



The Reproduction and Bees of Lead plant in a Fragmented Landscape by Malinda W. Slagle

When most people think of bees, they think of honeybees with their hives, stings, and sweet golden honey. But there are more kinds of bees than just the honeybee. In the Iowa tallgrass prairie alone there are more than 150 species of wild native bees, most of which are solitary. For these solitary species, each nest is the work of one female. Each female constructs a nest, lays eggs, and gathers pollen and nectar to provide food for each egg that will emerge as an adult bee the next spring. Wild bees contribute to the pollination of most tallgrass prairie plants and are essential for the pollination of 1000 crop plants worldwide. Bees are essential not only for the ecological sustainability of our environment but also for our economic viability. Without bees to move pollen from the male to the female parts of flowers, seed would not form on many crop plants and wildflowers.

After European settlement, 99.9% of the original tallgrass prairie in Iowa was converted to agricultural use. Most of the prairie that remains is in small state preserves, along unimproved roadside ditches, along railroad rights of way, and in small patches on private land. Because so much of their native habitat has been converted to agricultural use it is possible that wild bee populations are in decline. Declining bee populations in Iowa would result in declines in pollination and reproduction of native prairie wildflowers. However, wild bees in Iowa are not well studied so the effects of the conversion of the prairie to agriculture on bees and the reproduction of their associated plants are not known.

For the past two summers, I studied the reproduction and bee pollinators of a beautiful tallgrass prairie wildflower, lead plant or *Amorpha canescens*. Lead plant is a semi-shrub in the bean family with hairy compound leaves that are gray in color (which may have led to the common name) and has clusters of small purple flowers, or racemes, on the ends of its stems. These clusters of flowers can be up to a foot long with up to 30 branches. Lead plant can reproduce via rhizomes and can make large clones that grow in clumps. I chose to study

lead plant because it's considered a highly conservative species indicative of unplowed, ungrazed upland prairie habitats.

I studied the bees and fruit production of lead plant in 11 small prairie remnants (3 acres) and 3 large state preserves (100 acres) in northwest Iowa and southwest Minnesota. In July, I collected bees from lead plant using a sweep net similar to those used to capture butterflies. I also identified all of the plants flowering at the time of the bee survey and counted or estimated the number of lead plant clumps at the prairies. In September, I collected 20 clusters of fruits from each prairie. I determined the percent fruit set for each prairie by comparing the actual number of fruits I collected per cluster with the potential number of fruits per cluster.

I identified 49 species of bees visiting lead plant, a whopping 40% of the known regional bee community. Over 40% of the bee species that I captured were represented by only 1 or 2 individuals, meaning that many of the bee species visiting lead plant are relatively rare. Rare species are a cause of concern because they could be lost if their habitat is destroyed. The fruit set of lead plant increased as the number of bees and the bee species diversity that I captured on lead plant increased. This means that as long as there are enough bees present in a prairie, the reproduction of lead plant will be high. I also found that the less isolated the prairie, the greater the fruit set, so conserving and restoring nearby prairies may help increase the reproduction of bee-pollinated plants like lead plant. Prairie area or number of lead plant clumps at a site was not related to bee abundance, bee diversity or lead plant reproduction, indicating that small prairies with few lead plant clumps can still have comparable bee populations and plant reproduction to larger sites with big plant populations.

Conserving bee populations is essential for the reproduction of important native prairie plants, such as lead plant. Suggestions for preserving bee populations include:

1. not burning an entire prairie at once, rather burning it in sections so that bees nesting in the ground and in hollow stems will not all be killed;
2. not using insecticides that affect bees;
3. planting bee-friendly gardens or restoring and conserving prairies that have native species high in nectar and pollen blooming throughout the growing season;
4. putting out bee "apartments," thin (1/4" inner diameter) hollow bamboo stems 5" or more in length that are open on one end and closed on the other end, bound together with twine and hung horizontally from a tree near flowers. Each bamboo stem is big enough for a solitary bee nest.

