



SPRING 2013



Tallgrass Prairie

CENTER

Restoring a National Treasure



The Tallgrass Prairie Center restores native vegetation for the benefit of society and environment through research, education, and technology.



Refuge and nearby Prairie City. In 2003, we started moving the conference around the state to provide participants with an opportunity to visit prairies in different parts of the state. The conference has been held at the following locations: Iowa Prairie Network-Ames, 2003, Squaw Creek Nature Center-Cedar Rapids, 2005, Briar Cliff University-Sioux City, 2007, Southern Iowa Oak Savanna Alliance & Graceland College-Lamoni, 2009, Iowa Lakes Community College-Estherville, 2011.

Question/comments? Email: daryl.smith@uni.edu

New IRVM Program Manager: Rebecca Kauten

For three years as a young college student I had the pleasure of working with Kirk Henderson for the four year-old program. Time has passed and a lot has happened – yet here I am again. For nearly a decade, I have worked closely with watershed projects, water quality monitoring and fostering partnerships with some “non-traditional” groups through natural resources in Iowa. I come to this position with a unique skill set and hope to achieve some important goals for IRVM.



Kirk left an impressive legacy – and my first goal is “do no harm” to those successful ventures he established. Yes, there will be a calendar, a seed pickup (barring further paperwork), and an annual Roadside Conference. There will also be some newness to the website, some opportunities related to technology and training on the horizon. Growing up as an Iowa farm kid, and having time spent in storm sewers, creeks and construction sites in recent years has taught me to be resourceful and work with what one is given. It taught me to think on my feet, plan for the worst; hope for the best, and bring in your partners at any opportunity. You never know when you might need their back – or vice versa. Many of you know me already, but for those who do not I look forward to working with you in the days and years to come. IRVM has a lasting, profound legacy in Iowa, which I hope to continue.

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2013 Iowa Prairie Conference, Decorah, IA

<http://www.luther.edu/iowaprairieconference/>

by Daryl Smith

The **14th Iowa Prairie Conference** will be hosted by the Biology Department, Luther College, in Decorah, July 18-20, 2013. Several optional activities will be available Thursday evening. There will be presentations on Friday morning, local field trips on Friday afternoon and daylong field trips on Saturday. This will be an excellent opportunity to visit some of the “hill prairies” of NE Iowa. See the conference website listed above for information regarding registration and conference activities. Early registration will result in significant savings. Supplemental funding for the conference is provided by the Living Roadway Trust Fund.

The Iowa Prairie Conference was initiated by Pauline Drobney and a group of prairie enthusiasts after attending the 10th North American Prairie Conference (NAPC) at Denton, TX in June 1986. The first Iowa Prairie Conference was held on the UNI campus in 1986 followed by a second one in 1987. The Iowa Prairie Network was formed in 1990 at the 12th North American Conference (NAPC) hosted by UNI, and it was decided to hold the Iowa conference on a regular basis. It seemed obvious to hold the Iowa conference on alternate years with the NAPC. UNI again hosted the third Iowa Prairie Conference in 1991 and on alternate years thereafter for the first several conferences. In 1997 the conference was held at Neal Smith National Wildlife

What a Difference a Year Makes in a Planted Prairie.

By Dave Williams

I recently read that the summer of 2012 in eastern Iowa was the driest summer on record since 1956. I've lived in Iowa since 1983 and have been planting prairie since 1990 and haven't seen a summer as hot and dry as 2012. There is no doubt it was difficult to work outside in the prairie last summer, but it provided an opportunity to observe how planted prairies responded to excessive drought. Here are a few observations I recorded during that summer of 2012 while working out on the prairie.

Prairie Seedling

Emergence – In late May of 2012, I seeded prairie on two separate sites – one on the UNI campus and the other at the Janesville school building. Both sites were typical prairie reconstructions for me – killed turfgrass sprayed in late April

followed by no-till drilling prairie seed in late May. At the time of seeding, soil conditions were ideal and the drill performed flawlessly at both sites. No reason for failure. I visited both sites multiple times after seeding to assess prairie plant emergence and could not find any native seedlings in either planting over the entire summer of 2012. This has never happened in all the prairies I have planted since 1990. I am anxiously waiting to see if prairie seedlings emerge this spring.

Establishment Mowing - In a summer with normal rainfall, we typically mow a new prairie planting at least three times during the growing season to control weeds. However, no mowing was needed at those newly planted prairies in the drought summer of 2012 because there was very little weed growth.

Deformed Leaves and Dried Green Shoots – In July, prairie grass leaves rolled in response to dry conditions and leaves wilted on most of the forbs. By August, shoots of ox-eye sunflower had dried green 'on the vine'. The only other time I've seen dried green plants were in plant presses used for preservation.

