NEWSLETTER

IOWA NATIVE PLANT SOCIETY

Volume 7, Issue 3 Octoher 2001

PRAIRIES AT STAKE IN 2002 FARM BILL

by Cindy Hildebrand

(An earlier version of this article appeared in the Summer 2001 edition of the Iowa Prairie Network's IPN NEWS.)

Nothing will determine the fate of our surviving native prairies more than the 2002 Farm Bill. The current farm bill encourages the destruction of native prairies. Prairie destruction was not the intention, but it is the predictable result of incentives built into farm programs.

Farm program incentives are causing prairies to be plowed up and planted to row crops, or damaged by tree and shrub plantings. The question is whether the next farm bill will provide incentives for prairie protection or prairie destruction.

Current farm programs, while they sometimes encourage new prairie plantings, do not protect native (virgin never-plowed) prairies. As the National Wildlife Federation has pointed out, "No conservation program currently exists that directly conserves intact native grasslands and their wildlife.

Inside this issue:

In fact, while grasslands provide a tremendous benefit to society, an intact native grassland may be the only parcel on a working landscape that is not eligible to be enrolled in any farm program."

America's native prairies are important natural resources with great public value. They build soil, store carbon, shelter a rich diversity of wildlife, harbor rare species, and provide recreational opportunities for millions of Americans. They are also very important to America's livestock industry. Many native prairies, in Iowa and elsewhere, are privately owned, and are being used as pasture, rangeland, or hay land.

Native prairies also have value because of their special capacity to absorb, store, purify, and gradually release water. Scientists are studying the unique hydrological qualities of native prairies in order to design better ways to control floods and prevent water pollution in rural and urban landscapes.

Prairie plantings have value, but they cannot match the soil structure, biodiversity, hydrology, and recreational value of native prairies. Scientists estimate that it would take at least four centuries for planted prairies to match native prairies in quality.

Prairies once covered much of North America, but are now our most endangered landscape. Unfortunately, tax-funded farm programs are a major reason why.

The 2002 Farm Bill needs to ensure the sustainability of the nation's irreplaceable prairie resources by including the following elements:

1. A voluntary Grassland Reserve Program should be established, giving landowners the opportunity to enroll their lands and receive payment for permanent or 30-year easements.

Continued on page 7

President: Tom Rosburg
P.O. Box 234
Colo, IA 50056
515-377-2930
thomas.rosburg
@drake.edu

Vice President:
Mary Jane Hatfield
2505 Tullamore Lane,
Ames, IA 50010
515-232-7555

Secretary: Linda Scarth
1630 Wildwood Dr. NE
Cedar Rapids, IA 52402
lscarth@
mmc.mtmercy.edu

Treasurer: Diana Horton
720 Sandusky Drive
Iowa City, IA 52240
319-337-5430
diana-horton@uiowa.edu

Issues/Action Committee:
Jane Clark
9871 Lincoln Ave
Clive, IA 50325
515-232-5047
jrclark@radiks.net

Program Committee:
Chairman: Mark Leoschke
2212 East Rose Ave #13
Des Moines, IA 50320-2613
mark.leoschke@
dnr.state.ia.us

Mary Brown
330 Windsor Dr.
Iowa City, IA 52245
319-338-3875
mlbrown@
blue.weeg.uiowa.edu

Judy Felder
335 Beldon Ave
Iowa City,IA 52246
319-351-7718
rfelder@
blue.weeg.uiowa.edu

Tom Rosburg (see above)

William C. Watson
P.O. Box 281
Cedar Falls,IA 50613

Historian:
Deborah Q. Lewis
Dept. of Botany,ISU
Ames,IA 50011-1020
515-294-9499

Printed on recycled paper

Leaves from the President's Notebook

The 200I field season is quickly winding down. Gentians and asters are in full bloom. A trip through the local prairie or forest results in a menagerie of seeds stuck to jeans and socks, the consequence of fruits adapted for ectozoochory. Birds are flocking. Grasshoppers and butterflies are losing some of their agility and pep. Fawns are losing their spots. Squirrels are busy storing acorns. And the maples are translocating and degrading chlorophyll, permitting the carotenoids and anthocyanins to shine through. The earth feels the need to rest.

