

# SEEDS OF DIVERSITY



Iowa DNR Prairie Resource Center

December 2010

## Species Spotlight: Prairie onion



Late August is a great time to get out and enjoy the prairie. Most of the grasses are at their full grandeur along with the late blooming forbs. The Prairie onion (*Allium stellatum*) is one of these species; and it is often overlooked. It appears late in summer and is hidden among the native giants as it only climbs to a height of 12 to 18 inches. When in full bloom it has strikingly pink to lavender flowers and appears between clumps of native grasses. It blooms in late July and August.

Prairie onions are easily identified because of their distinctive “onion” smell when leaves and stems are damaged or broken. Prairie onions are avoided by deer and many other pests because of their pungent onion smell. They are edible, although my taste buds say their flavor is stout. Early settlers utilized the bulbs and leaves for stew. They are found only in northern Iowa, most commonly on dry prairies of Northwest Iowa. They can reproduce both asexually by bulb and sexually by seed. Often, in our seed production plots, we will get 8-10 bulbs growing from a single, four inch diameter hole. Prairie onions also make a nice rock garden plant because of their small size and beautiful pink blooms.

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Walking through a prairie on a cool, late summer or fall day, can be a calming and very pleasant experience. Keep both your eyes and your nose open and you may find a small, late summer treasure like the Prairie onion.

## The Journey

By Eliot LaFollette



Having just arrived at my job site, I climbed from my vehicle and stood in awe. The morning was October 19<sup>th</sup>. The year...doesn't matter. Frost had settled heavily on the exterior structure of our living environment yet the car windows did not need scraped. This wasn't the first but it was the heaviest so far. The air was crisp and carried with it a nip; the kind that seemed comfortable at first, but without warning would send a million tiny convulsions up your spine producing some minor discomfort. This early sign of an approaching winter did not deter from the grandeur of the rising sun. Beams of yellow, pink, purple, lavender, and red radiated off the clouds, trees, and prairie before me producing a canvas in my memory that the most recognized painter would envy.

Fall has come and gone nearly 50 times during my life yet the wonder of a fall sunrise can still get me as giddy as my Chocolate Lab Chip waiting for a milk bone treat. Fall brings with it a sense of accomplishment; everything renewed in the spring has established, produced, and is ready for a rest. Fall also brings with it a quiet relief from the long hot days of summer. It's the time to rejuvenate a spirit, broken by the summer sun, and prepare it for the long cold days of winter. In doing so we reap the benefits of all the effort put forth during the spring and summer seasons.

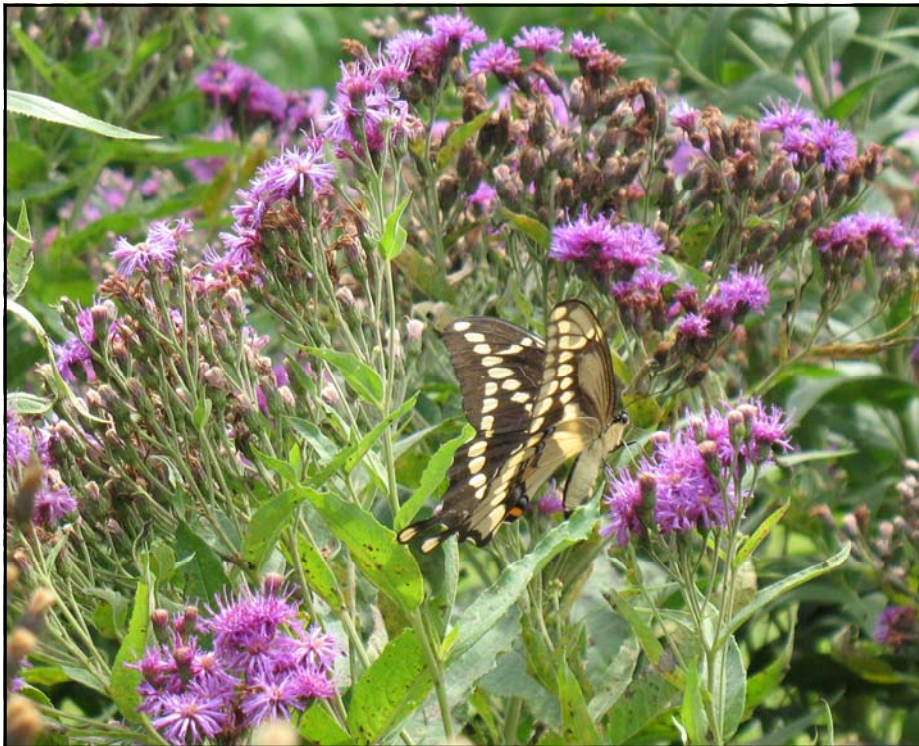
Fall has been especially good to me this year. Opportunities to travel and learn, hunt and harvest have been abundant. As far as work is concerned, this has been one of the most rewarding falls we've had since inception. Despite some of the weather challenges throughout the summer, we've managed to pull off a "no holds barred" record harvest of forb seed. This is an awesome reward considering the amount of effort it takes to get to the harvest stage. With July 1, 2010 marking the tenth anniversary of the Prai-

rie Resource Unit, I wanted to reminisce briefly about our journey.

