



# BRUSH PILES

NORTH BRANCH RESTORATION PROJECT

FALL 2007

## NATIVE BEE COMMUNITIES PERSIST ON THE NORTH BRANCH

by Dr. Alan James Molumbo

Worldwide, there are about 20,000 species of bees. In North America, the native bee fauna encompasses at least 3,500 species. Our local assemblage of bees includes ecological generalists, as well as species whose ecologies are relatively specialized.

The vast majority of bee species are solitary; the females build their own nests and provision them with small balls of nectar and pollen for their offspring. For instance, solitary bees of the genus *Andrena*, which nest along the North Branch of the Chicago River, dig deep tunnels into the earth. Branching from these tunnels, the careful mother will dig a series of cells. As she goes out on foraging trips, she will collect pollen and nectar, gradually adding to a ball of nectar-soaked pollen back in one cell of her nest. Once this ball is the right size (just a bit heavier than an adult bee, because it must contain all the energy and nutrients to support the growth and development of a bee from egg to adulthood) she lays an egg on it and seals the cell.

Other species are social, however, and levels of social behavior vary from one group to the next. Bees of the genus *Halictus*, which nest in nature preserves, open lots, and gardens form small colonies ranging from six or eight individuals, to dozens. They are black with whitish bands on the abdomen. Colonies are founded, in spring, by one or a few sisters who choose to cooperate rather than going it alone. One inevitably takes the lead, dominating the others and assuming the queen role. Their daughters will have no choice in the matter, becoming workers. In fall, new queens will be produced. For these bees, caste is more a matter of attitude than size or shape. A worker is virtually indistinguishable from a would-be queen.

Bees can be polylectic, feeding from, or gathering pollen from a variety of flowers, or be oligolectic, specializing on a limited number of flowers, most likely close relatives. An interesting, and very valuable oligolectic bee, *Andrena ziziae* (tiny, black and

inconspicuous), occurs along the North Branch of the Chicago River at the Bunker Hill forest preserve and also at Harms Woods, farther to the north. This species only visits *Zizia aurea*, the Golden Alexanders flower. Its timing of emergence is closely synchronized with the availability of its floral mutualists. For the eleven months a year when there are no Golden Alexanders flowers, the young bees wait, in tunnels, underneath the ground, dormant.

Bees can have one generation a year or several. Some bee species are more prone to migrate than others. Some bees gather nectar from a wide variety of flowers, but gather pollen from a much narrower subset of the available flora. Some are habitat specialists as well, requiring a particular plant assemblage to be present at a particular time of the year and a particular type of soil for nesting. Nest site requirements vary among bee species. A species may use twigs, beetle burrows, sandy soil, packed sand, grassy tussocks, abandoned rodent burrows, the abandoned burrows of other bees, or other nesting substrates. Garden bees, such as the ubiquitous *Anthidium manicatum* (a big black and yellow bee that is aggressive toward other bees), the males of which spectacularly defend territories over flowers all summer long, are usually extreme generalists. Females of this species visit a wide variety of flowers (though they seem to prefer Snapdragons, they also love native species such as Foxglove Beard Tongue); they go through several generations a summer and can nest in holes drilled in wood.

The specialized species are particularly susceptible to anthropogenic disturbance and habitat change. Their disappearance can echo through a biological community, causing their plant mutualists to decline or disappear, and with the plant mutualists, other species disappear as well. Recently, a major study of British and Dutch bees documented the parallel declines of pollinators and the insect-pollinated plants upon which they depend. The species in greatest danger were the bees that depended upon one or a few flowers, the ones who were only active a small part of the year, and the ones who tended to stay put rather than to disperse.

In my study of Chicago area bees, I have col-

lected 61 species, in 22 genera and 5 families, and work is just beginning. By far, the best sites for encountering native species have been those sites along the North Branch of the Chicago River. Of all the places I have sampled, these sites are the ones where the local ecologies and evolutionary relationships of the bees are most intact. For instance, cleptoparasitic bees of the genus *Nomada* (yellow and black or brown, not hairy, waspish) occur at Harms Woods and Bunker Hill, but are absent at all my other sites, including the Indiana Dunes National Lakeshore. Rather than building their own nests, *Nomada* bees, such as *Nomada sulphurata*, which occurs at Bunker Hill, sneak into the nests of their *Andrena* hosts and lay their own eggs in the carefully-provisioned brood cells. Not inclined to share, *Nomada* larvae quickly dispatch the competition.

