

# WILDFLOWER

A non-profit organization committed to the preservation and reestablishment of native wildflowers, grasses, shrubs, and trees

As a botanist at the National Wildflower Research Center, one of the most common questions I receive during the fall season is, "What is the easiest way to plant wildflowers in my yard?"

Just like any project, incorporating native plants into an existing landscape can be as difficult or as simple as you want to make it. We use the following method at the Wildflower Center. It's simple; any homeowner can use it to begin landscaping with native plants and wildflowers.

There are three basic steps to successfully planting wildflowers in your yard: plant selection, soil preparation and seeding, and maintenance.

#### • Plant Selection.

Before you set out to use any native plant in your existing landscape, you need to look at your yard and decide what kinds of native plants and wildflowers will do well in the habitat your yard represents. Go into the surrounding countryside and observe plants growing in their natural environments. What is growing well along the roadsides near your home? Are the plants growing in a ditch full of water? In full sun, or partial or dappled shade?

Determine which species grow together and which species are solitary. You don't have to know every species that grows in your area, but a basic knowledge of

the dominant species will give you a good idea of what might do well in your yard. Spend some time at your local native plant nursery. People who work with and propagate native plants will have a good idea of what species might do best in your yard. If you can duplicate at home what you have observed in nature, the wildflower species you choose will thrive in your yard.

• **Soil Preparation and Seeding.** Choosing plants that are appropriate to the microhabitats in your yard will eliminate the need for major soil preparation. In fact, disturbing the site can create more problems than it solves.

If your site is not too weedy, and you plan to incorporate wildflowers into the existing vegetation, the first step is to mow the area to be seeded. Mow the vegetation at the lowest possible setting. This is known as "scalping" the area.

Next, rake up as much of the thatch as possible to expose the ground and open up bare areas, allowing the seed to make good soil contact, which is essential for germination.

Once the thatch has been removed, the next step is to sow your seeds. Hand broadcasting is the easiest and doesn't require any special equipment. Seed each species separately because the different sizes and weights of the seeds make it difficult

to evenly distribute each species. Adding fine, damp sand to the seeds, in a ratio of four parts sand to one part seeds, will ensure a more even distribution of each species.

After seeding, lightly rake or tamp the area to ensure good seed-to-soil contact. Soil contact helps seeds retain water, which is important for germination, as well as provides a substrate for seedling growth.

If rain is not expected within several days after planting, thoroughly water the area once following planting. Then, lightly water the area every two days for approximately one week.

• **Managing Your Wildflowers.** All landscapes need several years to become well established. Once established, your landscape will need minimal maintenance. However, some attention will be necessary during the establishment period.

Depending on the look you want to achieve, you may want to prune or weed out fast-growing species and undesirable plants as they appear. Clipping seedheads encourages fullness and longer bloom periods for many perennial wildflowers. Some native shrubs and perennials respond

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**GIFTS INSIDE**

## Lady Bird Johnson: A champion of nature

Although she has never liked the word *beautification*, many people believe it is synonymous with the name *Lady Bird Johnson*. For those who know of Mrs. Johnson's 80-year interest in the land's natural beauty and her commitment to its conservation, the true meaning of *beautification* is clear.

When Mrs. Johnson speaks of "Vermont in the fall," or "the understory of flowering dogwoods in the southeast each spring," or "the color and beauty of the desert after a seasonal rain," or "the orange blanket of California poppies," or "the colorful mosaic of fall grasses and wildflowers of the midwestern prairies," her definition of *beautification* becomes clear. Native flora defines a region's character, and Mrs. Johnson has had an abiding interest in regional floral beauty since childhood. It was her cause as First Lady during the mid-Sixties and it has contin-

ued through her founding of the National Wildflower Research Center in 1982.

Those of us who have worked with Mrs. Johnson during the Wildflower Center's early years find its growing stature an exciting and encouraging indicator for the future.

The Center's visibility has grown from rare mentions in a few publications during the first few years — mostly about Mrs. Johnson and the beauty of wildflowers — to hundreds of articles in a wide variety of publications.

Many of these articles promote the Center's mission: the conservation and use of native plants in regional home landscape design. Re-establishing indigenous native plant populations along roadsides and in public spaces can reduce the need for high-cost maintenance such as mowing, herbicide and pesticide spraying, and fertilizer application. Because native plants are well adapted

to their regions, they seldom need supplemental watering once they are established — conserving a precious resource.

