



Tallgrass Prairie

CENTER

Restoring a National Treasure



Mission: The Tallgrass Prairie Center develops research, techniques, education and source identified seed for restoration and preservation of prairie vegetation in rights-of-way and other lands.

Spring 2009



Big Woods Prairie panorama, June 2008, days before the flood. Photo: Brent Butler

Until the Iowa floods of 2009, I thought that prairie vegetation was virtually indestructible. I have planted prairie and watched it thrive in clay soil as hard as cement, in soil so sandy that you would burn the soles of your feet in mid-summer, and into limestone road rock. This past June however, everything changed when the Cedar Falls Rotary prairie at Big Woods Lake was inundated by six feet of water for ten days.



Big Woods Prairie in mid-July (pre-flood) 2007. Photo: Dave Williams

The Big Woods Lake prairie was no ordinary prairie planting. In 2001, the Cedar Falls Rotary Club spent \$15,000.00 on prairie seed to plant ten acres

around Big Woods Lake in the city of Cedar Falls. The seed mix included eighty species of prairie grasses, sedges, rushes, and forbs. We were careful about using seed from only eastern Iowa prairie remnants. We spent a week cutting, dragging, and chipping hundreds of Siberian elm trees from the site. The Rotarians built a kiosk and spent countless hours weeding as if it was their own flower gardens. In 2007, I conducted a plant inventory and found sixty-seven of the eighty species we planted. It was a showplace for the community and drew hundreds of bikers, walkers and prairie enthusiasts every year.



Dave Williams illustrates the height of the flood waters that covered Big Woods prairie in the Summer of 2008.

When the floodwaters receded last June, a half-inch of mud covered the ground throughout the site. The vegetation changed from a vibrant pre-flood green to a post-flood gray. Weeks later the mud cracked and buckled. Still there were no green plants. In late July, a flush of annual weeds appeared as if this were a new planting. By mid-August I gave up hope for the 2008 growing season. Marblesseed, prairie phlox, nodding prairie onion, large-flowered beardtongue, and dozens of other prairie species had not reemerged.

This spring we plan to burn all ten acres hoping that it will stimulate new growth, but honestly we don't know when or if the vegetation so lovingly reconstructed will return. I am optimistic because, *after all it's prairie*. I anxiously await spring at Big Woods Lake.

For more information contact
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Care for a Carex

Buxbaum's sedge (*Carex buxbaumii* Wahlenb.)

...The Widely Uncommon Sedge

Buxbaum's sedge, or brown bog sedge, an obligate wetland species, is widely distributed across North America and Eurasia. The most characteristic feature of this species is the bluish-green foliage in early spring, and the handsome lime green perigynia contrasting with the ebony scales in the spike that ripen in late June and early July. It is a bunch type sedge, with flowering stalks growing usually 2-3 feet tall.

It was named for Johann Christian Buxbaum (1693 -1730), a German physician, botanist and traveler, and botanist to Peter the Great, Czar of Russia. Interestingly, it is an extremely rare species in Ireland, where it was known from only one location. Known there as club sedge, it has not been found in the wild since 1886, but it's descendents live on now in the Glasnevin National Botanic Gardens in Dublin.

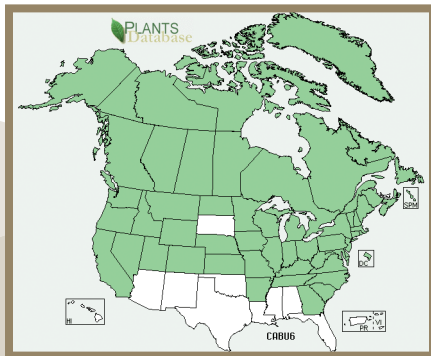
Widespread but uncommon in Iowa, it is listed as a rare species in 10 states, mostly in eastern and northeastern U.S. We are fortunate to have Buxbaum's sedge growing in remnant wet prairies, swales, sloughs, and sedge meadows throughout the state (Eilers and Roosa 1994, Norris and Zager 2008). It is associated with calcareous soils (Hipp 2008). The Tallgrass Prairie Center is collecting remnant Iowa populations of Buxbaum's sedge, as well as several other *Carex* species for foundation seed increase for wetland restoration.

For more information contact:
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- Hipp, A.L. 2008. Field Guide to Wisconsin Sedges: An introduction to the Genus *Carex* (Cyperaceae). The University of Wisconsin Press. 265 pp.
- Norris, W.R. and S.C. Zager. 2008. A guide to the identification of sedges in the genus *Carex* (Iowa species), 3rd edition. Self-published by authors (norrisw@wnmu.edu; Wildlands@comcast.net).
- Eilers, L.J. and D.M. Roosa. 1994. The Vascular Plants of Iowa, An annotated checklist and natural history. University of Iowa Press, Iowa City. 305 pp.