In the future, I am certain I will find other interesting bees at these sites, and it is only through the patient and devoted efforts of local conservationists that these sites harbor these bees at all. Through habitat restoration and protection, we may continue to preserve them into the future.

### ***NBRP SEED PROCESSING DAY REPORT***

Over 90 people came to Emily Oaks Nature Center on Saturday, November 17th to help with this important part of restoring healthy preserves. Lending a hand were students from Northwestern University, Wright College, New Trier HS, Saint Ignatius College Prep, as well as friends from Riverbank Neighbors, Notebaert Museum, and of course the stalwart North Branch volunteers. Seeds of more than 150 native plant species, carefully collected from North Branch sites, were hand processed to separate the individual seeds from their capsules, pods and heads. The seeds were distributed into a dozen different prairie and woodland mixes that will be scattered in managed areas, restoring the healthy native plant community.

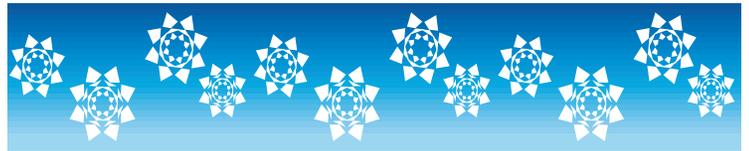


## Special Dates

### **SOLSTICE BONFIRE AT SOMME WOODS**

**SUNDAY, DECEMBER 23, 2:00 – 4:00PM**

Celebrate the winter solstice with music, a bonfire, and friends at Somme Woods. On the darkest day of year, when the sun sets at its earliest for the last day this fall, come gather round a warm fire with a few friends and reflect on things past and yet to be. We will have spiced cider, hot chocolate, and some treats to tempt your palate. This annual event – jointly sponsored by the North Branch, the Forest Preserve District, and Friends of Northbrook Forest Preserves – is a peaceful and sweet celebration. Neither snow nor cold ever stops this event (rain? maybe). Everyone welcome. For more information call Linda Masters at 847.509.0431.



### **NORTH BRANCH ANNUAL POTLUCK**

**... AT A NEW LOCATION!**

**SATURDAY, JANUARY 26, 2008**

**6:00pm to 10:00pm**

Please join us in this time-honored celebration of our good work. We will gather for the festivities at North Park Village Nature Center -- a different location this year but the same good spirits, delicious food and warm fire!

**DIRECTIONS:** From Pulaski Road, enter the North Park Village Complex at Ardmore St. (5801 N. Pulaski). Just past the security kiosk is a stop sign (just inside the entrance) Proceed straight through to the next stop sign and turn left. Follow the winding road to the last parking lot (before you hit the cul-de-sac at the end of the road). The nature center is located across the road. Walk up the gravel path, through the native plant garden, to the Nature Center building. We'll have the light on for you!

If you have questions, please call Nancy Freehafer (773) 342-6665.

Getting ready for the seed processing day. In the background are Jane Balaban, Joan Meersman, Jerry & Kent Fuller, Nancy Freehafer, and Paul Dolinko. Photo by Linda Masters.

# Notes From the North Branch

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## *SHOOTING WITHOUT BULLETS*

By Joe Walsh

Autumn is a time to count the harvest of blessings in one's life. Few things are as conducive to this as a little time off, which I got when I tore a shoulder muscle last February. It gave me an opportunity to reflect on my time with the North Branch.

Years ago, a friend who is acutely tuned in to beauty in the world, Gretchen Baker, had given me a copy of *Miracle Under the Oaks* and told me I must read it. I am not ashamed to say that I finished the whole thing in one sitting and was so moved that I cried, rather a lot for a grown man.