Growing awareness of the Wildflower Center's work indicates more than an acceptance of our mission — it heralds a willingness to get involved and to make a difference.

As we celebrate Mrs. Johnson's eightieth birthday year, I invite you to help us spread our message and encourage these changes. Please take this opportunity to join Mrs. Johnson in celebrating her special birthday year, while helping secure the natural beauty of our land for future generations.



David K. Northington, Ph.D., is executive director of the National Wildflower Research Center.

## Wildflower

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## WILDFLOWER CENTER NEWS

The Clearinghouse has had an intern from Austin's Concordia Lutheran College during the summer and fall. **John Slider** is an environmental science major who plans to obtain a masters degree in biology or botany. He recently joined a field trip to the rainforests of Hawaii to study the unique habitats there.

Media coverage of the Wildflower Center is still fabulous! CNN aired a terrific travel feature on the Wildflower Center as a tourist destination. *US News and World Report* included the Center in a special video about Great Travel Destinations that will be offered as a special benefit to the magazine's subscribers.

Wildflower Center representatives will attend the **National Tour Association** trade show in November, providing a good opportunity to promote the Center to travel agents and tour operators who organize motorcoach tours. The result could mean busloads of visitors to the Center, but we have enough wildflowers for everyone to enjoy!

Horticulturist **Denise Delaney** and Publicity and Marketing Coordinator **Patricia Alholm** were featured speakers at the International Master Gardener and Trade Show in San Antonio in August. The Wildflower Center was a selected destination for a pre-conference tour for attendees.

Wildflower Center botanists are participating in **Science Fun Day** in October at Highland Mall in Austin. The event is sponsored by the College of Natural Sciences at the University of Texas at Austin and is designed to encourage children of all ages to experience how much fun science can be.

**Patricia Alholm** and Development Associate **Molly Sherman** recently visited the Atlanta Botanic Garden and the Fernbank Museum of Natural History in Georgia. Representatives of the two organizations were generous with their time and expertise. Much of what was learned will be applied to the Wildflower Center's new facility.

# Wildflower Center offers educational materials

One of the National Wildflower Research Center's primary goals is to provide vital and reliable information about conserving and using native plants in traditional landscape and gardening designs. To respond to the public's increasing awareness, enthusiasm, and interest in wildflowers and native plants, the Wildflower Center offers a number of programs and resources.

• **Fact Sheets.** The Wildflower Center offers more than 250 individual fact sheets including recommended species lists for each state (species information is still being researched for Alaska, Hawaii, Nevada, and Utah), regional lists of native plant nurseries, and regional bibliographies. Basic information about gardening and landscaping with natives, wildflower meadow gardening, creating a prairie, and habitat gardening also are available.

• A special **Education Packet** for teachers is available and includes wildflower fun facts, alternatives to wildflower collection, how-tos on collecting and pressing wildflowers and seed collecting, an education bibliography, a bibliography of native plant uses, and parts of the flower.

• **Regional Slide Programs.** Slide shows featuring wildflowers found in six regions of the United States are available for lease or

### Fact Sheet Order Form

Members receive this special Education Packet free. The packet is available to non-members for \$4. Send this form (or a copy!) to: Educator's Packet, Clearinghouse, 2600 FM 973 N, Austin TX 78725-4201. The Educator's Packet includes:

- Fun facts
- Alternatives to wildflower collecting
- Bibliography of educational references
- Bibliography of native plant uses
- Slide program order form

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

purchase from the Center's Clearinghouse. Each program consists of 35 to 40 slides of a particular region's most common native wildflowers and is accompanied by a script that lists each species' botanical and common names, bloom period, and habitat preference.

• **Publications.** The Center publishes a bimonthly newsletter and a biannual journal. The newsletter is geared toward home gardeners who want to incorporate native flora into their landscape and garden designs, while the journal targets an audience that includes members of the academic and scientific communities, as well as the layperson who wants more in-depth information on native flora.

Fact sheets are free to members and \$4 per packet for non-members. For more information on the materials and resources available at the Wildflower Center, contact the Clearinghouse at the address listed on the back page or use the order form above.