In this issue:

Leaves from the President's Notebook	2
INPS Field Trips	3
Announcements/Calendar of Events	4
INPS/IPN Joint Meeting	5
A Closer Look at Cleistogamous Flowers	8
Natural History Exhibit - Lewis and Clark Interpretive Center	9



Leaves from the President's Notebook

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Restoring plant diversity to the briar patch in my West 40 has been quite a challenge. It's located west of our vineyard on forty acres my husband, Bill, and I purchased in 2001. Although badly degraded the land in this forty acre patch has never been plowed. Until 1950 sheep and cattle grazed there. After the grazing ceased, Eastern red cedar, elm, honey locust, multiflora rose, blackberries, dogwood and hazelnut invaded the site. Only a few small prairie remnants and an overgrown oak savanna remained as indicators of this land's former diversity.

Of all the pieces on this forty acres the briar patch is the most severely degraded. However, a diverse prairie remnant filled with forbs such as compass plant (*Silphium laciniatum*), rattlesnake-master (*Eryngium yuccifolium*), pale coneflower (*Echinacea pallida*), leadplant (*Amorpha canescens*), purple prairie clover (*Dalea purpurea*), New Jersey tea (*Ceanothus americanus*), pale or cream gentian (*Gentiana flavida*), and butterfly weed (*Asclepias tuberosa*) is just west of the briar patch. Its proximity made me wonder if some of the same forbs weren't hiding under the eight foot tall multiflora rose, blackberry bushes, and filberts.

The first year we owned the property Bill and I cut a trail through the middle of the impenetrable blackberry and multiflora rose thicket. The following spring I found bracted orchid (*Coeloglossum viride*), purple milkweed (*Asclepias purpuracens*), and pale gentian blooming along the trail. Chinquapin oak (*Quercus muhlenbergii*) and one of our few native buckthorns (*Rhamnus lanceolata*) were also exposed.

Seeing these plants increased my desire to know what else might be suppressed. The next winter we removed the eastern red cedar, and elm. We followed that with a controlled burn in November, 2003. The fire we lit downhill from the briar patch roared up the hill through dried sedges, bottlebrush grass, and oak leaves but stopped at the briar patch. There just wasn't enough fuel under the shrubs to keep it burning.

We tried another burn there in late March. This time we cleared the brush before burning and piled it on top of the dead eastern red cedars and elms. This fire was hot enough to spread in a wide circle around the brush pile. Although it cleared only a portion of the site, the response has been particularly rewarding. Lousewort (*Pedicularis canadensis*), spiked lobelia (*Lobelia spicata*), golden alexanders (*Zizia aurea*), and hoary puccoon (*Lithospermum canescens*) have bloomed there this spring. Even twayblade (*Liparis liliifolia*) bloomed where we had burned. Best of all was finding the grove sandwort (*Arenaria/Moehringia lateriflora*), under a dead eastern red cedar. It's the first time I've seen this species at Timberhill and may well be a county record.

