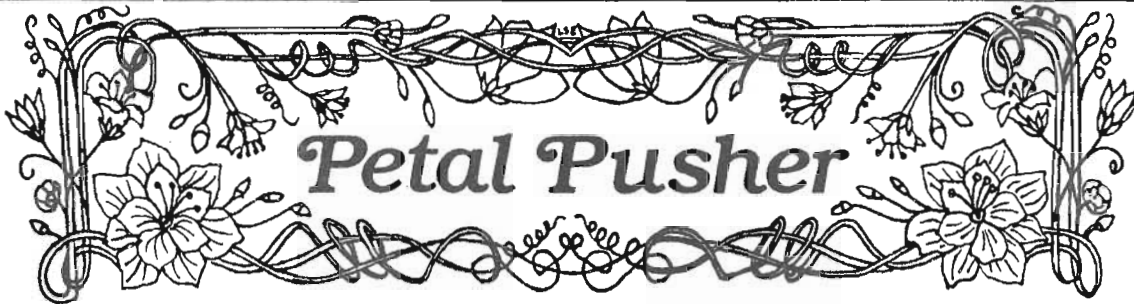


Missouri Native Plant Society



March-April Volume 3 Number 2, 1988

UPCOMING EVENTS

May 10th, Tuesday, K C Chapter Meeting
7:30 PM at the University Ex-
tension Center on 291 highway.
Call Linda Ellis for info.-
472-0227.

May 13th, Friday, Kirksville Chapter -
Prairie campout to south cen-
tral Kansas and north central
Oklahoma to the proposed site
for a prairie national park.
Call Pete Goldman, 785-4628
for info.

May 15th, Sunday, Springfield Chapter
Field trip - Fern Walk with
Jim Key. Meet at West loading
dock, Temple Hall, SMSU Campus.
Call Dr. Key for info: 831-1659.

May 20 - 22, Springfield, The Redfearn
Symposium and field trips. Con-
tact Russell G. Rhodes, Dept.
of Biology, SMSU (417)-836-5126

May 21st, Saturday, KC Chapter Field Trip
to George Owen Nature Park, M-
78 Highway and Speck Rd. 9:30 AM
Contact Judy Carver for info,
373-4747.

May 26th, Thursday, St. Louis Chapter
meeting, Washington Un. Campus,
MacMillan Hall, Rm 101, 7:30 PM
Speaker Jim Bogler, Native
Plants of Dolomite Glades.

May 28th, Saturday, St. Louis Field Trip.
To Valley View Glade. Car pool
8:30 AM, South County Shopping
Center at Union and Lindberg.
Call Bill Summers for info 843-
0862.

June 4th and 5th MONPS Annual Meeting
See page 2 for Details.

June 11th, Saturday Prairie Day at
Prairie State Park in Barton
County near Liberal, Mo. Call
your local Mo. Dept. of Con-
servation office for details.

June 12th, Sunday, KC Chapter Field Trip.
to Tarkio Prairie and Paul Wil-
liam's farm. We will look for
the White Fringed Prairie Orchid.
Meet at Minsky's Pizza at 129 and
Barry Rd. to carpool at 9:30 AM.
Bring a sack lunch. Call Paul for
info at 471-5832.

June 14th, Tuesday, KC Chapter Meeting
7:30 at Un. Extension Center on
H 291. Call Linda Ellis 472-0227.

June 23rd, Thursday, St. Louis Chapter
meeting at regular location (see
above). Speaker: Ron Milliken,
DNR Naturalist, on Flora of St
Francois and Hawn St. Parks

June 25th, Saturday, St. Louis Field Trip
to St Francois St. Park. Carpool
8:30 AM at South County Shopping
Center. Call Bill Summers for
info, 843-0862.



ANNUAL MEETING & FIELD TRIPS
JUNE 4-5, BROOKFIELD

During this meeting we will explore some of the remnant wetland habitats in north Missouri. We will take field trips to several places, including the wet prairie at Pershing State Park as well as the privately owned Lowry Marsh (home of the state record marsh marigold, *Caltha palustris*). Meeting activities, lodging and dining will be in Brookfield. The weekend includes a Friday evening program, Saturday and Sunday field trips, and our annual membership meeting with the announcements of election results and this year's awards recipients. Hope to see you there!

