



LADY BIRD JOHNSON WILDFLOWER CENTER

Educating people about the environmental necessity, economic value, and natural beauty of native plants.

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formerly National Wildflower Research Center

GRASSES—FROM THE GROUND UP

Terri M. Speckenthaler



Sorghastrum nutans (Indian grass);
Midwest and Southwest

By F. M. Oxley, Senior Botanist

As interest in natural landscapes grows, many home gardeners and landscape professionals are incorporating native plants into their gardens and designs. Native wildflowers, trees, vines, and shrubs are viable options to the non-native species we have traditionally used, but when was the last time you thought about your ground cover? In our enthusiasm for native landscapes, we often forget one of the most important components of that landscape: *grasses*.

Grasses form one of the largest plant families, the Poaceae or, as it is sometimes known, the Gramineae. Containing

approximately 650 genera and 9,000 species, the Poaceae are the most ecologically dominant plant species. They occur in nearly every habitat and are economically important throughout most of the world. Virtually every society relies on one or more grass species as a staple food crop. Corn, for example, is a grass crop used widely in the Americas.

Grasses are critical to the function of our ecosystems. They provide support and protection for wildflowers and fill in spaces that would otherwise be occupied by weed species. Their fibrous root systems aerate and stabilize the soil, preventing erosion. They also provide food and cover for wildlife. Grasses keep on giving, even after they die. Their decomposing stems and leaves are recycled back into the ecosystem, providing soil-building compost and nutrients other plants use during their life cycles.

Think about the ways we use grasses in our landscape today. In most of North America, grasses fill a cultural niche as well as an ecological niche. Native grasses can function as well as exotic species in just about any situation. Individually, or with other native plants, they bring great natural beauty to any setting by adding color and texture to the landscape. Wiggle-your-toes soft grasses are the stuff of childhood memories, of games with the neighborhood kids and lazy afternoons under the shade tree. A lush green lawn is beautiful. Native grasses can meet a variety of landscape needs—and do so much more.

How do grasses grow?

Grasses can be either mat-forming or bunch-forming. Buffalo grass (*Buchloë-dactyloides*), a mat- or sod-forming species, spreads by runners or stems that grow horizontally along the ground, putting roots down as they grow. Unlike non-native turf grasses, such as St. Augustine and ryegrasses, which are too competitive to allow other plants to become established, many native sod grasses grow in a loose matrix that easily allows room for wildflowers.

continued on page 3

WHAT'S UP? *Celebrating Wildflowers Hotline*

Members of the Native Plant Conservation Initiative have joined forces to help you find the best wildflower displays on our federally managed lands. Just call the Celebrating Wildflowers Hotline at 1-800-354-4595 for a 5-minute recorded message about native plants blooming on public lands across the country. The hotline is updated weekly.

Director's Report



It is always a pleasure to share great news with our members.

This report brings not only great news, but news that is unprecedented—news that The Brown Foundation, Inc. of Houston has pledged \$5 million to the Lady Bird Johnson Wildflower Center's Endowment Fund. Our largest endowment gift to date, this pledge will be funded over a five-year period, bringing gifts and pledges received to a total of \$9 million toward our \$25 million endowment goal. While many staff and board members worked to secure this pledge, I particularly want to thank our Board President Ellen Temple and Endowment Consultant Martha

Farmer for their initiative in this achievement.

The Brown Foundation supports and encourages education and arts in the state of Texas, and has granted charities more than \$500 million in its 46-year history of philanthropic giving. The Foundation funds projects that will add significantly and lastingly to community resources. Earnings from the Foundation's gift to the Wildflower Center will endow the Brown Center for Environmental Education at our Austin, Texas, headquarters, funding education activities at this location and other education programs that reach the people of Texas.

The long-term results of the pledge will transfer to regions beyond Texas. By enabling the Center to create innovative programs that help people to discover the importance and beauty of native flora, programs developed through

the Brown Center for Environmental Education will serve as the model for the Wildflower Center's national programming.

