The Newsletter of the National Wildflower Research Center

Volume 10, Number 2 March/April 1993

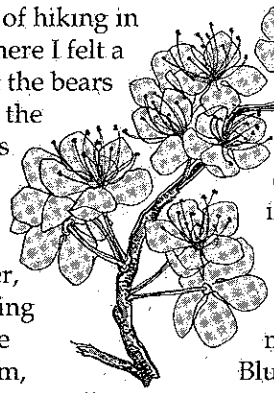
NATIONAL WILDFLOWER RESEARCH CENTER

WILDFLOWER

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

Berry browsing in the backyard

Whenever I eat a wild berry I feel connected to the place I picked it. Taste is a dimension of my memory of hiking in Montana, where I felt a kinship with the bears browsing on the huckleberries.

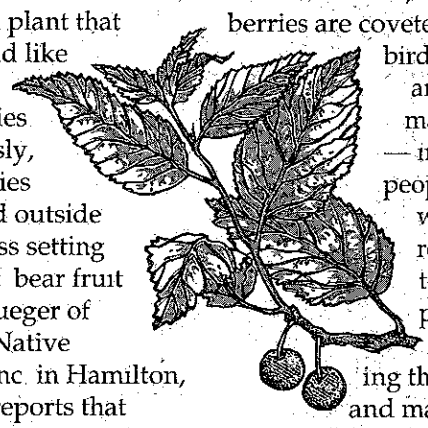


On the grounds of the Wildflower Center, the early spring blooms of the Mexican plum, *Prunus mexicana*, will become sour plum treats in the fall. The red Turk's cap, *Malvaviscus arboreus*, which blooms in summer, becomes a red capsule, a sweet nibble while weeding. I may get a tart agarita berry, *Berberis trifoliolata*, after a flock of birds has picked the ripest ones. A mesquite pod, *Prosopis glandulosa*, is sweet, though it may have a wormhole. (Please remember to "graze" responsibly. Know *what* you're eating and be careful not to eat so much that it could reduce the plant population.)

The romance of wild foods is that they still are part of the natural matrix that includes birds, insects, deer, and other wildlife. Planting wild edible plants and sharing the bounty with wildlife, including insects, can help us remember that we are part of the earth's wondrous, intricate, dynamic life-support system.

If we share our wild edible plants with wildlife, we must take care not to do things that will hurt the wildlife that our plants attract. Spraying pesticides can harm insects and other animals, and discouraging birds leaves part of the matrix vacant.

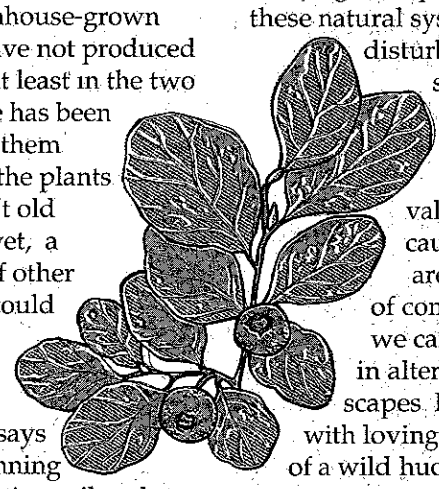
Blue huckleberry, *Vaccinium globulare*, whose taste I still remember from hiking, is a plant that some would like to grow for its berries. Mysteriously, huckleberries propagated outside a wilderness setting often don't bear fruit.



Jan Krueger of Bitterroot Native Growers, Inc. in Hamilton, Montana, reports that huckleberries are easily grown from seeds, but the greenhouse-grown plants have not produced berries, at least in the two years she has been growing them. Perhaps the plants just aren't old enough yet, a variety of other reasons could be preventing fruiting. Krueger says she's planning to add native soil to the pots to see if beneficial mycorrhizal (root fungi) associations occur.

Even wild berries produce a good crop only in years when site-related conditions are right, including a specific pollinator, a root mycorrhizal association, a trace mineral, soil acidity, temperature, elevation, or moisture. Dr. Nellie Stark and Stephen Baker, who have tried to learn some of the secrets, share them in *The Ecology and Culture of Montana Huckleberries*, published in 1992 by the Montana Forest and Conservation Experiment Station.

In the wild, tasty berries are coveted by birds, bears, and other mammals — including people — which returns us to the problem of keeping things wild and maintaining the complex system. The challenge is reproducing these natural systems in disturbed landscapes. "Wild" natural areas are valuable because they are models of communities we can strive for in altered landscapes. It starts with loving the taste of a wild huckleberry.