The next Saturday, I went to a workday at Somme Prairie Grove. At first, I was underwhelmed by the small patches of habitat we worked in, and the handful of enthusiastic people with bowsaws. They were outnumbered by uncountable green waves of buckthorn, and the scene made me think of nothing so much as the Spartans at Thermopylae. At the same time, the spirit of these people was infectious. They had a deep level of conviction, yet they were not at all dogmatic. In fact, they were extremely open to questions and ideas, and were bubbling over with knowledge of local natural history.

I went home that day thinking, "well, isn't that quaint." At the time, I felt trapped in Chicagoland by work and was frankly kind of desperate. I was relieved to find any wild areas at all. Please understand, I learned what makes great habitat at the feet of Edward O. Wilson; his theory of island biogeography proclaims that, "bigger is better!" Nonetheless I thought, "who knows, maybe these bowsaw warriors are onto something."

I kept going to workdays. Over time, I began to see the threatened and endangered plants and animals that thrive here because of our work. I came to know unique satisfactions that tap into the primeval unity of our species with the rest of the living world. I helped clear a swale at Somme Prairie Grove in honor of Steve Packard's 60<sup>th</sup> birthday – good enough fun on a cold, blustery day. The amazing part was seeing Virginia Rails nesting in the newly-cleared area the following summer. That was heavy. The only other Virginia Rail I have ever seen was hiding under a dumpster at the Field Museum, having gotten lost on an especially foggy morning about seven years before. Nature – real nature – in an ur-

ban landscape, and I helped it flourish there. Not a trivial thing, I tell you.

Part of my job is teaching conservation biology, which can be a pretty discouraging task given the current occupants of Washington, D.C. Even so, I can honestly tell my students that I am optimistic about the future – not in a forced-smile kind of way, but in a deep, rich, and nuanced kind of way. That's because the model of volunteer restoration that began on the North Branch is held up as an example to the world. It gives people real hope, especially me. I could not teach that course without you folks.

All of these thoughts distilled themselves in September. I finished my shoulder therapy and finally got the OK to go to a workday. I went to Sauganash Prairie Grove. It was miserable – hot, humid, buggy. The FPD's Bill Koenig was there in case the restoration antagonists showed up. He explained the, "rules of non-engagement" – we were asked not to argue with any of the antagonists if they confronted us, but just go on working and let the FPD staff deal with them. Others were there shooting video of the good work we do – as one joked, "shooting, but no bullets." Then Pete Leki said, "Non-engagement of your enemy? Shooting without bullets? I want to join *that* army!" And in one crystalline moment, I realized I was back where I belonged, fighting the best fight I have ever fought with the most inspiring people I have ever known.

Thanks.

## *MORTON GROVE FOSSIL HUNT*

by Mary Busch

The Morton Grove Historical Museum held its third annual Fossil Hunt at Linne Prairie on Saturday, October 20th. Milton Langer, President of the Morton Grove Historical Society and a retired geologist led this adventure. This year 40 participants met museum staff at the north pavilion in Linne Woods for an introduction to the Geology of Morton Grove and the Chicago Region.

Children and adults of all ages hiked through Linne North, learning a little bit about the stream bank stabilization project on the North Branch of the Chicago River at the equestrian bridge on the way. Passing a beautiful open woodland in Linne North, we admired recent restoration work by stewards John and Marian Thill and Ken Schaefer. We

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# Notes From the North Branch

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discussed the North Branch Restoration Project, especially with regard to historic oaks and European buckthorn.

Once we arrived at the Linne Prairie Restoration site Mary Busch, Curator of the Morton Grove Historical Museum, led a discussion on the history of this 30 acre site from pre-settlement to present day, with a focus on the Tunnel and Reservoir Plan (TARP), more fondly referred to as the *Deep Tunnel*. Joyce Gavurnik, new Assistant Curator, assisted with this program.

The focus of our museum program is on the crushed limestone that is present on site due to the excavation of rock necessary to create the tunnel system in Morton Grove. Fossils have been found during regular workdays at Linne in this Silurian dolomite rock strata dating back to 450 million years ago, when shallow seas were present and this land was closer to the equator. Crinoids, ancient filter feeders, and imprints of Brachiopod shells are the most common fossils we have found. A cast of a fairly complete Gastropod shell was brought out from the

museum collection for the hands-on discussion and the introduction to this fossil hunt.