The last INPS field trip for 200I was held last month, but there is still one INPS event you won't want to miss. The annual meeting will be held in late October at the Neal Smith Wildlife Refuge near Prairie City (see the newsletter announcement for details). The main event will be a panel discussion on the legal, ethical, and ecological issues surrounding plant propagation for native restorations. It's really an important topic these days. There are so many restorations underway by a variety of agencies and individuals (a really good thing) that it's impossible to keep track of who is doing and planting what. Even agencies utilizing the expertise of restoration ecologists have projects that have planted inappropriate species (at least in my ecologically-slanted opinion). For example, I have found 8 plant species (nearly 10% of the seed mix) in the 1-35 prairie reconstruction in Story County that should not have been in the seed mix. Three more were planted but have not established as far as I know from surveys.

Four of these eight plant species appear to have been accidental species that somehow managed to slip into the mix. This demonstrates that maybe there should be some concerns about how seeds are harvested or acquired by nurseries. However, the other four species were planned and purposefully put in the seed mix. This begs the question: what are the ethical, legal, and ecological guidelines for selecting species? One issue may be to what extent does improper seed selection in restorations contribute to a "homogenization" of our communities? Is this a real biological concern? Another issue is the use of species outside their known natural range. Is this the same as planting exotic species? Why is it legal to grow exotic species on your property, but unlawful to propagate threatened or endangered species? I hope you can come and contribute to this important discussion.

Tom Rosburg

Iowa Native Plant Society Annual Meeting
October 27th
Neal Smith National Wildlife Refuge
Prairie Learning Center, Prairie City

Everyone is invited to the Annual Meeting.

Agenda and activities:

9 - 10 a.m. Registration, rolls and coffee, and "social time"

10 a.m. Business meeting
(Please let Tom Rosburg know in advance of items that need to be included on the meeting's agenda)

10:45 or 11-12:30 Panel Discussion -- The Legality, Ethics and Ecology of Native Plant Propagation for Restoration Projects, moderated by Tom Rosburg. The panel will be composed of folks representing a variety of professions and interests -- academic, state and county government, those who sell seeds and plants, and those who are involved in restoring natural areas.

12:30 p.m. Pot-luck lunch -- please bring a dish to share, as well as your own drink and tableware.

1:15 p.m. The "Whaddya Know" Quiz on Botany -- prizes awarded for those who can answer the most questions on general botany!

Please join us for what promises to be a fun and interesting meeting! Bring your questions for our panel about native plant propagation (including endangered and threatened species), pertinent laws, "local ecotype" concepts, use of natives in restoration or landscaping projects, and related topics!

Questions about the meeting? Contact Tom Rosburg (515-271-2920; thomas.rosburg@drake.edu) or Deb Lewis (515-294-9499; dlewis@iastate.edu)

Request for DNR Proposals -- by John Pearson

With special funding from the Environment First Account, the Iowa Department of Natural Resources is issuing a request for proposals for plant and animal surveys:

- plant and animal surveys of a complex of public lands along the Wapsipinicon River in Clinton and Scott counties

- plant survey of the Paint Creek Unit of the Yellow River State Forest in Allamakee County

- plant survey of a complex of privately owned fens and prairies in Fayette and Clayton counties

Detailed texts of the Request For Proposals, plus maps, are provided at the following website:
http://www.state.ia.us/parks/surveysrfp.htm

BOOK REVIEWS

New State Preserves Guide Now Available

University of Iowa Press is announcing the publication of *The Guide to Iowa's State Preserves,* by Ruth Herzberg and John Pearson. As described at the website (http://www.uiowa.edu/uiowapresslherguito.htm): This new guide to all ninety Iowa state preserves-biological, geological, archaeological, historical, and scenic — will include both maps (location and topographic) and descriptions of each preserve. Except for a few privately owned or fragile preserves, there will be written directions, a description of the preserve's size, features, and history; a list of nearby or similar preserves, parks natural areas, and other attractions; recommended readings; and contact information.

Although the preserves system emphasizes preservation rather than recreation, some preserves do have formal trails; some allow hunting, horseback riding, and canoeing; a few have museums or nature centers. This comprehensive guide allows visitors to plan active and informative visits to sites that highlight Iowa's natural and cultural heritage.

The Guide is 240 pp., paperback, and includes 180 maps. The price is $14.95, and it may be ordered directly from the website.

Interested in Restoring the Prairie in Your Back Yard or Back Forty?

Look no further than *A Practical Guide to Prairie Restoration* by renowned naturalist [and INPS member] Carl Kurtz. Special features: Step-by-step guide to prairie reconstruction from site and selection through burning; 24 color photographs; conservation guidelines from The Nature Conservancy; and a reference list of Midwest seed sources and services and books on prairie plant reconstruction and identification.

