

WILDFLOWER

Newsletter of the National Wildflower Research Center

Vol. 1, No. 3, Fall 1984

Lady Bird Looks Forward to Fall's Activity

As the lazy days of summer draw to a close here in Austin, I find the annual "back to school bustle" infectious — this in spite of the many years it has been since I was in the classroom! September has always signaled a time of new beginnings, challenges and hopes for me. Such is also the scene at the National Wildflower Research Center.

- In late August the Scientific Advisory Committee met to discuss the Center's research program. This volunteer group, composed of dedicated scientists and landscape professionals from across the country, generously spent two days examining our progress to date and gave us constructive advice.

- With our year's plans in place, activity increases as we prepare for September and early October plantings and harvesting expeditions to collect seed from summer and fall blooms.

- Work is beginning on a greenhouse, a needed and welcome addition to our research facilities. I can't wait to see it up and full!

- A summer planting of native buffalo grass around the new building has a good start in spite of the continued drought.

- Valued friends are being made as we welcome and train some new volunteers (20 from the Junior League of Austin) to help meet the needs of our growing Center.

- The national test mailing offering membership in the Center is underway. What a great relief to finally get that massive project "in the mailbox" — the next few weeks are ones of nervous anticipation waiting to find who and where



The Center's Scientific Advisory Committee met August 25 and 26 at the LBJ Ranch. Left to Right are Craig Steffens, John Thomas, G. Michael Alder, Dr. David Northington, Jack Robinson, Lady Bird Johnson, Dr. B. L. Turner, Dr. Wayne G. McCully, Dr. Ed McWilliams, Dr. J. R. Goodin, Dr. Robert Cook and Kathryn Kennedy. See Story page 2.

our constituency are.

With a quiet summer of steady progress and planting time now at hand, everyone is eager to move forward and hopeful that we will find these last months of 1984 very productive!

Lady Bird Johnson

Gardeners Celebrate a Decade of "Operation Wildflower"

Operation Wildflower is a program that runs on people power. Begun in 1973 as an enthusiastic effort to restore natural beauty to our countryside, the program has grown into a highly organized national project.

"When this program was started, it was thought that one could throw out some wildflower seeds along the highways and they would grow," said Mrs. C. Norman Collard, chairman of Operation Wildflower.

"We have learned that it isn't that easy and there isn't very much material available on growing wildflowers," she said.

The program was actually the brainchild of Aileen Roads and other members of a Tulsa Garden Club in 1972. They visited the Oklahoma Highway Commission with the suggestion that the state garden club help beautify the roadside by

donating wildflower seed. At that time the commissioners agreed to initiate a delayed mowing program required to give the native wildflowers the opportunity to go to seed and spread.

The idea quickly gained national attention and soon after it was endorsed by the National Council of State Garden Clubs, the parent organization of all Federated Garden Clubs. They in turn took the idea to the Federal Highway Administration and to the Department of Transportation. In December of 1973 the Federal Highway officials announced the implementation of Operation Wildflower on a national level.

Since then the program has been a coalition of members of Federated Garden Clubs and state highway officials working together to promote the propagation and growth of wildflowers along highways constructed with federal funds.

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Memo from the Director

One of the most rewarding aspects of my job is the opportunity to periodically report on the Center's progress. Significant advances are being made both in terms of projects completed and exciting plans developed for future activities.

Thanks to the continued generosity of many of our Trustees, members and other enthusiastic wildflower proponents, the equipping and furnishing of our new facility has made it possible to work more efficiently and to respond more quickly to the many inquiries that arrive daily. In response to our "We Need Your Help" box in our Spring issue of *Wildflower*, we now have adequate file and shelf space as well as additional furniture, a computer work station and a slide projector.

The first test mailing for our direct mail membership program has been sent, our new brochure is finished, and we are developing an audiovisual slide show as part of our educational program. If funding becomes available, the slide show could be converted into a video tape to be used by interested groups to learn about the utility of wildflowers.

Another important event has also occurred this summer; the first meeting of our newly formed Research Advisory Council took place in late August. This impressive group of experts met to discuss priorities for this year's research and to aid in the development of long term research goals. The consensus was unanimous — the National Wildflower Research Center has a unique opportunity to coordinate and conduct needed research on the establishment and maintenance of wildflowers and to investigate their utility in a variety of landscaping and native habitat settings.