We explored History, Geology, Ecological Restoration, and a look at Coyote Populations, while passing abandoned coyote dens along the river on this very beautiful autumn day.



Cole Lanham's New Trier class has a workday at Somme Woods.

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North Branch Restoration Project  
P.O. Box 2154  
Northbrook, IL 60062-3707

The North Branch Restoration Project is a cooperative effort involving the Nature Conservancy, the Audubon Society, and the Sierra Club. We manage the sites as volunteers for the Forest Preserve District of Cook County and other local agencies. The Project works to restore and manage the few remaining woodlands and prairies along the North Branch of the Chicago River. Our goal is to restore conditions that will allow these natural wild communities to flourish as a permanent part of the metropolitan area.

[www.northbranchrestoration.org](http://www.northbranchrestoration.org)

Paperless option - If you would like to download a pdf version of Brush Piles from our website, we will send you an email letting you know when it is posted. Sign up by sending an email to: [northbranch@comcast.net](mailto:northbranch@comcast.net).

To contribute notes and photos to Brush Piles:

*Email:* [masters2001@comcast.net](mailto:masters2001@comcast.net)

*Snail Mail:* P.O. Box 2154, Northbrook, IL 60062

*Deadlines:* November 1, February 1, May 1, August 1

Linda Masters, editor

# NBRP Workday Schedule - Winter 2007

## DECEMBER

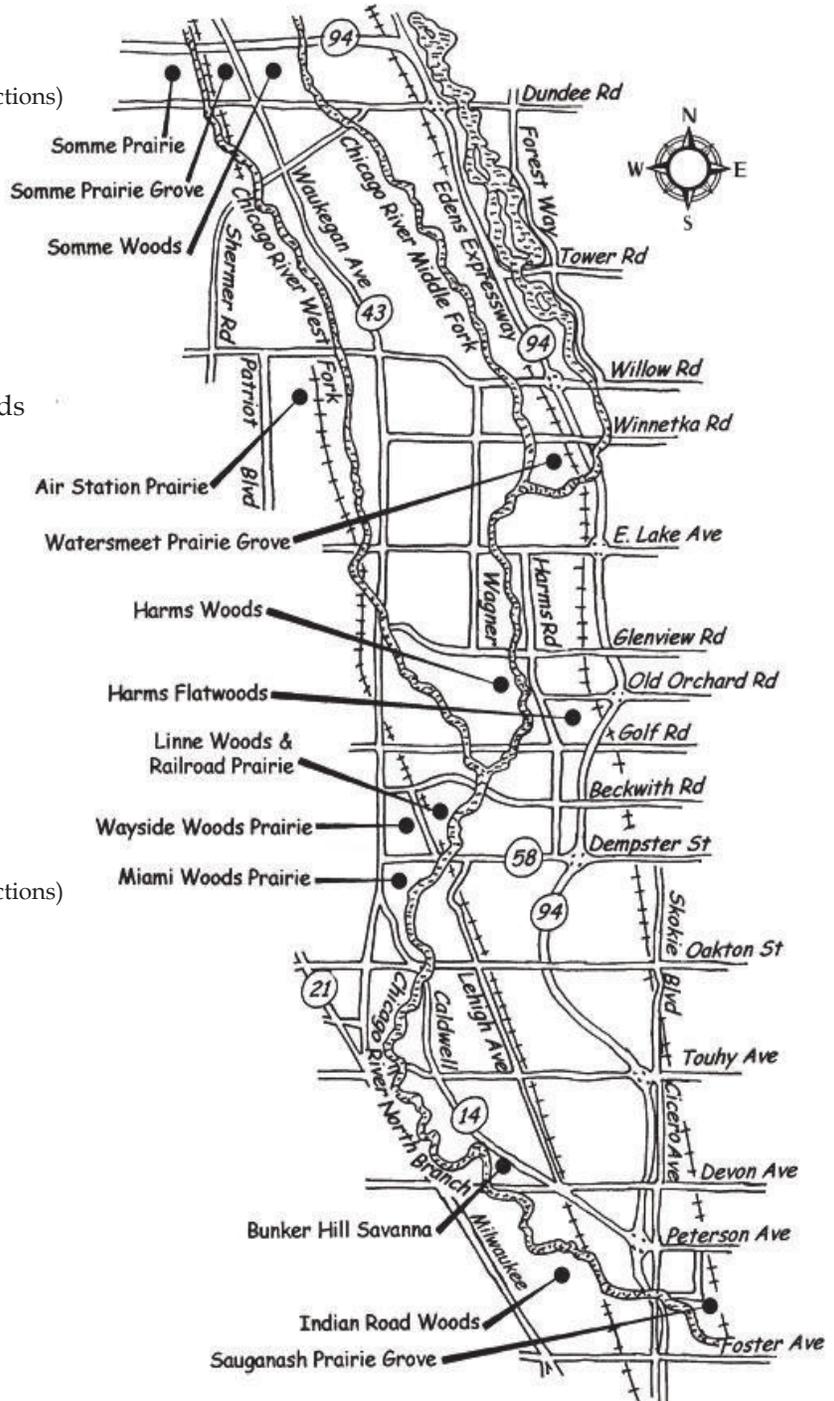
Sat	1	9:00-noon	Somme Woods
Sun	2	9:00-noon	Watersmeet
Sat	8	9:00-noon	Oxbow (See Bunker Hill for Directions)
	8	9:00-noon	Somme Prairie Grove
	8	9:00-noon	Watersmeet Prairie Grove
Sun	9	9:00-noon	Harms Woods
	9	1pm-4pm	Harms Woods
Sat	15	9:00-noon	Bunker Hill
Sun	16	9:00-noon	Harms Flatwoods
Sat	22	9:00-noon	Watersmeet Prairie Grove
Sun	23	9:00-noon	Wayside Woods Prairie
	23	2pm-4pm	Solstice Bonfire, Somme Woods
Sat	29	9:00-noon	Somme Woods
Sun	30	9:00-2pm	Somme Nature Preserve