A Practical Guide to Prairie Reconstruction ($12.95 paperback, 70 pp., 24 color photos, 2 maps) is available at bookstores or directly from the University of Iowa Press at 1-800-621-2736. For more information or to order online, visit the University of Iowa Press website at

(from "Book News" from the University of Iowa Press)

"Orchid Fever" submitted by Fred Crane

Orchid Fever, by Eric Hansen, was published last year by Pantheon Books. Here is part of the blurb from the book's dust cover:

"A seductive journey into the obsessive, outrageous, and mesmerizing world of orchids.
From the steaming jungles of Borneo to the hallowed hallways of Kew Gardens, from the clandestine orchid nurseries of Europe to the peat bogs of northern Minnesota, here are luscious, sexy flowers, orchid smugglers, ... and government officials who raid orchid nurseries with attack dogs and automatic weapons...

Hansen spent seven years exploring the far corners of the earth --marveling at flowers of uncommon beauty, studying the history of the orchid trade, and grappling with the vicious, bizarre petty world of plant politics than sometimes makes it impossible to protect endangered species... he illuminates a funny, weird, and poignant world of horticultural passion and pathos."

The author perhaps rails excessively at the Convention on International Trade in Endangered Species and the people who enforce it, but he is a good writer and it is a fascinating book.

A Case for Collecting

Jane Mygatt
UNM Herbarium

Time was when quality and craftsmanship were coveted; items from latchkeys to scientific instruments were carefully crafted of wood, glass, and metal. Some were complex, others simple, such as a botanist's companion- the vasculum.

A vasculum is a botanist's collecting case. These special cases were made oftin in the shape of a compressed cylinder and used for carrying freshly collected specimens (Fig. 1). They had handles or woven cotton shoulder straps for ease of carrying and came in varying sizes. To prevent wilting of the specimens, wet towels were put inside the vasculum to keep the materials fresh until they could be properly pressed at a later time.

The first written accounts of the vasculum appear by 1704 during *The Enlightenment* when botanical collecting became increasingly practical and profitable for the new science of medicine. Specialist societies began to form during this era of exploration and investigation, and as a consequence, an abundance of publications appeared. By the 1770s literature was available in English, as opposed to Latin, which widened readership. The British physician William Withering is recognized for writing a popular manual on British plants, and credited with introducing, in print for the first time, the importance of the screw down plant press and the tin vasculum.

In 19th century Britain, knowledge of the local flora was required for qualification in the medical field. Renowed physician-botanists at the major universities undertook regular botanical excursions. Field collecting became popular and as a result of advances in technology, field equipment such as the vasculum became more available and affordable. By the 1820s students were expected to supply their own vascula which they used widely. Botanists now had that special air, that *esprit de corps* when equipped with their vascula.

In the 1830s the size of the vasculum increased and the shoulder strap was added. The length of the vasculum increased to accommodate larger specimens to fit the new standard of larger sized herbarium sheets. Notable at this time was the secondary use of the vasculum for accommodating another British invention, the sandwich.

D.E. Allen, author of *The Naturalist in Britain* wrote: "...it seems to have been British botanists' repeated use of their vascula for holding and preserving sandwiches - to such an extent that lC. Dale, in 1838, actually dared to recommend, quite unequivocally, 'a vasculum (for sandwiches)' - that caused the standard design of this implement to be heavily influenced by that of the sandwich-box, and so led to a British vasculum that is still markedly different in aspect from the usual models on the Continent."

In the United States, the vasculum may have seen its heyday from 1870-1945, when botanical explorations accelerated after the Civil War. Professionals and amateurs collected in search of new species. University faculty and students were encouraged to collect in the field and many individual state *Floras* were written during this period.

After World War II ended, taxonomy expanded into the science of Systematics, which focuses on understanding plant relationships. It was getting more difficult to find new species to describe. Few remote areas remained in the U.S. where new genera were likely to be found. The old science of taxonomy, once predominated by field collecting and describing and naming new species, took a back seat to the new taxonomic techniques used in the laboratory.

Plant collecting continues, but to a much lesser extent. Some of the older vascula are still in use by the more traditional taxonomists. There are many amusing anecdotal references to the vasculum. Deborah Q. Lewis, Curator of the Ada Hayden Herbarium in Iowa, sent this story. "Duane Isely, a legume taxonomist here who passed away last year, used to tell a funny story about his graduate adviser at Cornell, W.L.C. Muenscher. One day Dr. Muenscher was sitting in a bus station with his vasculum on his lap. As Dr. Isely would tell it, a drunk in the bus station kept staring at the vasculum. Finally he loudly announced, "Hey, everybody -- that guy carries his mailbox with him!"

