

A Prairie Rendezvous

A joint publication of:



Prairie
Grove
Volunteers



Grand
Prairie
Friends
of Illinois

Summer Vol2, N3, 2000

This summer we bid farewell to long time Busey Woods steward Kim Bauer. She's completed her studies and is moving on to new challenges. During her time here, she's been a valuable volunteer and mentor to restoration newbies. More than once she came along to help an otherwise understaffed burn.

Dedicated volunteers are a commodity in chronic short supply, no matter the size of the group. The names say it all...Prairie Grove **Volunteers** and Grand Prairie **Friends**. Without them, the preserves would not be preserved and the little projects, like labeling plants for sale, would go uncompleted.

There are two opportunities for you. GPF is currently looking for new members to serve on its Board of Directors and Kim needs a replacement steward for Busey Woods.

Sounds intimidating? How about helping sell plants for a couple hours instead? No matter what your contribution, small or large, it is needed. Just send a note to A Prairie Rendezvous with your interest!

- the editors

I'm sure like many of you, insects of the prairie fall into one of two categories. The first the beautiful, like the butterflies and dragonflies that flit thought the air; something to stop and admire before going back to pulling sweet clover. The second category consists of the nasties; the mosquitoes, ticks, and chiggers that we douse ourselves in chemicals to keep away. There is a third group, those insects that go about their business quietly and unseen, a group that I had not previously given much thought about.

I hope you'll find the following article about ants as interesting and informative as I did. So the next time you are out on the prairie, take a moment to consider the bugs that don't bug. - DC, managing editor

The original and full text of the following article is available at the Northern Prairie Wildlife Research Center Home Page, www.npwrc.usgs.gov

An Introduction to Ants of the Tallgrass Prairie

by: James Trager

The sheer abundance of ants indicates their importance in the ecology of the prairie. Like the plants of the tallgrass prairie, ants of the tallgrass prairie can all be found in other natural communities, especially open, oak or pine-dominated woodlands.

All prairie ants can be characterized as meat-eaters with a sweet-tooth and fall into four groups; known as guilds. The largest guild is generalized predators, which hunt and kill other invertebrates. Another guild raises sap-feeding insects, such as aphids, on plant roots, like humans raising livestock. A third guild raids other ant colonies for slaves and/or food. Finally, while all ants scavenge opportunistically, there are some which specialize in this life style.

Within their size range, ants are among the foremost predators, in part because of their ability to hunt in groups. They patrol the ground and plant surfaces, killing whatever they can subdue, collectively taking huge numbers of the prey animals. Major prey items are smooth- and soft-bodied immature insects. The protein-rich prey is mostly cut up and fed to the ants' larvae.

Ants satisfy their taste for sweets with naturally-occurring sugary substances; mainly used as food for adult worker ants. Many plants, e.g. sunflowers and partridge pea, secrete nectar from glands on leaves, stems or buds. The nectar is licked up by ants, which spend long periods of relative inactivity on the plants, awaiting the slow secretion of the sweet substance. When approached by other insects, the apparently idle ants become aggressive

(see *Ants*, page 6)

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A Prairie Rendezvous is published quarterly. Article submissions should be sent electronically to the editor at d-chien@uiuc.edu

Prairie Grove Volunteers

www.prairienet.org/pgv

The PGV is part of The Nature Conservancy's Volunteer Stewardship Network. Its stewards help coordinate volunteer workdays at native prairie, savanna, wetland, and woodland remnants. Inquires and tax-deductible donations should be sent to: Prairie Grove Volunteers c/o The Nature Conservancy,

Grand Prairie Friends of Illinois

www.prairienet.org/gpf

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A Prairie Rendezvous
Submission Deadlines:

Hibernation Issue (Dec, Jan, Feb)
November 15

Greenup Issue (March, April, May)
February 15

Summer Issue (June, July, Aug)
May 15

Fall Issue (Sept, Oct, Nov)
August 15

Member submissions encouraged.

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A "Fare Thee Well" Message

from Kim Bauer, TNC Regional Administrator:

This is a melancholy message...in September I am moving to Seattle to attend Naturopathic Medical School at Bastyr University. Sigh. I will miss you all very much. After six years of working side by side with many of you to help restore woodlands and prairies, I feel a deep connection to our local natural areas, and to all of you who spend your time and energy helping to preserve them. I have seen the tremendous progress that a few devoted people can make toward increasing the biodiversity of a site. I have felt the sense of accomplishment at the end of a workday, and the strong kinship that it imparts to volunteers who have just completed a job well done. These qualities are rare, and I hope I can find as fulfilling volunteering opportunities wherever I go.