## JANUARY

Tues	1	10am-1pm	Somme Prairie Grove
Sat	5	9:00-noon	Bunker Hill
Sun	6	9:00-noon	Somme Woods
Sat	12	9:00-noon	Linne Woods North
Sun	13	9:00-2pm	Somme Nature Preserve
Sat	19	9:00-noon	Somme Prairie Grove
	19	9:00-noon	Watersmeet Prairie Grove
Sun	20	9:00-noon	Harms Woods
	20	1pm-4pm	Harms Woods
Sat	26	9:00-noon	Linne Prairie
	26	9:00-noon	Oxbow (See Bunker Hill for Directions)
	26	6pm-10pm	NBRP Potluck
Sun	27	9:00-noon	Somme Prairie Grove

## FEBRUARY

Sat	2	9:00-noon	Harms Flatwoods
	2	9:00-noon	Somme Woods
	2	9:00-noon	Watersmeet Prairie Grove
Sun	3	9:00-noon	Miami Woods & Prairie
Sat	9	9:00-noon	Linne Woods North
	9	9:00-2pm	Somme Nature Preserve
Sun	10	9:00-noon	Harms Flatwoods
Sat	16	9:00-noon	Sauganash Prairie Grove
Sun	17	9:00-noon	Harms Woods
	17	1pm-4pm	Harms Woods
Sat	23	9:00-noon	Bunker Hill
Sun	24	9:00-noon	Somme Prairie Grove



### BUFFALO GROVE PRAIRIE

Sundays, 9:00 am - Noon  
 Dec 2, Jan 13, Feb 10  
 Bev Hansen, 847-272-6211

Work on Sundays at this piece of virgin prairie located on Hastings Road. It is off Lake-Cook about a mile west of Milwaukee (watch for Hastings on the north after going under the railroad overpass). Turn north on Hastings, then right into the second parking lot. The prairie is under the ComEd power lines.

### SKOKIE LAGOONS

Saturdays, 10:00 am - 1:00 pm  
 Dec 8, Jan 12, Feb 9  
 Jerry Garden, 773-545-4632, jerrygarden@sprynet.com

Meet at the Tower Road parking lot (east of the lagoon bridge - not the boat launch). There will be a sign with directions to the work site in the picnic field adjacent to the parking lot. Come dressed for the weather. We will provide waders, gloves and tools.

