

Field Seminar
Woodland Restoration
July 2006

These **field seminars** are for people with some background in ecological restoration who would like to learn from the 25 years of restoration efforts at Somme Prairie Grove. The text and map are meant to be carried during a walk around the site, so the person participating in the seminar can look at the ecosystem and see the species and their relationships while reading the histories, comments and questions.

This seminar follows the **Vestal Grove** trail at **Somme Prairie Grove**. The common names below follow Swink and Wilhelm's "Plants of the Chicago Region."

BEGIN at the entrance at the corner of Waukegan and Dundee Roads, and take the first left fork in the footpath to find point A.

A. Note many young bur oaks in this former farm field. The **prairie dropseed** and **marsh blazing stars** among the increasing brush here suggest a degrading prairie remnant. Instead it's a neglected restoration. The dropseed was planted after the brush was cut here about twenty years ago. The blazing stars were planted nearby, and their seed gradually blew in. The **sweet black-eyed Susan** was also planted nearby, and the seed has been getting around the site impressively somehow.

This area was neglected in part because it's near the noisy corner, in part because it's hard to burn (needs a southeast wind, which is not common during good burning weather), and in part because the managers became "over-extended" when "the moratorium" hit in 1996. Since politics made work more difficult, we had to give up for a while on some areas to save the most critical ones. This area had no endangered species or other top priorities.

But now that it's on the entrance trail, count on some brush to be cut, starting this winter.

Note that some areas still have a turf of grasses and wildflowers while in some areas the shade of the brush has killed all the grassland species. In our early efforts, we chose those killed-off areas to cut and plant, because the prairie species grew most quickly there. Now we first choose to cut brush off the grassy areas, since the inter-seeded grassland recovers quality most quickly where there's an established turf. (More about this in the field seminar on savanna restoration.)

B. The large trees here are mostly **bur oaks**. Note waist-high clumps of **woodland puccoon** on the south side of the path. And on the north side, find **big leaf aster** (*Aster macrophyllus*) and **tall thistle** (*Cirsium altissimum*). These rare plants thrive in the open oak woods, but they may be bigger and more abundant here because of the recent disturbances.

Notice also large numbers of **figwort** plants. These are a good example of a phenomenon studied by Dr. Liam Heneghan of DePaul University. Buckthorn seems to enrich the soil with unnaturally high levels of nitrogen, on which these plants thrive. Two years ago there was 6-foot to 10-foot tall buckthorn filling much of this part of Vestal Grove. (This was one of the last parts of this site to resume controlled burns after "the moratorium.") The heights of the figwort provide a fairly accurate barometer of where the buckthorn was most dense. They will largely fade out after the first couple of post-buckthorn years. Hummingbirds feed on their strange brownish-red small flowers.

C. Note the two eight-foot lengths of "tortured wood" near the trail here, smaller pieces hanging from some nearby branches, and the huge fresh scar in a nearby **scarlet oak**. These are all lying exactly where they landed when lightning struck in early July. Please let them lie where they are. They tell a powerful story.

This is one of the richest parts of Vestal Grove – far enough advanced in its restoration that the buckthorn grew little during the moratorium. Diverse grasses here include **wide-leaved panic grass**,

woodland fescue, and long-awned wood grass. The most abundant forb is **elm-leaved goldenrod.**

Over toward the scarred oak is a small wire deer enclosure. It protect a few plants of **large-flowered bellwort** (the deer have eliminated most of them), **poke milkweed**, and **purple Joe-pye-weed.** Both the milkweed and the Joe-pye-weed appeared after the enclosure was placed there in about 2001. If you want to compare the plants inside and outside, please walk carefully and don't step on plants on the way.

D. Here at the west edge of the original grove we cut dense invasive trees about twenty years ago. Some parts grew back to dense buckthorn during the moratorium, but these two have been cleared again, and this area now is one of our healthiest bits of open woods. Oaks are reproducing freely here (which they aren't in the still-too-dense-for-bur-oak-reproduction grove. Some are in deer-exclosure cages until they get big enough. Note especially healthy populations of **woodland sunflower, bottle-brush grass, starry campion, great St. Johnswort, tall coreopsis and Canada milk vetch.**

E. Brush was cut here in the winter of 2005. There was a dense carpet of buckthorn (and other invasives) seedlings that was then foliar sprayed in summer '05. Unfortunately, Garlon 4 instead of Garlon 3 was used for the spray. When the former gets into the soil, it inhibits plant growth, and little of the restoration seed planted here was successful this year (although an impressive crop of long-suppressed **white sweet clover** came up). To maintain a receptive seed bed, we scythed plants that would likely be very aggressive next year. These included **tall goldenrod** and **Canada thistle.** We'll seed this area again this fall.