SCHEDULE

Friday

8:00 p.m. - Evening program (to be announced). At DNR Headquarters in Brookfield.

Saturday

8:00 a.m. - Field trip to Pershing State Park. Leave from the motel parking lot (see below) or meet at the Park Office at **8:30 a.m.** We will visit the wet prairie and other habitats. Be sure to bring lunch, water, and wear shoes you don't mind getting wet. Insect repellent might also be handy.

12-1 p.m. - Picnic lunch at Pershing State Park.

1:00 p.m. - Continuation of the day's field trip (see above) for those who wish to arrive later. If time permits we may also explore the bottomland forest at Swan Lake National Wildlife Refuge. Don't forget ~~insect repellent~~ - mosquitoes are bloodthirsty little critters.

6:00 p.m. - Dinner on your own (the Martin House is a likely place).

7:00 p.m. - Short annual business meeting with presentation of awards and announcement of election results. This will be followed by a Board Meeting. (Non-Board members may wish to bring slides to share while the Board meets). At DNR Headquarters in Brookfield.

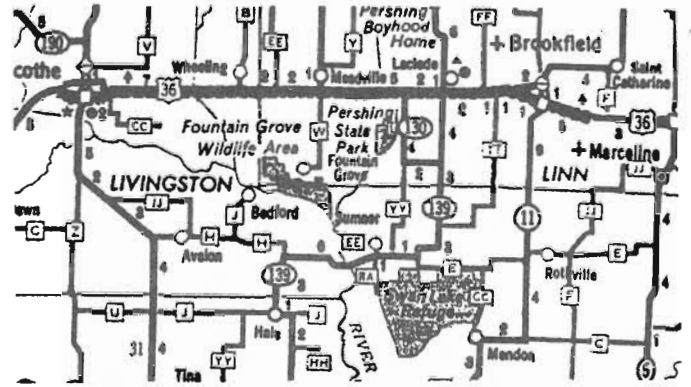
Sunday

8:00 a.m. - Field trip to north Missouri. We will visit the Trenton Cemetery prairie, Lowry Marsh and Helton Prairie (at Helton Wildlife Area). This trip will involve a lot of driving. It will take us almost to Iowa and should end by mid-day or early afternoon.

Lodging and Meeting Location

Lodging is available at the Martin House Motel (816)258-7257, \$24.00 single, \$31.00 double. We have not reserved any rooms in advance; please make your own reservations.

Meetings Friday and Saturday evenings will be held at the DNR Headquarters in Brookfield. The headquarters is a brown building with a large DNR sign located on the north outer road off of Highway 36, just west of the Highway 11 exit.



ELECTION NOTICE

Two board positions expire in June. The nominating committee has selected four candidates for these positions; information about each candidate appears below.

Please vote for one in each pair listed on the enclosed ballot; write-in space is also provided. **Ballots must be received no later than Friday, May 27.**

ABOUT THE CANDIDATES

Joanna Turner - Joanna is a charter MoNPS member. She served on the Board for one term early in the organization, and has also served a term as Secretary. Joanna worked as an assistant Editor of *Missouriensis* with editor Erna Eisendrath for several years. Currently, Joanna is a volunteer at the Missouri Botanical Garden where she is working with George Yatskievych on updating nomenclature for the revision of Steyermark's *Flora of Missouri*. Joanna resides in the St. Louis area.

Susan Russell - Susan is a charter member of MoNPS, and has attended many field trips and Board meetings in recent years. Susan worked with Erna Eisendrath on collecting and identifying the plants at Tyson Research Center for a herbarium there. Susan is a volunteer guide at Shaw Arboretum where she leads wildflower walks. Susan, who lives in St. Louis, is an interested and enthusiastic MoNPS member.

Wanda Doolen - Wanda is a charter MoNPS member and has served the organization in a variety of capacities. She served on the membership committee for a year, was co-presenter of a plant-collecting workshop, and has led Society field trips in southeast Missouri. She organized and served as president of the first MoNPS chapter while a student at Southern Illinois University (which later grew into the Illinois Native Plant Society). Wanda is currently with the Department of Natural Resources as a Naturalist at Sam A. Baker State Park. Wanda resides in Patterson.

