What is Chicago Wilderness?

Chicago Wilderness is some of the finest and most significant nature in the temperate world, with roughly 200,000 acres of protected natural lands harboring native plant and animal communities that are more rare—and their survival more globally threatened—than the tropical rain forests.

Chicago Wilderness is an unprecedented alliance of 76 public and private organizations working together to study and restore, protect and manage the precious natural resources of the Chicago region for the benefit of the public.

Chicago Wilderness is a quarterly magazine that celebrates the rich natural heritage of this region and tells the inspiring stories of the people and organizations working to heal and protect local nature.
Seeing, Learning, Loving

What we see or touch or hear or smell has a power that few words can match. This issue is about such experiences and their people.

Dr. Michael Miller peers through a microscope at animals too small for the unaided eye—and falls in love with dirt.

Ten year-old Adam Ralph discovers a strange hawk moth on a pile of leaves at his Vernon Hills home and starts a great little adventure. And a covey of veteran birders share the magic of spring migration that inspired the dedication of thousands of conservationists, and inspires them still.

Perhaps you’ll agree that with nature, as with people, we learn first to love individuals, to marvel at the song of one yellow warbler, the glimmering beauty of a dragonfly, the hue of a wild hyacinth. We learn to love what’s close to us, what we encounter at an impressionable age or under inspiring circumstances.

How much more difficult it is, how much more challenging, to learn to love whole landscapes. If we know that the fungi and microorganisms of the soil are crucial to all the other species of our region, and if we start to see their faces by learning their secrets, can we learn to love them? Or whole forests?

Or mankind? Yet this is precisely the challenge we face, here in Chicago Wilderness, and everywhere on the shrinking Earth. To save the particular local loved nature, we will need to think bigger, love larger, and understand connections.

In local, familiar nature, we mourn the death of a specific tree, lost to an infestation of Asian beetles, lost to disease or a wind storm. We mourn the disappearance of Kentucky warblers from an oak woods under restoration. We mourn the prairie orchids and butterflies and Franklin’s ground squirrels that once inhabited a plot of land that we have come to know.

These losses are sad, it is true. But unless we learn to love whole habitats—the complex web of entire prairies and woods and marshes and even the unseen but vital life of the soil—then we will no longer have individuals to love either. This, then, is the paradoxical lesson of Chicago Wilderness: if we want to have splendid individual butterflies and bees and bluebirds in the future, we will have to learn to love—and care for—whole communities. And these communities include us.

Seeing, learning, and loving.
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Spring Tonic.

COVER PHOTO: The rich forest of Messenger Woods in Will County contrasts with the silty stream, which arises outside the preserve. Photo by Joseph Kayne.

OPPOSITE: Marsh marigolds and bunch sedges thrive in open wet woods. Photo by Pat Wadecki/Root Resources.

The yellow-headed blackbird is a resident of open marshes; the Chicago Wilderness region holds the largest populations in Illinois.

“Everyone thinks of bird song as so beautiful. But you can’t hear the call of a yellow-headed blackbird and not smile or laugh. They sound like they’re dying.”
—Carolyn Fields

More birds—and bird stories—on page 4. Photo by Arthur Morris/BIRDS AS ART.

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Migration Magic

Spring Birds of Chicago Wilderness

Photos by Arthur Morris
Edited by Judy Pollock

Early April, on the edge of Lake Michigan.

A line of great blue herons flies slowly through the early morning light. Flocks of blackbirds chatter overhead. Flickers sound their exuberant calls from the treetops as others, exhausted from a night of migration, wing in to join them. Everywhere are flocks and clouds of ducks. Goldeneye and bufflehead; canvasback and teal; mergansers by the hundreds; scaup by the thousands.

This is spring. In Chicago Wilderness.

Chicago is blessed with rich bird life—and a vibrant community of birders. To prepare this article, five veteran birders spent an evening looking at slides from master photographer Arthur Morris. The text below is drawn from their comments.

Probably the most numerous migrating duck in the region, Lesser scaup are more common on inland lakes—Crabtree Nature Center, the Palos region, Fermilab. On Lake Michigan, they are joined by the similar greater scaup, usually a good distance off shore.

“This is a bird that from a distance would be just a black and white blob—but when you see it through a scope, it’s gorgeous. There’s all the vermiculation on the sides, the shape of the head and the purplish gloss on the side—it’s just a gorgeous bird.”

—Walter Marcisz

“I don’t like to anthropomorphize, but this bird looks a little ticked off. Like it’s saying, ‘If you come one step closer...’”

—Eric Walters
“Red-winged blackbirds have something in common with the brown creeper. New birders ask, ‘What’s that little brown bird creeping up the tree?’ When you tell them the name, they say, ‘Are you making fun of me?’ The same’s true when they ask, ‘What’s that black bird with red on its wings?’”

— Geoff Williamson

“Every March, at the lakefront, after a warm southwest wind, hundreds or even thousands of blackbirds will fly over, heading south. The first time I saw them, I thought, ‘This is so cool—it’s spring—it’s a wonderful day—migration has started, and I’m watching the birds flying...SOUTH?!’ It’s a weather-related phenomenon. The best theory I’ve heard to explain it is that birds flying to nesting grounds to the northeast, say Michigan, hit the lake and won’t cross it, so they spend the morning flying around it.”

— Eric Walters

The white-crowned sparrow is one of about 22 native sparrow species that live in or migrate through Chicago Wilderness.

“This is the bird that got me into birding. One day, looking at our feeder, I said, ‘Hey, there’s a bird out there with a piece of paper stuck to its head.’ My husband said, ‘That’s not paper, that’s its head.’ We thought it was some kind of mutant. We checked a field guide and discovered that it was really a bird species, a white-crowned sparrow. We looked at the range map—we had never paid attention to them before—and saw that it migrates through Chicago. The whole concept of migration suddenly came together for me with that one bird.”

— Carolyn Fields
During the second and third week of May, shrubs and trees are awash in colorful neotropical migrants like this **Blackburnian warbler**. Find them in forest preserves, parks, gardens—anywhere there are insects for them to eat.

“One claim to fame that Chicago has in the birding world is the unparalleled number of warblers you can see during May. Sometimes, bad weather brings a fallout of birds. Once, two birders were in a car at Montrose Point, waiting for the rain to let up. The wipers were going, and they were parked under a tree that hadn’t fully leaved out yet. They counted 18 species of warbler in that tree in five minutes.”

—Eric Walters

**Black-and-white warblers** often work the trunks of trees, looking for insects.

“This was the first warbler I ever found on my own, as a young birder. It was an emotional thrill that I still remember to this day. Everyone remembers their first warbler—you fantasize about finding them; they’re so colorful and active.”

—Eric Walters

**Ovenbird** in threat display posture, with the wings held down and crown feathers raised.

“After 30 years of birding, I found my first ovenbird nest on May 31, 1998. I remember the exact date. I was walking in Zanders Woods. A little olive bird flushed from under foot. I thought, since it flew from under my foot, there must be a nest—or there’s no way it would have stayed so long. All of a sudden I heard, ‘Teacher, teacher, teacher!’ The song of an ovenbird! I looked down, and sure enough, there was a little domed, oven-shaped nest at my feet. It had the one obligatory cowbird egg in it and one ovenbird egg.”

—Walter Marcisz
The male **Cape May warbler** is beautiful, but this female has all the personality! Flowering fruit trees bloom in mid-May and fill with birds. All warblers eat lots of insects, but some, like the Cape May, also drink nectar.

“Dave Bohlen, author of *The Birds Of Illinois*, told of a Cape May warbler that actually defended a spot in a tree for a few days—a couple of branches. I guess the insect supply there was just great.”

— Eric Walters

**Baltimore orioles** weave hanging nests in elms and other deciduous trees. They are sometimes seen picking up string or yarn to weave into their nests.

“Once in Schiller Woods I watched a female oriole build a nest. I sat for four hours and watched her weave the entire nest. It was just wonderful. I was doing a nesting survey at the time. Later I watched the male visit the nest, and even saw the young fledge...To see an oriole outside your own window, just put out half an orange in May. An oriole is likely to show up.”

— Doris Johanson

**Rose-breasted grosbeak**. In 1997, a cold snap occurred in early May, right after many insect-eating birds had arrived. Grosbeaks showed up at bird feeders by the dozens. Many people became interested in birds that spring. Birds that are normally seen only in treetops, such as peewees and Blackburnian warblers, were on the ground everywhere in the parks and in people’s yards, scrounging for cold insects.

“If someone wants to get to know birds this spring, I’d say put out a feeder. Just some seeds on a light-colored board in April will bring four or five kinds of sparrows, and maybe a few grosbeaks.”

— Eric Walters
“Jenny Vogt and I were at the Darrow Bridge in Jackson Park, watching cliff and barn swallows build their mud nests under the bridge. Some city workers were preparing to clean the bridge with high-pressure hoses. We tried to talk with them, but who were we to butt in? Jenny whipped out her cell phone, asked one of the workers for his boss’ number, called and suddenly this quiet woman turns into a professional negotiator. She hands the phone to the workers, and they agree to put off the work. It was wonderful.”

—Carolyn Fields

You meet great folks. All ages, sexes, walks of life. And they're all wonderful people.

“One outstanding characteristic of the birding community is that everyone shares knowledge. I think the great beauty of our subjects, not to mention the surroundings we find ourselves in when we are studying them, generates an enthusiasm that we just can't keep to ourselves. Duane Heaton led many trips for Prairie Woods Audubon when I first started. He was such a good teacher, extremely patient and always emphasizing awareness of the habitat needs of each species. I appreciate the conservation ethic built into everything I learned about birds and hope to pass it on to whomever I might mentor.”

—Carolyn Fields
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Carolyn Fields is a second-career student and 25-year resident of Palatine. She monitors bird populations in the Northwest suburbs.

Doris Johanson has spent 30 years sharing her love of birds—leading bird walks, teaching schoolchildren about birds and, for the last 20 years, answering the questions of callers on the Audubon information hotline. She and her husband live in Des Plaines.

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Photographer Arthur Morris was an elementary school teacher for 23 years. But he decided to follow his dream and try to make a new career—photographing and lecturing on wildlife. It’s been a howling success. More than 9,000 of his images have been published in magazines such as Natural History, National Geographic, and Audubon. He wrote the dazzling and revered book The Art of Bird Photography: The Complete Guide to Professional Field Techniques. To learn more on the Internet, check out birdsasart.com

“I’ll never forget the year a kingfisher dug its nest in a steep bank just north of Irving Park Road along the Des Plaines River. I had so many hours in Schiller Woods, and found so many nests. After my husband went to work, I was in the woods until I had to pick my son up from school. I miss those days.”

—Doris Johanson

Like to discover birding? Turn to page 16 for a list of bird clubs and this spring’s bird walks in our Chicago Wilderness Guide to Birding.
Adventures in the Rhizosphere:

Life Underground

by Alex Blumberg

To the honor roll of world-altering technological innovations, a list that includes the wheel, the cotton gin, and the solid-state transistor, few of us would add the self-scouring steel moldboard plow. We should. John Deere’s invention tipped the balance of power once and for all from prairie to farmer. It guaranteed that prairie no longer broke plow, that plow instead broke prairie. And it inscribed on the landscape the first line to the now familiar story of wilderness into fruited plain. But the moldboard plow wrought its greatest transformation on a hidden landscape, the subterranean world of prairie soil.