And so, I leave you all with these thoughts. Over these past few years, Prairie Grove Volunteers has evolved into a group that has made TNC quite
(see Kim, page 7)

Thank You Volunteers!

Over the winter and spring GPF was fortunate to benefit from the invaluable help from a number of volunteers. They helped transplant prairie plants for our popular annual sale, helped out at the sale, and a variety of other important tasks.

A big thank you to the following volunteers...with out you the group would be diminished.

Transplanting nights:

Alan Rider, Bob and Jackie Vaiden, Steve Buck, Kara Krumdick, Jim Hoyt, Chris and Jen Hauser, Jim and Mare Payne, Alison Meanor, Dan Busemeyer, Phil Hult, Mary Kay Solecki and John Taft, Jamie Ellis, Joyce Hofmann and Paul Tessene

May 6th - May Day at Lake of the Woods:

Jamie & Mindy Ellis, Jim Payne, Phil Hult, Ruth Green, and, Aliaon Meanor

Annual Plant Sale on the 13th:

Brian Wilm, Dan Busemeyer, Jim Payne, Ruth Green, Connie Carroll, Bob Vaiden and Phil Hult hauled plants to or from the sale. We had many faithful volunteers working at the sale, including John Marlin (who generously donated his woodland plants to the sale), Rick and Debbie Winkel, Paul and Peggy Tessene, Jim & Mare Payne, Lisa Braddock, Kara Krumdick, Heidi Leuszler, Jen and Chris Hauser, Joyce Hofmann, Alan Rider, Jim Hoyt, Connie Carroll, Jen and Chris Hauser. Thanks to your help we raised \$2700.

We had super volunteers thought this year from The Red Bison.

As always, thanks to Ruth Green for organizing and keeping things moving. 

Volunteer Workday



Calendar



'Fridge' Insert - Summer, 2000

EVERY THURSDAY

WINDSOR ROAD PRAIRIE. Every Thursday night from 6 - 8 pm help maintain this highly visible site. There is a curb cut at the west end for cars to pull off. Volunteers are welcome to work any other time. Contact Ruth Green at rgreen@mail.inhs.uiuc.edu or call 333-7091 or 355-8125.

SATURDAY, JULY 29

SHORTLINE RAILROAD PRAIRIE. Come experience the satisfaction of removing sweet clover and other non-native vegetation from this prairie remnant. Meet at APNC at 9:00 am to carpool, or on site at 9:45 am. Contact Phil Hult (h: 586-4511) for more information.

SATURDAY, AUGUST 5

JASMINE HOLLOW NATURAL HERITAGE LANDMARK. Workday to remove trash (concrete, RR ties, etc.) from the Sangamon River. This is a 140 acre privately owned site along the Sangamon River. It contains mature bottomland and second growth upland forest. This site is important in that it protects the Sangamon River and is a nearby link to Allerton Park. Bring gloves and wear boots if you have them. Meet at 9:00 am at the Lost Garden parking lot at Allerton and car pool from there. Contact Eric Smith (278-5773).

SATURDAY AUGUST 19

BUSEY WOODS. Brush cutting and removing non-native species. Enjoy a woodlands close to home. Bring loppers or hand saws if you have them. Meet at APNC at 9:00 am. Contact Kim Bauer (h: 328-0552) for more information.

SATURDAY SEPTEMBER 9

PROSPECT CEMETERY PRAIRIE NATURE PRESERVE. Help cut brush and battle other invasive species at this 5 acre cemetery with a remnant mesic prairie. Some 80 species of native herbaceous forbs and grasses grow at this site. 21 of these are found nowhere else in this county! Bring gloves, drinking water, and cutting tools if you have them. Bring a snack too if you'd like. Meet at APNC* at 9:00 am to carpool, or on site at 10:00 am. Contact Chris Hauser (384-5048) or John Taft (w: 244-5046).



Directions:



APNC - ANITA PURVES NATURE CENTER. Urbana Park District. 1505 North Broadway, Urbana. Busey Woods is located behind the APNC.