Special thanks go to the members of our Research Advisory Council who have provided expert and sound advice and offer continued cooperation in the development of the National Wildflower Research Center's research goals. This group includes: Mr. G. Michael Alder, Vice-chairman, Native Plants Inc.; Professor E. Arthur Bell, Director, Royal Botanic Gardens, Kew, London; Dr. Robert E. Cook, Director, Cornell Plantations; Dr. Donald Duckworth, Director, Bishop Museum, Honolulu; Dr. J. R. Goodin, Chairman, Department of Biological Sciences, Texas Tech University; Dr. Tom J. Mabry, Chairman, Department of Botany, University of Texas/Austin; Dr. Wayne G. McCully, Range Scientist, Texas Transportation Institute, Texas A&M University; Dr. Ed McWilliams, Department of Horticulture, Texas A&M University; Dr. Peter H. Raven, Director, Missouri Botanical Garden; Mr. Jack W. Robinson, Director, Department of Parks and Recreation, Dallas; Mr. Craig Steffens, Supervising Architect, Texas Department of Highways; Mr. John R. Thomas, President, Wildseed, Inc.; Dr. B. L. Turner, Director, Plant Resources Center, University of Texas/Austin; and Dr. Grady Webster, Department of Botany, University of California/Davis.

We are only a few weeks away from the seeding of our research plots. Every day is hectic and full as we lay out the plots, prepare the ground, measure the seeding mixtures, and make other plans for the continuing field research effort. In addition, our small seed separator is busy sorting the results of the summer harvesting and we have completed our "hay spreading" designed to study the effectiveness of that method of spreading wildflowers.

So, as you can see, we are busy and excited by the amount of progress we have made in the 21 months that the National Wildflower Research Center has been in operation.

We are especially pleased and proud that our activities are being so strongly supported by the very people who are the most interested in the results — the general public. As this support continues to grow, the more we will be able to promote the reliable and successful use of wildflowers.



Dr. David K. Northington

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Operation Wildflower

The basic working pattern of Operation Wildflower is that the garden clubs cooperate with state highway departments by contributing ideas on wildflowers, seeds or plants, or money for seeds. In turn, the highway departments contribute land, labor, expertise, maintenance and partial funds.

In addition, the highway departments have the option of using federal money for wildflower seeding as an element of erosion control or in association with landscaping projects as part of the planting process.

In the decade since the inception of Operation Wildflower, many highway officials have come to appreciate the program. The use of wildflowers has significantly decreased the cost of landscaping in many areas. Other benefits include seasonal color, erosion control, restoration of the native environment and protection of wildlife.

From the standpoint of environmentalists, there is some small victory in the fact that the highway rights-of-way have become strongholds for these hardy and beautiful native plants and flowers. These areas near and between highway roads are among the last major refuge for America's indigenous wildflowers. Extensive cultivation, grazing and development have removed lower growing native vegetation from much of the land.

According to Mrs. Collard, "We have accomplished a great deal since the program was started. Many states are beginning to see results of their efforts and more research is being done on wildflowers."

Through the National Council a plan was developed to hold regional workshops for participating garden clubs. In these workshops a complete program was presented, usually at a time when wildflowers of the area are at their best. The workshops are funded by the National Council, and are run by National Operation Wildflower leaders. Generally, the workshops include an explanation of how to begin an Operation Wildflower program in a given area, recommendations of where to get information on native plants and flowers, suggestions of areas to discuss with highway officials, a luncheon and a wildflower field trip.

"We had 27 workshops during the past two years and I think most of the federations are planning a workshop during this (three-year) administration. The National Council helps fund the workshops up to \$500 from royalties received with the endorsement of wildflower linens by Spring Mills and sold in J. C. Penney stores," Mrs. Collard said.



Mrs. C. Norman Collard,
Chairman,
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WHY WILDFLOWERS?

Buffalograss—a Water-Saving Turf

Looking for a low maintenance, drought tolerant grass, compatible with wildflowers? Buffalograss (*Buchloe dactyloides*) may be the answer.