Michael Miller, an ecologist at Argonne National Laboratory, knows soil. He notices things about soil that most people don’t, its composition and chemistry, its smell and weight, cohesion and tilth. He mentions in passing that high metal content can give soil a reddish tinge, the result of iron oxidizing, earth literally rusting. He knows that in every cubic millimeter of soil beneath our feet, nematodes hide and mites hunt; springtails couple and bacteria divide; things grow and die. He knows, in other words, that the soil lives, that it is, in fact, alive by definition. “Without life,” he explains, “there is no soil. There’s dirt.”

Miller knows also that prairie soil, in particular, is a hidden ecosystem rivaling any visible system in complexity. This knowledge causes him to regard the moldboard plow as a tool of environmental calamity on par with the chainsaw and the oil tanker. “The real diversity of the tallgrass prairie is not above ground, but below,” he says. “The tallgrass prairie is a rainforest turned upside down.”

To find out what inhabits this inverted jungle, it helps to talk to Dr. John Lussenhop, a soil biologist at University of Illinois at Chicago.

He is, among other things, the region’s foremost expert on springtails and mites. To envision life underground, Lussenhop recommends shrinking, Alice-like, to about one millionth your original size, roughly one micron (one thousandth of a millimeter) in length, or about the size of the average bacterium. Bacteria coat the surfaces, line the crannies, and plug the interstices of whatever they’re eating. They produce CO2 and ooze a slimy film; they clone themselves with abandon, and gorge themselves until food or moisture is gone. When that happens, they either die or go into quiescent mode and lay low until the next food source staggers along and dies. “Bacteria aren’t the most mobile of organisms,” says Lussenhop. “It’s been estimated that the average bacterium lays quietly for six months waiting for breakfast to bump into it.”

Occasionally, bacteria find themselves engulfed in the peculiar embrace of the amoeba, chief predator of the unicellular world. An amoeba can wedge its pseudopod into a microscopic crevice 2 microns in diameter and scoop out an individual bacterium, which it then surrounds with its fluid body and consumes for a tasty snack.

Moving up three orders of magnitude, we come to the springtails and mites. The springtails, at a fraction of a millimeter in length, are nonetheless a thousand times larger than the bacteria and amoebae all around them—the same ratio in length as an ant to a person, say, or a person to an aircraft carrier. “Springtails have white bodies, stubby antennae and two horn-like formations protruding from
their last segment,” says Luschenhop. “They spend a lot of
time walking up and down roots. It’s their highway.” Along
this highway they consume food—fungi, bacteria, and
rotting organic matter—and they become food. They share
the thoroughfare with diminutive predators, the mesostig-
matsids, or soil mites.

Mites, Luschenhop explains, “wander along the roots also,
snatching unsuspecting springtails up in their cheliscera,”
the invertebrate equivalent of steely jaws. Luschenhop once
blew up a microscopic photograph of a mauled springtail
and compared it with the fossilized remains of a
Tyranosaurus kill. “The dentition patterns looked almost
the same,” he marvels. “These guys are just like T-rex, but on
a microscopic scale.”

Growing ever bigger, the procession of soil organisms
continues, eventually becoming easily visible to the naked
eye. Pseudoscorpions, no bigger than a half centimeter,
scuttle among the soil particles nabbing mites and
springtails in their pincers, piercing them with their
deadly fangs. Earthworms glide by, consuming all that
they find in front and excreting all they don’t like behind.
Ants bustle, larvae burrow, and moles tunnel. In one thim-
bleful of soil, scientists can distinguish roughly 20,000
discrete species of life form. All these organisms don’t
merely inhabit the soil. Living and dead, they are the soil.
Il soils, of course, contain bacteria and fungi, and
most contain mites, nematodes, and springtails.

Appreciating what makes prairie soil unique
requires a basic understanding of soil structure. Soil is a
mixture of sand, silt, clay, and organic matter. Think of the
sand, silt, and clay as bricks, and the organic matter as mortar.
As living things—roots, leaves, butterflies,
woodchucks—die, they are eaten by hordes of microbes liv-
ing in the soil. These hordes exude a sticky film while they
dine. Once the dead root has been nibbled to a small
enough piece, says Miller, the sticky film binds the silt and
clay around it, and “mummifies it in a matrix of mineral
and organic material.” The root bit, now sealed in a tomb
of clay skins and microbial glues a couple thousandths of a
millimeter in diameter, is called a microaggregate.

Microaggregates can clump together like soap bubbles or
add layers like a pearl or both. Doing any of these things
lets them drop the micro and go by the less fussy, more uni-
versal term, aggregate. Aggregates can be thought of as the
essential building blocks of the soil, since a clump of soil
dropped in water will dissolve only to the aggregate level.
In the space between aggregates, the tunnels and pores that
filigree the ground below, the microscopic life of the soil
goes about its business. The nuances of aggregate size, sta-
bility and composition are known collectively as a soil’s
“crumb structure.” To fully grasp this concept’s importance,
it’s instructive to compare the soil in a cornfield to the soil
in a virgin prairie.

The roots of many
prairie plants plunge 20 feet or more into the
ground. On the roots live
Michael Miller’s specialty,
mycorrhizal fungi. These
fungi send out tendrils
called hyphae that have a
binding effect on the soil.
Together with the slimy
residue of bacteria and a
slurry of water and silt,
they form gigantic tangles
called macroaggregates.
Gigantic, of course, is a rel-
ative term. To earn
macroaggregate status, tangles must measure at least 250
microns across. That’s .25 millimeters, about the size of a
head of a small pin. Miller and co-workers have pho-
tographed macroaggregates and x-rayed them. Magnified,
they resemble a bit of gum that’s been rolled in a dirty rain
gutter. In the prairie, macroaggregates make up 95 percent
of the soil. In a cornfield the percentage drops to 35. The
ramifications of this 60-point spread are huge.
First, large aggregates add tilth to the soil, or to use
Michael Miller’s personal jargon, “they make it fluffy.”
Prairie soil, having a crumb structure of bigger constituent
parts, is “fluffier” than agricultural soil, which is another
way of saying it’s less dense. This may seem an academic
distinction, but Vermont Prairie, a one-acre remnant in
Will County, highlights its real-world ramifications. Plotted
as a cemetery nearly 150 years ago, Vermont Prairie
escaped the plow. It persists as a tiny island of 10,000 year-
old ecosystem amid a sea of 20th-century agriculture.
During the past 100 years, the soybean and cornfields

The world of the prairie soil is a
hidden ecosystem rivaling any
visible system in complexity.
“The real diversity of the
tallgrass prairie is not above
ground, but below. It is a rain-
forest turned upside down.”
around the prairie have been slowly collapsing, losing their fluff like a down pillow under a sprinkler. The prairie, by contrast, has maintained the tilth of the soil below it. The result is a nearly two-foot differential between the level of the Vermont Prairie and the surrounding cropland. It juts like a squat, rectangular butte from the flat and sagging plain. "A lot of people think the level subsided due to erosion," says Miller, "and that’s part of it, but mainly, it’s just the soil in the fields growing more dense."

"Here’s a second difference between the prairie soil and cultivated soil," says Miller. "There’s roughly twice the biomass below prairie as below corn." Again the reason has to do with crumb structure. Imagine a jar of steel ball bearings. In between the bearings, there are spaces, say, where tiny ants could roam. Now imagine a jar of iron filings. There’s no room for ants in between those particles. The same is true with soil. The bigger the aggregates, the more room for life to teem.

The added living space leads to what Miller sees as another key distinction. Prairie soil hosts far greater biodiversity. He has empirical evidence to support this claim—he’ll find 10 to 12 species of mychorrhizal fungi in a sample of prairie soil, for example, but no more than five or six in a cornfield. But mostly he interprets signs. Miller, after all, is an ecologist: he specializes in viewing systems as a whole. Certain systems tend to support highly diversified flora and fauna, others less so. Diverse systems vary, but from coral reef to rainforest, they all possess one common element—a large number of niches.

"In a cornfield," Miller explains, "all the aggregates are small, leading to uniform pore spaces in the soil." There are far fewer roots constantly burrowing and dying, fewer insects tunneling and worms digging. In other words, he says, "you’ve only got a few niches."

Under a prairie, by contrast, "you’ve got an animal that died here, a ground squirrel that dug a hole over there, a bluestem that rooted here, all this life doing all these different things," gesticulates Miller. "This leads to a high degree of diversity below ground." Add to this a crumb structure of large and craggy macroaggregates forming countless pores and openings throughout the soil, and you’ve got a lot of niches. You’ve got so many niches, in fact, that Miller thinks the prairie soil might be one of the greatest repositories of biodiversity in the world.

At the moment, we can’t know for sure. The fact is, scientists have yet to name the vast majority of below-ground life. Ed Zaborski, a soil invertebrate ecologist with the Illinois Natural History Survey, conducted a study of mites in corn and soybean fields in Ohio. "You’d think this system would be well-known, but it turned out that 20 percent of the mites I collected were new," he says. "We think that in North America as a whole, only 15 percent of the total number of mites have been described." And it’s not just mites. "Take nematodes, a group that functionally, at the ecosystem level, is much more important than soil mites," Zaborski continues. "We’ve described thousands of species, but people say there may be millions."

Prairie soils also differ from agricultural soils in their nutrient loads. A soil gets its nutrients from the breakdown of organic matter by bacteria and fungi. Michael Miller and other soil scientists measure a soil’s nutrients by extracting them into water or salt solution, boiling the solution down, and weighing what’s left.

For example, take nitrogen. "If you do a water extraction, you’ll find, at least initially, that cornfield soils contain much higher nitrogen levels," Miller says. "But if you crush both soils with a rolling pin, incubate them for several weeks, and repeat the extraction, similar amounts of nitrogen emerge from the prairie soil the second time." The cornfield soil, by contrast, has almost nothing left.

The answer to this seeming mystery lies in the microaggregates. Remember the entombed piece of root at the microaggregate’s center? The root bit is, in a sense, reserve fuel for the soil. Its nutrients are released only when its microaggregate is broken open and microbes digest it into fertilizer. By crushing the soil with a rolling pin, Miller unpacked all the preserved bits of organic matter and allowed the microbes to make them into plant food.

Scientists refer to organic matter in the soil as organic carbon. And the process whereby microscopic blobs of carbon—root, leaf, or woodchuck—get preserved inside pats of silt, slime, and mychorrhizal hyphae, is called carbon sequestration. Prairie soils, because they’re so good at forming aggregates, capture a portion of all the carbon that passes through them. Most of every ground squirrel or butterfly or compass plant that dies on the prairie goes into the air as CO₂ or into the cell walls of bacteria. But some of it gets stuck inside a microaggregate before the bacteria or fungi can finish it off.

The effect of carbon sequestration is that when the soil is undisturbed, available nutrient levels are relatively low. Of course, there’s always something digging, burrowing, rooting, or shifting in the prairie. The activity constantly breaks down the microaggregates and releases their nutrients, but at a slightly slower rate than new microaggregates are formed. For 10,000 years, the Midwestern prairie soil, continued…
like a thrifty pensioner, set aside more carbon than it spent. Then along came the steel moldboard plow and blew the savings virtually overnight.

The productivity of the land, the vast, flat, treeless expanse of it, the size of the corn it shot up year after year, must have fired the settler imagination. It’s easy to sympathize with 19th-century man, tempted as he must have been to see this magically fertile earth as proof that he was fulfilling God’s plan. Of course, we now know that he was really just raiding God’s storage bins. A century and a half later, things are a bit different, agriculturally speaking. The binge of the mid-19th century is over. The soil is still deep and dark, but, as already noted, certainly denser, less teeming, poorer in organic material. “We’ve gone from soil that was 10 percent carbon to soil that is less than three percent,” says Miller. “We didn’t farm the soil, we mined it.”