The Wildflower Center takes seriously our responsibility—and mandate—to be a major force for native plant conservation and reestablishment throughout North America. The staff, volunteers, and members share the belief that native landscaping and an appreciation for our natural heritage can and should be as significant a movement in the next decade as recycling has been in the 1990s. We have the opportunity to teach a new land ethic and I am most grateful to the Brown Foundation for extending our reach towards this endeavor.

Robert Glass Breunig, Ph.D.
Executive Director

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Lady Bird Johnson
Helen Hayes

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A Wildflower Fantasy

The Lady Bird Johnson Wildflower Center's annual Gala fundraiser, May 2, honored our founder for her devotion to the land she so loves, and celebrated the Center's recent name change.

As America's First Lady, Mrs. Lyndon B. Johnson became a gentle yet persistently persuasive advocate for our nation's landscape. Mrs. Johnson inspired millions of Americans to reclaim regional landscapes, beautify roadsides and highways, and preserve the environment.

Gala chairs Alex and Gabrielle Sheshunoff hosted more than 350 guests for *A Wildflower Fantasy*. The evening's program included comments from Ellen Temple, board president; Lowell Leberman and Maline McCalla, members of the Board of Directors; and Larry Temple and Alex Sheshunoff, benefactors. Luci Baines Johnson and her son, Lyndon Nugent, presented

Mrs. Johnson with the new Lady Bird Johnson Wildflower Center flag while a kilted Scotsman played "America the Beautiful" on the bagpipes.

Texas singer/songwriter Jerry Jeff Walker and the Gonzo Compadres entertained the Gala guests following a sumptuous Texas-style dinner prepared by the chefs at Austin's Four Seasons Hotel, with wine provided by the Robert Mondavi Wineries of California.

A pre-gala luncheon featured internationally-acclaimed garden designer, Penelope Hobhouse, who recently designed a garden in honor of the Queen Mother's 95th birthday. Hobhouse's new book, *Natural Plantings*, promotes the use of indigenous plants in planned landscapes. Her presentation provided guests with a glimpse into native plant gardens across North America and Europe.

Special thanks for an immensely successful fund raiser go to Gala chairs Gabrielle and Alex Sheshunoff, the Austin committee, and to friends, old and new, who contributed so much in support of the Wildflower Center.

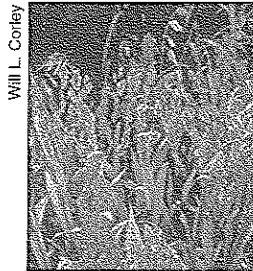
GRASSES

CONTINUED FROM PAGE 1

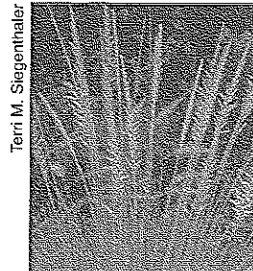
Bunch grasses, such as little bluestem (*Schizachyrium scoparium*), grama grasses (*Bouteloua* spp.), and muhly grasses (*Muhlenbergia* spp.), grow in distinct clumps or tufts. The open spaces between native bunch grasses provide gaps within which wildflowers can become established.

Perennial grasses, such as big bluestem (*Andropogon gerardi*), return each year from their rootstocks, while annual grasses, such as poverty dropseed (*Sporobolus vaginiflorus*), must re-seed themselves.

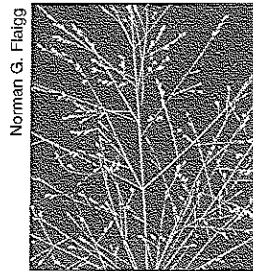
Cool-season grasses grow in the early spring, from late March to early June. As they mature in late spring or early summer, the cool-season grasses produce and disperse seeds, and then become dormant during the hot summer months.



Chasmanthium sp.
(Inland sea oats);
Southwest and
Mid-Atlantic states



Muhlenbergia lindheimeri
(Lindheimer muhly);
Southwest



Panicum virgatum
(Switchgrass);
Southeast

Growth usually resumes during the cool fall months.

Warm-season grasses, on the other hand, grow during the late spring, producing most of their foliage in midsummer, and continuing until the early fall.