Marcia Hermann
Research Assistant
National Wildflower Research Center

GIFTS INSIDE

Director's Report

Ask the right questions when buying native plants

The commercial production of native plants is initially costly, requiring training and experience beyond traditional horticultural practice. Fortunately, many smaller and some larger nurseries and seed producers are responding to the challenge, and the public is responding to their efforts! However, because of inconsistent uses of some terms by the seed and nursery industries, consumers need to learn to *ask the right questions*.

Specifically, when purchasing native plants from nurseries, ask if they are *propagated* and container-grown, not just if they are *containerized* or *container-grown*. Plants can be dug from the wild and put into containers for a period of time and honestly represented as *container-grown* — which implies that they are *propagated*.

Another question revolves around the definition of native. Ask about the specific geographic distribution of the native plant in question. Does it grow in the wild in the area where you intend to plant it? A plant native to North America, the eastern United States, or even to a specific state may not be native to the more specialized soils of the specific geographic area where it will be planted.

The term *naturalized* can be especially misleading. Normally growers use this term to refer to a non-native plant that they believe will perform as well as a true native plant because it originally comes from an area with similar rainfall and temperature averages. Such a designation, however, ignores soil considerations, temperature extremes, and annual precipitation patterns.

A variation of this problem is marketing a given plant as "_____-grown," as in "California-grown" or "Pennsylvania-grown." The plant in question could be native to the state or it could be a non-native plant that has been grown — even propagated and grown — in the state. Such a designation doesn't mean that the plant is a native species; ask specifically.

Finally, although the seed industry as a whole is doing a good job of providing high-quality, clean seeds of indigenous native grass and wildflower species, there is still an occasional misuse of the term *wildflower*.

The definition used by some seed providers or retailers allows for any flowering species that will successfully grow "in the wild" — for even one season — to be called a wildflower. By such a definition, a "wildflower" mix therefore could even be predominantly seeds of exotic flower species such as bachelor's button, wallflower, rocket larkspur, African daisy, baby's breath, dame's rocket, scarlet flax, forget-me-not, corn poppy, catchfly, and others that are native to other continents but will germinate and flower for at least one season if properly planted in the wild.

The Wildflower Center prefers that use of the term *wildflower* be limited to those species that naturally grow in the wild — indigenous to the area.

Ask the right questions and enjoy the aesthetic, ecological, and economic benefits of using native plants in your planned landscapes.

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

Wildflower

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Wildflower Center News

Wildflower Center staffers will have a booth at the **San Francisco Landscaping Show** in April. We'll show our traveling exhibit, and answer questions about the Center. Please stop by and say hello!

By the time this newsletter goes to print, the Wildflower Center will have been on national television! Representatives of the game show ***Jeopardy*** called recently to verify several Wildflower Center facts that were used in a series of questions about Texas.

Resource botanist **Flo Oxley** and horticulturist **Denise Delaney** participated in a **Girl Scout Jamboree** at Canyon Lake near San Marcos, Texas, in November, where they taught several hundred Girl Scouts how to plant bluebonnets.

The Wildflower Center planted bluebonnet seeds at the **Presidio La Bahia** in Goliad, Texas. The historic fort may be the site of a new movie tentatively titled *Dreamweavers*, which focuses on the nearly forgotten Battle of Goliad. The screenwriter, a native Texan, requested the Center's help.

