaces where a little debris is tolerated. Huisache requires little to no supplemental irrigation once

established. This species is an ideal plant for the xeric garden. Growth rate has been described as slow to rapid, depending on the hardiness zone and amount of water. Huisache will take full sun and is tolerant of temperatures ranging from a high of over 100°F to a low of 15°F.

Height and Spread: - 30 ft depending on growing conditions: *A. farnesiana* is very similar to *A. smallii* but smaller. Spread is similar in both:15 to 40 ft.

Sun: Full sun to light shade.

Soil: Adaptable, all soil types. Tolerant of alkalinity. Prefers well-drained soils**.**

Moisture: Extremely drought tolerant. Blooms more profusely after wet winters or when given supplemental water in late winter.

Blooming Time: Spring **:** *A. farnesiana*, flowers earlier (Jan-Feb) than *A. smallii* (Mar-Apr).

Pest and Diseases: Girdler beetles, or twig girdlers and leaf-cutter ants favor Huisache. Also susceptible to cotton root rot.

Maintenance: Prune saplings to remove narrow crotch angles. Be warned that you should wear gloves and a long sleeve shirt to prevent thorns in your fingers and scratches on your arms. Once established, watering is not necessary.

Wildlife Value: Used as cover, and nest sites by birds, Huisache is also an important nesting tree for white-winged doves. During migration, at the height of flowering, warblers are drawn to this tree for both the pollens and the insects that feed on the pollens. New growth is browsed by wildlife and livestock. Pollen, not nectar, is used by bees and small mammals eat the seeds.

Usage: Over the years Huisache has been used for many purposes. Sweet acacia perfume is distilled from its flowers and extensively used in European perfume. Seed pods contain 23% tannin, a glucoside of ellagic acid, and are used for tanning leather and for ink. Sweet acacia bark is also used for tanning and dying leather in combination with iron ores and salts. A gummy substance obtained from seed pods is used in Java as cement for broken crockery. Gum exuding from the trunk is considered superior to gum arabic in the arts.

References:
aggie-horticulture.tamu.edu/ornamentals/natives/acaciafarnesiana.htm
www.bonsaiweb.com/care/faq/acacia.html
cactus.east.asu.edu/~cmartin/plants/acaciaminuta.html

Flowers From an Insect's Perspective

by Gene Lester

The March 11, 2005 issue of *Science* (vol. 307:1539) reported on Bjørn Rørslett's website (www.naturfotograf.com/UV_flowers_list.html #top) which features a bee's-eye view of "**Flowers in Ultraviolet".** Mr. Rørslett, a retired water scientist and photographer from Oslo, Norway has captured the inflorescences of 100 plus plant varieties in both visible and ultra violet (UV) light. To our eyes a common buttercup (*Ranunculus acris*) looks yellow but a camera that captures UV light reveals speckles, streaks and splashes. Many flowers use these hidden – to our eyes – patterns to signal bees and other pollination insects which detect UV light. A dandelion's (*Taraxacum vulgar*) "bulls-eye" pattern, for example, functions like the runway lights at an airport, guiding approaching insects to a touchdown at the flower's center where nectar and pollen await. Mr. Rørslett describes his work: "Not all species have the typical bull's-eye UV pattern, which may be confined to symmetrical flowers. Nevertheless flowers may exhibit a virtually endless variety of spectral signatures. Just take a look at this modest plant, *Glechoma hederacea*, to get an impression of the near bewildering spectral diversity that exists. UV-absorbing substances (flavonyl glucosides) are instrumental in bringing about the fascinating pollinating guide patterns. UV marks on flowers are but a logical extension of the visual pollinating clues provided by evolution in Nature. When a flower is stated to lack UV marks, it simply means the signals emitted are directed towards pollinators which can "see" in alternate spectral bands, outside the UV range. If the flower absorbs UV all over the floral parts, it may appear visually in a "UV-complementary" color even to pollinators capable of seeing in UV. We can only speculate as to the rendition of that complementary color, but if say the insect is modeled as seeing UV as "**blue**", blue as "**green**", and **green** as "**red**", then the UV complementary would be "**yellow**". Thus, a UV-absorbing yellow flower still would come across as "yellow" even for an insect (or so it might seem, but who are we to know such things anyway).

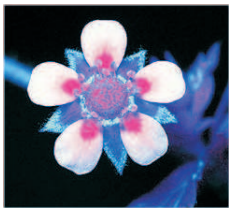
A final word: UV photography as such has lots of technical pitfalls and issues. You have to make absolutely sure your camera really records UV patterns, and in order to ensure this, careful testing of your setup is necessary. This has become even more important in the digital era."