Sadly, these stories, like the older botanists and the equipment they used, are passing into oblivion. The UNM Herbarium has a few examples of vascula that were in use during the 1930-40s. They were used by the first curator of the herbarium, Edward F. Castetter, who collected throughout the state beginning in 1928. Subsequent curators and their students used them until the mid 1970's. These vascula are now bruised and battered, their straps long gone. Even in this condition they captivate the imagination. The well-preserved vasculum is now highly collectible.

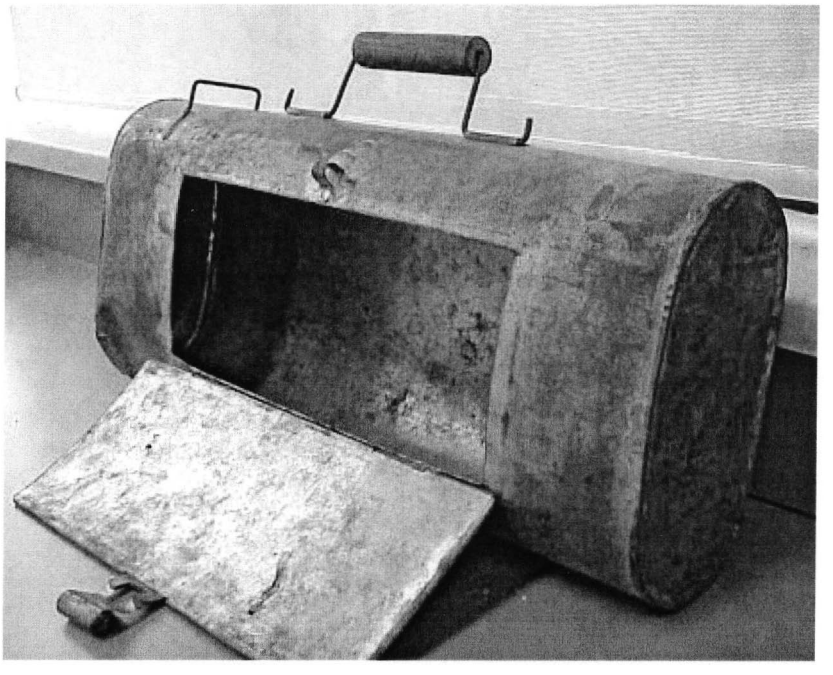
Current field botanists who have used our vascula say they worked well for the "gentleman botanist", one who didn't need to hike long distances. They proved too unwieldy while hiking in remote areas in rough terrain. The straps would entangle in shrubs and foliage, the case itself chaffed the hip. They became scorching hot in the desert heat and they were heavy. They may have had more utility in cool, wet climes.

New light-weight models of vascula are available from biological supply companies. One model is made of pattern-sheet aluminum, with a Velcro® type catch, and a polypropylene carrying strap. They cost around $60 and weigh less than 2 pounds. Not surprisingly, they lack character and charm.

The traditional case for collecting plants has gone out of style with many botanists. Ease and convenience have prevailed; metal cases have been replaced with low-cost, lightweight plastic. Many botanical web sites extol the use of plastic bags. A quote from one of these sites read ..."Any botanist worth his or her salt knows that a garbage bag with its inside moistened works just as well as a vasculum."

Maybe, but it has no class.

Fig. 1. Vasculum (circa 1914) of John Davidson, the first Provincial Botanist of British Columbia (Photo courtesy Daniel Mosquin, *VBC* Botanical Garden)



Continued from page 1

Priority should be given to native prairies that provide habitat for rare and declining species, and small prairies should be eligible as well as large ones. Well-managed grazing and seed harvest should be allowed where appropriate.

2. Commodity support programs should be designed so they do not encourage or result in the conversion of native prairies to cropland.

3. The Conservation Reserve Program (CRP) should be changed so that landowners are no longer encouraged to plow up and crop native prairie for two years in order to qualify the land for enrollment in the CRP.

4. The federal requirement that trees and shrubs be planted on CRP riparian marginal pastureland should be removed. The requirement causes serious problems in prairie states like Iowa, where it wastes money, angers landowners, destroys native prairies, and imperils rare species. On CRP pastureland, prairie vegetation should be encouraged on prairie soils.