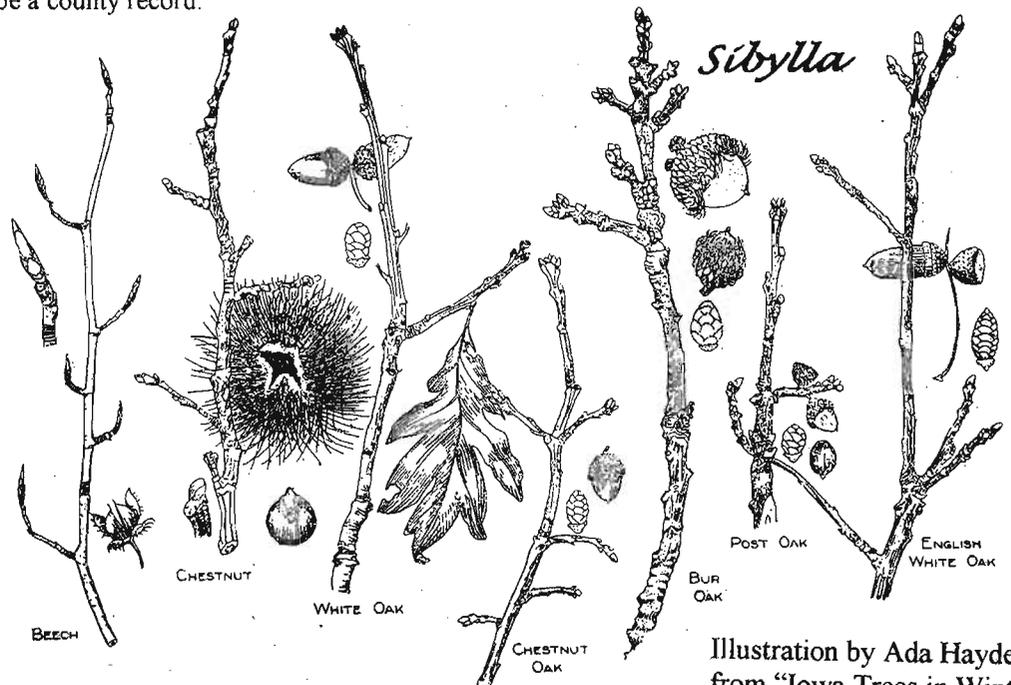


Illustration by Ada Hayden
from "Iowa Trees in Winter"

The Iowa Native Plant Society's 2004 Field Trips

By Mark J. Leoschke

A big thanks to all our field trip leaders for leading field trips. All field trips are scheduled for Saturdays and begin at 10 a.m. unless otherwise noted. They take place rain or shine, so come prepared for the weather. The terrain varies from site to site, so wear appropriate footwear. Bring a lunch and something to drink.

The Iowa Sportman's Atlas has large county maps with wildlife management areas, parks, preserves, etc. owned by public and some private conservation organizations. Its current edition (2002) has 911 street names for counties in Iowa which use this system (most counties do), which greatly helps one locate a favorite natural area or a new one. If you are interested in purchasing a copy, check with your local bookstore or call 1-800-568-8334. The cost is \$19.95 plus sales tax.

July 9-11: Lucas County and vicinity (south-central Iowa)

The **Iowa Native Plant Society** and the **Iowa Prairie Network** will be holding a **joint annual meeting** in Chariton on the Southern Iowa Drift Plain. It will take place at the Lucas County Conservation Board's nature center at Pin Oak Marsh. There will be several field trips as part of the meeting. Check the next INPS and IPN newsletters, as well as the web pages of these organizations, for details as they develop.

August 28: Jasper County (south-central Iowa)

John Pearson, a botanist for the Iowa DNR's Conservation and Recreation Division, and park manager Roger Thompson will show us the prairie remnants in Rock Creek State Park on the Southern Iowa Drift Plain.

Directions: To reach the park take Interstate 80 to the Kellogg exit (State Highway 224). Drive north about 5.5 miles (passing through the town of Kellogg) and turn right (east) on North 59th Avenue East (County Road F27). Travel a little over 3 miles and turn right (south) into the south unit of the park (you should be on the west side of the artificial lake). Follow the road (it twists and turns) until you reach the parking lot for the beach (located at the south end of the park road on the west side of the lake). You can not go any further as the road loops back to the north. Meet in the parking area. Go to this web address for a map: <http://www.state.ia.us/dnr/organiza/ppd/rockcrk.pdf>

October 9-10: Allamakee County (northeast Iowa)

Dr. Don Farrar, a pteridologist (a person who studies ferns and fern allies) at Iowa State University, will lead us on a weekend long fern workshop and field trip in Allamakee County on the Paleozoic Plateau. As currently planned, on Saturday Don will introduce us to ferns and to several of the common ferns of Iowa. Sunday's field trip will provide a chance to see some of the rare ferns of the area. More details will be provided in the next newsletter.

Announcing a new website:

Native Iowa Woodland Understory Restoration: A Guide to Collecting and Germinating Seeds

<http://web.grinnell.edu/individuals/mottll/index.html>

The goal of the website is to provide seed collection and propagation information for shade tolerant herbaceous species (and a few woody) that occur in closed canopy forests to savannas in Iowa, and that for the most part are not included in prairie propagation references. Cathy Mabry McMullen of Iowa State University and Larissa Mottl of Grinnell College have compiled the data through greenhouse and field trials. The website was created by Larissa.

