

SEEDS OF DIVERSITY



Iowa DNR Prairie Resource Center

June/July 2010

Species Spotlight: Prairie lily

Prairie lily (*Lilium philadelphicum*) is the spring beauty of the prairie. This orange to red flower blooms in Iowa from early-mid June to early July. The leaves are long and narrow and alternate, as opposed to the Michigan lily in which the leaves are whorled. It can be found on moist to dry prairies, savannas, and open woodlands across Iowa, but is infrequent to rare in occurrence. This species can go unnoticed for many years because of its small stature, but fire often brings this species to the forefront with its bright orange flowers. Prairie lilies are usually an indicator of a high quality prairie because of its conservative nature. In fact, it has a rank of 9 on the Coefficient of Conservatism- a scale that ranks the quality of a prairie by the number of conservative species that are contained within it. With 1 being common and 10 being conservative species. Yet, it is one of the widest ranging of the lilies, ranging from the Northeastern US, across the plain states and west to the Rocky Mountains.

The Prairie lily had special value to Native Americans. The bulb was utilized for food and medicine. Members of the Meskwaki, Cree and Blackfoot tribes consumed the bulbs, while many other tribes used the bulbs medicinally.

The Iowa DNR is attempting to add this species to the propagation list. Please contact us if you have some seed that you would be willing to do-

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nate. Please note the location of the seed collected. This species is difficult to propagate because of its slow growing nature and tastiness to deer and rabbits. Hopefully, it will be added to the DNR mixes in the near future.

Prairie lily is a beauty of the Iowa prairie. Take note of a prairie when Prairie lilies are found. This conservative prairie species usually indicates a high quality prairie. There may be other prairie gems in the area.

The Native Food Plot



Purple prairie clover

Oxeye(False sunflower)

New England aster

Purple prairie clover, Oxeye, and New England aster are favorites of deer. Oxeye seed is also a favorite of the Am. goldfinch.

Attracting the White-tailed deer to ones property has become a popular pastime for many outdoor enthusiasts. Whether you are a hunter, a photographer or a wildlife watcher, observing this reclusive cervid is a thrill to be remembered. Stories of big bucks have circulated for years following the event. The retail market for wildlife feeders, trail cameras, binoculars, etc. is astronomical and primarily the result of interest in the White-tailed deer and other wildlife.

Recently, I was in a major outdoor retail store where they had a huge display marketing food plot seed. The consumer can purchase an annual blend or a perennial blend depending on the individuals needs. Each of these blends contains various clovers, peas, etc, grown and researched in other parts of the world.

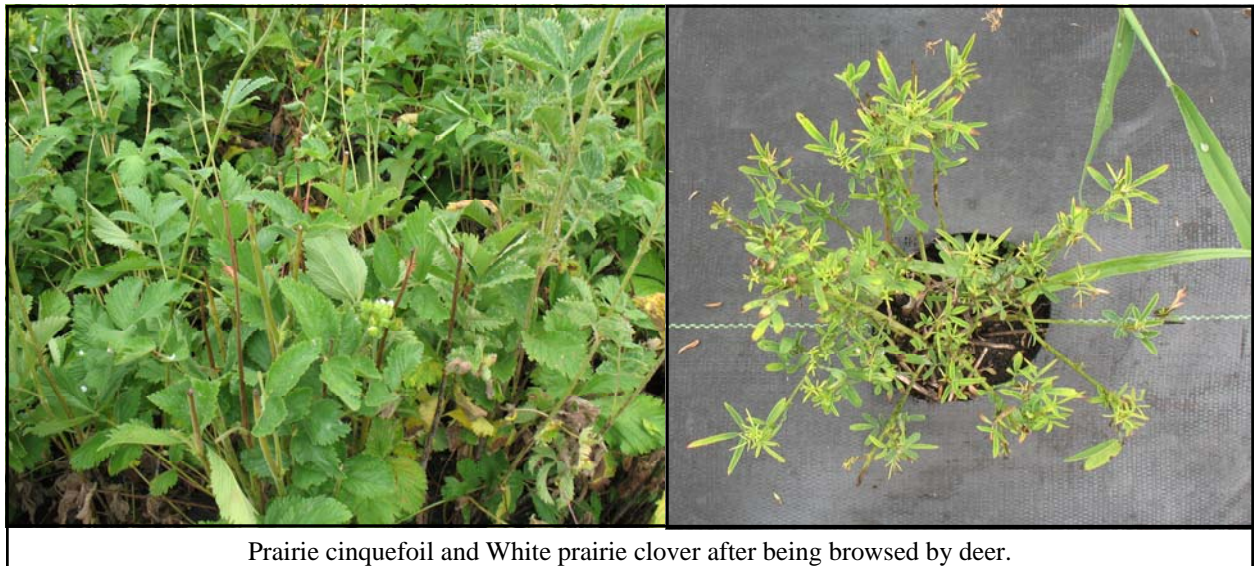
I know that some of these blends can be pretty effective at attracting wildlife but none of them were native. I have to question the value of these products when we have so many “vegetation gone wrong” issues across this country. Virtually all of these issues started with good intentions or an interest in attracting more wildlife.