Plant Growth – We had whole prairie plant communities of mixed grasses and forbs shift from a prairie plant community rich in forb growth in 2011 to a plant community rich in prairie

grass growth a year later (see Figures 1, 2 and 3). Year-to-year changes in abundance of individual species are normal in planted prairies. However, a year-to-year change of an entire guild of species (forbs) is highly unusual. Have to wait and see how the forbs respond in 2013.

Absence of Annoying Insects – Vegetative sampling in 2012 was uncomfortable due the heat but very comfortable when it came to annoying insects. No mosquitoes, chiggers, biting

flies, or ticks to deal with last summer. Those large yellow and black spiders that you normally bump into when walking through in the prairie in September were virtually gone.

Japanese Beetles – As if the drought wasn't enough stress to the prairie plants, Japanese beetles concentrated their feeding on showy tick trefoil, severely defoliating most plants by mid-summer. In addition, flowers

developed abnormal growth and flowering was aborted. I suspect this was caused by pathogens being introduced into the plants when beetles were feeding on them.

Cracks in the Soil – The largest soil crack we found while sampling last summer was 1" across. I stuck my mechanical pencil into the crack thinking it was only a few inches deep and nearly lost my pencil in the 8" deep crack.

Switchgrass and Compassplant – While most of the prairie plants showed definite signs of serious drought stress, switchgrass and compassplant appeared to have fared well in the drought. Plant height, number of flowering stalks, and seed set for both species in 2012 was similar to a summer with normal rainfall.

Bobcat Sighting – Saw my first bobcat at Cedar River Natural Resource Area in Black Hawk County, Iowa last summer. It was in early June, Nick Tebockhorst (my UNI student) and I were in the park installing sampling hoops in a planted prairie and saw the bobcat foraging in the planting. We had only about 5 seconds to watch the cat before it saw us and raced away. Probably wouldn't have seen the cat through the dense prairie vegetation in a normal rainfall summer. An extra special bonus - the cat was in a prairie that I had planted.

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Figure 1. Stand of 16 species of grasses and forbs planted in spring 2009. Forb rich growth occurred in summer 2011 when precipitation was near the 30-year average. Photo taken late August 2011.



Figure 2. Same planting and location as in Figure 1. In the drought summer of 2012, forbs dried up by mid summer and grasses comprised most of the above ground growth by late summer. Photo taken late August 2012.



Figure 3. Same planting and location as in Figures 1 and 2. Note the severe wilting (drought stress) on the forbs. Photo was taken in early July during the drought of 2012.

UNI Goes to Des Moines – UNI DAY

By David O'Shields

On February 11, I had the distinct pleasure of representing the Tallgrass Prairie Center at the first ever UNI Day at the Statehouse in Des Moines. The purpose of the event was to highlight UNI's impact across the state of Iowa by showcasing our university.

"If we want the Legislature to provide adequate funding for UNI we must explain why we are so valuable to the state," said Jeneane Beck, state relations officer at UNI. "Having students and professors travel to the Statehouse puts a human face on the university."

UNI faculty, staff and students used displays and interactive technology to highlight the university's diverse programs, departments and organizations.



Rep. Bob Kressig (I) stopped by the Center's display to shake hands with David O'Shields.

The Tallgrass Prairie Center's display table was quite popular, with many visitors extolling the ever-increasing beauty of Iowa's roadside prairie plantings – a keystone accomplishment of the center's Integrated Roadside Vegetation Management program – while others were surprised to learn of the depth of the center's work, and its many important programs including Natural Selections, Plant Iowa Native and the Prairie Power biomass research effort.

Many members of the House and Senate stopped by the center display to chat and visit, including Representative Bob Kressig, and Senators Bill Dotzler and Jeff Danielson. Boards of Regents State of Iowa staff members were also intrigued by our ongoing programs, including Executive Director Robert Donley.

Based on my observations and interactions, UNI Day was a "slam dunk" at the Statehouse; it was a very productive day for UNI, and for the Tallgrass Prairie Center.

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National Native Seed Conference, Santa Fe, NM

By Greg Houseal

I had the good fortune to represent the Tallgrass Prairie Center and Natural Selections Seed through two presentations at the 2nd National Native Seed Conference in Santa Fe, NM, April 8-11, 2013 (<http://native-seed.info/>). Over 260 professionals from land management agencies, wildlife agencies, the seed and nursery industry, conservation organizations, and academic institutions attended. The conference was an excellent opportunity to network and share information about collection, research and development, production, and use of native plant materials for restoration, with a strong emphasis on practical information with direct implications for management. Presentations included research and general information on species selection and seed collection, plant material evaluation, seed zone determination, field establishment and cultural practices, commercial native seed production, storage and distribution solutions, current methods for successful habitat restoration & rehabilitation, ecoregional native plant materials programs, and economics and policies supporting restoration & rehabilitation.

The National Native Seed Conference is organized by the Native Seed Network, a program of the Institute of Applied Ecology, Corvallis, OR, with major sponsorship by the Bureau of Land Management. And while it currently has a western flavor, the organizers truly want it to be a national conference, and would like to see more presentations on research, restoration and management from the midwest and elsewhere in the country.