PROSPECT CEMETERY PRAIRIE - Champaign county. Take US Rt. 45 north from Rantoul. Just before entering Paxton turn right (east) on Green St (about one mile past 2700 N). At "T" intersection turn right and park along road.

Upcoming Events

JULY 16 - 20

17TH NORTH AMERICAN PRAIRIE CONFERENCE. Mason City, Iowa at North Iowa Area Community College. Symposia include roadside vegetation management and seed-source issues plus sessions on prairie culture, heritage, and ecology. Contact Carol Schutte, North Iowa Area Community College, 500 College Dr., Mason City, IA 50401. Ph: 515-422-4319; e-mail: schutcar@niacc.cc.ia.us. www.niacc.cc.ia.us/~napc/index.html.

OCTOBER 2000

CONFERENCE ON EXOTIC SPECIES. Iowa State University. www.ag.iastate.edu/departments/aecl/invasives/

OCTOBER 16 - 20

27TH NATURAL AREAS CONFERENCE. Will address different aspects of biodiversity and how humans fit into the new century of management. Contact Kate Leary at 513-751-4115 x183. www.conservation.state.mo.us/nac



Prescribed burn in Seymour, Spring 2000.

Midwin Writers Society

The Midwin Writers Society is a new Illinois-based group designed to further nature writing in the Midwest. It is based at the Midwin National Tallgrass Prairie headquarters between Wilmington and Joliet.

The group and the US Forest Service are entering into a first-of-its-kind agreement incorporating a writers' group into the formal organization/activities of a USFS site.

The Society, just started this year, will sponsor its first formal

activity this fall, with a workshop course on nature writing.

Those interested in either getting involved in the group or in signing up for the course can do so by contacting Arthur Pearson at 773-928-9014, or Alf Siewers at 217-328-7410. 

GPF Summer Interns

Grand Prairie Friends is again fortunate to have two eager interns for our summer program. Andrew Clark and Ellie Kron, will be out working on the various sites managed by GPF. Be sure to attend a workday and say hello. Following are their personal statements.

To start, my name is Andrew Clark and I am originally from Rockford. I graduated high school in 1996 and proceeded to Rock Valley CC for two years before transferring to complete my undergraduate degree here at the University of Illinois. My declared major is Natural Resources and Environmental Sciences - Biological Science degree option. Chances are high for me to stick around and complete a second degree in plant biology. While education is my main focus, I have many commitments on campus socially and otherwise. Next year I will be continuing my position as a resident advisor in Illinois Street Residence Hall (my second year as a

RA), and I will also be working on the editorial staff of the university's yearbook, the Illio. This past year I worked as a photographer on the Illio and will be continuing that among other jobs this upcoming academic year.

I spent last summer working for The Nature Conservancy at the Nachusa Grasslands near Dixon, IL. The job offered the chance to live on-site, which I accepted and worked weekdays as a Restoration Technician. The job duties were sometimes broad but consistent with the mission of preserve managers through maintenance of the existing prairie and reintroduction of natural

species. Duties included hand broadcasting seeds, removing exotics, working with fellow interns and stewards, ordering/collecting supplies, computer maintenance and structure/automobile maintenance (although these last three were small parts of the summer work). During this time I became more comfortable with common and rare prairie species, keeping a daily journal about the various interactions with plants either exotic or native. Now, if I could only find that journal...

Oh, I also drive a '74 VW Super Beetle. It's a big part of my life, so I thought I would mention it. 



My name is Ellie Kron and I'm a junior in NRES (Natural Resources and Environmental Science). I got involved in prairie restoration when I came to the U of I with Red Bison, the student prairie restoration group. I'm excited to be co-leading the group for the next academic year. I'm very interested in natural lands management and hope to learn many things from GPF this summer.

I'm from Lake Villa, which is about an hour north of Chicago just below the WI-IL border. Prairie restoration and management in general interests me because it is a great way to learn about an ecosystem and to repair some of the damage we've done. Plus, it's a great avenue for teaching others about that particular ecosystem and to have a caring attitude towards the environment. Next semester with Red Bison, we

will be planting a prairie garden on the far north end of our site, at the southeast corner of the intersection of Windsor and Neil, along with the routine burning and seed collecting. While my passion for environmental work started long before I'd seen a prairie, working with prairies over the last two years continuously renews my desire to work with natural areas and amazes me with the wide diversity and intricate complexity of the environment. 