The most profound consequence of John Deere’s plow has come to light only recently, in the era of global warming. The effort to determine the origins of all the excess CO₂ in the atmosphere is called mass balancing. On one side of the equation, scientists place all new carbon in the atmosphere. On the other side they place carbon in all the fossil fuels that have been burned since the industrial revolution. For many years the equations didn’t balance; more new carbon hung in the atmosphere than could possibly have come out the ends of tail pipes. “Much of the unknown was explained,” claims Miller, “by the plowing of prairie soils. A good portion of the elevated CO₂ levels in the world comes from the breakdown of the North American prairies.”

It’s awesome to consider the intricacy of this web—a pluck here, near the blind and groping bacteria on a bluestem root, sends tremors strong enough to melt the polar ice caps. It’s scary how much the well-being of our planet depends on a world beneath our feet that most of us aren’t aware of. Who knows how many species we’ll eventually discover at work beneath our remnant prairies, or if we’ll ever be able to count all the inhabitants of this inverted rainforest? Who knows how irreversibly John Deere’s plow has altered things, how much has been lost, how much remains? But one thing is for certain, if any of the millions of organisms inhabiting the soil had hands, the fate of the world would be in them.

MISSING MUSHROOMS

Dr. James Bever, an ecologist at the University of California-Irvine, has been studying mycorrhizal fungi through Cook County’s Restoration Research Fund. Bever and his associates sought to identify the Chicago-area species of a particular fungal group called arbuscular mycorrhizal (AM for short) and to investigate how the presence of such fungi affects prairie restoration.

By comparing soil samples from different locations (prairie remnants, disturbed sites—such as roadsides and old fields, and restored prairies), Bever found that the untouched remnants had the greatest diversity and concentration of AM fungi. His study confirms that routine agricultural practices, such as tilling and the application of inorganic fertilizers and pesticides, reduce the abundance and diversity of AM fungi. And although prairie restoration does increase the level of diversity, Mike Miller’s research shows that even after 15 years of prairie restoration at Fermilab, the diversity of mycorrhizal fungi still has not reached the level of West Chicago Prairie, a nearby remnant.

The types of fungi that are less common in the disturbed and restored sites are, according to Bever, prime candidates as potential prairie restoration tools. Now the task is to identify these rarer fungi and their preferred host plants and develop techniques to inoculate degraded soils. Currently, about 180 species of AM fungi are known, 34 of which were identified in the Chicago prairie study. Already Bever has discovered that some plants (big bluestem, prairie dropseed, yellow coneflower) are more receptive fungal hosts than others (purple spiderwort, wild onion, alum root). More research into these tiny organisms offers promising help for our region’s newest prairies.

—Debbie Hillman
Into the Wild

OUR GUIDE TO THE WILD SIDE

Bring field guides and binoculars—or just your senses and spirit. These lands are among our best and brightest gems of ancient nature.

1 NORRIS WOODS—Kane County
2 BUSSE FOREST NATURE PRESERVE—Cook County
3 GOOSE LAKE PRAIRIE—Grundy County
4 ELIZABETH LAKE NATURE PRESERVE—McHenry County

Maps: Lynda Wallis
The Chicago Wilderness Guide to Birding

Want to learn more about birds and nature? Want to have some fun? Check out a local bird club. Most offer walks and access to a network of people who have great knowledge about our local natural history. Contact the club presidents listed below for more information.

Local Birding Organizations

**COOK COUNTY**
- **Chicago Ornithological Society**
  - Geoffrey Williamson: (773) 935-8439
- **Chicago Audubon Society**
  - Jerry Garden: (773) 539-6793
- **Fort Dearborn Audubon Society**
  - North Lakefront, Chicago
  - Margaret Murley: (847) 864-1385
- **Evanston North Shore Bird Club**
  - North Cook and Lake County
  - Mary Singh: (847) 864-1385
- **Park Ridge Audubon Society**
  - David Dini: (847) 394-2579
- **Prairie Woods Audubon Society**
  - Northwest Cook County
  - Brian Herner: (847) 952-5821

**WILL COUNTY**
- **Will County Audubon Society**
  - Jerold Olson: (815) 723-1847
- **Thorn Creek Audubon Society**
  - Will and Southern Cook Counties
  - Kathy Bader: (708) 672-6574

**NORTHWEST INDIANA**
- **Dunes-Calumet Audubon Society**
  - Tracy Page: (219) 662-1953
- **Sand Ridge Audubon Society**
  - Northwest Indiana and adjacent Southern Cook County
  - Dorothy Kovach: (219) 838-5031

**LAKE COUNTY**
- **Lake-Cook Audubon Society**
  - Jesse Stewart: (847) 433-8564
- **Lake County Audubon Society**
  - Della Hamburg: (847) 362-5897

**KANE COUNTY**
- **Kane County Audubon Society**
  - Bob Andrini: (630) 584-8386

**SOUTHEASTERN WISCONSIN**
- **Hoy Nature Club**
  - Racine and Kenosha area
  - Muffy Petrick: (414) 639-2760

**MCHENRY COUNTY**
- **McHenry County Audubon Society**
  - Barb Meding: (815) 338-6831

**DUPAGE COUNTY**
- **DuPage Audubon Society**
  - Wayne Dinelli: (630) 963-8875
- **DuPage Birding Club**
  - Karen Fisher: (630) 985-2956

Bird Walks—Spring 1999

Get out and experience the wonder of spring migration. This is a sampling of local bird walks and their leaders. For more details or complete calendars of a club’s trips, contact the bird club representatives listed above. Bring binoculars and a field guide if you have one. Dress for a day outdoors; waterproof boots are necessary for wetland trips.

- **Lincoln Park Zoo, Chicago**—spring migrants. Every Sunday, Tuesday, and Thursday, from April 1 through the end of May. Meet at 8:30 a.m. in front of the birdhouse. Doug Anderson, Fort Dearborn Audubon.
- **Glacial Park, McHenry County**—shorebirds, ducks, and other wetland migrants. April 17, 8 a.m. Harts Rd. off Rte. 31, 3 miles north of McHenry. Dave Miller, McHenry Audubon.
- **Pratt’s Wayne Woods, northwest DuPage County**—spring migrants, followed by a picnic lunch (bring your own). May 15, 9 a.m. From Rte. 59, head west on Army Trail Rd., then north on Powis. Meet at back parking area. Dick Wilson, DuPage Audubon and Illinois Prairie Path.
- **Jackson Park, Chicago**—height of spring migration. May 9, 7:30 a.m. Clarence Darrow Bridge just south of Museum of Science and Industry, 57th St. off Lake Shore Drive. Sue Friscia, Chicago Ornithological Society.
- **Nelson Lake, Kane County**—spring migrants, wetland birds. May 1. Call Chris Cudworth, Kane County Audubon, for details: (630) 761-8457.
- **Thatcher Woods, Cook County**—arriving spring migrants along the Des Plaines River Valley. May 9, 8:00–10:00 a.m. Trailside Museum parking lot west of the intersection of Thatcher Rd. and Chicago Ave. in River Forest. Christine and Stephen Lee, Chicago Audubon Society.
- **Waterfall Glen, DuPage County**—spring migrants. May 2, 7:00 a.m. 1 block south of I-55 on Cass Ave. near Darien. Bob and Karen Fisher, DuPage Birding Club.
- **Montrose Point, Chicago**—spring migrants before work. May 12, 6:30 a.m. Lake Michigan at Montrose. Meet at the small hill between harbor and beach. Ralph Herbst, Evanston North Shore Bird Club.

For Internet information, check out “Illinois and Chicago Net-Birding,” at [www.xnet.com/~eugeiser/Birds/Birding.html](http://www.xnet.com/~eugeiser/Birds/Birding.html). There are two list-serves for local birders. For reports on sightings, send e-mail to majordomo@lists.enteract.com with “subscribe ibet” as the message. For what’s hot in bird conservation, send e-mail to majordomo@ece.iit.edu with “subscribe bcnnet” as the message. Edited by Judy Pollock.
Fox River Trail hounds beware! Conservation efforts at Norris Woods have been known to stop traffic. Bikers, hikers, runners, and skaters—who usually breeze by faster than a speeding sparrow—halt in amazement when they see Norris Woods being burned. Norris Woods has become a unique opportunity for discovery, a place where folks stop with a need to know more. The person responsible is Mary Ochsenschlager, manager of natural resources and interpretive services for the St. Charles Park District. Most people call her Mary O.

Walk with Mary through Norris Woods and you’ll learn that it is rare for such a well-traveled trail to run smack through a dedicated nature preserve. However, Mary says, “There are a lot of people who come [to Norris Woods] who wouldn’t come out here without their bikes,” and furthermore that, “the hardest thing to do is introduce people [to nature] who don’t know much—just to open their eyes—to help them finally see things.” When the District conducts prescribed burns in the spring or fall, she says, “People stop, and they want to know what we’re doing. They’re concerned.”

Owned for many years by the Norris family of St. Charles, the parcel was purchased by The Nature Conservancy in 1978 which transferred ownership to the St. Charles Park District and the city of St. Charles. Norris Nature Preserve is now a 70-acre site that abuts the east bank of the Fox River in St. Charles and is part of the last 260 acres of high-quality upland forest remaining in Kane County. It consists of unusually large numbers of red and white oaks, some of them 100 to 150 years old. Sugar maple, willow, silver maple, white ash, red elm, black cherry, choke cherry, blue ash, and Virginia creeper are also found here. The rich herb community includes twinleaf, squawroot, shinleaf, poke milkweed, and ferns. In addition, 41 species of nesting birds have been recorded at Norris.

Most of Norris Woods is what Mary calls “good woods,” due to the prevalence of healthy native trees and woodland communities.

When fires ran rampant through these parts, prevailing winds from the southwest carried the strongest flames across this landscape to burn all in their path. When such fires reached the Fox River, naturally, they stopped. Thus the Fox River allowed natural communities that are somewhat fire-sensitive to thrive here.

For more information contact the St. Charles Park District at (630) 513-3338.

DIRECTIONS:
From Chicago, take Rte. 64 west to St. Charles. Turn north on Rte. 25 to Johnor Ave. which turns into 3rd Ave. Access preserve on west side, behind Bethlehem Lutheran Church.

—Christopher Collier

WORK PARTIES

KANE COUNTY:

Norris Woods (St. Charles):
April 10, May 8, June 12, 9 a.m.
Contact Rob Schnieder:
(630) 455-1081.

Johnson’s Mound (Elburn):
4th Saturday every month, 9 a.m.
Contact Grace Koehler, Kane County Forest Preserve District:
(847) 741-9798.

Aurora West (Aurora):
3rd Saturday every month, 1–4 pm.
Contact Grace Koehler, Kane County Forest Preserve District:
(847) 741-9798.

Trout Park Nature Preserve (Elgin):
2nd and 4th Saturday every month, 9 a.m.
1 block west of Rte. 25, just south of I-90 on Trout Park Blvd.
Contact Sue Bohne: (847) 697-4929.

DUPAGE COUNTY:

Belmont Prairie (Downers Grove):
April 10, May 1, 9 a.m.
Contact Pat or Sally, Downers Grove Park District: (630) 963-1304.