Natural Selections Seed (a.k.a. Iowa Ecotype Project) is highly regarded for its efforts to bring native plant materials to the commercial market, and indeed has been an inspiration and model for similar efforts around the nation, from Long Island to Oregon, from Texas to Minnesota.

The first conference was held in 2010 in Snowbird, UT. Conference planners would like to see the conference take place at least every two years. Consider attending in the future! Presentations from the 2010 conference in Snowbird, UT are available on-line at <http://nativeseed.info/2010/presentations.html>.

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The logo for the Tallgrass Prairie Center Newsletter. It features a stylized sun rising over a horizon line, with the text "Tallgrass Prairie CENTER NEWSLETTER" to the right. Below the logo is a block of text providing information about the newsletter's publication schedule and contact details.

*This newsletter is published electronically twice per year. For subscription information or questions, contact the editor: gregory.houseal@uni.edu
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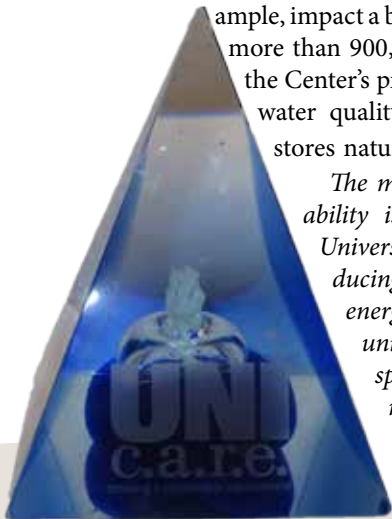
Legacy design courtesy of The Design Butler

Center Receive's UNI C.A.R.E. Award

The Tallgrass Prairie Center received a UNI C.A.R.E. Award (Creating a Responsible Environment) at the first UNI Sustainability Conference on April 12, 2013. The Center was recognized for their expertise with native plants in making a major impact at UNI and throughout the state of Iowa. More than 100 acres of campus have been planted to prairie. Since 1999, the Center has helped to foster native and resilient natural ecosystems on and near the UNI campus as well as throughout the Cedar Valley and State of Iowa. The Center's programs reflect UNI's 30-year commitment to prairie reconstruction, restoration, management, and advocacy. The native plantings of the Integrated Roadside Vegetation Management Program, for example, impact a broad audience throughout the state's more than 900,000 acres of roadsides. Altogether, the Center's promotion of native species improves water quality, creates wildlife habitat, and restores natural beauty on disturbed landscapes.

The mission of the UNI Office of Sustainability is to promote sustainability at the University of Northern Iowa through reducing carbon emissions, conserving energy, engaging and educating the university community to establish responsible lifelong behaviors, and promoting the general public interest.

UNI Sustainability
C.A.R.E. Award



Featured Student Employees/Interns



Kelsey and Matt have been working with the Natural Selections Seed program.

Kelsey Abolt, Donnellson, IA Business Administration, May 2014. "I would like to work in Des Moines with a good-sized company and learn new things and meet new people."

Matt Vavroch, Montezuma, IA Social Science Education, December 2013. "I hope to teach in a small Iowa school. I enjoy bass fishing and playing guitar."

Kimberly Breuer, West Union, IA Graphic Design/Art History minor, May 2013. Kimberly is redesigning the *Plant Iowa Natives* website, to be unveiled this spring. "I love working with design. I will be working as a graphic designer at RuffaloCODY in Cedar Rapids after graduation my hobbies include biking and motorcycling."



Heather Chamberlain Degree: BA in Biology in 2012, Masters in Science Education in 2015

I'm currently working on two major projects with the DOT and EPA. The DOT project involves collecting and analyzing stormwater runoff samples from DOT construction sites. We are developing a user-friendly way to measure water clarity with simple tools as an alternative to more expensive, complex equipment. My job has been to develop documentation for methods and standard procedures (SOPs), test and analyze water flow, pH, temperature, dissolved oxygen, orthophosphorous, nitrate + nitrite, turbidity, total solids, and transparency. Other responsibilities include field sampling, training, maintaining lab documents, modeling data, producing reports, and creating the overall quality assurance project plan.

The EPA project relates to advancing environmental literacy efforts in both formal and nonformal education. We are researching how environmental education (EE) is currently implemented across Iowa, and how these methods align with the Iowa Professional Development Model, the Instructional Strategies as well with the Iowa Core's 21st Century Skills. A survey will be developed for naturalists, school administrators, and teachers to identify what EE resources they use, how they adhere to the Iowa Core and other state/national standards, and whether they have an interest in exploring EE options.



A new website is underway for Plant Iowa Natives, featuring information, resources, and services to make your next prairie, wetland, savanna, or woodland restoration a success, whether it's in your backyard or the back forty. The website is still under construction, but will soon be available. Feed back is appreciated!

www.tallgrassprairiecenter.org/plantiowanative/