(*Ants, from page 1*)

and attack. They will even climb on and bite the fingers of nosy entomologists investigating this behavior. Plants benefit from the protection the ants afford them from leaf-eating insects.

Ants linger in a similar manner on plants infested with leaf- or stem-sucking aphids (or scales or plant hoppers) and take advantage of the excess sugars excreted by the insects, known as honeydew. Plants suffer from sap loss and increased chance of disease transmission however, they benefit by having protection from leaf chewing insects. These interactions can affect seed production and energy storage, and thus ants may affect species composition and relative abundance.

Acanthomyops and certain *Lasius* species have given up hunting and foraging above ground for subterranean livestock-rearing. These ants live in association with root-feeding aphids, harboring them in subterranean chambers among plant roots. The ants tend the aphids constantly, softly tapping them and gathering the resulting honeydew. To meet their protein requirements, the ants slaughter young aphids for meat. Aphid-rearing ants remain underground save for a few days each year when they send off their winged brothers and sisters (males and queens-to-be) on mating flights.

Two groups of ant species hunt other ants. One group includes all *Polyergus* and some species of the related genus *Formica*. These parasite/predators raid nests of certain neighboring *Formica* species to steal their pupae and larvae. Some of the stolen are eaten, but the rest mature and become incorporated into a mixed-species colony. The stolen

Formica ants ultimately do most of the work of foraging, nest-maintenance, and brood-care for their kidnapers.

The second group includes army ants of the genus *Neivamyrmex*. These are true specialized predators on the brood of other ants. *Neivamyrmex* are found commonly in the southern prairies and are close relatives of the fabled tropical army ants.

Many smaller ant species in the prairie are primarily scavengers, gathering bits of dead insects or lapping up honeydew or fruit on the ground. *Solenopsis molesta*, the smallest prairie ant, nests within the mounds of larger ants, feeding off their scraps and possibly snatching larvae or eggs. Other ants run about singly, collecting edible fragments and fallen honeydew droplets. The ubiquitous little black ant, *Monomorium minimum*, swarms to dead invertebrates. One often sees large gatherings of these small ants feasting on larger insects or on small vertebrates killed on hiking trails in public prairies.

Pheidole species are scavenger/predators which also gather and crack open small seeds and place their larvae directly on the exposed contents to eat the nutritious inner parts. Indeed, most ants gather plant fragments, seeds and other parts which they eat, or incorporate into their nests. Certain plants rely on this behavior for seed dispersal. Violets, some sedges, trout lily, and trillium take advantage of ants by producing nutritious and highly attractive fleshy appendages, or arils, on their seeds. The arils induce ants to carry the seeds home, where the soft parts are then eaten. The aril-less

seeds are then discarded in the ants' underground trash heaps, with ideal conditions for germination.

All ground-nesting ant species move prodigious amounts of soil as part of their normal nesting activity. In northern prairies, where there are no native earthworms, ants are the main movers and aerators of soil. Even further south, ants exceed earthworms in importance as earth-mixers in prairies. Waste, dead ants, and inedible food parts enrich the soil in and around ant mounds. Some prairie plants, especially annuals and the young of longer-lived plants, characteristically grow upon the loose, rich soil of abandoned mounds. Ant mounds are also the preferred habitat of a variety of small animals, especially commensal and parasitic arthropods which spend part or all of their existence in ant nests.

Ants and Prairie Restoration

The effects of restoration activity on tallgrass prairie ant populations, species richness and species composition have never been formally studied. Indeed, my work represents the first attempt to characterize the ant fauna of this endangered ecosystem (see also Trager 1990). Preliminary and informal observations suggest that the following responses may occur:

1. Prairie ants already in a degraded remnant natural area respond with population increases to restoration activity, especially burning.

2. Prairie plantings with old fields or prairie remnants nearby become colonized by many ants typical of grassland within a few years (Trager 1990).

3. By eliminating woody vegetation and detritus, fire eliminates or reduces arboreal, litter- and twig-nesting species and shifts dominance to soil-nesting species.

Unanswered questions which need scientific research include:

1. What is the "full complement" of ant species that might occur in a prairie tract, and how long might this take to restore or to establish in a planting?

2. What are the effects on ant populations of different management treatments such as haying, mowing, grazing and burns at different seasons?