The site is intended to promote dialogue on propagating woodland herbs and we hope that users will evaluate the information, provide feedback, and help us expand and improve on the database. For example, maturation dates are based on central Iowa observations, and we are interested in compiling information for other Iowa regions and for species that don't occur in central Iowa.

If you enjoy photography, we still need images of many species in fruit to help users identify maturation signs. Contact Larissa at mottll@grinnell.edu or by phone at 641-269-4717

Wisconsin web page helps in the identification of selected native Carex

http://www.botany.wisc.edu/herbarium/carx/db/species_index.asp submitted by Mark Leoschke

ANNOUNCEMENTS

NEW COURSE OFFERED ON PRAIRIE/SAVANNA RESTORATION

Biology 172 - Restoration of Native Plant Communities Des Moines Area Community College is offering a new class this fall on prairie and savanna restoration.

The class will meet on Thursday afternoon from noon until 4 p.m. at the Oak Woods Learning Center within a restored savanna community within the Saylorville Lake parklands. The U.S. Army Corps of Engineers are a full partner in this educational, hands-on learning experience that carries 3 college credits.

Registration will be limited to 15 individuals. Urban campus is the host campus, but the class will meet at the Oak Woods Learning center. For registration: 1-800-362-2127.

For more information: Danielle Wirth, 515/965-6010, ext. 421 or ehorizon@netins.net

Tour Wildflower Seed Plot of Adel

The Seed Harvest Team of the Iowa DNR, Dallas County Integrated Roadside Program and Dallas County Conservation will be having a tour of the wildflower seed plot at Adel on July 7th from 7:00 PM-8:30 PM. Early July is a great time to see many of the native wildflowers in bloom including Pale purple coneflower, False sunflower, Rattlesnakemaster, Lead plant, Butterflyweed, Coreopsis and many more. Presently, there are over 50 species represented on the 3 acres site. Learn about the propagation of the plants, maintenance of the area, or just come and enjoy the beautiful native wildflowers.

Directions: The plot is located 2 miles north of Adel on highway 169 and ½ mile west on 260th Ct. on the north side of the gravel road on the Dallas County Farm property

Calendar of Events of Other Organizations

July 5 (Monday): Gull Point State Park, Barney Peterson Trail tour, 7AM, Dickinson Co. Meet at Kenue Park in Spirit Lake to carpool to site. Hike guided by County Conservation Board Naturalists. Contact: 712.338.4238

July 8 (Thursday): Lake Hawthorn Hike, Lake Hawthorn Hike, 6:30 PM, Mahaska Co. IPN board member Pam White leads evening hikes at the lake the second or third Thursday of the month, May - September. Meet at the boat ramp parking lot on east side of the lake, on Victoria Ave, one mile east of V13 and 2.5 miles south of Barnes City. Contact: Pam White: pam-white@usa.net

July 9 – 11 (Friday-Sunday): Joint IPN and Iowa Native Plant Society annual meeting, Chariton.

See <http://www.iowaprairienetwork.org/>

July 9-11 (Friday-Sunday): Dragonfly Society of the Americas Annual Meeting, Winnesheik Co., Decorah, IA. Contact: www.windsofkansas.com/dsa2004.html

July 19 (Monday): Horseshoe Bend County Recreational Area tour, 7 AM, Dickinson Co. See July 5 listing.

July 22 (Thursday): Doolittle prairie walk, 7PM, Story Co. Join Lloyd Crim and prairie enthusiasts for an evening stroll through Doolittle Prairie Preserve. From I-35 exit 123 (Roland), go west on E-18 about 1/2 mile, then south 1.5 miles on (gravel) 560th Ave. Follow lane west to the preserve. Contact: Lloyd Crim 515.432.5026, lcrim@opencominc.com

July 24 (Saturday): Prairies of Butler County, 9AM - 3PM. IPN board member Greg Houseal and sidekick Daryl Smith will lead a tour of Butler Counties unique prairies. Contact: Greg Houseal gregory.houseal@uni.edu

July 24 (Saturday): Operation Wildflower 2004, 8AM - 5 PM, Story Co. Federated Garden Clubs of Iowa present lectures and an Ames area prairie tour. Contact MJ Hatfield, 2505 Tullamore Ln, Ames, IA 50010 or mjhatfield@oneota.org