Fullerton Park (Addison):
April 18, 1 p.m.–4 p.m., April 24, 9 a.m.
Contact DuPage County Forest Preserve District: (630) 876-5929.

Mayslake Prairie (Oak Brook):
April 18, May 22, June 12, 1–4 p.m.
Contact DuPage County Forest Preserve District: (630) 876-5929.
Located in northwestern Cook County, Busse Forest was dedicated as the third Nature Preserve of Illinois in January, 1965. Due to its unusually rich mixture of flatwoods, upland forest, and marsh communities, this 440-acre site, part of the larger 3,700-acre Ned Brown Preserve, is also registered as a National Natural Landmark by the US Department of Interior. Its flatwoods, a unique feature of this region, developed in slightly depressed areas where the soils drain poorly and are slightly compacted. These unique growing conditions support a mixture of red maple, swamp white oak, and black ash, as well as sensitive fern, hop sedge, and blue flag iris. The upland forest tree species are typical of our rich prairie groves; they include many species of oak and hickory, along with basswood and sugar maple.

Woodland wildflowers like bloodroot, wild geranium, jack-in-the-pulpit, great white trillium, and woodland phlox bloom in profusion. Marshes occur in larger glacial depressions that retain water most of the year and support dense aquatic vegetation—ample food and habitat for ducks, geese, shorebirds, muskrat, and other wetland wildlife. Waterfowl and shorebird enthusiasts will be specially rewarded during spring and fall migrations. And hikers can enjoy a two-mile nature trail of packed earth and gravel that meanders through the woodland interior and provides a peaceful respite from the surrounding sounds of suburban life.

Ned Brown Preserve also contains the 590-acre Busse Lake and 11.2 miles of paved bicycle trails that wind through the forests and meadows. The Forest Preserve District estimates that Ned Brown Preserve receives 2.5 million nature and outdoor enthusiasts each year, more than visit Yellowstone annually. And for a multitude of good reasons. This preserve offers bird-watching, hiking, biking, fishing, canoeing, rowboating, sailboating, picnicking, cross-country skiing, ice-skating, and more.

For more information contact: Forest Preserve District of Cook County at (800) 870-3666.

Directions:
From westbound I-90 take Arlington Heights Rd. south to Higgins Rd. then west .6 mile to a forest preserve drive with many parking areas that bisects Busse Forest. Or take I-290 to Higgins Rd. then west to the entrance.

— Eugene Bender

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Cook County:

Cranberry Slough (Palos Hills):
April 3, May 1, June 5, 9 a.m.
Contact Dennis Nyberg:
(773) 996-2643.

Black Partridge Woods (Lemont):
3rd Sunday every month, 9 a.m.
Rte. 55 to Lemont Rd., south to Bluff Rd., west one mile to lot.
Contact John Marlin: (312) 464-3799 or Palos Restoration website www.members.xoom.com/palosrestor/

McMahon Grove (Palos Hills):
4th Sunday every month, 9 a.m.
Meet at parking lot on 107th St., just west of Rte. 45.
Contact Joe Neumann: (773) 434-1415 or Palos Restoration website www.members.xoom.com/palosrestor/

Brookfield Woods Prairie (Brookfield):
April 3, May 1, June 5, 9 a.m.
26th St. at 7th Ave.
Contact David Wachtel:
(708) 763-0543.

Theodore Stone Woods (Hodgkins):
April 17, May 15, June 19, 9 a.m.
67th St. at LaGrange Rd.
Contact George and Barbara Birmingham: (708) 386-0579.

Somme Prairie Grove (Northbrook):
May 30, 9 a.m.
Exit Edens Expwy at Dundee Rd. west. At Waukegan Rd. turn north and enter the unpaved parking lot on the west side of the road.
Contact North Branch Restoration Project hotline: (773) 878-3877.

Harms Woods (Glenview):
May 16, 9 a.m.
Meet at Forest Preserve Grove parking lot on the west side of Harms Rd., just south of Glenview Rd.
Contact North Branch Restoration Project hotline: (773) 878-3877.
Living large is more than just a fashionable expression at Goose Lake Prairie. This is the largest remnant of prairie left in Illinois; you might say, what's good at the Goose is good for its grandeur.

Goose Lake Prairie was once a part of rolling grasslands that stretched from Indiana to the Rockies. Now composed of 2,468 acres of varied prairie and marsh communities, it is an important habitat for birds, prairie flora, and even rare insects.

Located 50 miles southwest of Chicago and one mile west of the place where the Des Plaines and the Kankakee Rivers converge to form the Illinois, the site includes a 1,500-acre dedicated Illinois nature preserve. As the coyote runs, it's right next door to the 1,800-acre Heidecke State Fish and Wildlife Area, Grant Creek Prairie, and the adjacent 19,000-acre Midewin National Tallgrass Prairie. In fact, it's part of the proposed Grand Prairie Parklands which would take in a whopping 60,000 acres.

Going to the Goose is like peering into the past—when 60 percent of Illinois was prairie. The 1,000-acre lake, which gave this area its name, is no longer. Settlers mostly drained it in the hopes of obtaining more farmland after scraping its underlying clay surface for pottery and fire brick. Marsh Loop Trail goes into the nature preserve, where Goose Lake once lay.

Though drained, the moisture of this land prevented it from ever being farmed. The Prairie View Trail is a 3.5-mile loop that passes through low-lying marshland, farmland, and a varied prairie landscape.

As the wind breaks against the bristled tall grass, a precious whispering symphony envelopes the Tallgrass Nature Trail. The trail has two loops: a 1-mile jaunt or a 3.5-mile study. Often known as “big blue” or “turkeyfoot,” big bluestem grass has been used to feed livestock in other settings. Here it's just one of the big boys, along with cordgrass, Indian grass, and switch grass. Cordgrass, head and shoulders above the rest, grows up to 12 feet. Readily visible from most nature trails at Goose Lake, switch grass is another common native prairie grass found here. Its bending green stems reach 7 feet in some instances. Growing up to 8 feet, with reddish-brown tassles that bloom in August, Indian grass is also in abundance along the trail.

The Prairie's grassland expanse provides excellent nesting habitat for endangered or threatened birds, such as the upland sandpiper and Henslow's sparrow. The marshes and prairies also harbor Virginia rails, least bitterns, northern harriers, red-winged blackbirds, great blue herons, belted kingfishers, wood ducks, warblers, eastern kingbirds, catbirds, and blue-winged teals.

For more information, call (815) 942-2899.

DIRECTIONS:
Take I-55 south to Lorenzo Rd. Drive west to park entrance.

—Christopher Collier

WILL COUNTY:

Old Plank Road Trail (Frankfort):
April 3, 9 a.m. - 1 p.m.
Contact Jessica Smith, Will County Forest Preserve District:
(708) 479-2255.

Messenger Woods (New Lenox):
May 15, 9 a.m.–1 p.m.
Contact Jessica Smith, Volunteer Coordinator, Will County Forest Preserve District:
(708) 479-2255.

INDIANA:

Indiana Dunes National Lakeshore:
Garlic Mustard Weed Control:
March–June. Call for schedule.
Contact Cheryl Guster:
(219) 926-7561 x 335.
If you never considered that being bogged down could be a good thing, then you’ve probably never heard of Elizabeth Lake. Elizabeth Lake Nature Preserve is a diverse wetland jackpot composed of graminoid bog, calcareous floating mat, graminoid fen, marsh, pond, lake, low gradient creek, sedge meadow, and dry-mesic savanna. Graminoid bog is a rare and unusual natural community, considered to be the first stage in bog succession. Always floating above water, often in the vicinity of more open waters, this type of bog is dominated by sphagnum moss, sedges, and marsh shield fen.

Located in the northeastern morainal section of Illinois, Elizabeth Lake is a kettle lake—formed from a leftover chunk of melting glacier.

A dedicated nature preserve of nearly 160 acres with another 13 acres serving as a buffer, Elizabeth Lake is located just north of Richmond in McHenry County at the border of Illinois and Wisconsin. Much of Elizabeth Lake is in Wisconsin and is well used by hunters, fishermen, and recreational boaters.

Wayne Schennum, natural resource manager at the McHenry County Conservation District, contends that the two biggest threats to Elizabeth Lake come from invasive brush and powerboat intrusions. Therefore, conservation efforts are fairly straightforward: keep powerboats away from this delicate portion of Elizabeth Lake and keep the brush under control. In order to keep powerboats away, signs are posted and the area is often patrolled. To keep brush expansion at bay, brush is cut and the stumps treated with herbicide.

Elizabeth Lake is considered to be the highest quality lake in McHenry County (and one of the highest in Illinois). It has 29 species of native fish, at least 200 species of plant life, 55 species of birds, 15-20 butterfly species, and 20 state endangered and state threatened species. Because endangered or rare cuckoo flowers, Iowa darters, pug-nose shiners, sandhill cranes, and black terns can all be found within the nature preserve, access to the preserve is restricted to tours sponsored by the McHenry County Conservation District.

For more information and a schedule of guided tours, contact the District at (815) 678-4431.

DIRECTIONS:
Take I-290 north to Rte. 68. Take Rte. 68 west to Rte. 12. Take Rte. 12 north about 2 miles past Rte. 173. The preserve is on the east side.

—Christopher Collier
Thursday at 6 p.m. we meet in the parking lot of McClaughryst Springs in the Palos area in southwest Cook County. Jackie, Deb, Phyllis, Bob, and I comprise this evening’s crew. Jackie is the steward here. A steward is a volunteer officially appointed by the Forest Preserve District as a caretaker of a site. A school teacher by profession, Jackie is still a student both formally and informally. She is currently conducting a study of small mammals for her master’s thesis.

Jackie passes out volunteer identification badges, rubber gloves, and bags. We all sign in. Deb Petro simply signs “Petro.” She is the Garbo of our group.

Formalities complete, we head into the woods. We know the way and what we will be doing. If it’s May, then we will be pulling garlic mustard.

Garlic mustard (Alliaria petiolata) is an aggressive European plant seemingly bent on displacing our native woodland plants. Its stalk can rise to your waist, or more usually your knee. Despite its innocuous appearance, it can dominate the ground layer vegetation within 10 years of its initial invasion.

Just north of the parking lot, we head west and quickly come to a bridge spanning Mill Creek. This creek is chock-full of rocks. When it is low, you can cross by hopping from rock to rock. The creek flows swiftly today, invigorated by yesterday’s rain.

Beyond this bridge, the terrain steps up and then rises rapidly. A sheer bluff runs away to the north and south. This ascent is steep and high enough that by the time you reach the top, you will be winded. But we do not scale this rise. Instead, we step off the trail and head north. A hundred feet ahead the garlic mustard begins.

This lowland is musty and mossy. It has a North Woods feel. A rich variety of woodland plants dwell here. Many emerge early in the spring, blooming before the trees leaf out while ample sunlight is available, and already their flowers are fading. Other species more fully adapted to low light levels are emerging only now. Particularly abundant and attractive are the lady ferns. Clusters of their unfolding fronds arc toward each other, forming miniature Shinto temples.

Garlic mustard uproots with ease. It is not married to the soil like the deeply rooted native plants. Just pull it (and pull it and pull it) and eventually you can remove enough from a site to give the native plants a fighting chance. Usually, you start to see results in three years. This is because garlic mustard is a biennial. During its first year, it remains a few leaves in a rosette on the ground. Only in its second spring does it shoot up and produce inconspicuous white flowers. By the onset of July, it dries and dies, scattering seeds as it does so.

Thus the important work is between May and July, to remove as many plants as possible before they set seed.