Native to the subhumid and semiarid regions of the Great Plains, it was buffalograss sod that built most pioneer's sod houses. Homeowners are finding buffalograss useful again. It is a warm season turfgrass that is heat tolerant, and cold tolerant. It has outstanding drought tolerance, as it has the ability to go dormant during water stress periods. Once established it is low maintenance, requiring little mowing, weeding or watering. Buffalograss has fair spring green up time and fall color retention. It forms a fine textured soft, gray green turf during the growing season. Longer leaf blades curl, and can be left to form a handsome ripple textured beige surface in the winter months. This wonder grass reaches only about 6 inches in height. It does not suffer from pests or disease unless it is over watered or fertilized. It will not tolerate shade, however.

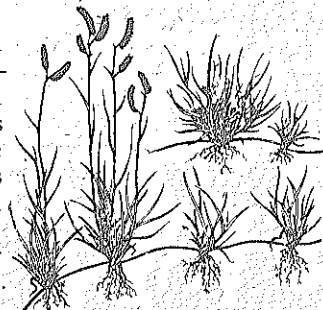
The plants are usually dioecious, (producing male and female flowers on separate plants) and spread by runners. The seeds are enclosed in heads that are hard to separate, and it is marketed as burs that contain one or two seeds each.

Buffalograss has been hard to grow from seed due to poor germination, but recently developed chemical treatment techniques have overcome the problem. Be sure to use treated seed.

Because it is slow growing, it may take a couple of seasons to form a dense turf, but it is worth the wait! Supplemental irrigation will help speed thickening, but don't overwater.

Planting months are March through June, as 70 degrees minimum soil temperatures are needed for germination. Several months of vigorous growth are desirable before winter, so that the plants are hardy enough to withstand the cold.

Prepare the seedbed, as for any lawngrass. Seed using 2 lbs. treated seed per 1000 square feet. Roll lightly. Water, if possible, during early growth, then occasionally until thick.



Buffalo Grass
Buchloe dactyloides

Center's Research Looks at Interseeding

There are many questions about wildflowers that enthusiasts and professional landscapers are asking. Installation costs are a major concern.

The feasibility of establishing wildflowers as a landscape option for large tracts will be dependent on the expense of installation. After new construction, where bare soil is planted, installation methods and costs can be comparable to, or even cheaper than, those of using other ground covers. In areas where some vegetation is already established, however, the costs of eradicating existing plantings and starting over from the bare soil state are prohibitive. For this reason there has been a great deal of interest in interseeding techniques, that is, planting seed into areas with existing vegetation. If successful seed mixes and techniques can be developed for interseeding, the potential for using wildflower landscapes is increased. The need for such research is recognized.

The initial studies of the Center focus on interseeding techniques. We are fortunate to have received generous donations of seed. As a result, we have put in 27 long term plots using 5 commercially available seed mixes blended for the Texas area and 9 individual species. We are looking at the success of different planting techniques such as hand broadcasting, using a cyclone seeder, and a grain drill.

At the LBJ Ranch, we have put in test plots to investigate the use of a planting technique called wildflower haying. When the seed is ready a swath is cut through an existing stand of wildflowers and the resulting mulch containing the seed is gathered and spread in a new location. This technique is being tested to establish optimum application rates of the mulch, as Highway departments frequently use this method.

In addition, we have a few test plots in to evaluate the effects of seed scarification (roughening the seed coat), hot water soaking, and the application of an inoculant to the seed of the Texas Bluebonnet to see if germination and establishment can be improved.

This spring, we were able to start an experiment using native grasses and wildflowers around the Barton Creek Square Shopping Mall area in Austin. We will be trying both spring and fall plantings on the site, which has soil and microclimate typical of the Texas Hill Country. This is a different environment than that of the Center, which has sandy loam soils more related to the Prairie and Cross Timbers Region of Texas.