It all started in the fall of 1997 when Bays Branch and Saylorville Wildlife Units teamed up to harvest native grass from established stands on state wildlife areas. The price of grass seed had gone through the roof! A combine was leased and 16,000 pounds of pure live seed were harvested and distributed across the state in an effort to save money. The header used on the combine was a rice stripper head and was provided in partnership by the private lands program of the U.S. Fish and Wildlife Service (USFWS). The USFWS was using a portion of the seed harvested to help boost their program.

In 1998, Pheasants Forever (PF) jumped on board and purchased a second combine with a portion of the harvested seed going to boost their programs. The Iowa DNR purchased the rice stripper head for this machine. The program operated with this partnership until 2002.

In the mean time, The Wildlife Diversity Program of the Iowa DNR was interested in adding diverse



vegetation to the landscape to improve habitat conditions for all wildlife species in Iowa. They initiated a program called “Prairies In Bloom” and had started working with the Iowa Department of Corrections (DOC) for manpower and the State Preserves Board for approval to harvest seed off state preserves to start a production garden. The first production garden (south zone) was established at the Montrose State Forest Nursery located at Iowa State Penitentiary Farm 3; also in cooperation with Iowa DNR Forestry. These events were the precursor.

The Prairie Resource Unit (PRU) formerly known as the Seed Harvest Team was established on July 1, 2000 as a result of the Clean Water Initiative which passed the Legislature during the spring 2000 session. It was a culmination of the wildlife management and wildlife diversity projects, and headquartered at the Boone Research Station. In late winter of 2001, we invited guests representing over 50 special interest groups, private organizations, government agencies, and other Iowa DNR staff to sit with us and discuss the direction that our program should take. We listened to the ideas and concerns of each of these representatives and used this information to mold a vision plan for the most well rounded program we could offer; with wildlife management as our primary focus. The information that came out of this meeting was amazing and by doing this we helped secure a relationship of trust between these stakeholders and the Iowa DNR. It was decided to follow harvest and distribution guidelines set by the Iowa Department of Transportation and the University of Northern Iowa



(Iowa Ecotype Project); dividing the state into north, central and south zones.

In July and August 2000, meetings were held with the DOC at Oakdale and Farm 3. We were looking for a place to grow plants and the manpower to do it. Many of the prison facilities have greenhouses. We were also looking for a spot to construct a 30' X 90' greenhouse of our own. These meetings were successful and we obtained greenhouse space at Oakdale and were able to construct our greenhouse at Farm 3.

By the middle of October we were fully staffed and off and running on a large scale. Our first task was to haul a combine to Union Hills WMA south of Clear Lake and harvest a field of diverse forbs which had been established previous. This was the harvest that initiated diverse seed mixes in Iowa on a large scale.

The preserve harvest had been going on with the aid of wildlife diversity personnel while we were building our staff. The seed collected was the beginning of all greenhouse germination conducted by the Iowa DNR; it amounted to about 25 species; not all in one zone.

In November of 2000 our relationship with the Department of Corrections (DOC) began to expand. Working closely with DOC, we were able to obtain a building for cleaning seed and a piece of land for a production plot (north zone) at the North Central Correctional Facility (NCCF). The combine harvested seed has been cleaned at NCCF ever since.

In January of 2001, interest in our program was sparked with the Dallas County IRVM (Integrated Roadside Vegetation Management). An agreement was reached to obtain a piece of land for the last production garden (central zone). This agreement involved both Dallas County IRVM and Dallas County Conservation Board and involved a piece of property managed by the Dallas County Home. The three plots together only amounted to 5 acres but it was a start and there was room for expansion.

Now its time to learn about greenhouses, easier said than done! I did not realize there were so many types of containers, growing mediums, growing aids, darn near microscopic insects, funguses, diseases, insecticides, fungicides, fertilizers, growth regulators, etc. I did not know about over watering, dampening off, or shade cloth. This process was like starting all over again, terrifying at first, then intriguing. One thing is for certain; the atmosphere inside a greenhouse when it is 10 degrees below zero outside can be intoxicating; you're engulfed in heat, humidity and a jungle-like aroma. Between Oakdale and Farm 3, we grew approximately 70,000 plants.