Because grasses are wind-pollinated, grass flowers do not rely on birds or insects for pollination. They are extremely specialized to take advantage of any small breeze. The sepals and petals are very small, inconspicuous scales, and the flow-

ers are protected by modified, boat-shaped leaves called *bracts*. The anthers produce copious amounts of air-borne pollen to ensure that at least some of it reaches a compatible flower. The stigmas are feathery, enabling them to catch as much pollen as possible.

Consider these species when planning for native grasses in your landscape

NORTHEAST

<i>Bromus kalmii</i>	Prairie brome, wild chess
<i>Danthonia spicata</i>	Poverty grass
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Sorghastrum nutans</i>	Indian grass
<i>Sporobolus heterolepis</i>	Northern dropseed

MID-ATLANTIC

<i>Andropogon virginicus</i>	Broom sedge
<i>Arundinaria gigantea</i>	Giant cane
<i>Chasmanthium latifolium</i>	Inland sea oats, wild oats, river oats
<i>Elymus canadensis</i>	Canada wild rye
<i>Eragrostis spectabilis</i>	Purple lovegrass, tumblegrass
<i>Tripsacum dactyloides</i>	Eastern gamagrass

SOUTHEAST

<i>Andropogon ternarius</i>	Splitbeard bluestem
<i>Eragrostis spectabilis</i>	Purple love grass, tumblegrass
<i>Hystrix patula</i>	Bottlebrush grass
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Tripsacum dactyloides</i>	Eastern gamagrass

MIDWEST

<i>Andropogon ballii</i>	Sand bluestem
<i>Hystrix patula</i>	Bottlebrush grass
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Sorghastrum nutans</i>	Indian grass
<i>Stipa spartea</i>	Porcupine grass

ROCKY MOUNTAINS

<i>Aristida longiseta</i>	Red threeawn
<i>Bouteloua gracilis</i>	Blue grama
<i>Deschampsia caespitosa</i>	Tufted hairgrass
<i>Hierochloë odorata</i>	Sweet grass
<i>Poa alpina</i>	Alpine bluegrass
<i>Stipa comata</i>	Needle-and-thread grass

NORTHWEST

<i>Agropyron spicatum</i>	Bluebunch wheatgrass
<i>Calamagrostis canadensis</i>	Blue joint grass
<i>Elymus glaucus</i>	Blue wild rye
<i>Festuca idahoensis</i>	Idaho fescue, blue bunchgrass
<i>Koeleria macrantha</i>	June grass
<i>Trisetum spicatum</i>	Spike trisetum

SOUTHWEST

<i>Andropogon gerardi</i>	Big bluestem, turkeyfoot
<i>Bouteloua curtipendula</i>	Sideoats grama
<i>Chasmanthium latifolium</i>	Inland sea oats
<i>Elymus canadensis</i>	Canada wild rye
<i>Muhlenbergia lindheimeri</i>	Lindheimer muhly
<i>Sorghastrum nutans</i>	Indian grass

CALIFORNIA

<i>Agrostis scabra</i>	Ticklegrass, fly-away grass
<i>Bromus carinatus</i>	California brome
<i>Distichlis spicata</i> var. <i>spicata</i>	Seashore saltgrass
<i>Festuca californica</i>	California fescue
<i>Hierochloë occidentalis</i>	Vanilla grass
<i>Melica imperfecta</i>	Coast range melic

ALASKA

<i>Agrostis exarata</i>	Spikebent, spike red top
<i>Arctagrostis latifolia</i>	Polar grass
<i>Danthonia intermedia</i>	Timber oatgrass
<i>Elymus mollis</i>	American dune grass, beach wild rye
<i>Hierochloë odorata</i>	Sweet grass
<i>Pbleum alpinum</i>	Alpine timothy

Grasses are an essential component of any healthy ecosystem, and they bring a unique beauty to the landscape. Call your favorite native plant nursery or call the Wildflower Center Clearinghouse at 512-292-4200 for more information about native grasses in your area.