As it enters its second decade, the Wildflower Center will continue to respond to America's growing interest in wildflowers and native plants. Through our educational programs and materials, our members can help us teach others about the economic, aesthetic, and ecological importance of our native flora.

## Plant now for spring beauty!

well to severe pruning in the fall or late winter.

Because native plants are adapted to their environments, little or no chemical maintenance is required. Native plants come with their own "built-in" pesticides and fungicides. Once established, native plants will crowd out all but the most noxious weedy invaders, eliminating the need for herbicides.

Native plants usually do not require fertilizers. Many natives thrive in very poor soils and

applying fertilizers could chemically burn them or stimulate lush foliage growth with few flowers. Fertilizers also stimulate the growth of unwanted species.

Mow only at the end of the bloom season. Mowing after the flowers have set seed will help reseed your wildflowers and produce a strong display next year.

By planting native species, you provide habitat and food resources for wildlife and encourage the presence of native insects and microorganisms that benefit plants

*continued from page 1*

and keep them healthy. With a little care, thought, and patience, your landscape can become an interacting, changing entity that offers a unique look into the complex interactions of the natural world — right in your own backyard.

*F. M. Oxley  
Resource Botanist  
National Wildflower Research Center*

# Wildflower

## NOTEBOOK



**Scientific Name:** *Echinocereus engelmannii*  
**Common Names:** Strawberry hedgehog cactus, calico cactus, purple torch  
**Family Name:** Cactaceae  
**Habitat:** Deserts in sandy, rocky well-draining soil  
**Range:** Arizona, Southern California, Nevada, Utah, and northern Mexico  
**Bloom Period:** April to June

A native to the southwestern U.S. and Sonoran deserts, the strawberry hedgehog cactus (*Echinocereus engelmannii*) is named for its spiny red fruits, which resemble strawberries. This low-lying cactus grows in clumps up to ten inches tall. Stems have ten to fourteen ribs and diameters of two to three inches.

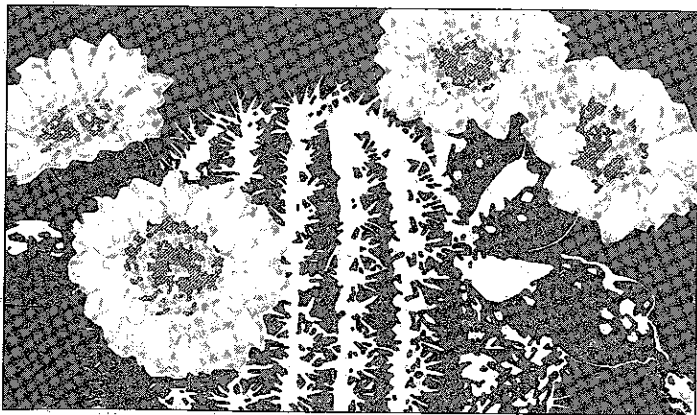
The shaggy appearance of *E. engelmannii* is due to the dense covering of drooping white to yellowish spines. From areoles, ten to twelve radial spines about half an inch long encircle the two to six central spines, which can be three inches long. This thick spine coverage helps the cactus conserve moisture by shading the stems and reducing transpiration.

Around April, showy magenta flowers with an abundance of bright yellow anthers appear. A light pink style with up to ten stigmas protrudes from the center of the bloom. Blooms last about two weeks and are pollinated by bees or beetles. The fruit develops into an edible red "berry" that is spiny and rich in

sugar. Sometimes called "cactus apple," it is an important food source for birds, rodents, and desert tortoises.

The strawberry hedgehog cactus can be propagated by seed, which may require scarification before planting.

Sow seeds in a pot of normal cactus compost (equal parts loam, shredded sphagnum peat, and sharp gritty sand). Press seeds gently into soil and cover both pot and plant with plastic, which will maintain the essential humidity needed for germination. Place pot in a well-lit location, not in full sun. Germination may take two weeks. Do not allow seedlings to dry out. Watch for signs of fungal growth.



**Botanical Name:** *Carnegiea gigantea*  
**Common Name:** Saguaro  
**Family Name:** Cactaceae  
**Habitat:** Rocky and sandy desert slopes and flats  
**Range:** Extreme southeastern portions of California to

southern Arizona and northern Sonora  
**Bloom Period:** May to June

The state flower of Arizona, the saguaro cactus is a prominent desert landscape feature. Averaging 30 to 40

feet in height, and sometimes reaching 50 feet, the saguaro grows at altitudes of 600 to 4,000 feet. In southern Arizona, large cactus forests are found between 1,000 and 4,000 feet.