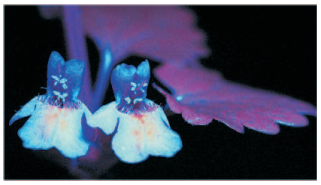
Ranunculus acris

Taraxacum vulgar

Glechoma hederacea

Potenilla intermedia





Calystegia sepium

Prickly Pear Cactus

by DesertUSA.Com

Prickly pear cactus represent about a dozen species of the **Opuntia** genus (**Family Cactaceae**) in the North American deserts. All have flat, fleshy **pads** that look like large leaves. The pads are actually modified branches or stems that serve several functions — water storage, photosynthesis and flower production. **Chollas** are also members of the *Opuntia* genus but have cylindrical, **jointed stems** rather than flat pads.

Like other cactus, most prickly pears and chollas have large spines — actually modified leaves — growing from **tubercles** — small, wart-like projections — on their stems. But members of the Opuntia genus are unique because of their clusters of fine, tiny, barbed spines called **glochids**. Found just above the cluster of regular spines, glochids are yellow or red in color and detach easily from the pads. Glochids are often difficult to see and more difficult to remove, once lodged in the skin.

The fruits of most prickly pears are edible and sold in stores under the name "**tuna**." Prickly pear branches (the pads) are also cooked and eaten as a vegetable. They, too, are sold in stores under the name "**Nopalito**." Because of the glochids, great care is required when harvesting or preparing prickly pear cactus. **Both fruits and pads of the prickly pear cactus** are rich in slowly absorbed soluble fibers that may help keep blood sugar stable. Prickly Pear Nectar is made with the juice and pulp of the fruits.

Range & Habitat

Prickly pear cactus are found in all of the deserts of the American Southwest, with different species having adapted to different locale and elevation ranges. Most require course, well-drained soil in dry, rocky flats or slopes. But some prefer mountain pinyon/juniper forests, while others require steep, rocky slopes in mountain foothills.

Description

Most prickly pear cactus have yellow, red or purple flowers, even among the same species. They vary in height from less than a foot (Plains, Hedgehog, Tuberous) to 6 or 7 feet (Texas, Santa Rita, Pancake). Pads can vary in width, length, shape and color. The Beavertail, Santa Rita and Blind Pear are regarded as spineless, but all have glochids.

In addition to the North American native prickly pear cactus listed below, there are many varieties, non-native imports and hybrids, so identification can often be difficult. Information on the 15 species below is based on wild, non-cultivated samples.

There has been **medical interest** in the **Prickly Pear plant**. Some studies have shown that the pectin contained

in the Prickly Pear pulp lowers levels of "bad" cholesterol while leaving "good" cholesterol levels unchanged. Another study found that the fibrous pectin in the fruit may lowers diabetics' need for insulin. Both fruits and pads of the prickly pear cactus are rich in slowly absorbed soluble fibers that help keep blood sugar stable. There are on going studies and at this point there are no proven results on humans. You can make your own study and see if it works for you, which is the only test that really counts. Note: This article and the prickly pear jelly article previously appeared in *The Sabal May, 2004*

Prickly Pear Jelly – Make it Yourself!

by The Native Plant Society of Texas

Across many parts of Texas, beneath the upcoming searing summer sun, the plump fruits of Prickly Pear will begin to darken and ripen. These fruit provide the timber for one of the finest native fruit jellies available – but only if you make it yourself, for it is rarely available for sale.

Approach the Prickly pear with the utmost caution. The spines are numerous and some are almost invisible. Handle the fruits only with heavy leather gloves or tongs. Rub the fruits with a heavy cloth to remove the tiny bristles. Or, better still, hold the fruit over a flame and burn the bristles off.

Wash and slice the fruit into a saucepan, then add 2 cups of water for each cup of fruit. Cook until soft – don't hurry! – and strain the juice through a jelly bag or several thicknesses of cheese-cloth.

To make the jelly, here is what you need:
3 cups Prickly pear juice
½ cup lemon juice
1 pkg powered pectin
4.5 cups white sugar

Measure juices into a sauce pan and mix in the pectin. Bring quickly to a hard boil, stirring in the sugar all at once. Bring to a full rolling boil, then boil hard for one minute, stirring constantly. Remove from heat, skim and pour into glass jelly jars.