While the others work in the bottomland, I make my way up the slope. Jackie calls me “billy goat.” As I pull, I pause to examine some Dutchman’s-breeches. This small plant gets its name from the pants-like shape of its flower. A group of these plants flowering look like Lilliputian laundry hung out to dry.

Whenever you are off-trail, you try to step with care, but this bluff is a particularly sensitive area. Erosion is a serious problem on such a steep incline. Near the Dutchman’s-breeches, soil has piled up behind a fallen log that slipped sideways.

The official trail running right up the face of the bluff is maintained by the Forest Preserve District only with difficulty. Gravel placed on the trail repeatedly washes away. Culverts have been constructed to redirect water. This trail provides the full panorama from the height of the high ground to the lowland and its creek, but it is not enough to satisfy some.

Wayward mountain bikers and horseriders have cut their own trails. Mountain bikers love the challenge of changing up the bluff and the hoot of rocketing down. They have sliced a track into the bluff south of the official trail. Another gouge lies near where I work. Legally, horseriders must stay on the official trails; but some have carved new trails along the top of the bluff and in more than one place through the lowland. A horse is a large animal. When one goes off trail, it does a lot of damage. A few years ago the Forest Preserve District began placing orange signs where unofficial trails split off from the official one, but these signs are regularly torn out or broken off.

A pair of birders join us now. They yank out some garlic mustard while they trade the latest nature news with us. They are here to see this site’s avian stars, a pair of barred owls. These owls have returned to this area year after year, obstinately producing owlets despite the increasing human traffic.

Last year, we feared they had finally been driven out. The bottomland along the creek that is their chosen nesting habitat is no longer secluded enough. Yet instead of abandoning the site, they shifted up the slope to a quieter spot.

One of these owls once perched in a tree 50 feet above and watched us work. Most owls have yellow eyes, but the barred owl’s eyes are dark moist marbles. Our overseer was about the size of a crow, but stouter. Its feathers were a smattering of white among a wet-bark brown.

We are losing the light now, but we work on a while longer, snatching wads of garlic mustard and stuffing them into our already stuffed bags. We gab among ourselves. Somehow the topic always turns to garlic mustard. It will be out of flower soon and harder to locate. Petro surveys the garlic mustard spread throughout the lowland. “Jackie,” she declares, “you have job security.” We are quiet now, absorbed in our work.

Below us the sounds of the creek rise.
Smallmouth Bass
Early spring is the time of year for smallmouth bass to start their families. Construction of the nest is the work of the fathers-to-be, who fan out a slight depression in the gravelly bottom of clear running streams. As many as five females may lay up to 2,000 eggs in the nest, which will be guarded vigilantly by the expectant father. The eggs will hatch in a matter of weeks, with the small fry bass dispersing up and down stream. These predatory fish do not fare well in muddy, poorly oxygenated bodies of water and thus are benefiting from soil erosion control and stream restoration projects.

In Klein Creek, a tributary of the DuPage River's west branch, some of the resident smallmouth bass spent several months last fall in school classrooms. These bass came from the Illinois State Fish Hatchery and helped teach elementary students about wetland ecosystems and habitat restoration. After their classroom assignment, the young bass were released into Klein Creek. Lucky class and lucky bass.

Timing Is Everything
As melting snow and early spring rains saturate our soil, an innocuous group of animals known as mole salamanders begin to stir from their winter sleep. Soon they will begin marching to the edge of their breeding spot, typically a pond without a population of predatory fish. If the spring thaw continues, this overland migration may turn into a stampede, for nobody wants to be left out in the cold. Literally.

There are three types of mole salamanders in the Chicago Wilderness, each living in a slightly different habitat. Probably the most common—and certainly the largest—of the mole salamanders (at least in our area) is the tiger salamander, which can reach a length of 8” or more. In fact, the longest wild-caught tiger salamander on record (10”) came from nearby Racine, WI. It breeds in savannas where trees are widely spaced, with plenty of sunlight warming the ground.

The spotted salamander favors forested areas, while the blue spotted salamander is more abundant in our flatwoods. They both spend most of their lives under the leaf litter and decaying logs. The spotted salamander averages 6” in length and has two irregular rows of yellow dots along his back. The blue spotted salamander has a coloration similar to those old-fashioned, blue speckled, enamel cooking pots that are found in cute/crafty country shops, usually next to the bonnets for ceramic lawn geese.

Island Living
The Chicago Wilderness heron rookeries are filling up. Baker's Lake in Barrington and Lake Renwick in Plainfield are both receiving daily flights from the south with great blue herons, great egrets, and black-crowned night herons among the new arrivals. These birds nest in colonies, with each species occupying a different level. For example, the great blues prefer the penthouse level, at the tops of the trees; the egrets occupy the middle tier; the black crowns, incredibly, seem to prefer the basement apartments. Not that I’m overly fastidious, but I wouldn't want to live under several hundred great blue herons.

Both rookeries are located on islands, thus protected from most predators of young birds and eggs. These sites are also protected by law, as both are dedicated Illinois Nature Preserves. The Forest Preserve District of Will County schedules interpretive talks at 9, 10, and 11 a.m. on Saturday mornings at Lake Renwick from May through August. Spotting scopes are set up for close-up viewing, and volunteers are on hand to answer questions. This is an amazing opportunity to see these special, warm-weather residents up close and personal.

Credit Where Credit Is Due
I think my son’s history book is wrong. It credits Jacques Marquette and Louis Jolliet with being the first Europeans to visit the Chicago Wilderness. It is true that these intrepid Frenchmen entered our area in September 1673, arriving from the south after their epic 2,700 mile journey of exploration. But I don’t believe they were the first, partly because the native people they encountered in the Grand Village of the Kaskasia, along the Illinois River, were already using European trade goods such as iron kettles and axes. Also, the French already had arrived in Green Bay in 1620, 50 years prior to Marquette and Jolliet’s visit.

Even canoe men like my friends Ralph and Gary would not take half a century to paddle from Green Bay to Che-Ca-Gou. I believe there were countless, uncelebrated French traders venturing into our area, earning a living by bartering for beaver, mink, and otter pelts.

On the first weekend in June each year, the era of French exploration and fur trading is celebrated in joyous fashion at Isle à la Caché, an 80-acre island in the Des Plaines River in Romeoville. This Island Rendezvous is full of colorful re-enactors and historic displays. By the way, Ralph Frese (proprietor of the Chicagoland Canoe Base) and Gary Mechanic (Director of The Access Project for the Illinois Paddling Council) have done a fantastic job promoting canoeing along the waterways of Chicago Wilderness for many a year. Thanks a billion guys!

A Tale of Two Elephants
This is the story of two elephants that lived in Chicago Wilderness. One was a mastodon who liked to browse on pine cones, bark, twigs, and tamarack seeds. The other was a mammoth who liked to graze on grasses and leaves. One day, the mastodon decided to take a drink from the stream that flowed nearby. As he reached his long trunk into the water, his foot became stuck in the peaty clay. As hard as he pulled, he could not extricate himself. He was stuck for good and eventually passed away. On another day, not too far away from the mastodon, the mammoth decided that he, too, wanted a drink of cold water. He, too, became mired in the muck and perished. Sadly, this is the end of the story of our two elephants.

The remains of the mastodon were recovered in 1963 from an old marsh adjacent to the east branch of the DuPage River. The remains of the mammoth were found in 1977 adjacent to the west branch of the DuPage River. Fortunately for us, the remains of these two immense creatures are on display for us to learn from. The mastodon can be found at Wheaton College, and the mammoth can be found at Fullersburg Woods Environmental Education Center in Oak Brook.

In June, there will be a public hike to the discovery site of the mammoth site near Winfield, IL. Call Fullersburg Woods at (630) 850-8110.
Western Chorus Frog: Audible but Seldom Seen

It’s sprrreeeng! Let the chorus begin. The first sound most people will hear in the spring is a “prreeep” sound, much like someone running a fingernail over the small teeth of a pocket comb. This is the call of the western chorus frog (Pseudacris triseriata). Each “prreeep” call lasts one to two seconds. At first, only a few hardy individuals call, but as the days get warmer, large choruses can be heard from little ponds both day and night.

Western chorus frogs are often the first frogs to become active in the spring. Even when the nights are still quite cold with temperatures near freezing, these small hardy frogs can be active. In Chicago Wilderness, western chorus frogs are usually heard in early March with increasing numbers until they peak in April then diminish in May. Cold weather delays the calling and early warm weather causes them to call early in the season. These small creatures are probably among the most frequently heard frogs in the Chicago Wilderness region, but they’re elusive and seldom seen.

Western chorus frogs are tiny, usually around an inch long (from their snout or nose to their vent or rear). They’re gray or tan in color with dark stripes down the back and along the sides. They usually have a dark triangular area on the top of their heads right between the eyes. One consistent distinguishing characteristic is a light line along the upper lips. The females tend to be larger than the males, while the males tend to have dark throats during breeding season. These frogs are members of the tree frog family, which is characterized by adhesive toe pads, allowing them to climb. But this species has small, poorly developed pads, so they aren’t as agile at climbing as many tree frogs, although they can and do climb.

Western chorus frogs are true prairie frogs. Originally, they were found in the many temporary prairie wetlands of the Chicago Wilderness area. Although their numbers have probably decreased due to diminishing habitat, they’ve hung on by being adaptable. Today they’re found not only in prairie remnants and marshes, but also temporary wetlands in agricultural areas, in drainage ditches, and in shallow ponds.

The loud “choruses” are in and around temporary water sources (ephemeral ponds). In order to attract females, the males sing day and night. The males often call from under vegetation, like a clump of grass, although sometimes they’ll also call from out in the open. The males take in air, inflating their lungs and throat pouch. Then they close their nostrils and force air back and forth between the lungs and throat pouch passing the air over their vocal cords. The throat pouch can expand to the point where it looks like it will burst. When filled with air, the vocal sac serves as a resonator that will increase the volume of the call. The throat pouch remains inflated during the call. Each frog and toad species has a different call and can be identified easily by that particular call. It’s amazing how loud some frog species can be.

The choruses attract receptive females as well as other males. Some research has shown that the larger the chorus (the more male frogs calling), the greater success there will be in attracting females. The calls may also serve as a territorial song warning off other males from the immediate area. In other words, the males are proclaiming that they are western chorus frogs, they’re interested in mating, and that the small area from which they are calling is their territory.

To hear chorus frogs in the Chicago Wilderness area, visit just about any wet prairie, sedge meadow, or shallow marsh area in March and April. Because they’re probably the most common frog calling at this time of the year, it’ll be difficult to miss them. Listen for the “prreeep” sound. To see these special creatures, you’ll probably need to get out into the wetland so rubber boots are a necessity. Try to disturb the water as little as possible as you walk through the wetland. The vibrations in the water from your movements may disturb the frogs and they may stop calling. If individuals or the entire chorus stops calling, stand still for a little while and they’ll usually start back up.

Listening and viewing frogs and toads can be fun and challenging. The limited number of frog species makes learning their calls fairly easy. With a little practice, you’ll be able to identify all the frogs in the Chicago Wilderness area. So get out there this spring. Look, listen, learn, and enjoy your neighbors.

—Bill Glass
Here in Chicago Wilderness my annual Rite of Spring always includes a pilgrimage to a swamp, marsh, calcareous fen, or springily place to listen for chorus frogs and spring peepers and to look for the skunk cabbage (Symplacarpus foetidus). As early as mid-February, but usually in March, when there’s still snow on the ground and temperatures are around freezing, this most unusual member of the tropical Arum family melts its way out of the frozen ground and begins its startling bloom cycle.