July 26 (Monday): Caylor Prairie Tour, 7 AM Dickinson Co. Meet at Kenue Park in Spirit Lake to carpool to site. Hike guided by County Conservation Board Naturalists. Contact: 712.338.4238

August 1 (Sunday): Wiegert Prairie Farmstead Fallfest, 10AM-4PM, Pocahontas Co. The 37 acre Wiegert Prairie is located one mile north of Kalsow Prairie on 280th Ave. Contact: Pocahontas County Cons. Board, 712-335-4395

August 2 (Monday): Freda Hafner Kettlehole tour, 7 AM, Dickinson Co. See July 5 listing.

August 7-8 (Saturday-Sunday): Go Wild, a Celebration of Native Plants and Native Lands Madison, Wisconsin. Note: precedes NAPC (next listing), in same location. Contact: (877) 394-9453, www.for-wild.org

August 8-12 (Sunday - Thursday): 19th North American Prairie Conference, Madison, Wisconsin. See www.napc2004.org

August 19 (Thursday): Lake Hawthorn Hike, 6:30 PM, Mahaska Co. See July 8 entry.

August 26 (Thursday): Doolittle prairie walk, 7PM, Story Co. See July 22 listing.

September 11 (Saturday): Stream, savanna and prairie restoration workday, 10 AM - supper, Allamakee Co. Join IPN board member Kirk Larsen on ambitious multi-habitat 98 acre restoration. Contact: larsenkj@luther.edu

September 16 (Thursday): Lake Hawthorn Hike, 6:30 PM, Mahaska Co. See July 8 entry for details

Joint Annual Meeting



July 9 - 11, 2004
Chariton



Iowa Native Plant Society *and the* Iowa Prairie Network

Join us for our annual meetings and the opportunity to tour some of Lucas County's best natural areas!

Highlights of the weekend:

- Our meeting site, Lucas County Conservation Board's Pin Oak Lodge. This new interpretive center is situated on over 2000 acres of marsh, prairie, and woodland.
- Tour of the prairie along the Cinder Path, the first rails-to-trails project in the state
- Tour of DNR projects at Stephens State Forest near Lucas
- A visit to Sibylla and Bill Brown's restored savanna - over 350 plant species! Chris Bair will review the landscape history compiled from historical records.
- Informative talks by Paul Tauke, Ed White, Tom Rosburg, and Sibylla Brown
- Tour of local CRP plantings that have significant amounts of prairie species "volunteering"
- Opportunity to camp on a site with remnant prairie and a restored antique barn

www.iowaprairienetwork.org

Meeting Agenda

Friday July 9, Ryun/Rassler Residence, Chariton (directions in "camping options")

6 PM - ?? Dinner in Deb Ryun/Steve Rassler's barn - all meeting attendees are welcome to drop by even if not joining us for dinner. Bring Frisbees.

Saturday July 10, Pin Oak Lodge, Chariton (see map on previous page)

8 - 9 AM Breakfast at Pin Oak Lodge, INPS annual meeting

9:00 board buses for field trip tour loop in western Lucas county

9:15 - 10:30 Cinder Path prairie tour

10:45 - 12:15 Stephens State Forest tour, Randy and Jeff Goerndt, IDNR Forestry

12:30 - 1:30 Return to Pin Oak Lodge, lunch and IPN annual meeting

1:45 - 2:45 Paul Tauke, IDNR Forestry, "Condition of Iowa's Forests"

2:45 - 3:45 Tom Rosburg, Drake University, "What Constitutes a Prairie Remnant?"