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# NBRP Site Directions and Stewards

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## *Air Station Prairie, Glenview*

### **Kent & Jerry Fuller**

From the Edens Expressway; go west on Willow Road, past Waukegan Road and over the RR overpass. Turn left (south) at the traffic signals for Patriot Blvd. Turn left on Compass Road (second light from Willow). At the end of Compass, park along Lehigh Avenue or in the METRA lot. Meet at the Tyner Interpretive Center on the south end of the prairie. Patriot Blvd. is also accessible from Lake Avenue.

## *Bunker Hill Savanna/Oxbow, Chicago*

### **Jane & John Balaban**

Off Caldwell between Devon and Touhy; entrance located just opposite Tonty Street. For Bunker Hill Meet in first section of parking lot; for Oxbow, follow road until it turns north, then park along the west side.

## *Harms Flatwoods, Glenview*

### **Neil Peck & Jette Thomassen**

Meet at the Forest Preserve Grove parking lot on the west side of Harms Road, directly west of Old Orchard Road.

## *Harms Woods, Glenview*

### **Jane & John Balaban**

Meet at the Forest Preserve Grove parking lot on the west side of Harms Road, just south of Glenview Road and north of Old Orchard Road.

## *Linne Prairie, Morton Grove*

### **Mary Busch & John Thill (847-966-0231)**

Meet at the Wayside Woods Prairie parking lot on Lehigh Ave, a few blocks east of Waukegan Road and just north of Dempster.

## *Linne Woods North, Morton Grove*

### **John & Marian Thill (847-966-0231, mjthill@icsp.net)**

From Edens go west on Dempster street about 1.5 miles. The forest preserve entrance will be on the north side of the street directly across from McDonalds. Follow the winding road all the way back until it dead-ends at the turn-around circle.

## *Miami Woods & Prairie, Morton Grove*

### **Kent & Jerry Fuller**

East of Caldwell between Oakton and Dempster. Meet in the parking lot two blocks north of Oakton.

## *Morton Grove Prairie Nature Preserve, Morton Grove* **Kent Fuller**

From Dempster, 2 blocks east of Waukegan, turn north on Oak Park Ave. Turn left on Churchill and drive to the end.

## *Sauganash Prairie Grove, Chicago*

### **Larry Hodak & Pete Leki (watersschool@yahoo.com)**

Meet at the Forest Preserve parking lot at the Irene Hernandez Picnic Area off Foster Avenue across from Kilbourne Avenue. We will walk north along the railroad tracks and cross the river on the bridge.

## *Somme Prairie Grove, Northbrook*

### **Stephen Packard (847-509-0431, spackard@audubon.org )**

**WE NOW PARK AT SOMME WOODS.** Park on the left, near the entrance and follow the new trail. From the Edens Expressway, take Dundee Road two miles west and turn right into Somme Woods parking lot (just before the light at Waukegan Road).

## *Somme Prairie Nature Preserve, Northbrook*

### **Laurel Ross (312-665-7432, lross@fieldmuseum.org) & Christiane Rey (773-478-2019)**

From the Edens Expressway, take Dundee Road 2½ miles west (past Waukegan) to Western. Turn north and park in the post office parking lot.

## *Somme Woods, Northbrook*

### **Linda Masters (847-509-0431, masters2001@comcast.net)**

From the Edens Expressway, take Dundee Road two miles west and turn right into Somme Woods parking lot (just before the light at Waukegan Road).

## *Watersmeet Prairie Grove, Northfield*

### **John Berg (815-919-4916, Kerg111@aol.com)**

From Lake Avenue and Wagner Road, turn north on Wagner to Winnetka Road. Turn east on Winnetka for ¾ mile. Park on the north side of the street or a side street.

## *Wayside Woods Prairie/Linne RR Prairie, Morton Grove*

### **Gladys Bryer & Larry Hodak**

Meet at Wayside Woods Prairie parking lot on Lehigh Ave, a few blocks east of Waukegan Road and just north of Dempster.

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