Wrapped in a purple-streaked, flame-shaped cowl, the spathe pokes out of the ground and opens its cloak a little to reveal the purple club-shaped spadix inside. Thirty or so flowers are crowded together on the spadix. Most Arum flowers are unisexual and heat up their flowers to produce strong odors, which are often putrid or skunky, to attract pollinators. Skunk cabbage, however, is bisexual and often blooms when temperatures are too cold for pollinators to fly, but the flowers still produce heat.

William J. Hess at the Morton Arboretum and Roger M. Knutson in Iowa have both studied the production of heat in skunk cabbages during their bloom time. They found that skunk cabbage flowers could be 36 to 63°F higher than the ambient air temperature. The spadix could be at 74°F when the air temperature was around freezing. This heat is produced by oxidizing stored starch in the thick rhizome. In fact, Knutson found as temperatures dropped from 63 to 45°F the plants nearly doubled their oxygen consumption. The spongy spathe is excellent insulation around the spadix and its dark color also absorbs heat energy from the sun.

The skunky odor and rotten meat color of the spathe appear to lure carrion flies and other pollinators to the flowers. People have observed carrion flies, honey bees, other small flies, gnats and spiders crawling on the spadix or seeking shelter inside the spathe, but only when the air temperature is above freezing. In fact, Knutson reports that one species of spider, *Pachygnatha brevis*, seems to use the warm skunk cabbage flower for mating and hatching its young.

Skunk cabbage’s Latin name comes from the Greek meaning “connected fruits” and “rotten smell.” Other Aroids in the Midwest include Jack-in-the-pulpit, green dragon, golden club, and water arum.

A pointed, curled cone of leaves pokes up beside the flower but does not unfurl until flowering is finished. The bright green leaves are two to three feet high and make a beautiful backdrop for golden marsh marigolds and lacy cinnamon ferns that fill the area in May. The spathe rots away leaving the spadix to develop in the soil.

The fruit of skunk cabbage—black and about the size of a flattened tennis ball—ripens in fall. It is marked on the outside somewhat like a pineapple and occurs at ground level. It disintegrates or rots or is eaten by rodents from the top down releasing the hard, marble-like seeds one at a time. They are mottled purple-brown with yellow streaks just like the spathe. They lie on the ground near the parent plant. Some fall into the water and float away to a new spot, and some are eaten or carried away and buried by mice and squirrels.

Skunk cabbages enchant us with their mysterious ways and winter blooming. With their contractile roots, they hunker down in atavistic, dank and mucky places and live for hundreds of years. “Methuselahs of the plant world,” they’ve been called. They have “the fascination of a particularly crafty and devious old man,” wrote the early 20th-century naturalist Donald Culross Peattie in his *Almanac for Moderns*, “wrapped in a cape, and pottering about down in the leafless copes for some dubious purpose.” In any case, spring can’t come to the Chicago Wilderness until the skunk cabbages have bloomed.

—Patricia Armstrong
Love of nature may start in many ways, but often it starts with digging in dirt. At least it did for 12-year-old Katie Sosin, who recalls helping her mother plant flowers and digging for treasures with her older brother. As long as she can remember, Katie has had a fascination with the outdoors and all the living things in it. She cites a third grade writing assignment as bringing her interest into focus. “We had to create a book about an animal,” Katie recalls. “Fun facts like where they lived and what they ate. I loved ring-tailed lemurs from Madagascar, so I wrote about them.”

Sue Law, Katie’s science teacher at Kerkstra Middle School in Oak Forest, remembers observing Katie on a field trip to Swallow Cliff Woods in southwestern Cook County. “Katie was deep in prairie grass with this giant praying mantis—showing it to everyone. Even the macho, too-cool eighth-grade boys. And she was only in the sixth grade!” says Law, who describes Katie as “a big person on the inside wrapped in a small package.”

“She has an eye for detail, focusing on little things adults wouldn’t see,” says Law. “But she sees the big picture, too.” Katie’s balanced perspective helped her through a difficult time. Her dog, Muffin, disappeared—she thinks the victim of a coyote. Her understanding of the relationship between the habitat loss and the loss of her pet to a predator demonstrates her ability to recognize the connectedness of nature. “As I learned more, I began to understand everything comes together, like the food chain,” Katie says. “If you let one population or habitat go, you’re letting them all go.”

Sue Law established and supervises the Kerkstra Environmental Science Club, which is the inside home for 30 emerging nature enthusiasts, including Katie. The club’s major ongoing concern is the restoration project at Swallow Cliff Woods that features remnant oak woodland and savanna. The project requires a year-round commitment. In the fall, students collect seeds of native plant species, bring them back to school for propagation in the greenhouse, and then plant the seedlings at the preserve in the spring. During the winter, the club helps clear the preserve of invasive shrubs and trees, such as buckthorn, that have gained a stronghold and interfere with the survival of native flora and fauna.

The students also oversee a garden they created in their school’s central courtyard. Five years ago, the place was a nondescript plot of grass. But Law had an inspired vision and now the courtyard features native wildflowers, a traditional tailored garden, birdhouses, a path with benches and a bridge, and a compost pile. Adjacent to the garden is a greenhouse where the Swallow Cliff seeds are cultivated. Katie keeps a journal filled with scientific observations and poems, she loves to read, and she devotes herself to the scholastic bowl, drama club, and basketball. Katie is optimistic about her peers and how they will meet the environmental changes to come. They just need a little direction, she says, and that can come from developing a relationship with the outdoors. “If you don’t interact with nature every day, you’ll forget it,” she says, a touch of earnestness in her otherwise even tone. “Lots of kids and adults don’t think about nature much. If they did, I know they would want to protect the environment. That’s why the club is so important, because it provides a way to experience nature and a way to help. I don’t know how I’m going to make a difference, but I will. Right now I just want to experience everything.”

—Greg Melaik
DOING DIRT

Water Power

**GOAL:** To demonstrate how water and temperature help form soil

**YOU WILL NEED:**
- A straw
- Modeling clay
- A glass of water
- Your freezer

**PROCEDURE:**
Place one end of the straw into the glass of water. Fill the straw by sucking water into it. Hold your tongue over one end to prevent water from escaping while you insert a clay plug into the open end of the straw. Plug the other end with clay. Lay the straw in the freezer for three hours. Remove the straw from the freezer and observe both ends.

**WHAT HAPPENED?**
You should have observed one or both of the clay plugs pushed out of the ends of the straw and a column of ice extending out of the end of the straw.

**WHAT DID YOU LEARN?**
Water expands when it freezes. The clay plugs were pushed out of the ends of the straw because the water expanded when it froze. The same thing happens when water gets into cracks in rocks and freezes. The expansion of the freezing water is enough to push apart weak points in the rocks and can actually break the rock. This is one of the ways that rock is broken down to form the basis of soil. Rock also can be broken down through the growth of plants and fungi. When these start to grow in small crevices in the rocks, they force bits of rock to crumble off. Over time this broken-down rock becomes the soil in which other plants can grow.

Rock Eater

**GOAL:** To demonstrate the effect of acids in soil formation

**YOU WILL NEED:**
- Two pieces of chalk
- Vinegar
- Water
- Two glasses

**PROCEDURE:**
Fill one glass halfway with vinegar, and the other glass halfway with water. Put a piece of chalk in each glass. Observe for a few minutes. Let the glasses sit overnight and observe again the next day.

**WHAT HAPPENED?**
During the first few minutes you may notice bubbles in the glass of vinegar. By the next day, the chalk in the vinegar has partially or totally disintegrated.

**WHAT DID YOU LEARN?**
Chalk is made from limestone, a common rock in Chicago Wilderness. Vinegar is a weak acid. The chalk in the glass of vinegar disintegrates because the acid in the vinegar breaks the chemical bonds in the chalk. The bubbles you may have seen are carbon dioxide, a new substance formed when the limestone breaks down. Many natural processes produce greater or lesser amounts of acid. These acids are another way limestone rocks break down into the foundation for soil.
**Critter Collecting**

**WHAT IS LIVING IN YOUR SOIL?**
Many different kinds of tiny insects and other creatures live in the soil and the leaf litter just above it. You will be amazed at all you can find.

**GOAL:** To discover the living things in your backyard

**YOU WILL NEED:**
Notebook, ruler/thermometer, trowel, magnifier, field guide
White paper plate or plain white paper

**PROCEDURE:**
Before you begin, use your notebook and thermometer to record today's date and temperature.

Now go look for critters! Lift rocks, rotting wood, and piles of leaves. Do you see anything underneath?

Use your trowel to dig down a few inches in the soil in a shady spot.

Collect a sample of soil and place it on a white paper plate so that you can see the critters better.

Use your magnifier to get a closer look at the critters.

If you want to keep your critters longer, make a homemade bughouse.

After observing your critters, return anything you find back to where it lives.

**WHAT HAPPENED?**
Record observations about your critters in the notebook.
You can include both written descriptions and drawings.

What types of critters did you find? Use a field guide to identify them.

Where did you find them? Above the soil, in a pile of leaves or under a rock, or deeper within the soil?

How many legs does each have, what color is it, how big is it? (Use your ruler to find out).

**WHAT DID YOU LEARN?**
Soil makes a great place to live, especially if you're small.
Food, water and hiding places are all around, and the climate is much more stable than it is above ground. An amazing array of plants, animals, fungi, and critters that are too small to see without a microscope live in the soil.

You might try this activity several different times during the year. Do you notice a difference in the numbers and types of critters you find depending on when you look?

Some critters live year-round in the soil, but burrow down deeper during the colder months. Other critters are “part-timers” living in the soil during some stages in their lives, but above ground as adults.

Credit for these down and dirty activities goes to the cool folks at The Field Museum. If you like them, you’ll find more in the “I Dig Dirt” activity kit available at [opens March 27](#).
A year ago, when I was nine months pregnant, I was working for a big bank, commuting an hour a day, and generally racing around downtown Chicago. Forget having time to smell the roses—I barely made time to water my houseplants. A few frantic sorties on errand-crowded weekends to rip up weeds in our vegetable garden was about as close to nature as I got.

Then something happened.

I had a baby. Of course, there’s nothing so unusual in that. But it was very unusual for me. First of all, I was used to being able to race around. Well, no racing around with a baby. It makes them fussy and irritable. Second, I was used to spending most of my awake time in a hermetically sealed office tower, only seeing nature from above. Way above. And there was no way a baby was going to fit into that grown-ups-only citadel, where the loudest noise is the copy machine and nature exists only as Rent-a-Plant. Babies screech and chortle, and as they grow, they run around and knock things over and pull out all the drawers. Not exactly office material.

But third, and most important, I stopped wanting all that rush-rush adrenaline-pumping stuff. As never before in my life, I wanted to sit still. Sit still and hold my baby, watching the world be discovered for the first time by his little blue eyes.

At first, I was happy just to carry him, snug in his little pouch, everywhere I went. But as the spring woke the earth up, that young child inside of me woke up again, too. For the first time in years, I noticed the leaves on trees. Nat and I would lie on our backs in the grass, looking up at the branches of the maple in our front yard and...
the tiny new buds shooting out. It was all new for Nat, so he mostly just grinned and giggled. But for me, it was new, too.