Saguaro cacti grow slowly. The oldest plants are estimated at between 150 and 200 years old. Root systems are shallow and radiate out in all directions, enabling the saguaro to utilize even the lightest rainfall. However, the roots do not always provide stable anchorage, high winds can blow these huge cacti over.

The main stems can have a diameter of two and one-half feet and are a good example of nature's ability

to deal with a harsh environment. They are covered by spines and a thick waxy layer that helps the plant retain water.

Flowers are large, up to five inches in diameter, and have a waxy appearance. They open at night, producing a scent that attracts bats, moths, and a variety of insect pollinators.

The saguaro cactus has provided food and shelter for indigenous animals and people. Native Americans used the fruit pulp to make cactus jelly, oil extracted from the seeds was used in cooking, the seeds could be ground into a butter, and the fermented juice made an intoxicating drink.

# FROM THE FIELD

**Arizona Native Plant Society (Tucson Chapter) Chiricahua Workshop, Sept. 3-6, Portal, AZ. Contact:** ANPS, P.O. Box 41206, Sun Station, Tucson AZ 85717.

**Growing Greener Communities: Sixth National Urban Forest Conference, Sept. 14-18, Minneapolis/St. Paul. Contact:** NUFC, P.O. Box 2000, Washington D.C. 20013-200.

**Virginia Native Plant Society Annual Meeting, Sept. 17-19, Manassas, VA. Contact:** Prince William Wildflower Society, P.O. Box 83, Manassas, VA 22110.

**Ecological Implications of Fire in Greater Yellowstone, Sept. 19-21, Yellowstone Park, WY. Contact:** Paul Schullery, Yellowstone Center for Resources, P.O. Box 168, Yellowstone Park, WY 82190, (307) 344-2205.

**Environmental Concerns in Rights-of-Way Management, Sept. 19-22, Montreal, Quebec, Canada. Contact:** Dr. G. Jean Doucet, Hydro-Quebec, 1010 Ste-Catherine St. East, Fifth Floor, Montreal, Quebec, Canada H2L 2G3.

**Autumn Wildflower Workshop, Sept. 22-24, Cashiers, NC. Contact:** (704) 743-2411.

**Eastern Native Plant Alliance Annual Conference, Sept. 24-26, St. Louis. Contact:** Eastern Native Plant Alliance, P.O. Box 6101, McLean, VA 22106, (703) 356-7425.

**Fourth Symposium on Resources of the Chihuahuan Desert Region: United States and Mexico, Sept. 31-Oct. 2, El Paso, TX. Contact:** Chihuahuan Desert Research Institute, P.O. Box 1334, Alpine, TX 79831.

**The Ecology of Growth and Development, Oct. 10-13, Atlanta. Contact:** Timmy B. Hess, Asst. Chief of Fisheries, Georgia Dept. of Natural Resources, 205 Butler St. SE, Suite 1632, Atlanta, GA 30334, (404) 656-3524.

**National Roadside Vegetation Management Association Annual Meeting, Oct. 12-16, Pittsburgh. Contact:** NRVMA, 309 Center Hill Rd., Centerville, DE 19807, (302) 655-9993.

**Native Prairie Association of Texas, Oct. 16, Tallgrass Prairie Preserve, OK. Field trip to watch Oklahoma Nature Conservancy release 300 buffalo on the prairie. Contact:** NPAT, 301 Nature Center Dr., Austin, TX 78746.

**Eighth Wildland Shrub and Arid Land Restoration Symposium, Oct. 19-21, Las Vegas. Contact:** Keith McNeil, Division of Continuing Education, University of Nevada-Las Vegas, 4505 Maryland Parkway, Las Vegas, NV 89154-1019.

**Landscaping with Florida's Native Plants, Oct. 23, Sarasota, FL. Contact:** Florida Native Plant Society, P.O. Box 564, Sarasota FL 34230, (813) 951-4240.

**Freshwater Wetlands Communities, Oct. 23, Fullerton, CA. Sponsored by the Southern California Botanists. Contact:** Terry Daubert, SCB, Dept. of Biology, California State University, Fullerton, CA 92634, (714) 773-3579.