Louise Wienckowski - Louise has been active in MoNPS since joining several years ago. She served as Secretary of the Springfield Chapter in 1987 and is now the Chapter president. Louise has an extensive background in horticulture and is particularly interested in the medicinal, craft and ornamental uses of native plants. She is co-founder and member of the Ozark Beneficial Plant Project, a conservation and education group that promotes the cultivation and use of native plants. Louise resides in Springfield.

JC CHAPTER NEWS

WELCOME TO NEW MEMBERS

We have been active with meetings, field trips and fundraising activities this spring. In February, Don Kurz (MDC) presented an excellent program on the dos and don'ts of wildflower photography. In March we were treated to two excellent slide programs of the Ozarks set to music. This soothing, wonderful program was created and presented to us by Jim Huckins, a chemist from Columbia. In April we had yet another fascinating program, this time on mushrooms, presented by Phil Roos. Phil is the organizer and secretary/treasurer of the Missouri Mycological Society; he knows his subject well and is an enthusiastic and inspiring speaker.

On May 3 Bill Summers will be presenting our program on Missouri Orchids. We will be displaying his orchid photos at the Capital Mall for two weeks prior to his program. On Saturday, May 7, Bill will join us for a field trip to Pickle Springs Natural Area where we hope to see the large whorled pogonia orchid (*Isotria verticillata*) in bloom (as well as wild azalea).

Spring was a little slower getting here, this year, but we've been enjoying it just the same. We traveled to Ha Ha Tonka State Park in March to see the early spring wildflowers. We found lots of harbinger-of-spring in bloom, and one spring beauty flower open, and two bloodroots and one toothwort. The rest were in bud: trillium, more toothwort, dutchman's britches and more. Our trip was on March 19, right after that cold, snowy week, and it was wonderful to see some spring.

I also mentioned fundraising. The Capital Mall in Jefferson City offers non-profit organizations an opportunity to sell items for fundraising and publicize their existence, called Open Market. This event took place on Saturday, March 12. We set up a table with a wildflower photo display, state MoNPS membership brochures, chapter schedule of meetings and field trips, wildflower brochures from MDC, and copies of wildflower field guides. We sold craft items and baked goods donated by our members and wildflower perennials from Missouri Wildflowers Nursery. It was a successful day -- we got three new members and made about \$85.00.

We are happy and proud to report that we have eight new members this spring, bringing our total to 46 members. We've been advertising our meetings in the paper and on the radio. It helps!

We meet on the 2nd Tuesday of each month (except June, July and August) at 7:30 pm at the Conservation Department headquarters in Jeff City. Our field trips are on the 3rd Saturday beginning at 8:30 am. For more information call Ginny or Merv Wallace at (314) 496-3492.

- Felecia Bart, Parkville
- Grace Brill & Dan Schwartz, St. Louis
- Carol Taft, Warsaw
- Carol Wilson, St. Louis
- R.J. Pezley, Jefferson City
- Charmaine Hutchings, St. Louis
- Jo Gallo, St. Louis
- Michael I. Keirick, Kirksville *
- Sam & Kim Greer, Kirksville *
- Richard D. Sage, Columbia
- John & Martha Rowe, Kirksville
- Neta I. Pope, Florissant
- Leonard Moehrke, Webster Groves
- Phil Roos, Jefferson City *
- Sonya Hollingsworth, Hartsburg *
- Ann Wakeman, Fulton *
- Mahree Bright, Columbia *
- Bill & Becky Washburn, Jefferson City *
- Sarah Fast & John Madras, Jefferson City *
- Eva Kirkpatrick, Stonebrook Forest Wildflower Sanctuary, Imperial
- Helen Forster, Webster Groves
- Martha Schlapbach, St. Louis
- Deborah Bishop, Kirksville *
- Yuki Gleason, Kirksville *
- Nicholas Jordan, Kirksville *
- George Shinn, Kirksville *
- Jennifer Boardman, Kirksville *
- Mike Arduser, Webster Groves
- Theresa Graham, Excelsior Springs
- Alyce Hildebrandt, St. Louis
- Dorothy Hitt, Florissant
- John Weston, Chesterfield
- Rad Widmer, Maryland Heights
- John & Fran Witherspoon, Springfield

* DENOTES CHAPTER MEMBERS

Of the new members listed in this newsletter, 16 came with our new membership brochure.