A Harvest on Your Own Collecting & Storing Seeds

This time of year, many flowers have bloomed and their seed heads are heavy. Have you considered harvesting your own seeds for next season's wildflower gardens? All it takes is careful observation, a gentle touch, and plenty of patience.

Planning for harvesting begins when wildflowers are in full bloom. There are a number of ways to collect seeds; it all depends on the plant.

The Site

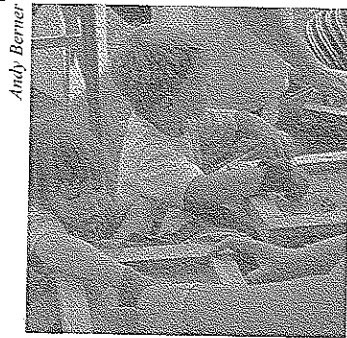
- If the plants are on someone else's property, be sure you have permission to collect the seeds before you walk into the garden or meadow. Investigate sites that are being developed, such as new construction or highway expansions.
- Plants growing on federally or state-owned public lands are often protected by law. Ask before you harvest.

The Plants

- Plan to harvest seeds from about five percent of the plants, leaving enough for the healthy stand to re-seed naturally and continue thriving.
- Know the species you are harvesting. Do not harvest seeds from an endangered, rare, or unknown species.
- Avoid plants that have signs of disease or insect damage.
- After identifying good plant prospects, use a thin slip of plastic tape or ribbon tied loosely to the stem (or simply note a nearby landmark) to mark the plants you want use as a seed source.
- Begin collecting when the seeds are mature. Mature fruits and seeds are usually dark in color, firm, and dry.

The Tools

- Gloves, boots, and pruning shears; cheesecloth, screen, or tray, paper or canvas bags (never plastic), and twine.



Andy Berner

Screen cleaning *Penstemon* ssp.
It's easy for all ages.

Harvesting the Seeds

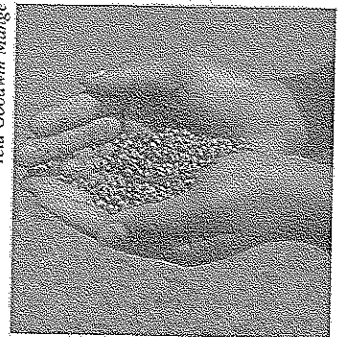
- Many seedpods or capsules *dehisce*, or open and spill their seeds, when ripe. Try inverting cheesecloth over the blooms and tying it around the plant stem with twine. The cheesecloth allows air to circulate around the plant to dry the seeds, then collects them as they fall from the plant. Be familiar with the seeds you seek. Certain seeds are so tiny that they will fall through the cheesecloth. If that is the case, use paper instead.

- Collect pods just before the seed pods turn brown and dehisce.

Lay pods in a single layer on a thin canvas, screen, or tray elevated above the ground. Air-dry the pods for up to three days. When the pods split open, collect the seeds, and store them in a breathable container in a cool, dry place.

- Threshing works well with some small-seeded plants. Simply rub the collected pods across a coarse screen. This breaks the seedpod and allows seeds to separate from the chaff and filter through the screen. Besides cleaning the seed, threshing removes seed predators, such as insect eggs or mold spores, from the seed inventory.

Teta Goodwin Mänge



Seeds to fill a garden full of *Lupinus texensis*.

Storing the Seeds

- Store seeds in a cool, dry, dark place. It varies, but a general rule for dry seed storage is 50 degrees Fahrenheit and 50% humidity. Constancy is key.
- Store the seeds in paper bags to allow air circulation and prevent molding.
- Seed longevity varies from species to species. Some seeds may remain viable for up to ten years; others may last in storage for only a year or two. Ideally, seeds harvested should be planted the following season.

(If working with fleshy fruit seeds, harvest the seeds when the fruit is ripe, and plant the seeds immediately. If the seeds dry out, they may germinate early, or not at all.)

There are a number of books available about seed harvesting. Visit your local library or native plant society, or call *Wild Ideas: The Store* at 512-292-4300 for mail-order suggestions.