*(To include your organization's event in the calendar, send information to the Newsletter Editor at the address listed on the back page. Please send information at least four months in advance.)*

# Q

Questions, questions, questions! The Clearinghouse at the National Wildflower Center answers thousands of questions a year

on wildflowers and native plants and how to grow them.

**Q: I am hesitant to plant wildflowers because so many look like the weeds I see along the roadsides. What do wildflowers look like and what is the difference between wildflowers and the weedy flowers seen along county roads?**

**M. J. A. Isaac  
Alpine, TX**

*A: The Wildflower Center is often asked to answer this question. Weeds are generally regarded as plants that are growing where you don't want them to, which implies noxious or aggressively growing plants living in disturbed areas or habitats that have been modified by humans. These areas include lawns, parking lots, and median strips on roads, as well as in our gardens. The plants often are unsightly and very difficult to remove. A weedy species that is displacing native and successfully naturalized plants is called an invasive weed.*

*Wildflowers are flowering plants capable of growing in wild, unimproved habitats without any help from human beings. These species are normally considered to be very attractive, with showy flowers, although there are species that some people would consider somewhat unattractive. Normally, a native wildflower is one that was growing in the wild before human introduction and is still growing within its natural range.*

**F. M. Oxley  
Resource Botanist**

*(Editor's note: Many beautiful wildflower species are available from native plant nurseries throughout the United States. For more information on recommended species for your state and native plant nurseries in your region, contact the Clearinghouse at the address listed on the back page. Information packets are free to members and \$4 for non-members.)*

# Night of The Wildflowers

## WILDFLOWERS IN THE MOONLIGHT

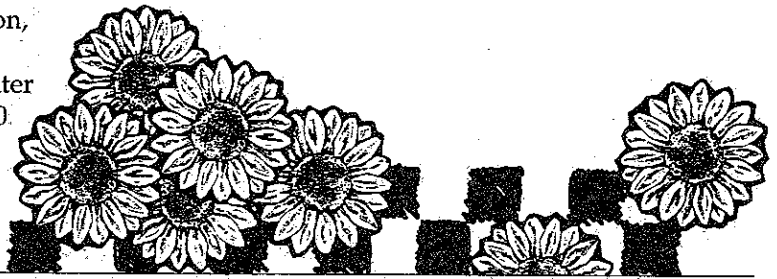
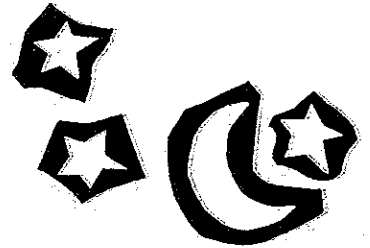
Join the Wildflower Associates for an evening of moonlit entertainment and dining at the University of Texas' Alumni Center in Austin on October 16 at 7:30 p.m.

Dance to the "country outlaw" music of Jerry Jeff Walker while sampling superb Texas regional cuisine. Also, be sure to bring your checkbook, so you can do some early holiday shopping at the fabulous Silent Auction.

Tickets to the event — the first

ever sponsored by the Wildflower Associates — are \$50 per person. Each party-goer will receive a one-year complimentary membership in the Wildflower Center.

For tickets or for more information, please call the Wildflower Center at (512) 929-3600.



### Harvest a wealth of knowledge: Join the National Wildflower Research Center!

Members of the National Wildflower Research Center support wildflower and other native plant work across the nation. Benefits include *Wildflower*, the newsletter and *Wildflower*, the journal; 10% discount on unique Center products such as wildflower books, calendars, and T-shirts; advance notice on tours and discounts to Center seminars; free wildflower information from the Center's Clearinghouse; a membership card; and other benefits.

- \$25 Supporting Member. All benefits listed above.
- \$50 Sustaining Member. All the above plus a set of specially commissioned wildflower note cards.
- \$100 Key Member. All the above plus wildflower tote bag and invitations to special events.
- \$250 Center Sponsor. All the above plus full-color wildflower address book.
- \$500 Trust Member and \$1,000 Benefactor. All the above plus special privileges.

\* Thank you! Your contribution is partially tax deductible. Contact the Development Office for detailed information on tax deductibility.

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## Wildflowers Work!

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