KANSAS CITY CHAPTER NEWS

Spring has come very slowly to the KC area, but we've been out in it. A permanent meeting place has been established at the University Extension Center on 291 highway. We meet the second Tuesday of the month at 7:30 PM.

April 9th and 10th, our chapter sponsored wildflower walks and a membership drive at Burr Oak Woods Natural Area. Linda Chorice and Donna Burris of the Mo. Dept. of Conservation joined us as did Mike Currier, Natural Heritage Survey Biologist. Mike was working on a list of Spring flora for the natural area. After walks, we had new member orientation and

refreshments supplied by our chapter members. April 17th, we had a MONPS-Audubon nature hike into Shirling Sanctuary led by Ester O'Connor.

Another salvage project is under way. The Corp of Engineers has given permission to remove plants from the basin of the Blue Springs Reservoir presently under construction. Several members have viewed the site and plans will be made for salvage at our next meeting.

Linda Ellis

PLANT PROPAGATION FOR PARKS

The Kansas City Parks and Recreation Department has shown a interest for several years in using native perennials for some of it's landscape work. Ginny and Merv Wallace gave a program last year to the Dept. officials as a way of introduction. The program is beginning to move along now with the construction of demonstration beds and the allotment of greenhouse space. Volunteers from KC MONPS and the University Extension Master Gardeners will be doing the propagation from seeds, cuttings and root stock. help is needed, however, to acquire some plant stock. Seeds from woodland wildflowers labeled with the name of the plants location and date collected would be gratefully received. Especially needed is root stock of Wild Ginger (*Asarum canadense*) so keep an eye out for woodland sites going under construction. Additionally, any seeds from *Liatris* spp., coneflower spp. or other prairie composites would be helpful. Some we will not use in plantings but propagation notes will be kept and hopefully published for the benefit of the membership. Send your contributions to :

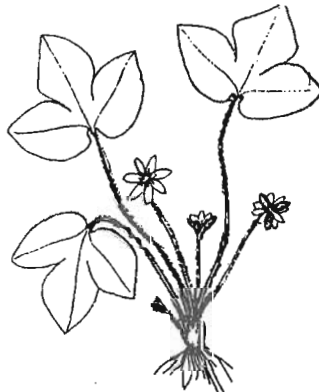
Linda Ellis
c/o University Extension
1601 E. 18th St. Suite 200
Kansas City, Mo. 64108

From Flora of
Missouri



Hepatica nobilis
var. *obtusa*

MONPS



Hepatica nobilis
var. *acuta*

HEPATICAS

by Art Christ

Reprinted from the St. Louis Chapter Newsletter

It is always pleasant to find Hepaticas at any time of the year as there are usually some of the leaves present at all times. At flowering time the new leaves of the plants have not yet appeared, or are just beginning to put in their appearance. Usually there are some leaves of the previous year still present. Although now mostly brown, they are somewhat thick and leathery and they have three lobes. The name "Hepatica" is derived from a fancied resemblance to the liver in the shape of the leaves. Hepaticas belong to the Crowfoot family (*Ranunculaceae*).

Hepaticas are among the very first wildflowers to bloom in the Spring, their blooming season being between February and April. Sometimes they bloom a second time in November and December. Each flower stands on a silky-hairy stalk a few inches tall. The flowers have no petals, but the sepals are petal-like with a sepal like green involucre below. The petal like sepals are usually lavender, bluish or pink in color, but white forms sometimes can be found. The numerous stamens have whitish or pale anthers and in the center of the flower there is a little cluster of pistils.