3:45 - 4:45 Ed White, IDNR "Update on Kellerton Wildlife Area"

4:45 - 6:00 choice of activities:

Marsh area tour with Lucas Co. Conservation Board Director, Skylar Hobbs

Car caravan tour of local CRP sites with significant numbers of "volunteer" prairie plants, Helga McDaniel, IDNR Private Lands

Self-directed tour of local prairie cemeteries (map will be available)

6 - 7 PM Dinner at Pin Oak Lodge

7 PM keynote speaker, Sibylla Brown, INPS President

Sunday July 11, Sibylla and Bill Brown Residence, Leon (directions on next page)

8:30 breakfast

9 - 12 Savanna tour, Sibylla Brown, INPS President, Chris Bair, Iowa Valley RC&D

12 - 1 Lunch, "on the way home" self-guided tours (maps will be provided)

Registration Form

Note: Saturday and Sunday meals provided by Joanne's Café, Millerton

____ Meeting (\$20 regular, \$10 student)

____ Friday dinner (buffalo burgers, salads, veggie dish, fruit, dessert, (\$6.00/person)

____ Saturday Breakfast (fresh fruit, cinnamon rolls, juice, coffee, \$1.75/person)

____ Saturday Lunch (sandwich buffet of sliced meats, cheese, salad, beverage, (\$5/person)

____ Saturday Dinner (Roast pork loin, potatoes, vegetables, salads, dessert, (\$7.50/person)

____ Sunday Breakfast snack (sweet rolls, coffee, \$1/person)

____ Sunday Lunch (scaloped turkey, tomatoes, salads, pie, beverage, (\$8/person)

____ Total

Name: _____

Address: _____

City, State, Zip: _____

Please make your check out to "IPN" and mail to:

IPN

PO Box 572,

Nevada, Iowa 50201

Registration deadline July 5. For more information contact Inger Lamb, 515.963.7681, 515.250.1693, Sibylla Brown 641.446.7358, or Skylar Hobbs, 641.774-2438

www.iowaprairienetwork.org

Tour Site Descriptions

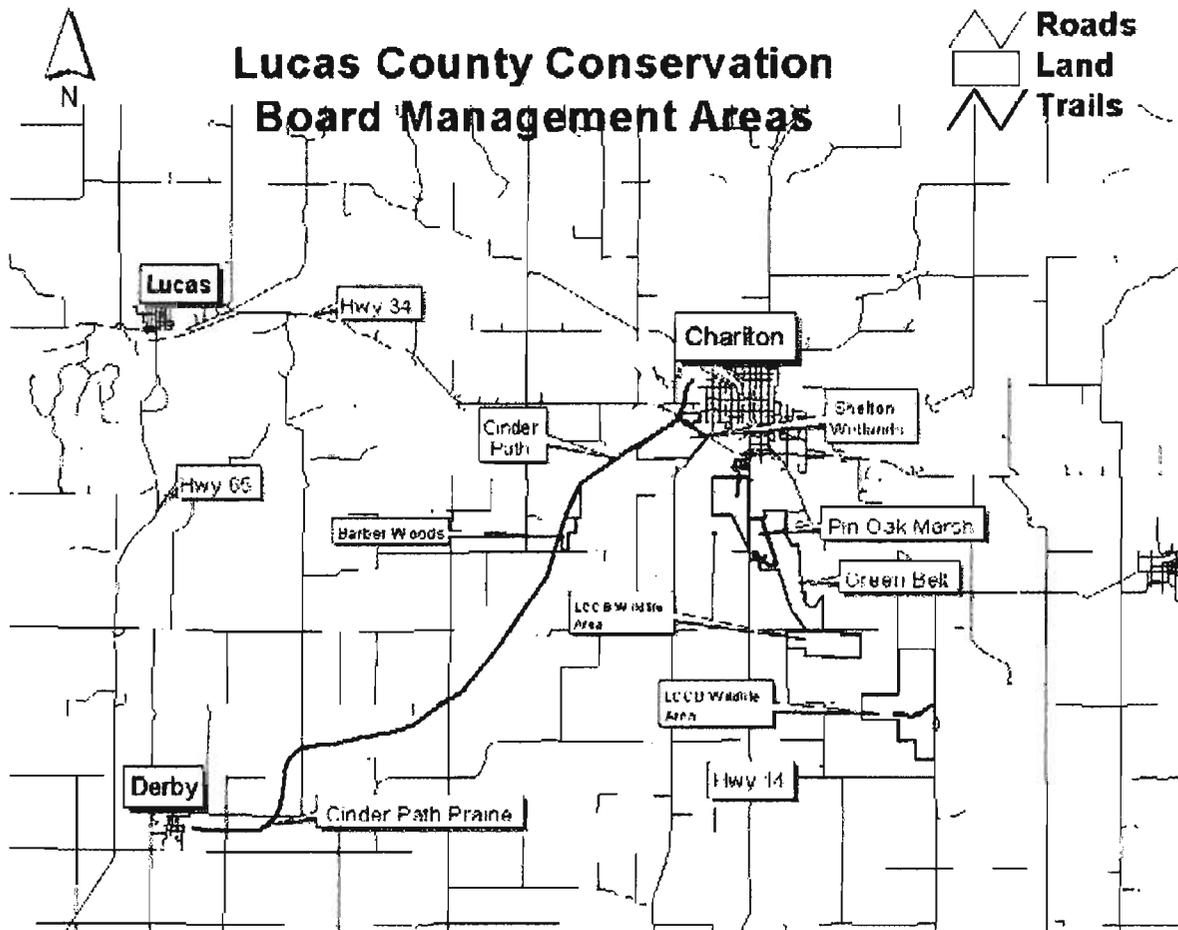
Cinder Path Prairie: This 13.5 mile long bikepath was the first "rails to trails" railroad conversion in the state. It is lined with diverse remnant prairie and bottomland forest. We can expect to see blazing stars, milkweeds, Culver's root, and purple prairie clover in bloom. Species list included in registration packets.