It took a lot of research to figure out cold stratification, scarification, timing of germination, etc for each species and we still are learning new techniques today. I remember in the beginning, we had some plants that were two feet tall, flowered and ready to put on seed; there was still snow on the ground. This is when we discovered growth regulators.



During the spring of 2001, we established the first production gardens, one at Farm 3, second at Adel, and the third at NCCF. The primary concern was obviously maintenance (weeding and watering). Irrigation systems were set up at Farm 3 and Adel. A 1000 gallon water tank was purchased and used with a transfer pump and hose system at NCCF. Weed barrier fabric was laid across the plots to reduce weeding, al-

though at the end of the summer there was a fair sized compost pile of weeds.

The first forb harvest was quite humble which was to be expected. It amounted to nine species total and 31.1 lbs. of seed. Some forbs will take up to three years to even put on seed. All forbs were cleaned by hand using inmate labor at the Boone Research Station. We also found an old hand crank air screen cleaner that we used; no kidding and we actually still have it.

In the beginning, grass (combine harvest) was cleaned using a grain tumbler; not very effective. During the summer of 2001 an old 3 screen air screen cleaner was donated by Epley Seeds of Shellrock, Iowa. This old thing worked for a short period but the wooden bearings would not hold up. During the winter of 2001 we received on loan from the USFWS, a large fanning mill and de-bearder. This equipment was set up in the "seed shed" at NCCF along with a refurbished gravity box for a hopper which was donated by a friend, and an old grain leg which was donated by Farmers

Coop in Rake, Iowa. The whole project cost approximately \$300.00 and to date has cleaned nearly 1,000,000 pounds of bulk seed.

On July 1, 2006 we officially moved into our permanent home at Brushy Creek State Recreation Area and became the Prairie Resource Center or Unit. Not only did this improve our efficiency through having our own space, but it landed us in the middle of a tremendous relationship with Brushy Creek Personnel and their management scheme. They have a passion for managing for Iowa's natural landscapes and wildlife as well as multipurpose recreation and it has been a pleasure to have them as neighbors.

Each year except for 2004 and 2009 we had the help of a summer temporary person. In the spring of 2002 we received two full time Americorps positions which really aided in plot expansion and seed cleaning. In February 2005, one of the Americorps volunteers started this newsletter "Seeds of Diversity". In 2004 we also received a full time PF position. They took over our operation at Farm 3 until 2006 when we began to phase out that plot for improved efficiency. We still maintain our greenhouse there, although the PF position has worked out of our headquarters since. In 2007 we received an additional 3 month Americorps position for the summer, and have to present. We had a huge set-back in 2009 when we lost both full time Americorps positions; it really kept us hopping, especially with the expansion that has occurred. There were several things that just couldn't get done. The work that all these people help accomplish is invaluable and this could not have been done without them.



Did you know that the first three years of a plot are like the honeymoon stage, maintenance is low and production is high? After that you don't know what you are going to get! Insects show up by the millions, weeds get a powerful stronghold, powdery mildew and other funguses attack and production begins to fluctuate. To top it off, the wildlife we are trying to benefit take advantage of the easy lunch. By the way, the Deer Barrier System I talked about in the article "Natures Food Plot" gets a thumbs-up. We harvested a couple of species we haven't been able to get in four years.

Today, we work with seven greenhouses including our own with the potential to expand to Northeast Iowa. We plant approximately 90,000 plugs per year and have ap-

proximately 25 acres of garden which is primarily hand work. Our compost pile has grown to 30' X 50' X 8', all weeds; with some other piles scattered. We have 800 acres of monoculture native grass stands and diverse seedings available for machine harvest. We harvest between 400 and 450 acres each year. Our machine harvest has always been large but last years' forb harvest reached just over 1,000 lbs. I can hardly wait to see what our tenth harvest will bring!! Between 2003 and 2009 we provided diverse ecotype seed for 12,510 acres or just fewer than 20 square miles and today we are up to 105 species.

Standing here before work mesmerized by the rising sun reflecting back on the last ten years, it dawned on me what this article needed to be about. I had almost forgotten this was our tenth anniversary. Where has the time gone? All the trials and tribulations, the volunteer events, the prairie work days and outdoor classrooms, the inmates, good crews and bad crews, all the other agency personnel and private organizations, other DNR staff, and finally all the new friends; what an awesome journey it has been! I certainly look forward to the future. Here is a big THANK YOU to everybody for your friendship, trust and support. Life is GOOD!!! Have a GREAT HOLIDAY!!!



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