Andy Berner



ROCKEFELLER COMMISSIONS Mrs. Johnson's Portrait

Laurance S. Rockefeller commissioned this portrait of Lady Bird Johnson, which now hangs in the lobby of the Center's auditorium.

Artist Raymond Kinstler, one of America's foremost portraitists, painted the official presidential portraits of Gerald Ford and Ronald Reagan. Mr. Rockefeller presented the portrait to Mrs. Johnson during a visit

to the LBJ Ranch.

F A R M S C A P E S

Farmscapes are gaining popularity in California's farming systems as many growers come to recognize the value of increasing biodiversity on their land. Whether planted as hedgerows, windbreaks, or strips of native plants, farmscapes usually consist of annual and/or perennial non-crop species planted adjacent to cropped fields. Growers often use native species in farmscapes, emphasizing plants that attract and nourish beneficial insects. (For more information, please call the Center for Agroecology at 408-459-4140 or 408-459-3240.)

Excerpted from The Cultivar, reprinted with permission.

From ^{the} **f i e l d**

NORTHEAST

Little Compton, RI: *Natural Areas as Design Examples*, July 17
Contact: The New England Wild Flower Society, 180 Hemenway Road, Framingham, MA 01707; (508) 877-7630
Conway, MA: *Selecting a Native Plant Palette*, August 21-23 Contact: Conway School of Landscape Design, PO Box 179, Conway, MA 01341-0179; (413) 369-4044

MID-ATLANTIC

Baltimore, MD: *Ecological Exchanges Between Major Ecosystems*, August 2-6
Contact: ESA Program Chair, Fred Wagner, Ecology Center, Utah State University, Logan, UT 84322; (801) 797-2555
Baltimore, MD: *7th Annual Native Plant Seminar and Sale*, August 29
Contact: Irvine Natural Science Center, St. Timothy's School, 8400 Greenspring Avenue, Stevenson, MD 21153; (410) 484-2413

SOUTHEAST

Atlanta, GA: *Moss Gardening*, July 14
Contact: Georgia Native Plant Society, PO Box 422085, Atlanta, GA 30342-2085; (770) 343-6000
Athens, GA: *Tree Identification*, August 5
Contact: The State Botanical Garden of Georgia, 2450 South Milledge Avenue, Athens, GA 30605-1624; (706) 542-6156

NORTH CENTRAL/MIDWEST

Lake Itasca State Park, MN: *3rd Annual Native Orchid Conference*, July 8-11
Contact: North American Native Orchid Alliance, PO Box 772121, Ocala, FL 34477-2121
Chanhassen, MN: *Prairie Day*, August 8
Contact: Minnesota Landscape Arboretum, 3675 Arboretum Drive, Chanhassen, MN 55317; (612) 443-2460
Morgantown, IN: *Seed and Plant Sale*, August 29 Contact: Indiana Native Plant and Wildflower Society; (317) 290-0612

OKLAHOMA/TEXAS

Houston, TX: *Wonderful Wetlands*, July 20-23 Contact: Houston Arboretum Nature Center, 4501 Woodway Drive, Houston, TX 77024-7774; (713) 681-8433

Austin, TX: *16th North American Prairie Conference*, July 26-30 Contact: Paul Twigg, Ph.D., University of Nebraska at Kearney, NE 68849-1140; or e-mail to twiggp@platte.unk.edu

ROCKY MOUNTAINS

Crested Butte, CO: *Crested Butte Wildflower Festival*, July 6-12
Contact: Dana Spencer, (970) 349-7153, or (970) 349-2571
Gunnison, CO: *Beginning Grass Identification Field Trip*, July 18
Contact: USFS Office Gunnison, CO; (970) 641-6264
Jackson Hole, WY: *Preserving Wildflowers Workshop*, August 15
Contact: Teton Science School Natural History Seminars, PO Box 68, Kelly, WY 83011; (307) 733-4765

SOUTHWEST

Santa Fe, NM: *2nd Annual Hummingbird and Butterfly Festival*, August 15-16
Contact: Santa Fe Greenhouses, 2904 Rufina Street, Santa Fe, NM 87501; (505) 473-2700 or (800) 492-7885