3. What are effective methods for transplanting and ensuring establishment of remnant-restricted ant species which are unable to disperse to restorations or to prairie plantings?

4. What are the impacts of a healthy ant fauna on establishment of prairie plants, other insects, and on lizards and other predators of ants?

5. What are the characteristics of succession of species in an ant community in the long and short run, and on restorations versus prairie plantings?

6. What effects do ants have on vegetation structure that are different when ants are lacking? 

Trager, J.C. 1990. Restored prairies colonized by native prairie ants (Missouri, Illinois). *Restoration and Management Notes* 8(2): 104-105.
citation for this article:

Trager, James C. 1998. An introduction to ants (Formicidae) of the tallgrass prairie. *Missouri Prairie Journal*. Vol. 18:4-8. Jamestown, ND

(Kim, from page 20)

proud. We consistently have an active board and devoted stewards. We have initiated and continued such successful programs as the Annual Steward's Luncheon, the Annual Picnic, and many workshops and field trips.

Through continued cooperation with Grand Prairie Friends, we now have a joint newsletter, and new volunteer and stewardship initiatives. I feel strongly that our group has successfully stood the test of time, and I have a sense that the present high energy and renewed commitment exhibited by our steering committee members will translate into a membership that is more involved than ever.

It is an exciting time for me to pass the torch! I am both Regional Administrator and Busey Woods Steward. Each of these positions requires qualities of leadership, and yet each has a different level of commitment. The Regional Administrator's job is to call the monthly steering committee meetings, to conduct outreach initiatives in the local community, and to act as a liaison to the regional field office. Always, I have strived to lead by encouraging cooperation towards our common goals. I consider myself fortunate to have worked so closely with such devoted friends. The person who takes over the position of Regional Administrator will find that the job

is gratifying, and offers many opportunities for growth. As for the Busey Woods Steward, the job is more clear-cut. Busey Woods has a work day once each month all year long! On the third Saturday of the month, from 9-11 am, volunteers meet at Anita Purves Nature Center to remove non-native species, plant native species, and do general trail maintenance. Because Busey Woods is located within the city limits of Urbana, and owned by the Urbana Park District there are always volunteers. Many university students and local community groups come to volunteer in the woods. I have found that though these groups are not often composed of "nature buffs", they are excited and get a lot done. So, the new steward should feel comfortable leading groups of folks on a workday that is as much about work as it is about environmental education. Busey Woods has come a long way towards recovery, yet it needs a guiding hand to lead the way.

Would you like to step into either of these positions (no, they aren't a package deal...you can do one or the other!)? If you are interested, call me to discuss the position further. I would be happy to "mentor" you between now and the time that I leave. So give me a call...even if it is just to say good-bye. (217)328-0552 -Kim 

Butterfly Photography Contest

sponsored by:
The Embarras Volunteer Stewards

- All photos must be taken East Central Illinois during 2000.
- Everyone is invited to enter: amateur or professional.
- Each photo must be 8"x10" in size and mounted in a mat only.
- Entry deadline: September 1st, 2000.
- All photos must be accompanied by the photographer's and pictured butterfly name. (Film speed and camera settings are optional.)
- All photo entries will be displayed at the Douglas-Hart Nature Center.
- There is no entry fee, but an application must be filled out.
- Photos may be considered for use in a new local butterfly guide.
- Judges decision will be final.

1st Prize \$100 2nd Prize \$50 3rd Prize \$25 A special award for best Skipper photo If over 25 entries are received, prize award amounts will be doubled.
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Applications at Douglas-Hart Nature Center
Rt. 316 on the East edge of Mattoon or
contact Gary Cole, 345-2622 (email-cole@lincweb.com).

Breaking News

The University of Illinois is planning to sell 1,800 acres of farmland adjacent to Allerton Park to the Department of Natural Resources. The DNR would then restore the land to tallgrass prairie. Funding for the purchase comes from the new Open Land Trust program.

This new park would expand tourism in the area and provide valuable habitat, especially for grassland birds. Conservations and hunting groups like Pheasants Forever are supporting the plan while the Farm Bureau is using its influence to try and derail the plan.

Plans to destroy part of the historic Illini Grove on the U of I campus for development have been partially derailed. The University Board of Trustees and Chancellor Aiken are in need of comments from the conservation community. For more information contact Lisa Braddock at braddock@uiuc.edu. 

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