Our first season has been a hard one for scientific research. We have suffered through an unusually severe season in every sense. Normally, Austin has mild winters with only occasional light freezes. This year we set record low temperatures. Then Spring eluded us with unseasonably high temps and little rain. The wildflowers, which had germinated well, were hard hit by this combination. As a result, our blooming season was sparse and many of the plants could not gather together the resources to flower. In spite of it all, many of the techniques show promise, and our observations during these extreme conditions are very valuable. We have found several species that were surprisingly hardy, and gained a great deal of useful information about the ability of others to maintain themselves over stressful conditions.

We are planning on beginning some experiments with native grasses this growing season, as well as investigating a few new species, setting up co-operative research projects with other institutions and agencies and using our new laboratory facility to do some investigation of germination requirements.

Center's Message Carried Far and Wide

A variety of groups kept Mrs. Johnson and the Center staff busy this summer with speaking engagements. Fourteen presentations were made in four states, Canada, and England to groups including the American Association of Botanical Gardens and Arboreta, the American Association of Nurserymen, Grocery Men of America, the Native Plant Society, Garden Clubs, Kiwanis and Rotary Clubs, Girl Scouts, Water Conservation and beautification seminar participants, and hospitalized youths.

The Center also hosted meetings of the local members of the American Society of Landscape Architects, the Texas Highway Beautification Awards Selection Committee, and University classes.

The coming months look just as busy, with more than 17 requests in hand. Just in the nick of time to help deal with this need, a speaker's bureau is being formed with trained volunteers to extend our capabilities. Our new slide show will really be getting a workout!

Support for the Center Comes In a Multitude of Forms

A few notes about our progress since January:

- (1) The Founders Fund, an effort to support the capital fund and endowment needs of the Center, has received commitments of over \$500,000. Special gifts of note to this fund will be listed in the end-of-the-year issue of *Wildflower*.
- (2) Boone Pickens, Dee Kelly, Bob Lanier and Senator Lloyd Bentsen are among those hosting Lady Bird Johnson for Texas gatherings to seek capital fund endowment support for the NWRC in the next few months.
- (3) Our first professional effort to have a national membership has been initiated with a direct mail effort in early September. Support for this effort was received from the Lila Acheson Wallace Fund. Approximately 100,000 pieces of mail have been delivered.

For those interested in being members of the National Wildflower Research Center, please contact us about the benefits offered through this program.

Our current charter members who inadvertently receive an additional membership invitation are asked to pass along the information to an interested friend and please understand computer limitations!

- (4) An exciting New York benefit is being planned for mid-May 1985. Those beginning work on this effort include Mr. and Mrs. Laurance Rockefeller, Brooke Astor, Mary Lasker, Enid Haupt and Warrie Lynn Price.
- (5) Among those foundations recently supporting the goals of the Center are the Engelhard Foundation, Kleberg Foundation, Houston Endowment, the Brown Foundation and the Eugene McDermott Foundation.
- (6) Plans are underway for a coordinated print and media public relations campaign to educate citizens about the National Wildflower Research Center.
- (7) A memorial and gift program has been formally initiated. (Please see this information elsewhere in *Wildflower*).
- (8) Recent gifts of furniture, equipment, shelving, vehicles, and fencing have been gratefully received. (Donors will be listed in our special issue in December.)

Honor a Special Friend

By your gift to the NWRC, you can establish a memorial or give a special birthday, anniversary or graduation present. We will acknowledge your gift and notify the honoree or family of your thoughtfulness.

PLEASE TYPE OR PRINT:

This gift is to honor: _____

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We Need Your Help

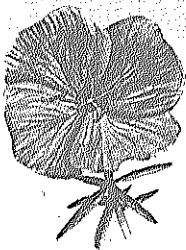
The Center still needs a variety of office, research and clearinghouse items. Information from our readers still tops the list! Your knowledge about wildflower projects, research and organizations working with wildflowers would help us build our library of references.

We also still need two IBM correcting selectric typewriters, a cassette tape recorder, a small gas lawnmower, a large riding mower/garden tractor with a clippings catcher and other attachments, a three wheel ATC with trailer and spraying attachment, a gasoline powered weed eater and a table saw. These items are tax-deductible as gifts.

If you can help us with any of the above, please call us at 512-929-3600, or write the National Wildflower Research Center, 2600 FM 973 North, Austin, Texas 78725.

National Wildflower Research Center

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