Inflorescence of Carex buxbaumii. Photo courtesy T. M. Jones ©2006, used by permission.



<http://plants.usda.gov>

2nd Spring Seminar Series Wrap-Up

The Natural Resource Research and Management seminar series wrapped up its 2nd spring season at the Tallgrass Prairie Center. Topics ranged from conservation programs available for private landowners, to sustainable landscaping techniques and projects on the University of Northern Iowa campus, to research on biomass and mineral content of selected prairie species. A



Paul Meyerman, Assist. Dir. of operations and planning at UNI, entertains questions after his presentation.

record number of people attended, including students, faculty, private landowners and interested public. Attendees had the opportunity to get first hand information about these projects in a very personable and casual setting. We would like to thank all of the presenters who participated this

spring: Greg Schmitt, Iowa DNR Private Lands Program; Joe McGovern, Land Stewardship Program Director, Iowa Natural Heritage Foundation; Paul Meyermann, Assistant Director of Operations Planning and Physical Plant Administration, UNI; and Jennifer Wahl, Environmental Science Graduate student, UNI. All seminars are held at the Tallgrass Prairie Center on Wednesdays at 4 p.m during fall and spring semesters.

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NEWSLETTER

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Brent Butler, Layout Design

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Roadsides Easy Target for GPS

Global Positioning System (GPS) technology is proving to be a valuable tool for roadside vegetation management. Counties can use GPS and GIS technology to record and manage data for their seeding, spraying and burning programs, as well as to map sample locations and vegetation zones when working with wetland delineation and mitigation projects. Jim Uthe, Dallas County's roadside manager, says, "With an antenna attached by a magnet to the top of our hydro-seeder, we pull up to an area, take a few seconds to enter data, and then drive along seeding and mapping the area as we go. It's a pretty slick way to keep track of where we planted. We also use it to map invasive species found in the county."

According to Uthe, "It took two seasons and two GIS short courses at Iowa State University to become proficient with everything here, and I'm still learning. It's about like anything, if you don't sit down and work with it often, it is easy to forget". This is the 4th year the IRVM program at UNI has written a grant and coordinated with ISU to offer the training free to county roadside personnel.

Upcoming workshops are April 16th - Basic Introduction to GPS with Garmin units supplied by the lab and April 17th - ArcPad GPS with participants bringing their own GPS units with ArcPad already on it. LRTF encourages the use of the technology. Jeff Chase of Des Moines County says, "We purchased a Trimble GEO XH handheld unit with software and a laptop, all with the help of LRTF. Without LRTF we probably wouldn't have it now".

For more information contact
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Prescribed Fire Workshops for NRCS Field Staff

The Tallgrass Prairie Center is providing four two-day introductory workshops on prescribe fire for USDA-NRCS Iowa field personnel. The first workshop was held at the Center on March 23 and 24, with 30 people in attendance. The second workshop is scheduled in Peterson in northwest Iowa on March 30 and 31. Two additional workshops will be provided this fall for southwest and southeast Iowa NRCS personnel.



NRCS field staff gather at the UNI Tallgrass Prairie Preserve to observe fuel conditions during a two-day prescribed fire workshop at the Center.

The workshops are intended to provide basic information on fire ecology, fire effects on soils, vegetation and wildlife, safety and smoke management. Prescribed fire and fire-suppression equipment will be demonstrated. Emphasis is placed on fire management objectives to meet NRCS conservation programs guidelines. Barb Stewart, NRCS State Agronomist adds, "The staff will use this training to provide assistance to producers when developing conservation plans. The training will help them to review sites and determine when a prescribed burn is an appropriate practice to meet the objectives of the producer and resource goals." This is the second round of prescribed burn training that the Tallgrass Prairie Center has provided to NRCS staff. The first round was completed in 2004.

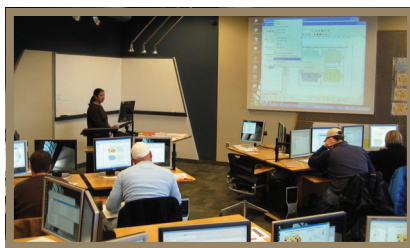


Photo credit: Alan Jensen,
GIS Program Director, ISU Ext.