I have observed wildlife activity in these types of food plots on a number of occasions and none of this activity even comes close to the activity I observe in native wildflower plots. Native plants are the cornerstone of quality wildlife habitat.

The Prairie Resource Unit (PRU) of the Iowa Department of Natural Resources (IDNR) has the primary

function of increasing plant diversity through the production of native plant material; for example, seed, and seedling plugs. To accomplish this task, a series of native wildflower garden plots have been developed for seed production.

While carrying out normal job duties over the past nine years, I have observed our wildflower plots being ravaged by White-tailed deer, Cotton-tailed rabbits, Thirteen-lined ground squirrels, Mourning doves, and a variety of grassland birds. Sunflowers, Silphiums, and Oxeyes are favorites of the American goldfinch. If we do not harvest the seed green, with the plant flowering, we will not get any. We literally have to race the finches in order to get any seed. They will almost pick it out of your hand while harvesting if you are not careful! White-tailed deer love to browse on Oxeyes, asters, and native legumes. Other favorites of these critters include Alumroot, Thimbleweed, and the bulbs of blazingstars. There are many other species as well. These plants are the species that are difficult to produce because of the wildlife competition for them. We call them wildlife candy!



Three strategies have been attempted to defend the plots from wildlife competition and maximize seed production. The first attempt was one of the most disgusting things I've done in my career. I sprayed wildflower plots with pig blood to try to eliminate these wildlife problems. The pig blood was advertised as a sensory barrier to deter wildlife from eating desirable plants. The plots looked like the slaughter of the lambs had taken place and I smelled like death. To make matters worse, it didn't work! Secondly, we sprayed garlic on the plants. We achieved moderate success with garlic, but garlic also washes off with rain or heavy dew. Lastly and currently, we have circled an entire plot with a white ribbon known as a Deer Barrier System. The ribbon is treated with a Plot Saver Concentrate which is supposed to hold up in rain. This method creates a physical barrier (although wimpy) as well as a sensory barrier to deter deer from even entering the plot. I hope that if they don't enter the plot to tempt themselves to browse, they won't bother anything. The jury is still out on its effectiveness.

If it is this difficult to keep deer and other wildlife from entering these wildflower plots and



New England aster is the #1 choice of browse consumed throughout the growing season in the PRC plots by deer

causing substantial damage, think of how attractive these plants must be. I guess the way I see it, Iowa deer know Iowa plants instinctively, whether they have ever seen them or not. Iowa deer do not necessarily know New Zealand plants. If you are still worried about having that huge buck hanging around, it's alright to have a high energy grain food plot nearby as well. I would be curious as to which one gets hit harder. Remember, diversity in your food plot will bring a diversity of life to your back door.

Volunteer Opportunity- Mt. Tired Prairie Remnant Restoration

When: July 27, 2010
6:00 p.m. – 8:00 p.m.