I'd show him the tiny bugs in the grass, and we'd smell the dirt together, watching robins pull out worms and squirrels chasing each other back and forth excitedly. He smiled, and poked at things, and rolled over. And I! I soaked up those rays of early spring sunshine, my heart bursting with joy at being connected to the earth again.

Soon we exhausted the flora and fauna in our front garden and started to venture further afield. We'd go to Caldwell Woods, a Cook County Forest Preserve along Devon Avenue, and find trilliums—like the one called, to my enduring delight, Stinking Benjamin. And we'd walk through thick carpets of may apples. And glimpse bright yellow marsh marigolds tucked in cool copses. Those spring flowers felt like a metaphor for my own self, re-awakening to the incredible fascination of the natural world, miles away from fax machines and computers and the Internet.

Then summer arrived. As a child, I squandered my summers. I took them for granted and got all excited at the prospect of going back to school in the fall so I could see my little friends. But when I grew up, after college, I had to step into the Real World and face the probability that I would never again have a summer off.

I panicked at the thought. Never again to walk in the woods or go to the beach or swim in a river. Except for weekends, of course, which to my eyes then looked like nothing more than temporary parole from jail. Time went on, though, and I numbed those feelings, as most of us must if we're to go on working in those well-paying jobs. Every now and then, on a fine spring day when I could glimpse Lake Michigan from a corner office window, or when I visited the Lincoln Park Conservatory, I remembered how I loved to be outside, close to the earth. But I ruthlessly squashed those feelings, and went less and less to the forest preserves and the lake.

Well, last summer I spent almost the entire time outside, in a sleeveless shirt and shorts, usually barefoot. With Nat shrieking with delight at the freezing cold lap of Lake Michigan's waves on his tiny toes. Or Nat dozing off as we lazied in among the catalpa trees in Evanston's Ladd Arboretum, fanning ourselves with their huge leaves and sniffing their beautiful orchid-like flowers.

We were outside as much as we could possibly be without putting up a tent. One of our favorite outings was to the Chicago Botanic Garden. We loved the waterfall there, and the Japanese gardens, but the part we both loved the best were the (six!) prairies. I could put Nat down (he was just starting to crawl), and we could go nose-to-nose with all those sights and sounds and smells.

Already a budding naturalist, Nat tugged at the huge Joe Pye weed and stared raptly at the fat bumblebee greedily extracting the nectar from the prairie sunflowers and coneflowers. We were really there. Nat and I sat in the prairie for hours, drinking in the smell of the warm big bluestem grass in the tallgrass prairie, listening to its gentle rustling in the cooling summer breeze.

Later we'd take a stroll around the lagoons, watching herons standing gracefully in the shallows, waiting to spear a fat carp with their beaks, or fish hawks swooping down, sometimes landing, sometimes swooping back up triumphantly with a bass or bluegill.

My mind just drifted along, like the monarchs and skip jacks alighting on butterfly weed. Instead of zooming and zipping, I floated and glided, my boy at my side, with his wide-open eyes.

Of course, leopards don't change their spots that quickly. I still can't live solely in the moment, the way Nat does, and I make all sorts of plans for the future. I want to take him canoeing in the North Shore Channel in Evanston, along the Ladd Arboretum, and watch for the kingfisher that I've heard lives there. I want to go exploring with him and show him Aphrodite fritillaries and lance-leaved violets. But mostly, I want him to come to love and enjoy nature as much as I do, and to learn to protect and cherish it. Who knows where the business of life may take him? But maybe one day, with my grandson or granddaughter, he'll be able to re-discover nature all over again himself!

Emerson Howell Nagel and her husband, Bob, had a garden store in Evanston—Emerson’s Garden—which economics and a full-time job forced her to close. She recently left the world of high finance to stay home full-time with her son, Nat.
President Clinton's proposed FY2000 budget includes $1 billion for land acquisition—some of which would be available as grants for preserving open space.
The developed land of the Chicago metropolitan region could double in extent over the next 30 years, according to a study released in January by the Openlands Project. The second of two reports from the Strategic Open Lands at Risk (SOLAR) project documents land consumption patterns and predicts that Chicago sprawl, which currently affects 13 counties, will reach at least six more if trends continue. This projected development would place more than 300 high-quality natural areas and critical species habitats at risk.

Some counties have shown leadership under pressure. Kane, Kenosha, and Walworth counties have developed land-use plans to guide growth while meeting development needs. Kane County’s land-resource management plan, which received an award from the American Planning Association, funnels most development to its eastern urbanized sector and limits land coverage to a percentage of watershed area. The SOLAR report includes the following recommendations to guide new land-use and regional-growth policies that can help to shape growth and protect open space:

1. Provide more funding to protect resource-rich lands. Establish permanent state land preservation programs. Increase forest preserve district and conservation district land acquisition budgets and, when necessary, pass referenda to secure additional funding.

2. Establish a State Office of Planning and Land Conservation to develop and implement state land use goals and strategies, coordinate state agency policies and actions that affect land use, and conduct research to inform and support the planning process.

3. Establish a new Metropolitan Planning Organization for the Chicago region to coordinate land use and transportation plans by combining the functions of the Northeastern Illinois Planning Commission and the Chicago Area Transportation Study.

4. Create a Tri-State Regional Task Force to coordinate growth management efforts in Illinois, Indiana, and Wisconsin.

“T here is no single solution to the problems of sprawl,” says Jerry Adelmann, executive director of Openlands Project. “However, we can develop policies that encourage compact town centers and preservation of natural areas at the perimeter of urban development.” A Rutgers University study revealed that compact, town-center-style growth would save taxpayers $1.3 billion in infrastructure costs such as roads, sewers, water lines, and city services over 20 years.

Urbanized Land

Chicago itself spans 222 square miles, about 30 percent of the developed land in Cook County. But, as large as the city is, it comprises only 3 percent of the land in these 13 counties (which collectively comprise 6,890.24 square miles or 4,409,757 acres).

Clearly, Cook County is the most fully built-out of the counties, with about 6 percent of its land mass available for protection or development. Its remaining undeveloped lands lie primarily in the southern and southwestern portions. DuPage County follows, with about 12 percent of its land still open. Walworth and LaPorte counties remain the least urbanized of the 13, not surprising since they lie at the very northern and eastern reaches of the project area.

SOLAR defines urbanized or built-up land as having a minimum of one housing unit per five acres. Much of the Chicago region’s outlying development has occurred at this very low density. Nonetheless, this land has been “consumed” and is not likely to be redeveloped at greater intensities in the foreseeable future.

Permanent Open Space

SOLAR defines permanent open space as land owned by a public agency such as forest preserves, parks, and so forth, and land privately held in trust or with permanent open space easements. Privately-owned golf courses and cemeteries (where data sources identify them as such) generally lie in the category of “low risk.”

The Risk Categories

SOLAR defines land at risk of development as that land where development pressure exists based on factors such as infrastructure availability or planned expansion, local and county comprehensive plans, zoning, and other local actions identified by focus group participants. While there is no expectation that all land at risk will be developed within the given time horizon, lands within a category are all equally under development pressure.

For a copy of the SOLAR project report, contact Openlands Project: (312) 427-4256 x221.

—Alison Carney Brown
THE WILD AND THE RARE

Want to get up close and personal with frogs, snakes, and salamanders—or some of the staff from the Lincoln Park Zoo and Shedd Aquarium? Want to hear more about local peregrine falcon recovery efforts? Attend adult workshops on warbler and aquatic plant identification, or bird walks through lovely Ryerson Woods? Come to the annual Smith Nature Weekend and Symposium, presented by Friends of Ryerson Woods and the Lake County Forest Preserves along with seven other Chicago Wilderness organizations. Dr. Lester Fisher, esteemed Lincoln Park Zoo director emeritus, will deliver the keynote address on “The Wild and the Rare: Saving Our Endangered Species.”

Date: Sat., May 15 and Sun., May 16
Location: Ryerson Woods, 21950 Riverwoods Road, Deerfield, IL
Information/registration: (847) 948-7750
—Sheryl De Vore

“IT’S WILD IN CHICAGO ‘99”

Learn about what happens in our ecosystem above and below ground at the Wild in Chicago festival celebrating Chicago Wilderness and the opening of the Field Museum’s new permanent exhibit, Underground Adventure. Meet representatives from Chicago Wilderness organizations, who will be on hand with activities and educational displays. Investigate the world underground with Field Museum scientists, live performances and puppet shows. Visit Creation Stations and exercise your imagination by making a paper bug chain or designing your own 3-D bug. The newly released the Bird Conservation Network Interactive Bird Data Page (www.fmnh.org/birdcensus) will be up for public demonstration, showing how up-to-the minute regional bird monitoring data can be submitted and viewed on-line.

Date: Saturday, March 27—Tuesday, March 30
Time: 11 a.m. to 4 p.m., March 27-28
10 a.m. to 1 p.m., March 29-30
Place: Stanley Field Hall, Field Museum, Roosevelt Road at Lake Shore Drive, Chicago
Information: (312) 922-9410 x 662
Admission: With museum admission

SPRING CLEANING AND BIRD MIGRATION: SAVE THE DATES

Saturday, April 24 is the Friends of the Parks’ Earth Day 1999 Citywide Parks Clean-up from 9 a.m. to noon. For information, contact Melanie Gross at Friends of the Parks (312) 857-2757.

On Saturday, May 8, the Des Plaines River Watershed Alliance will coordinate the Des Plaines River Spring Clean-up. Contact Jason Gorski (773) 585-4254 for details.

Flock to Brookfield Zoo May 8 and 9, from 8 a.m. to noon for International Migratory Bird Weekend, and enjoy watching avian world travelers and the Zoo’s own fine feathered friends. Birders will help identify these seasonal visitors and docents will have games and activities for children. Birding scopes and binoculars will be available, and the event is free with Zoo admission. For information, call (708) 485-0263 x 879.

The ecology and habitat needs of our local migrating birds are the focus of the Bird Conservation Network’s second conference, to be held at Prairie State College on November 13. Presenters include John Fitzpatrick, director of the Cornell Lab of Ornithology, and Chandler Robbins, biologist at the US Geological Survey’s Patuxent Environmental Science Center in Maryland and founder of the Breeding Bird Survey, the largest volunteer scientific monitoring program in the nation. For registration information, contact Chicago Audubon Society at (773) 539-6793.

MIDEWIN DUMP DEAL?
The Will County Board and Waste Management Corp. have proposed a landfill that would raise a 150-foot high wall of garbage next to the Midewin National Tallgrass Prairie, home to 19 threatened and endangered plant and animal species. Hydrologist Charles Norris testified in public hearings that seepage from the planned dump would likely contaminate groundwater that feeds Prairie Creek. The mounds of garbage would also attract gulls and rats, two predators that might further damage Midewin’s fragile ecology.

The Midewin National Tallgrass Prairie was created in 1996, after the Army closed the Joliet Arsenal. US Congressmen George Sangmeister and Jerry Weller and the Joliet Arsenal Citizen Planning Commission spearheaded the agreement that set aside the land for the Prairie. The agreement also contained provisions for two industrial parks on the developed portion of the Arsenal’s property and 455 acres for Will County’s use as a landfill. The landfill was to accept waste only from Will County and was to be closed after 20 years. However, the current proposal would...
create a landfill three times the size of the one in the original agreement and the County would accept waste from a nine-county area.

Opposition to the enlarged landfill has been led by the Sierra Club, the Midewin Alliance, and Congressman Jerry Weller. The Will County Board held public hearings last November, beginning a period of public comment that ended January 6. The Board will make a final decision by March 12. For more information, contact Jack Darin at the Sierra Club (312) 251-1680 or Dean Olson of Will County’s Waste Services Division at (815) 727-8834.