NORTHWEST

Eugene, OR: *American Penstemon Society Annual Meeting*, July 5-6 Contact: Ann Bartlett, American Penstemon Society; (303) 986-8096
Richland, WA: *Mt. Ellinor Native Plant Hike*, July 12 Contact: Douglasia, 2214 Camas Avenue, Richland, WA 99352; (360) 732-4984

CALIFORNIA

San Marino, CA: *National Cactus & Succulent Show*, July 11-12 Contact: The Huntington Library, Art Collections and Botanical Gardens, 1151 Oxford Road, San Marino, CA 91108

Many of these organizations host a number of native plant workshops, activities, and events through the season. Please contact them directly for a full calendar of local events or visit our web site at www.wildflower.org for more information. If there is a native plant event that we should include on any of our web listings, please call (512) 292-4200 x 114 or e-mail ATTN: Editor, wildflower@wildflower.org and share your news!



A flowering field trip

For weeks an invitation from the DeWitt County Wildflower Association to visit Cuero, Texas and surrounding lanes and byways in April, lured me. Happily, I gave into self-indulgence!

My adventure began in an intriguing home built in 1850, headquarters of the Cuero Historical Society, where each April the Society allows the Wildflower Association to be its tenants. Such cooperation enriches community life, and I rise in salute.

There I found some 150 specimens of wildflowers displayed in a stunning collection of antique glass bottles. In among the many familiar "faces," I made the acquaintance of new ones, like prairie brazoria and huisache daisies.

We departed in the company of Mrs. Merle Bramlette to explore the countryside. Our good fortune—she knew every flower! I invited her to share the lunch we had packed and she suggested we picnic in the almost deserted town of Lindenau in an old German dance hall. Three neighbors joined us, regaling us with tales about the history of the area.

"Dessert" was a one-lane dirt road far away from any community where we stopped many times to take pictures and short walks, delighting in our discoveries. Especially memorable (and unknown to me) were five-foot-tall ruby red wine cups climbing the barbed wire fences. In the sun's reflection, they gave the impression of stained glass.

Searching out nature's gifts in the countryside somehow leads me to simpatico people with interesting stories. Perhaps it's just that delight in life, like delight in nature, is contagious, linking us to the inner prosperity of the human spirit.

Lady Bird Johnson

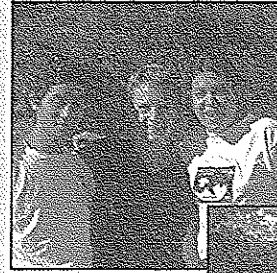
You Made it Possible: The National Internship Program

Internships are among the best tools for providing practical experience to college students. During the summer of 1997, the Wildflower Center looked to our members for support for the developing National Internship Program. We are pleased to report that our first year's program has been a true success.

Last February, five energetic university students joined the Wildflower Center staff through the National Internship Program. With majors ranging from

horticulture to botany, the interns spent a "semester among the wildflowers," working in every aspect of gardens and grounds management, adult and children's programming, festivals, conferences, publications, and general Center operations. Their professionalism and commitment was of the highest caliber and their enthusiasm was infectious. Although their internships end in late June, we look forward to staying in touch with each of them as their careers progress.

The staff and interns join together thanking you for your vision for the future. Your contributions continue to shape a new generation of environmental stewards.



Our interns
(from left to right)

Troy Sayakumane,
Amarillo, Texas;
Kim Ulmer,
Annapolis, Mary-

land; and Catalina
Wenholz, Cali, Colombia, South America; and
(inset) Elisa Lewis, Austin, Texas; and Scott
Egan, Humble, Texas.



Join Us! You may join as a new member, renew your membership, or give the gift that lasts a full year. Simply fill out this form and mail with a check or your credit card information. Members receive many benefits, but most importantly, membership supports the Wildflower Center's many education programs.

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Supporting (\$60) (includes lunchbag!)

Call (512) 292-4200 ext. 137 for more information on membership levels and benefits. Thank you for your support.



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