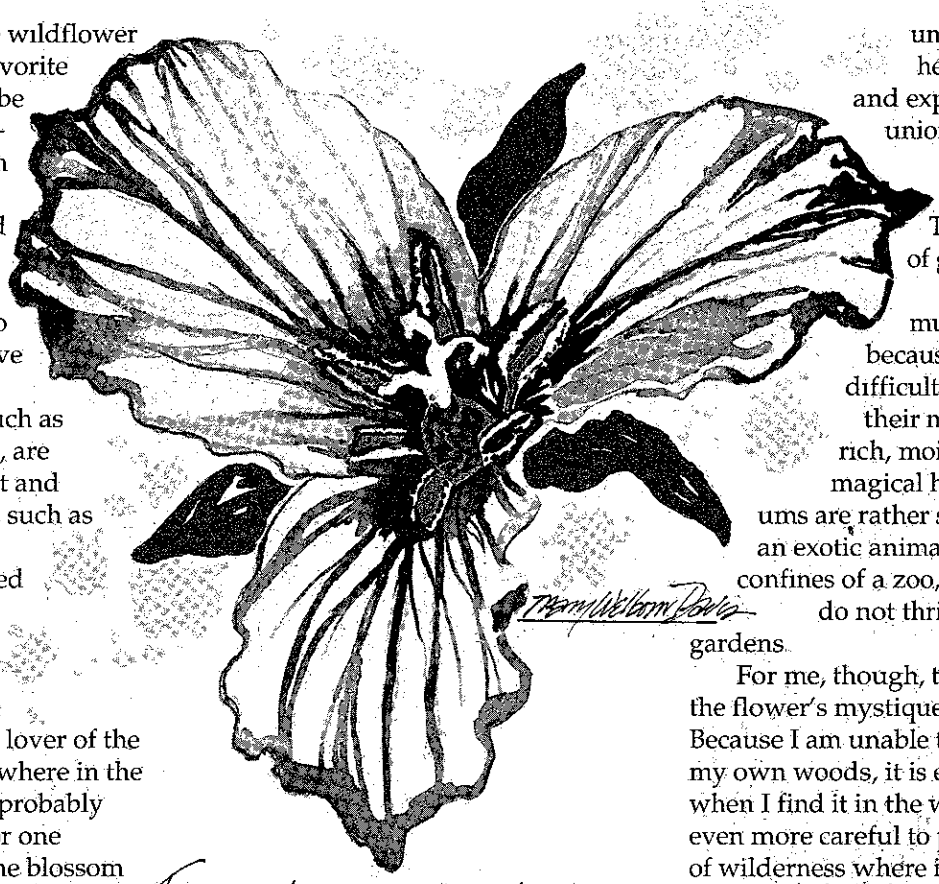
Wildflower, the newsletter of the National Wildflower Research Center, received a Texas Katy Award for best organizational newsletter from the Dallas Press Club in November. The Katy recognizes excellence in journalism and corporate communications. This was the newsletter's second award in 1992!

Marianne Pfeil, the Wildflower Center's administrative assistant in development, has moved to Seattle. She is replaced by **Diana Wood**, who was promoted from receptionist. The gap at the reception desk is filled by **Ruth Martenelli**.

The **University of Texas Lady Longhorns** basketball team invited 100 of the Wildflower Center's best Austin-area friends to watch a game against the Baylor University Lady Bears in January. Staff and members were honored at a special pre-game reception and were recognized during the game.

The University of Texas College of Natural Sciences has included the Center in its ***Austin Science Fun Guide***, which stimulates interest in different scientific fields.

A small flower that holds a large place in the heart



Trying to name a favorite wildflower is like trying to name a favorite child — it simply cannot be done. Like children, wildflowers all have their own charms and attributes, as well as possible flaws and defects. Some non-native flowers such as kudzu and loosestrife are hard to like, for they are aggressive and difficult to control.

Other wildflowers, such as lady slippers and trillium, are easy tolove for their sweet and gentle nature. Still others, such as bluebonnets and India paintbrush, are appreciated for their vibrant hues and stunning colors.

But even though you may profess not to have a favorite, if you truly are a lover of the flowers of the wild, somewhere in the depths of your heart you probably harbor a special feeling for one particular flower — for one blossom that causes an "aahhh" and stimulates a new wonder at the incredible beauty that is nature.

To see the painted trillium in the wild brings unexpected joy.

The aahhh and awe of my heart is the painted trillium. It is rarely found in a wildflower garden because trilliums are difficult to grow in cultivation, but to stumble upon it in the wild brings unexpected joy.

There are trilliums that are bigger. The great white trillium (*Trillium grandiflorum*), for example, is taller and has blossoms that measure almost four inches across. It is a magnificent flower boasting full white flowers that show beautifully against light green leaves.

And there may be trilliums that are more beautiful, like the Catesby trillium (*T. catesbaei*). The nodding blossoms of this species are either all white or all pink and are found abundantly in the Appalachian mountain regions.

But it is the small, erect painted trillium (*T. undulatum*) that has captured my heart. The blossoms of this flower are only two to three inches across and appear in late spring, sometime during April and May. Similar to the other trilliums, part of its beauty lies in its unwavering symmetry — three leaves, three sepals, three petals, and the double portion of six stamens in the center. The petals of the painted trillium are long and narrow, and are often slightly crinkled on the edges, giving it the appearance of an orchid. Through the cool white petals run streaks of dark crimson, gracefully painting the veins until they reach the heart of the flower and explode in a joyful union of petals and pink-tipped stamens.