—Mark Sheehy

GOOD NEWS FOR WOODLAND BIRDS

According to an ongoing study conducted at the Cook County Forest Preserve District’s Swallow Cliff Woods and other sites in Illinois, native woodland birds such as redheaded woodpeckers, Baltimore orioles, indigo buntings, and summer tanagers are benefiting from habitat restoration efforts. “Our research indicates that as our woodlands are restored and maintained through the reintroduction of fire and removal of invasive plant species, our native woodland bird populations return and thrive,” states Jeffrey Brown, associate professional scientist at the Illinois Natural History Survey. “The majority of bird species do better in the restored areas,” says Brown, who indicates that the few that do not—closed-canopy forest birds—typically require larger intact forests than the fragmented tracts at Swallow Cliff for successful nesting and rearing of young.

“Our results speak strongly in favor of woodland restoration as a way to conserve the diversity of our native bird populations,” says Brown. Brown pointed out that only small areas have been restored and studied so far and that continued research is needed. Shrubland and prairie habitats were not considered in this study.

—Nicole Kamins

CANAL COMES CLEAN

For more than 10 years the Illinois and Michigan (I&M) Canal National Heritage Corridor Civic Center Authority has been working to improve the Canal in the Willow Springs area. Unlike the Continental Divide of the great Rocky Mountains, the I & M Canal crosses a subcontinental divide only six feet high, but its purpose was mighty, connecting waterways from the Atlantic (through the Great Lakes and St. Lawrence River) to the Gulf of Mexico (through the Illinois and Mississippi Rivers). Since its heyday in the early 1800s, the canal has become filled with silt and clogged with brush. The potential 70 miles of open trail along its suburban banks motivated several meetings between the Civic Center Authority, the Army Corps of Engineers and Congressman Lipinski. The first real progress was made in Willow Springs in 1997, fittingly during the Canal’s sesquicentennial celebration year. Volunteers removed more than 200 large deadfall trees and debris, and the Metropolitan Water Reclamation District of Greater Chicago jet-rod ded several silted-in culverts to improve water flow. “This is only a tiny step in the right direction,” said Stan Johnson, Director of the Civic Center Authority. “We need major funding for real improvement.”

—Becky Polivka

CITIZENS AND SANDHILLS

This past summer, for the first time in living memory, sandhill cranes nested at Flint Creek Savanna Preserve near Barrington. Their restored habitat was courtesy of Citizens for Conservation...
Green Development!

There’s an exciting development underway in Chesterton, Indiana. Coffee Creek Center is a 640-acre community that will include 1,200 new homes and 2.3 million square feet of commercial and retail space. So what’s exciting? The developer, the Lake Erie Land Company, sees this project as an example of sustainable development and, in keeping with this approach, has already spent approximately $1.6 million on ecological restoration there. Last December the developer turned over 185 acres to the Coffee Creek Watershed Conservancy, a non-profit organization assembled to preserve and manage the development’s natural land. The 185 acres border a creek which runs through the property on its way to Lake Michigan. The Conservancy is comprised of representatives from environmental organizations such as Save the Dunes Council, Shirley Heinz Environmental Fund, and the Northwest Indiana Steelheaders (who work to conserve fish habitat). The Conservancy has been working on developing strict guidelines for the protection of the site’s native plant communities, including wetland, riparian, prairie and oak savanna. The Conservancy’s land will be open to the public, protected from development, and restored and maintained as native habitat. The preservation of this land also serves an important storm water management role: rain water will be distributed into the land, allowing it to filter into the creek—there will be no retention ponds. Mike Ryan, vice president of the Northwest Indiana Steelheaders commented, “Lake Erie has done a tremendous job. Eventually, hopefully this will be a model that will expand throughout the watershed.” Conservation Design Forum of Elmhurst, IL prepared the restoration plan along with J.F. New & Associates of Walkerton, IN.

—Andrea Friederici Ross

Disappearing Dams

The Des Plaines River near Riverside may undergo major changes soon. As part of its Aquatic Ecosystem Restoration Program, the Army Corps of Engineers is working with the Illinois Department of Natural Resources (IDNR) on a preliminary restoration plan that involves alteration of the Hofmann Dam between Lyons and Riverside and removal of two nearby smaller dams. The Hofmann Dam River Rats Fishing Club (see Summer ’98, p. 24) has championed the project, which may help clean up the river, improve fish populations, open up fish migration routes, and alleviate some flooding problems. Steve Pescitelli, an IDNR streams biologist, points to recent studies showing 25 species of fish below Hofmann Dam and just nine species above, indicating how drastically the dam affects the habitat. If the preliminary plan is approved, an in-depth feasibility study would follow. If the plan is approved, construction could begin within two years. This could be a model for future dam removals in Illinois.

—Andrea Friederici Ross

To Vote and Preserve

On April 13, voters in Kane, Lake and Will counties have the opportunity to approve land acquisition, preservation, and District improvements through forest preserve bond referenda. These three counties are growing rapidly, and timely forest preserve acquisitions can help balance urban

On the average plowed Midwestern farm field, two bushels of topsoil are annually eroded away for each bushel of corn produced. For soybeans, three bushels of soil are lost for each bushel of beans.
Treading Lightly . . . . . We’ve Left Footprints
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As partners in this exciting, pioneering effort to restore our natural systems, we applaud the efforts of all Chicago Wilderness organizations. And we invite your inquiry regarding our ecological consulting qualifications or seed and plant availability (Chicago region ecotype) from our native seed nursery, Taylor Creek Restoration Nurseries.

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ROOKERIES GET HELP FROM WILL AND COOK COUNTIES

Last fall, developers built dozens of homes in the heart of Lake Renwick Nature Preserve near Plainfield in Will County. But these were no typical developers—or residents. Volunteers, most from the Will County chapter of the Illinois Audubon Society, prepared nesting platforms for the site's many breeding herons, egrets and cormorants. Lake Renwick has been a waterbird mecca, providing 44 percent of the state's nesting areas for the double-crested cormorant, and nearly 100 percent for the cattle egret, according to 1995 data. “The new nest sites are a great start, but there is still more to be done to help maintain this important rookery,” says Audubon’s Rita Renwick (no relation to the lake). The Forest Preserve District of Will County also hopes to do more for the birds. One plan includes removing fingers of land extending to some of the nesting islands—avenues that allow raccoons and other predators to threaten nests.

On February 4, officials and land managers reviewed the preliminary management plan for another Chicago Wilderness rookery, along with the lake and lands surrounding it. Like Lake Renwick, Baker’s Lake is struggling with overcrowding, loss of vegetation from excessive guano, and erosion. Owned by the Forest Preserve District of Cook County, this island rookery has been a popular destination for black-crowned night herons, great blue herons, great egrets and, more recently, double-crested cormorants. At one time, the preserve held 220 black-crowned night heron nests, and in 1984, the site was dedicated as a Nature Preserve primarily to protect this state-endangered bird. But in the past several years, their breeding success has decreased dramatically. According to Ken Wilz, naturalist at Crabtree Nature Center, none successfully bred at the preserve for the past two years. Hopefully this management plan will offer black-crowned night herons a second chance at Baker’s Lake, and a better chance at survival in Illinois.

—Sheryl De Vore


—Alison Carney Brown

Lake County, the referendum would provide $55 million in general obligation bonds, $35 million of which would be for land preservation and $20 million for habitat restoration, trails and other improvements. In Kane County, the $70 million referendum would further the goal of acquiring an additional 5,000 acres of open space and improve existing forest preserve properties. Will County Forest Preserve District's $70 million bond referendum includes plans to designate 72 percent for land acquisition, with the rest for development and habitat restoration projects at existing preserves.

—Alison Carney Brown

—Sheryl De Vore


—Alison Carney Brown

—Sheryl De Vore

Trees and shrubs of oak woodlands mostly bear nuts and fruits—as their seeds are dispersed by the abundant wildlife of these systems. The species that most often invade our ancient open woodlands in the absence of fire (box elder, elm, ash, cottonwood, basswood, and maple) have wind-dispersed seeds.

Spring Tonic

In bloom: white and pink shooting stars, golden Alexanders, orange puccoon, hot pink phlox, cream false indigo. Apparently a fine little prairie. That big leaf is prairie dock. Indiangrass and prairie dropseed make the matrix. Lurking among the plants are hundreds of species of animals: the Acadian hairstreak butterfly, the smooth green snake and the swift brown fox. Beetles, snails, voles, toads, nematodes.

A rich prairie then? Most botanists would tell you so. Sticks of burned brush suggest the benefit of a recent burn. No weeds present—a dandelion could not compete here. Almost all the plants are rare.

What do the eyes of migrating prairie birds see as they pass over? The sad answer is, essentially nothing. Too small a site to register. The prairie bird ignores such a place and continues on, looking for home on land, lots of land, under sky with no trees. There's not much of that left. The tallgrass prairie birds are living on borrowed time, most often in temporary and degraded habitats.

But there are birds that love this little prairie, nestled among the trees. Oriole, bluebird, kestrel, goldfinch, kingbird—they all nest here. These birds need open woods or shrubland, and these habitats, too, are vanishing. Scrubby trees of native shrubland surround this prairie: wild plum, Iowa crab, hawthorn, sumac, dogwood. Good stewards might expand the grassland and shrubland for the animals and plants that need them. But some folks see a young "forest" in those trees, though neither plants nor animals of closed forest are present. If we try to manage this fine land just for the trees, we lose the species of shrubland and grassland, and that's most of what's here.

Just as we may admire a painting or a piece of music more deeply and truly if we've studied it, so conservationists study to see, not only through human eyes, but through the eyes of our fellow creatures. Like us, they need good habitat. If we can see it perceptively enough to protect and nurture it for them, then we can better taste the tonic of wildness for ourselves as well.

CHICAGO WILDERNESS MEMBERS:

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Butterfield Creek Steering Committee
Calumet Ecological Park Association
Campton Historic Agricultural Lands, Inc.
Canal Corridor Association
Center for Neighborhood Technology
Chicago Academy of Sciences
Chicago Audubon Society
Chicago Botanic Garden
Chicago Ornithological Society
Chicago Park District
Citizens for Conservation
City of Chicago, Department of Environment
Crystal Lake Park District
The Conservation Foundation
Conservation Research Institute
DuPage Audubon Society
The Field Museum
Forest Preserve District of Cook County
Forest Preserve District of DuPage County
Forest Preserve District of Kane County
Forest Preserve District of Will County
Fort Dearborn Chapter, Illinois Audubon Society
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Hammond Environmental Education Center
Illinois Audubon Society
Illinois Department of Natural Resources
Illinois Natural History Survey
Illinois Nature Preserves Commission
Indiana Department of Natural Resources
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Irons Oaks Environmental Learning Center
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Kane-DuPage Soil & Water Conservation District
Lake County Forest Preserve
Lake County Stormwater Management Commission
Lake Michigan Federation
Lake View Nature Center
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Max McGraw Wildlife Foundation
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US Dept. of Energy, Fermi National Accelerator Laboratory
US Environmental Protection Agency, Region 5
US EPA Great Lakes National Program Office
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Cub Scouts from Deerfield join Jim Anderson, natural resource manager for the Lake County Forest Preserves, in planting native wetland plants at Prairie Wolf Slough. Soon they’ll be digging in dirt (see p. 10). Photo: Kim Karpeles/Lake County Forest Preserves.