There are two varieties of Hepaticas in Missouri. One has the lobes of the leaves and the bracts of the involucre pointed and is known as the Sharp-lobed Hepatica or Sharp-lobed Liverleaf (*Hepatica nobilis* var. *acuta* f. *acuta*) while the other variety has the lobes of the leaves and the bracts of the involucre rounded and is known as the Round-lobed Hepatica or Round-lobed Liverleaf (*Hepatica nobilis* var. *obtusa* f. *obtusa*). The Sharp-lobed Hepatica occurs in eastern and southern Missouri on rich usually north-facing wooded slopes of well drained soil, mostly around limestone ledges, bluffs and outcrops, while the Round-lobed Hepatica is found in southern Missouri in the Ozark section on rich or rocky wooded slopes and ravine bottoms, and along mossy banks and ledges, usually in acid soils associated with chert, sandstone or granite rocks, but also with limestone. Where the two varieties come together at the margins of overlap of their range, hybrids have been found. Such hybrids show an intermediate condition in the lobes of the leaves between rounded and pointed.

JOIN A WITCHGRASS HUNT

by Roy Gereau


One of the striking color effects of late summer and early fall in the fields and open places of Missouri is caused by masses of the red-purple culms and inflorescences of Common Witchgrass, or Panicum capillare. We would be free to enjoy these rose and magenta-hued scenes with no malingering taxonomic worries if this common old hag had no close cousins, but alas, Dame Nature is not oft so kind, and she has three: Wiry Witchgrass (Panicum flexile), Philadelphia Witchgrass (P. philadelphicum) and P. gattingeri, which has no recorded common name but for consistency's sake we may dub Gattinger's Witchgrass. Many authors, including Steyermark in his Flora of Missouri and Voss in his Michigan Flora, have commented on the difficulties of separating these species, and various combinations of species and subdivisions into varieties have been proposed. While preparing a soon-to-be-published checklist of Missouri grasses, I became quite dissatisfied with my ability to distinguish P. gattingeri from P. philadelphicum. Then I noticed that P. gattingeri was first named as a variety of P. capillare, and my confusion began in earnest! I intend to resolve this taxonomic muddle during the 1988 growing season, and to do so would like to enlist the help of anyone who would enjoy getting out and seeing what these little witches are really doing out in the wild.

Steyermark's description of the distribution and habitats of the four Witchgrasses are quite thorough and accurate. All show a preference for sterile soils and open sites, and all are widespread in the southern half of Missouri. Panicum capillare and P. flexile are the earliest-flowering, with herbarium records from as early as mid-June, but are rarely abundant before mid-July. Panicum philadelphicum begins flowering in late July, and P. gattingeri comes in last, toward the end of August. All continue flowering into October, providing the avid field botanist with something to investigate at a time when yet another growing season is about to close down.

From those of you who like to poke about in the old fields, cherty slopes and alluvial gravel bars of our great outdoors, I wish to elicit any information you can gather about our native Witchgrasses. Pressed herbarium specimens, including underground parts and as much data as possible about soil and habitat conditions, will be especially welcome, as will information on population size and flowering dates. If you find a place where two or more of the species or their varieties are growing, it would be very valuable to record observations and collect specimens along some environmental gradient, such as from dry to wet, or from thin to thick soils. I plan to spend a lot of weekends in the

field this year, and would like to start planning how to crack the Case of the Confusing Witches as soon as possible. Please contact me at the address below if you have some ideas on this hexed problem, or would like to help me put all of our witchgrasses in their proper place.

Contact: Roy Gereau
Curatorial Assistant
Mo. Bot. Garden Herbarium
P. O. Box 299
St. Louis, Mo. 63166-0299



REED SYSTEM UNDERWAY

by Linda Morgan, TN Staff Writer
(Springfield Mo)

The treatment of wastewater can be complex and expensive, or simple and very reasonable in cost, one Taney County land developer has discovered.

Two years ago, Dick Scott installed an experimental reed bed (root zone) sewage treatment system at his Lakeway subdivision in Kissee Mills in eastern Taney County.

The results of its operation are so successful that Scott has made application to build four more plants at Venice on the Lake near Rockaway Beach.

The system was developed in West Germany about 20 years ago by a college professor.

The first full-scale trial of the method was undertaken at Othfresen in 1974 and proved to be so successful that it is widely used in Europe.

Scott's plant is the first to be built in the state of Missouri.