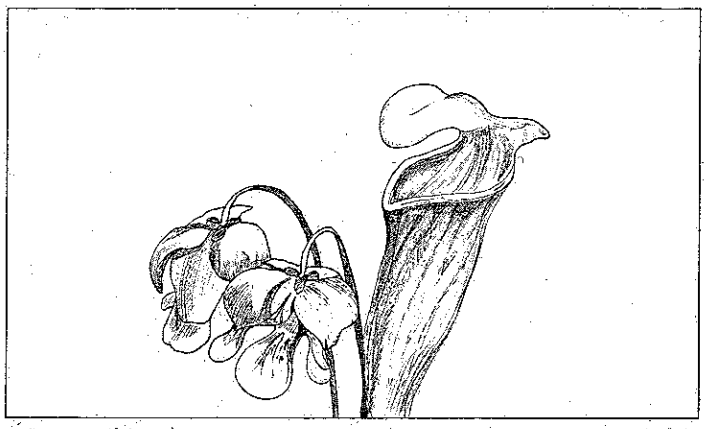
Trilliums, flowers of great beauty, also are the object of much frustration because they are so difficult to grow. Out of their native habitat — rich, moist soil full of magical humus — trilliums are rather short-lived. Like an exotic animal trapped in the confines of a zoo, trilliums often do not thrive in wildflower gardens.

For me, though, this only adds to the flower's mystique and beauty. Because I am unable to grow this in my own woods, it is even more special when I find it in the wild — and I'm even more careful to preserve the bit of wilderness where it is found.

It is not necessary for me to possess this bit of beauty. It is enough that I can seek it out and marvel at it each year. The painted trillium is the reason for my springtime trek, my pilgrimage to the woods, my annual communion with those things that are wild and free. I am humbled by its beauty and by its wild nature that keeps me in *aahhh*.

Author Laura C. Martin, who lives in Atlanta, has written five books, including The Wildflower Meadow Book *and* Wildflower Folklore. *Both of these books are available through the Wildflower Center's Products Department. For information on how to order the books, please write to Department DB at the address listed on the back page.*

Wildflower NOTEBOOK



Scientific name:
Sarracenia alata
Common names:
Yellow trumpets, pale pitcher plant
Family: Sarraceniaceae (pitcher-plant family)
Habitat: Prefers acid bogs, swamps, low wetlands, and moist pine flatwoods of the Gulf Coastal Plain
Range: Occurs from Alabama to East Texas
Bloom period: March to April, sometimes into May

The pale pitcher-plant is a carnivorous perennial with relatively narrow leaves and a hood arching over the opening. The modified leaves form pitchers that collect water and digestive enzymes that the plant secretes. The pale yellow flowers hang down at the tip of the leafless stem and emit a distinctive musty odor.

Adapting to low concentrations of essential nutrients such as nitrogen, potassium, and phosphorus in their preferred habitat, pitcher plants have evolved the ability to capture insects to supplement their diets. The plants use a "passive pitfall" strategy to capture unsuspecting prey.

The leaf surface exudes nectar that lures the intended insect victims to their deaths. Attracted to the nectar, the insect lands on the leaves, the rim of the pitcher, or the hood, and follows a trail of increasing nectar abundance toward the entrance of the pitcher tube. The tube is lined with down-pointing hairs that prevent escape. While it is eminently easy to proceed down, it is virtually impossible to turn around or go up. Working its way carefully around the hairs as it descends, the insect continues to forage on the copious nectar. The inner leaf surface gets slicker, smoother, and waxier with each step. Suddenly, the hapless insect can't maintain a foot-hold, loses its balance, and falls into the pool of enzymes, where it is slowly digested.

Beetles, ants, wasps, crickets, and flies are among the most common victims.

Botanical Name:
Lobelia cardinalis
Pronunciation: Loh-BELL-ee-ah kar-din-AL-iss
Common Name:
Cardinal flower
Family Name:
Campanulaceae (bluebell family)
Habitat: Wetlands areas
Range: Southern California to southern Utah and western Texas, north to eastern Colorado and the eastern U.S.
Bloom Period: July through October

Inhabiting moist shady slopes and sunny stream banks, the cardinal flower is one the West's most striking wildflowers. Named for its brilliant red color, which closely resembles the red of Roman Catholic cardinals' robes, the cardinal flower attracts hummingbirds that feed on the nectar and, at the same time, pollinate the flowers.