Where: Brushy Creek Prairie Resource Center
2820 Brushy Creek Rd
Lehigh, IA 50557

Contact: Brian.Laughlin@dnr.iowa.gov

What to Bring: Please wear long pants and appropriate footwear for walking on steep hillsides and through timber. Long sleeves may be necessary to protect yourself from getting scratched. A good pair of gloves, sunscreen, drinking water, and bug spray are also items to bring. Participants may bring hand-saws or trimming loppers.

Utilizing Prairie to Solve Wildlife Conflicts

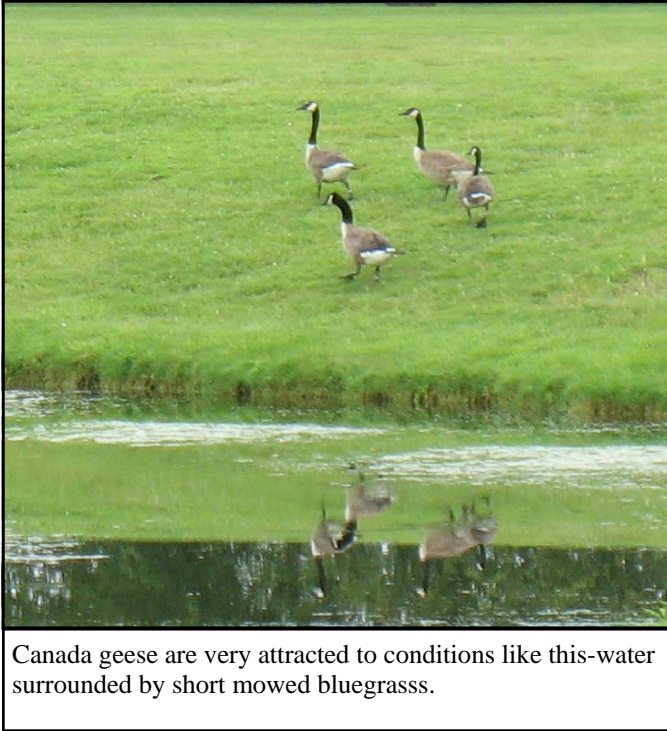


I have said many times that prairie is attractive to many wildlife species. The diverse habitat is utilized by many wildlife species. I have trouble saying it; but, prairie is displeasing for some wildlife. Okay, I have broken the vow of a prairie advocate however; this avoidance of prairie by some wildlife can be a useful management tool in reducing conflicts between humans and Canada geese.

Canada geese, like most wildlife species, elicit a wide range of responses from the public. Some people love to see them and are willing spend their time and money to improve their habitats. Others see them as unwanted pests that should be controlled or, better yet, eliminated. The later opinion usually arises where geese and people are both trying to use the same area. Conflicts with geese can take many forms: geese eating crops, geese defecating on beaches and golf course, geese over-grazing lawns, geese chasing people, etc. These conflicts can occur anywhere, but are most frequently found in urban areas where geese and people live in close proximity and compete for the use of limited green space. Unlike their rural cousins, geese that live in urban areas have very high survival and reproductive rates because they are protected from both natural predators and hunters. Consequently, urban goose populations can grow very rapidly. Regulated hunting seasons can control goose populations in much of Iowa. In urban areas, however, where hunting is often not allowed, special Canada goose population control practices may be necessary to keep geese from becoming overabundant.

Problems associated with over-abundant geese are usually best resolved by using a variety of standard abatement techniques and population control methods. Most problems require the application of multiple techniques to be satisfactorily resolved; there is often no quick fix or single answer to resolving many human-geese conflicts. It must be explicitly recognized, however, that it is not possible to eliminate all injurious Canada goose activities without eradicating the species; some level of compatibility between goose and human-use of most areas will need to be attained.

An easy way to discourage goose use of an area is to alter the environment so that it is less attractive to geese. Geese like large, open grassy areas with easy access to water. Reducing the attractiveness of an area to geese should be one of the first considerations when trying to alleviate injurious goose activities or prevent them from occurring. Designing an area that is unattractive to geese is far easier than reducing goose use after the fact. This is where prairie plantings come in.



Canada geese are very attracted to conditions like this-water surrounded by short mowed bluegrasses.