5. All biomass programs should be carefully designed so they do not encourage or subsidize the plowing of native prairies in order to plant the land to biomass crops.

6. Conservation programs for working lands should encourage and reward sustainable grazing and good stewardship on native prairie pastures, hay land, and rangeland.

7. The CRP and Wetland Reserve Program (WRP) should be made sufficiently flexible so that state and local officials will have the ability to protect native prairies by using appropriate seed and management techniques on nearby CRP and WRP plantings.

8. The Sodbuster compliance provision should be reauthorized and strengthened so it extends the same protection to prairies and other native plant communities that Swamp buster extends to wetlands.

9. The Wildlife Habitat Incentives Program, which has helped landowners protect native prairies, often with the help of state and local matching funds, should be reauthorized with increased funding.

10. The Farmland Protection Program, which has helped landowners protect native prairies and other unique farmland from development through permanent conservation easements, should get full funding and support.

By including native prairie protection in the 2002 Farm Bill, Congress would help all Americans, as well as our natural resources and our agricultural economy. Farmers and ranchers who have kept their native prairies intact, thereby providing benefits to the public, would be economically rewarded instead of punished. Our serious crop overproduction problem would be reduced. And future Americans would be able to experience wild native prairies and discover their special magic.

Prairies are getting little attention in current Farm Bill debates. If you want to help them, please write to your U.S. senators and congressional representatives.

(Cindy Hildebrand is a prairie enthusiast who lives near Ames.)

IOWA PRAIRIE NETWORK FALL CELEBRATION & ANNUAL MEETING October 20, 2001 Neal Smith National Wildlife Refuge, Prairie City.

The Iowa Prairie Network will have it's Fall Celebration and Annual meeting on October 20th at the Neal Smith National Wildlife Refuge near Prairie City. Registration and coffee will be from 8:30 to 9:00 with walks (and discussion) starting around 9:30. Lunch will be a potluck at 1:00, plates, cups and silverware will be provided, just bring a food item to share. There will be time in the afternoon to look at the displays, the book store, and seed cleaning facilities. We will leave at 3:30 to go to Engledinger Marsh for the final walk.

There are no registration fees - the IPN just wants everybody (member or not) to come and enjoy the day! Pre-registration would be appreciated to aid in the planning and arrangements but is not required. Pre-register by sending your name, address, and phone number to: IPN c/o Pam White, 2066 Suffolk Rd. Oskaloosa, IA. 52577. Those who pre-register will have their name put in for a special door prize.

Sedge Workshop Report submitted by Deb Lewis

The sedge workshop was held in Muscatine County on June 9th. A surprisingly large group (nearly 40!) participated in the workshop for at least part of the day! Our "fearless leaders" (Bill Norris, Tom Rosburg, and Scott Zager) opened the workshop with explanations of how *Carex* is "put together", pointing out the several special features (like the perigynium) that identify the genus and those that are most important for telling the species apart (like perigynium shape, arrangement of male and female spikes and florets, achene shape, scales, etc.). We jumped right in with actual examples of sedges that could be examined under the dissecting microscopes that were set up. These first species that we looked at were: *Carex hystericina,* C. *rosea,* C. *brevior,* and C. *vulpinoidea.* Each of these are quite common, and, as noted below, we also got to see each of these "in the field".

We had time before lunch to also explore a ditch near the entrance to Wildcat Den State Park. The ditch was surprisingly diverse in sedge species, and we're guessing that it is actually part of a larger natural seep-complex. The *Carex* species that we saw there included C. *molesta,* C. *laevivaginata,* and C. *shortiana,* as well as giving us a chance to "review" C. *vulpinoidea* and C. *hystericina* that we had looked at in the introduction.

After lunch (and a lot of good conversations and new/renewed acquaintances!), we went in search of woodland species at Wildcat Den. *Carex blanda,* C. *albursina,* C. *grisea (=c. amphibola* var. turgida), C. *gravida,* C. *oligocarpa,* and C. *rosea* were all turned up during our hike in the mostly upland woods.