The plant consists of two layers of cinder block formed in a square with sides about 50 feet long, a layer of plastic to hold water in, several tons of gravel and earth, and the main element of the treatment process, phrygmites reeds.

Information from the Taney County Planning office explains that years ago it was noted that certain types of aquatic plants thrived in areas where the water was clean. It was thought that these plants, which were reeds or bulrushes, were capable of living only in clean water and that the clean water provided the habitat for the reeds.

Years later it was discovered that it was not that the reeds grew in clean water but rather that the reeds cleaned up the water that was found around them by processes in their root zones.

The concept was then taken and applied to the problems of treatment of sludge from treatment plants. Normally the sludge was drained from the treatment plant and dumped

into a large earthen bed to allow the water to evaporate, leaving several inches of residue. When reeds were planted in these beds the water dried several times faster and there was far less residue. The reeds proved successful even with the worst sludges from breweries and toxic industrial waste.

The next step in development of this technology was to use it as the entire treatment system. To do this the system had to be able to take all the solids as well as the volumes of water and treat it to specifications without fail. So a treatment bed was designed which would allow the water to percolate or move through the soil laterally instead of straight down and to clog or plug up the soil from solids. This has been done and the first root zone sewage treatment facility was built in 1974 to service a city of about 50,000 in Germany.

Scott heard about the method and because of the reduced expense and because it is virtually maintenance-free, "decided it was worth a gamble."

Scott said the Lakeway system which is built to service 50 homes, cost approximately \$35,000 to put into operation. "Our bid on a conventional system was five times that much and too expensive in a rural area. This system is inexpensive and appears to be very successful," Scott said.

The entire system, including the building of the plant, installing the lines and beginning the treatment process, took less than 60 days to put into operation.

The system is designed to treat 5,000 to 6,000 gallons per day, Scott said.

During the two years the Lakeway system has been in operation, Scott has made changes and modifications in the system and has qualified to seek application for a patent on those changes. He has refined the process, corrected things that wouldn't work, and those changes will be made when he builds his next plants.

Scott has confidence in his vegetation treatment of sewage and said, "It's a sure thing for the treatment of home sewage. This system may be a solution for the smaller subdivisions," Scott said.


Taney County planning and sewer inspector Tony Wasson monitors the system. He made the following observation on its operation:

"Last report we had was the (BOD) biological oxygen demand suspended solids were below minimum standards limits prior to chlorination and the fecal coliform count was a low mark prior to chlorination, which is the final stage of treatment prior to being discharged, chlorination.

"The possibility of this being a very cost-efficient means of wastewater disposal has moved the Taney County Common Sewer District to grant Scott the ability to work with the planning staff on implementing this revised operation into other areas of the county.

"It is presently an experimental project with number one priority prevention of contaminants entering the waterways of our state. Maintenance is very low because of the lack of mechanical parts. Every step of the process is being reviewed at periodic times to assume quality and necessary steps to improve processes that are beginning to be implemented," Wasson said.

"The system is designed so that the solids are broken down in the septic tank. The effluent water moves into the reed bed. The root system absorbs the effluent which carries high levels of nitrogen and phosphorus. This is absorbed and then through either transportation or carbon dioxide is excreted. During growing season discharge is not common. During dormant season discharge is probable, thus the purpose for a chlorination contact chamber. The possibility also exists of another aquatic stage of a lagoon or wetlands to hold all waters in a sealed area with evaporation the final natural stage," Wasson said.



WILDFLOWERS MAKE EARLY APPEARANCE

From The Orange County Register
(California)(the state)

Spring has sprung early this year, which means that it's time for wildflower hunters to break out the binoculars and head for Orange County's more rustic areas.

Heavy rains followed by a spell of unseasonably warm weather have resulted in wildflowers making their colorful display a few weeks early this year. Patches of wildflowers already have begun to bloom in patches along the Ortega (74) Highway near Caspers Regional Park, and in the park itself.

Finding spring wildflowers in Orange County used to be easy. A short trek to south county put the seeker among endless acres of hillsides draped with bright blankets of gold, scarlet and purple.

It's not so easy today, relentless development has covered many of those hillsides with housing tracts. But finding clusters of wildflowers is still possible, even if a bit more persistence is necessary.