America's Lost Landscape Documentary Goes International

The U.S. Department of State has selected America's Lost Landscape: The Tallgrass Prairie as one of 30 titles in the 2009 American Documentary Showcase. The film's director, David O'Shields, will serve as a Citizen Ambassador representing the film and will travel to American embassies overseas in 2009. The chief goal of the American Documentary Showcase is to offer a broad and diversified look at American life and the values of a democratic society as seen by American documentary filmmakers. American Documentary Showcase curator, Dr. Betsy McLane said America's Lost Landscape was chosen because "it is a beautiful film that tells its story with great skill and craftsmanship in a short amount of time [and] also carries on the tradition of Pare Lorentz' mission to make people aware of our beautiful lands, and the proper way to treat them."

America's Lost Landscape is a production of New Light Media and was produced in association with the Tallgrass Prairie Center. Center Director Daryl Smith, executive producer for the film, believes that "the natural history, ecology, civic history, cultural perspectives, agricultural use and prairie preservation, restoration and reconstruction for the future are all interrelated. As we worked on the film, I became even more convinced that everyone should know about this vanishing -- or lost -- landscape."

For more information about the film, and to view the trailer and PBS promo, visit:
www.lostlandscapefilm.com

Prairie Smoke Salsa

Courtesy of Mary Weld

In large bowl mix:

- 1 14 oz. can black beans, drained and rinsed
- 1 6 oz. can corn, drained and rinsed
- 1 can original Rotel™
- 1 14 oz. can petite diced tomatoes (or chopped fresh in season)
- 1 purple onion, finely chopped
- 1 bunch green onions chopped
- 1-3 jalapeno peppers seeded and chopped fine- the more the hotter
- 1 T. minced garlic
- 1 bunch finely chopped cilantro
- 2 t. sugar
- 1 t. dill weed
- Salt and pepper
- Juice squeezed from 1-2 fresh limes

Chill for at least one hour to blend flavors. Serve with tortilla chips.



Graduate Student Profiles

The halls of the Tallgrass Prairie Center are buzzing with busy graduate students. Work stations have been set up in the proposed 'laboratory/research facility'. Professor Daryl Smith oversees student research projects as their graduate advisor. Dave Williams assists with research design, implementation and statistical analysis. The students willingness to work collaboratively with each other on their research projects greatly enhances their experience and promotes the Center's mission and presence on the UNI campus and beyond.



Ryan Welch

Hometown: Teeds Grove, IA
Research: The effects of varying seeding rates of *Bouteloua curtipendula* and mowing on native plant establishment in a prairie reconstruction
Graduation: 2009
Career goal: Continue to work for the Tallgrass Prairie Center's Outreach program.



Justin V. Huisman

Hometown: Forest City, IA
Research: The effects of planting methods and granivory on seedling emergence and establishment in a tallgrass prairie reconstruction
Graduation: 2009
Career goal: Accepted position as biology instructor at Central Springs High School in Manly, IA



Jennifer Wahl

Hometown: Nevada, IA
Research: Biomass, mineral content and winter phenology of nine tallgrass prairie forbs
Graduation: 2009
Career goal: Outreach in conservation, restoration, or astronomy



Christopher Barber

Hometown: Dysart, IA
Research: M.S. Biology
Graduation: 2010
Career goal: Interested in a position natural resource management



Sarah Benedict

Hometown: Pella, IA
Research: Comparison of interception and infiltration in different grass dominated communities
Graduation: 2010
Career Goal: College Professor



Ryan Neuhaus

Hometown: Hartwick, IA
Research: Effect of management techniques on plant and animal species in prairie reconstructions
Graduation: 2011
Career goal: Find out interesting things about the world



Rebekah MacKay

Hometown: Janesville, IA
Research: Biology - Natural Sciences
Graduation: 2010
Career goal: Interested in a position as a horticulturist

Native Plant Propagation Workshop

When: Thursday, April 30, 2009

Where: Tallgrass Prairie Center,
University of Northern Iowa
(2412 W 27th St, ¼ mile West
of the UNI Dome and McLeod Center)

Time: 9:00 AM-2:00 PM

Cost: \$50.00 per participant, includes:
- Registration - Hand lens
- Catered lunch - Reference materials
- Propagation material to take home

Featuring:

- Propagation Techniques
 - pretreatment of seeds to enhance germination
 - vegetative propagation from stems, rhizomes, corms, and bulbs
- Greenhouse Applications
 - soil mixes, amendments, watering, and light
- Transplanting Techniques
 - dibble/container system into weed barrier

To reserve one of the remaining slots:
e-mail Ryan Welch (rwelch@uni.edu)
Phone (319.273.3828), or Fax (319.268.0668)
Registration Information ON or BEFORE
April 16, 2009