The irregular tubular flowers are bilaterally symmetrical with two lips. The upper lip splits into two lobes, while the lower lip is deeply divided into three lobes. The flower's stamens form a long filament tube around the style which extends beyond the corolla. Flowers are approximately two inches long and form dense racemes that have a velvety texture.

Cardinal flowers grow from basal rosettes and have unbranched stems. The leaves are two to six inches long, lance-shaped to oblong with irregularly toothed edges, and alternately arranged on the stems. The leaves are a deep green color and often have a bronze tint.

The botanical name, *Lobelia*, honors the Flemish botanist Matthias de L'obel, an herbalist for King James I. Native Americans prepared medicines from members of the genus *Lobelia* that were used to treat a variety of ailments including asthma, tetanus, hysteria, whooping cough, baldness, syphilis, and a strange disease called "suspended animation" by folk healers.

Cardinal flowers are not as abundant as they once were and they should never be picked or dug in the wild. Disturbing its natural wetlands habitat poses a serious threat to the cardinal flower. Protecting these habitats will ensure that this beautiful plant will flourish and delight generations to come.

FROM THE FIELD

Eco Expo, *March 12-14, Los Angeles.* Environmental trade show. **Contact:** 14260 Ventura Blvd., Suite 201, Sherman Oaks, CA 91423.

Riparian Ecosystems in the Humid U.S.: Functions, Values, and Management, *March 15-18, Atlanta.* **Contact:** Beverly Ethridge, U.S. EPA, Region VI, 1445 Ross Ave., Dallas, TX 75202, (214) 655-2263.

Wildflower Festival and Native Plant Sale, *April 3, Chattanooga, TN.* Sponsored by the Chattanooga Nature Center and Reflection Riding. **Contact:** CNC, 400 Garden Rd., Chattanooga, TN 37419.

Highland Lakes Bluebonnet Trail and Wildflower Show, *April 3-4, Buchanan Dam, TX.* **Contact:** Harold Steadman, (512) 793-6211.

How to Grow Wildflowers, *April 4, Los Angeles.* Historical Society of Southern California's annual Garden Open House. **Contact:** HSSC, 200 East Ave. 43, Los Angeles, CA 90031, (213) 222-0546.

Wildflower Days Festival, *April 17-18, Austin, TX.* Wildflower Center's annual Spring celebration. Wildflower walks, lectures, children's activities. **Contact:** NWRC, 2600 FM 973 N, Austin, TX 78725, (512) 929-3600.

Reintroduction Symposium, *April 20-22, St. Louis.* **Contact:** Marie M. Bruegmann, Center for Plant Conservation, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166.

Spring Wildflower Pilgrimage, *April 22-24, Great Smoky Mountains National Park, Gatlinburg, TN.* **Contact:** GSMNP, Gatlinburg, TN 37738, (615) 436-1262.

The Great Cover-Up Spring Affair, *April 24, Lincoln, NE.* **Contact:** University of Nebraska—Lincoln Botanical Garden & Arboretum, 1340 North 17th, P.O. Box 880609, Lincoln, NE 68588-0609, (402) 472-2679.

HOTLINES TO YOUR HEART!

As spring fills the air, many folks feel the need to find a place to commune with wildflowers. If you live in the southwestern United States, you're in luck. Four groups in California, Utah, Arizona, and Texas are sponsoring wildflower hotlines this year.

The Wildflower Center's annual Texas Wildflower Hotline will operate between March 20 and May 30. The approximately five-minute recorded message lists areas in Texas that have particularly strong stands of wildflowers. The message is updated once a week. Call 512-370-0000. After a short message, punch in 9500.

The Desert Botanic Garden in Phoenix, Arizona, will operate its recorded wildflower hotline from March 1 to April 30 this year, detailing wildflowers found in Arizona. To reach the pre-recorded message, which is updated once a week, call (602) 481-8134.

The Theodore Payne Foundation in Sun Valley, California, will operate its wildflower hotline from March 1 to May 30. Call (818) 768-3533 for a recorded message that's updated once a week. The Payne Foundation's hotline covers areas including the Anza-Borrega Desert State Park, Joshua Tree National Monument, Antelope Valley, the Santa Monica Mountains, and the San Gabriel Mountains.