CRP with volunteer prairie: You've heard of "volunteer" corn in a bean field, Helga's found volunteer prairie in CRP brome and alfalfa plantings! She will show us some examples, which have long histories of row cropping before they were put into CRP, but somehow maintained a viable seed bank that has produced "prairie - CRP".

Lucas County Conservation Board Headquarters at Pin Oak Marsh: This site, located just south of Chariton on Hwy 14, has over 2000 acres of marshland, forest and prairie. There is a handicapped-accessible paved path leading a quarter mile into the marsh and to a 50 ft pier. Other trails around the wetland and the dyke are mowed for access. The interpretive center has many taxidermy specimens, including mink, otter, bobcat, fish and aquatic birds. Aquariums with live salamanders, game fish and turtles are available for viewing. Spotting scopes will be set up on Saturday for viewing marsh bird activity.

Restored Savanna at Sibylla and Bill Brown's residence: The Browns have been restoring their savanna for about 12 years. If increasing species diversity is any indicator, they have had great success - they now have documented over 360 species of plants, with no introduced species. Their site is also significantly free of invasive species. A recent addition of an adjacent sedge meadow offers an exciting new area to explore. Chris Bair will have original surveying information and interpret historical information about the site, including native American campgrounds. **Directions to the savanna, at 21675 Pony Farm Rd, Leon:** Go 9.7 miles east from the junction of I-35 and Hwy. 2. Turn south on Pony Farm Road (after mile marker 128), proceed on Pony Farm Rd. for 2 miles. 21675 (blue 911 sign) is on the south side of the road after the goat farm (red barn), turn right and cross bridge to house and savanna site.

Stephens State Forest, Lucas: Stephens State Forest covers 13,000 acres in eight separate units. Lucas, Whitebreast and Woodburn units are near the town of Lucas and have most of the recreational development in the Stephens SF system. They have ponds stocked with fish, and equestrian trails.



Taking a Closer Look at Cleistogamous Flowers

submitted by Deb Lewis

To start on a bit of a tangent: as I walk to my building from a distant parking lot most mornings, I've noticed a spreading patch of henbit or dead nettle (*Lamium amplexicaule*). Even though it's an introduced weed, I view it fondly, as it is partly responsible for my becoming a botanist. In Arkansas, henbit is abundant in many lawns, including the one just outside the biology building on the Arkansas Tech University campus. More than 25 years ago, in early spring in my first plant taxonomy class (and only second botany class of any kind), the instructor suggested that we go out and "grab a handful of weeds" from the lawn to look at under the dissecting microscope. I think I had the usual shepherd's purse, dandelions, and henbit in my quick gathering. The flowers of henbit, when magnified ten or so times with the microscope, looked as beautiful to me that morning as any orchid I'd ever seen... I was stunned by this plant I'd walked on every day, and wondered, "If something this gorgeous is underfoot, what else is out there?!" This, combined with the enthusiasm of my instructor (soon to be advisor and mentor) led me on my career path.