Canada geese do not like tall thick grass next to water-they can not see danger as they walk through the tall grass, there is a visual barrier. Urbanites need something attractive to go in place of the short bluegrass lawn. A diverse prairie with a lot of wildflowers may be the answer. How wide should the barrier be? The natural prairie barrier should be at least 20-30 feet wide and vegetation height should be at least 30 inches. A barrier of greater width may be advantageous. A prairie being planted will not eliminate Canada geese from the site, but it may reduce their numbers to more tolerable levels or keep them contained to an area where they do not conflict with humans. Prairie may not be the mowed green landscape that urbanites are looking for, but add some flowers to the mix and it becomes attractive and tolerable in an urban situation.

Next step - what species do I plant for a Canada goose barrier? A Switch grass monoculture or Big bluestem, Indian grass, Canada wild rye and Switchgrass mixture may make a good visual barrier for the Canada geese, but a mixture of native grasses and forbs may be the most human being pleasing and sustainable for the area. A combination of a pond ringed by Switchgrass or a mixture of tall native grasses with the outer ½ being a diverse mix of native grasses and forbs may be the solution for both. I would suggest the following mix:

Grass only area: Mixture of Big bluestem, Switchgrass, Indian grass and Canada wild rye planted at a combined rate of 7-8 PLS (pure live seed) per acre.

Grasses and wildflower area:

Grasses-.5 PLS pounds of each: Big bluestem, Indian grass, Virginia wild rye and Canada wild rye
1-2 PLS pounds of each Little bluestem and Side oats gramma

Forbs/Wildflowers

1.5 or greater PLS pounds total of the wildflower mixture

Stiff goldenrod, Yellow coneflower, Golden Alexander, Great blue lobelia, Pale purple coneflower, Butterfly milkweed, Smooth blue aster, Sawtooth sunflower, New England aster, Purple prairie clover, Prairie blazing star, Ironweed, Rattlesnake master, Compass plant, and Common mountain mint. Additional species and pounds of wildflowers would be beneficial, but this should be a good starting point.

Seeding method. To be successful seeding prairie you need to remember 4 things. Good seed to soil contact, planting time, maintenance the first year, and management.

Seed to soil contact. Do not plant into existing bluegrass or other established vegetation, kill existing



vegetation and remove most of the residue. This can be done by a Glyphosate application followed by burning or tillage. This will allow good seed/soil contact if all vegetation is removed.

Planting time. Plant mixtures that include wildflowers are most successful if completed during the dormant season - November through March. If native grasses only are planted a spring seeding in April, May or June will do. Please make sure planting depth is 1/8th inch or less. Planting during the dormant season, seeds may be scattered on the surface and frost action will deliver seed to the proper depth.

Maintenance. During the first year following planting the area must be mowed 4 or more times depending on rainfall and weeds. Mowing reduces competition for resources with annual weeds. Mow when vegetation is 12 inches in height or less and cut back to 4 – 6 inches in height. Making sure that cut vegetation does not stack up

in large piles (windrow) killing newly emerging seedlings.

Management. Urban situations provide for unique management of prairie. Burning, the typical management tool may not be possible with city burning ordinances, nearby buildings, and other safety issues. Occasional late fall/early spring mowing/baling may have to be instituted in order to maintain a healthy prairie. Mowing will keep woody vegetation in check and enhance the prairie, by removing residue, such as a fire would do. This will be a lot less expensive than mowing the bluegrass every week! Mowing will reduce the effectiveness of the natural barrier. Some residue left standing would be advantageous to keeping the Canada geese discouraged.

Prairie may be a socially acceptable answer to **some** Canada goose depredation issues, but it is not the silver bullet for all Canada goose problems. It may be a way to start changing the mindset of many that short mowed bluegrass is what we need everywhere. It is a way to mitigate negative Canada goose/human interface. Okay, I am still advocating prairie being planted on more land across the state, I still am able to keep my prairie advocate status.

For more information on “Guidelines For Controlling Canada Goose Populations And Injurious Canada Goose Activities” visit http://www.iowadnr.gov/license/files/nwco_cgoose.pdf

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