F. This area was along an old fence line (or perhaps just plow line) between corn field to the north and pasture to the south. When the restoration started there were still such fine savanna species as **grove sandwort** and **meadow parsnip** (Thaspium). They're still here, along with **robin plantain** and **cream gentian.**

G. Here you'll notice that the south side of the trail has dense tall goldenrod while the north side has little. That species was scythed on one side of the trail for comparison with a similar area, over the years, to see the impact. In a similar area (described in the Savanna Field Seminar) the results were very impressive.

H. On the southeast side of the trail is a stand of **viburnum, plum, hawthorn** and **dogwood** that is part of an experiment. There are few preserves in the tallgrass region that are seeking to restore shrublands and copses – although many bird species that depend on them indicate that they were a major part of the natural landscape over long periods of time. In the short run a major challenge is to keep young buckthorn from taking over the understory. Burns will probably have quite variable impacts on these areas from year to year (from no impact in wet, windless conditions to complete burning of above ground stems in dry, windy weather). It will be interesting to see what wildflowers and grasses win out in this changing, partially shaded area. The birds that breed on this site that spend time in the shrubby areas include **field sparrow, indigo bunting, cuckoo,** and **brown thrasher.**

I. Some of the **bur oaks** and **hazelnuts** here are in deer-excluding wire or netting. The deer eat both of them down to nothing without this protection. But reproduction of both is thought to be a key need of this preserve, especially in the formally farmed areas. These two species are thought to have been the major tree and shrub species of our savannas and open woodlands. Girdling and fire over the years have killed many invasive trees in the site, and both treatments are represented here. The girdled trees show marks of two parallel cuts a few inches apart. Holes are made in these trees by **flickers, downy** and **red-bellied woodpeckers** – and used after for nesting by **eastern bluebirds, house wrens, chickadees, great crested flycatchers, white footed mice** and **flying squirrels.** An uncommon plant that is abundant here, **black snakeroot** (*Sanicula marilandica*), escaped everyone's notice (we thought it was the common snakeroot) until John Balaban noticed that it was different

and keyed it down. It's a good example of surprises that can show up after many years of observations.

J. On the northwest side of the trail, an ephemeral pond with another lightning-blasted tree, this time a **cottonwood** – still healthy a decade after the blast. On the southeast side of the trail one of the richest areas for distinctive savanna species: including **starry campion** and **pale Indian plantain**. This especially rich area is also brushy. Do some savanna herbs thrive best in brushy areas?

K. Another area that is rich in savanna species including **meadow parsnip** (*Thaspium trifoliatum*), **New Jersey tea**, and **violet bush clover**. The dense **wood betony** here was all seeded in as part of the restoration, and the **butterfly weed** arrived from seed blowing around from plants restored elsewhere on the site, but the **meadow parsnip** and **New Jersey tea** were hiding in the brush when we started cutting back the edges. The New Jersey hasn't done well in our plantings, but it has spread dramatically here, from a few plants in a few square yards twenty five years ago, to hundreds over thousands of square meters now. Will some of these species gradually fade out of the increasingly conservative prairie vegetation in the more open areas – and find a place in the partial shade of savanna oaks?

L. The vegetation is very sparse here under dense bur oaks. When he saw this area, the first words out of the mouth of Lake County restoration ecologist Ken Klick were “Why don't you cut some of these oaks?” Good question. Many people assume that since bur oaks are our fastest declining tree species that they should never be cut. But it's not good either for them or their ecosystem companions for the oaks to grow too dense. Our thought had been that fire would eventually thin out the more fire sensitive ones – leaving the ones most adapted to restored natural conditions here. But the necessarily cautious fires we have here, close to two large roads, haven't done much thinning yet.

This field seminar was prepared by Stephen Packard with the hope that this exercise might help us learn from each other. He would be pleased to receive comments, recommended improvements, etc. Please send them to info@sommepreserve.org.

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