We then drove several miles to the Swamp White Oak Preserve (TNC). The preserve is in the Cedar River floodplain, and with recent rains, was largely flooded. However, in the limited drier areas near the entrance, we found *Carex davisii,* C. *conjuncta,* C. *grayi,* C. *emoryi,* C. *laeviconica,* and C. *muskingumensis.*

Our fmal stop for the day was at Shield Prairie, a sand prairie just a few miles from Swamp White Oak Preserve. The prairie largely covers dry, well-drained hills, but a low, wetland area provided additional *Carex* species for our list -- C. *leavenworthii,* C. *pellita (=c. lanuginosa),* C. *aggregata,* C. *vesicaria,* C. *atherodes, and* C. *scoparia.*

Our three leaders did a great job -- in filling our heads (and notebooks) with sedge info, providing a helpful reference manual, as well as choosing good sites in which we could see the nearly overwhelming variation of fonns found within the genus! From the delicate beauty of *Carex rosea* to the surprisingly wide leaves of C. *albursina* in the woodlands and from the wand-like spikes of C. *vulpinoidea* to the dangling spikes of C. *hystericina* to the short, terminal spikes of large, clustered florets of C. *grayi* in the wetlands, the great diversity of Iowa's sedges was clearly demonstrated!

Jensen Marsh and Upland submitted by Tom Rosburg

It was a perfect August day for plant-hunting at Jensen Marsh. A diverse group of 23 people attended the morning tour of prairie, wetland and woodland edge habitats. Mark Widrlechner gave an insightful presentation on the identification and collection of *Rubus* species (raspberry, blackberry) complete with several handouts. Did you know that *Rubus* is second only to *Carex* in terms of the number of species present in Iowa?

About 40 species were recorded in an hour and a half of rambling. Due to the interest in learning about *Rubus* and other plants that we saw, we didn't really get very far into the area. Some notable species included: *Rubus ablatus, Quercus muhlenbergia,* three species of *Euphorbia (nutans, maculata,* and *dentata), Apios americana, Strophostyles helvola,* and *Tripsacum dactyloides.*

Many in the group stayed after lunch for an afternoon tour of the Johnson prairie and woodland near Peru. Roselea gave an informative tour of her property and provided wonderful refreshments. A trip through the woodland found *Lithospermum latifolium, Dasistoma macrophylla, Scleria triglomerata,* and leaves of *Liparis lilifolia.*

The reconstructed prairie areas were equally as interesting. A variety of planting times and management scenarios provide opportunity to compare reconstruction techniques.

Exploring in Dolliver State Park submitted by Deb Lewis

September 22nd turned out to be a wonderful day for exploring the canyons, forests, and prairie at Dolliver State Park. Seven of us ignored the clouds and early threat of rain to see the ferns in Boneyard Hollow, the woodland flora of the trail to the Copperas Beds, and a surprising diversity of prairie species on a steep slope above the ranger's station. Attempts are underway there to enlarge the prairie and savanna with selected tree and shrub removal. Leafy spurge *(Euphorbia esula),* an aggressive non-native species that can out-compete native prairie species, was present, but seemingly not in the abundance of 15 years ago.

Rockrose *(Helianthemum bicknellii)* and sky-blue or prairie heart-leaved aster *(Aster azureus* in Eilers and Roosa), both from the prairie, were the "good" additions to the 1987 checklist, while winged wahoo or burning bush *(Euonymus alatus),* an escape from cultivation into disturbed woods, was the "bad". It was also a good day for looking at the asters and goldenrods, and we were also surprised to fmd how many sedges *(Carex* spp.) were still in fruit. We wondered if this was typical for the site or just for this year -- have others also observed this? Just before we were done for the day, we found one of Iowa's few fall-blooming orchids, fall coral-root *(Corallorhiza odontorhiza*).

An added - and unexpected – treat for the day was having Lois Tiffany tell us about the many mushroom and other fungus species that we found throughout the park. We saw the more familiar puffballs (at least two species) and shaggy-mane mushrooms, as well as less familiar, but often very colorful ones. Dr. T told us not only the names, but also whether they were edible and often a bit of natural history about each species.

INPS Membership/Change of Address Form and Survey

Send with your 2001 dues of $10.00 to Diana Horton, 720 Sandusky Drive, Iowa City, IA 52240.

Name: _

Address: _

Phone: Email Address: _

Additional information or special interests for member directory entry _

O 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 for change of address.

UPCOMING EVENTS

Mark your calendars

October 27th Iowa Native Plant Society Annual Meeting
Neal Smith National Wildlife Refuge
Prairie Learning Center, Prairie City (see page 3)

October 20,2001 Iowa Prairie Network Annual Meeting
Neal Smith National Wildlife Refuge
Prairie Learning Center, Prairie City (see page 7)

Newsletter
Iowa Native Plant Society
c/o Deb Lewis
Department of Botany
Iowa State University
Ames, IA 50011-1020