Now, back to the henbit on a different campus in a colder climate... I've been watching the plants grow, anticipating soon being able to again admire the flowers. But throughout last summer, I didn't see any in bloom. The population was larger this year, but I still hadn't seen the purple-magenta flowers protruding from the floral bracts. On looking closer, I found only tiny white closed "bud-looking things" among the bracts. Unlike typical buds, these easily fell away at my touch, but left the developing four nutlets typical of the mint family. I hadn't known until then that henbit produced cleistogamous flowers.

Cleistogamous flowers occur in a number of species, including another one of my favorites, false-pimpernel (*Lindernia dubia*), as well as some of the grasses. However, the best known example of cleistogamous flowers among Iowa plants is in the violets. The cleistogamous flowers in our common blue violets (*Viola sororia*) are those early-season, short-stalked (pedicelled), yellowish "buds" that never open, but that often set fruit. This gives us a strong hint of the definition of cleistogamy – "the condition of having typically small and inconspicuous flowers which remain unopened and within which self-pollination takes place." In contrast, chasmogamous flowers are the "typical", open flowers that more easily catch our eye.

So what are the possible advantages of producing cleistogamous flowers? It's likely that there is less of an "investment" by the plant in producing these tiny flowers, and perhaps they are a way of getting a jump-start on the season. For species that are insect-pollinated, cleistogamous flowers are usually produced early and/or late in the season, before or after the insects would be present. Often the anthers (pollen-producing structures) are appressed directly to the stigma (pollen-receptive structure) in these small flowers, so that pollination is efficiently carried out. Of course genetic studies tell us that outcrossing (cross-pollination) is advantageous, and often necessary, yet cleistogamy doesn't allow for outcrossing. However, in a "pioneer" or early-colonizing species (like henbit and false pimpernel), self-pollination rather than outcrossing is an advantage, especially if there's only one plant at the new site. Thus cleistogamous flowers may be a way for the plant to "hedge its bets" in case no other individuals of the species or its pollinating insects are present.

INPS MEMBERSHIP/CHANGE OF ADDRESS FORM AND SURVEY

Send with your 2004 dues of \$10.00 to Diana Horton, 720 Sandusky Drive, Iowa City, IA 52240

Name _____

Address _____

Phone _____ Email Address _____

Additional information or special interest for member directory entry _____

Mark this box if you do not wish to have this information published in the INPS member directory. The INPS mailing list is never distributed to other organizations or companies. Dues are payable on a calendar year basis from January 1 to December 31. Use this form to change address

Natural History Exhibit at Sioux City's Lewis and Clark Interpretive Center

Sioux City's Lewis and Clark Interpretive Center is in the process of creating an outdoor, living, natural history exhibit that will last and continue to bring tourists and school buses long after the Lewis and Clark craze has subsided. Under the guidance of Dr. Brian Hazlett of Briar Cliff University and a dedicated committee that has worked long hours, this is on its way to becoming a reality. In November 2003, Jon Judson helped plant a two-acre prairie on the grounds of the Center. Volunteers collected most of the prairie seed locally. The eighty-five species planted will be kept mowed for three years. Additional species will be over-seeded.

During the winter months, native plants were ordered from various nurseries in at least ten states. Most of the plants have arrived and will be planted in the Garden of Discovery. Master Gardeners will plant the more than one hundred seventy species. The species represent plants found in the prairie as well as many plants Lewis and Clark discovered and collected on their expedition. The rains this spring have delayed getting the more than a thousand plants in the ground, but finally the planting is underway. The Garden of Discovery will provide a great opportunity to see how these native species do under "cultivation".

Future plantings will include dry prairie on some mounds, and a wetland area, all on the grounds of the Center. Signs will also be added this summer to identify the plants in the formal Garden of Discovery. For more information, contact Dianne Blankenship, bennaid@hotmail.com. Thank you to the many people who helped guide this project through responses on the INPS ListServe!

INPS Website: <http://www.public.iastate.edu/~herbarium/inps/inpsHOME.htm>

Newsletter

Iowa Native Plant Society
c/o Deb Lewis
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