One of the many varieties making an appearance is the Cleveland shooting star.

"They grow in masses of white that look like snow, summer snow," said Karlin Marsh, a biological consultant who recently drove in search of wildflowers. Others in full bloom include California buttercups, wild

Hyacinths and lupines, whose blue flowers can be seen growing along rustic roadsides.

Ortega Highway is one of the better vantage points, but it has its drawbacks. Keeping an eye out for traffic is a good idea, Marsh said, as well as remembering to bring the binoculars. Many of the flowers are on fenced-off private ranchland, along with "No trespassing" signs and sometimes angry bulls and rattlesnakes.

A good place to see some of the non-native mustard grass, brought by Spanish explorers two centuries ago, is on the north side of Silverado Canyon behind the community center, where there are acres of the yellow grass.

Other non-natives include the long-beaked filaree, which grows needle-like flowers that their seed pods by digging into animal fur.

Because this winter's rainy season ended too soon, Orange County probably won't see a truly spectacular crop of wildflowers, Marsh said.

"It started off really great, but it just wasn't enough," she said even if the rains were to resume, it probably would only cover up many of the wildflowers with dull grasses. "What we needed was continuous rain up until March, and then for it to warm up."

This batch of wildflowers will last no more than a few weeks, but mountain wildflowers generally sprout later in the spring. Farther up Ortega Highway toward El Cariso, white and blue California lilac are already in flower, and soon they will be joined by owl's clover, golden eardrops and scarlet monkey flowers.

Picking wildflowers is not a good idea, since transplanting them into an urban environment hampers their ability to propagate and survive, Marsh said.

One opportunity to pick up plants and flowers will be at the annual Arbor Day Festival at Mason Regional Park in Irvine, scheduled for March 12.

--John Westcott/The Register



PRAIRIE PLANTS USED TO FIGHT WEEDS

Des Moines, Iowa (AP) -- A weed is a weed is a weed to most people, but to roadside biologist Trelen Wilson the good weeds can be coached to go after the bad ones.

The noxious weeds, the ones he and other weed commissioners are required by law to stamp out, are the enemy since they compete with crops and plug up drain tiles.

The common method is to spray them with chemicals like 2,4-D. "We've been doing that for 30 years and it has not been successful," said Wilson, roadside biologist for Story County. "What we've done is simply create 2,4-D resistant thistle and snake grass."

The good weeds to Wilson are the same plants that sobbusters turned under years ago to make way for farm fields: native prairie.

Prairie plants don't wander into soybean fields, they're excellent ground cover for wildlife and, like eager athletes, they can be coached to win.

"They're well-behaved," said Wilson. "They compete against misbehaved ones but they don't cause trouble. They know their place."

Given enough time, the prairie plants would defeat the misbehaved weeds -- pigweed, lambs quarters, foxtail ragweed and other miscreants that thrive in places where the soil is disturbed.

"In a hundred years if you left everything alone, it would be prairie again," said Wilson. "Maybe less if conditions were extremely dry," which favors prairie.

But farmers don't have that much time and since spraying hasn't been very successful, Story and several other counties are trying the new approach of coaxing prairie plants to battle the noxious ones.

"Instead of the strongarm technique, you use all the tools," said Wilson. "You use nature instead of fighting it. You want the best-adapted plant community living in the ditches. Otherwise you'll have weeds."

Others in similar positions around Iowa are enthused about the prospect of prairie-versus-weed.

"We're really excited about it," said Lee County Engineer Dennis Osipowicz. "We were looking for another way to handle noxious weeds and brush. The board (of supervisors) doesn't like spraying, and I'm not crazy about it either."

"Everybody's coming to the realization that chemicals aren't the ultimate solution," said Jackson County engineer Steve De Vries.

Still, roadside spraying is the rule in Iowa. All but nine of 91 counties responding to a 1986 survey do at least some spraying, and six still spray every ditch. But complaints from landowners, fears of pollution and cost of chemicals have driven several counties to try alternatives.

The problem with prairie is that it takes time to flourish and it needs regular maintenance, mainly a spring burn-off every other year or so to discourage woody pests and to rejuvenate the grasses.



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