This will make 6 to 7 jars. The jelly will be a lovely lilac or soft pink in color. And it tastes delicious!

Jellies and preserves made of cactus fruit are not always dependable. Sugar, acid, and pectin content of the fruit vary with the ripeness and growth conditions.

Native Plant Rescue: **The Valley Nature Center** will rescue native plants about to be destroyed by construction companies, developers, or no longer wanted by home owners. Call 956-969-2475.

Exclusively Native plant sources:
Benito Trevino, Landscaper/Grower, Rio Grande City 487-4626
Valley Nature Center -- Native Plants, Weslaco 969-2475
Richard Holverson, Plants and Consulting, La Feria 797-2102
Mother Nature's Creations, Harlingen 428-4897
Frank Gonzales, Landscaper/Grower, Harlingen 412-2125

Nature Happenings in the Lower Rio Grande Valley Texas

Laguna Atascosa NWR— Nature BIKE RIDES on Saturdays from 8 a.m. - 10:30 a.m. and Nature WALKS, Sundays from 8 a.m. - 10 a.m. Call for details: 956-748-3607.

Sabal Palm Grove Sanctuary— Native plant presentation and tour by Joseph Krause – every weekday at 10 a.m. Pre-registration required – call 956-541-8034.

Santa Ana NWR— Tram Tours of the park. Fees: $3 for adults and $1 for 12 years-old and under. Guided Nature WALKS are available. Call for details: 956-787-3079.

Texas State Park Tours/ World Birding Center, Mission, Texas— Lomitas Ranch Tours and other natural area tours 7:30 a.m. – 5 p.m. every Tuesday and Friday from Benson Rio Grande State Park/World Birding Center in Mission, TX. Outings focus on native plants and their uses. Fees: $25 per person: reservations required - call 956-519-6448. Or go to www.worldbirdingcenter.org

The Sabal is the Newsletter of the Native Plant Project and conveys information on the native habitats, and environment of the Lower Rio Grande Valley Texas. Co-editors: Gene Lester and Eleanor Mosimann. **You are invited to submit articles for *The Sabal*.** They can be brief or long. Articles may be edited for length and clarity. Black and white line drawings -- and colored photos or drawings -- with or without accompanying text are encouraged. We will acknowledge all submissions. Please send them, preferable in electronic form - either Word or WordPerfect, to: Native Plant Project, P.O. Box 2742, San Juan, TX 78589 or contact Gene Lester @ 956-425-4005, or g_lester48@msn.com. See *The Sabal* and our 4 handbooks on the website. www.nativeplantproject.org

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Native Plant Project Annual Membership Application Form

___Regular $15 per year ___ Contributing $35 per year ____ Lifelong $250 one time fee per individual. Members are advised of meetings, field trips, and other activities through The Sabal. Dues are paid on a calendar year basis. Send checks to Native Plant Project, P.O. Box 2742, San Juan, Texas 78589.

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Comments/ suggestions/ speaker recommendations should be sent to: Native Plant Project, P.O. Box 2742, San Juan, TX 78589 or contact G. Lester @ 956-425-4005 or g_lester48@msn.com

Native Plant Project Meetings – May 24, 2005; **Board meeting** at 6:30 pm; G**eneral meeting** at 7:30pm featuring: Richard Lehman recent recipient of VNC's "Outstanding Naturalist Award 2005" will present "Butterflies and Butterfly Plants in South Texas and Northeastern Mexico" with gorgeous photos from his new book written with Kim Garwood.

Board and General Meeting 2005:

January 25
February 22
March 22
May 24
September 27
October 25
November 22

Board Meeting Only 2005:

April 26
December 27

Highlights of the NPP Board Meeting on March 22, and April 26, 2005: Summary of the Minutes of the Native Plant Project Board Meeting March 22, 2005. In celebration of the upcoming 25th anniversary of the NPP, Lester would like the Board to consider establishing an "Outstanding Member" or "Hall of Fame" award, including a plaque, $100 prize, and/or life membership. Lester would like to change the bylaws so that a General Meeting in April is substituted for the meeting in July. Summary of April 26, 2005. The July General Meeting will be moved to April creating a schedule of consecutive General Meetings from September through November and January through May. December is usually canceled because of the holidays. No summer meetings are scheduled. Bylaws did not have to be amended. An "Outstanding Service to NPP Award" will be given to 5 people at NPP's 25th Year celebration in 2007. Kathy Sheldon will chair the Awards committee. Lester asked all Board members present to submit articles for the Sabal.

Native Plant Project
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