Red Butte Gardens in Salt Lake City, Utah, operates its five-minute recorded hotline year-round. Areas covered in Red Butte's wildflower hotline include Zion National Park, St. George, Monument Valley, Lake Powell, the Wasatch Front, and the Moab area. Call (801) 581-4747.

(If you know of a wildflower hotline that wasn't listed, please contact the editor. We'd like a more complete list.)

WILDFLOWER OUTLOOK

Louisiana's Project Wildflower recently awarded prizes for the best roadsides in the state using native plants, according to the Lafayette, Louisiana, *Daily Advertiser*.

Project Wildflower and the Louisiana Department of Transportation and Development sponsored the competition, which pitted road crews from parishes across the state.

Late last fall, 100 science students at **Belton Middle School** in South Carolina planted a 4,500-square-foot meadow with local species. The meadow is part of a schoolyard wildlife habitat that will include shrubs to attract birds and butterflies, a forested trail, and a marsh.

Four towns in southwestern Minnesota have banded together to develop an economic base that celebrates the native prairie where they are located. Rose Creek, Adams, Taopi, and LeRoy, Minnesota, have created an organization called **"Prairie Visions"** to develop small businesses based on the local natural resources and agriculture.

Prairie Visions counts among its natural resources the remnants of the native prairie that still remain in the area, as well as the state's first wildflower highway route. The group has sponsored several special events, including festivals, to attract visitors to the area.

For more information on Prairie Visions, please call (507) 437-4058.

Don't be a stranger! Come vist us this Spring!

Please put us on your calendar this Spring. Come visit the Wildflower Center during the peak of our wildflower season.

As usual, the Wildflower Center will be open to visitors during the week from 9 a.m. to 4 p.m. Starting March 20, the Center will be open on weekends until to May 8. Weekend hours will be from 10 a.m. to 4 p.m. Our wonderful gift shop will be open for your shopping pleasure, and picnic tables are available for outdoor eating.

Remember our Wildflower Days festival April 17-18. The festival, the high point of our summer season, will feature wildflower walks, children's activities, and a native plant sale.

The Native Beauty of America Photo Contest

sponsored by the National Wildflower Research Center

Winners of this exciting photo contest will collect prize money—plus the First Prize photo in each category will be featured in the Wildflower Center's traveling exhibit. Enter now!

Photo Contest Rules:

1. The photo contest has two categories: (1) **Home or Commercial Native Plant Landscapes**, and (2) **Wildflower Vistas**.

2. Slides must predominantly feature native plants, and the predominant plants in the photos must be identified on the entry blank or on a separate sheet.

3. Photos will be judged on technical quality (sharpness, correct exposure), composition, originality, and relevance to the "Native Beauty" theme. Photos will be judged by Wildflower Center staff members and a panel of photography experts. The decisions of the Wildflower Center and its judges are final.

4. Entries must be submitted on duplicate 35mm slides or duplicate slides from 35mm prints. All entries must be received **no later than June 15, 1993.**

5. Contestants may enter as many times as they wish, but must pay an entry fee for each entry submitted. Entry fee for current members is $10; entry fee for non-members is $15.

6. Prizes will be awarded for first, second, and third places in both categories. First Prize winners will receive $250, Second Prize winners will receive $150, and Third Prize winners will receive $100. Winners will be notified by mail. To qualify to receive a prize, winners must sign an affidavit of eligibility and release. Employees, members of the Board of Trustees and the Advisory Council, and family members of the National Wildflower Research Center and its judges are not eligible to enter.

7. All slides become property of the National Wildflower Research Center, which may use the slides in its publications, educational programs, publicity efforts, and slide library. Contestants must know the names and addresses of any identifiable persons featured in the slides, who must also sign an affidavit of release without compensation. No slides will be returned. The National Wildflower Research Center cannot be responsible for lost, late, misdirected, damaged, or postage-due mail.

8. Do not mark your name on the slides. Your slide will be assigned a code number when it arrives at the Wildflower Center.

9. Mail your 35mm slide submission(s), fully completed entry blank, and a check or money order for the total entry fee (made payable to the National Wildflower Research Center) to: The Native Beauty of America Photo Contest, National Wildflower Research Center, 2600 FM 973 North, Austin, TX 78725.

Name: _____

Address: _____

City: _____ State: _____ ZIP: _____

Daytime phone number: ( ) _____

Current Wildflower Center Member: Yes ( ) No ( )

Number of entries submitted: _____

Total entry fee: _____

Plant(s) featured in the slide(s): _____

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Wildflowers Work!

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