Chicago Wilderness is dedicated to the protection, restoration, and stewardship of the natural communities of the Chicago region through fostering their compatibility with the human communities whose lives they enrich.

CHICAGO WILDERNESS MEMBERS:

Brookfield Zoo
Butterfield Creek Steering Committee
Calumet Ecological Park Association
Campton Historic Agricultural Lands, Inc.
Canal Corridor Association
Chicago Academy of Sciences
Chicago Botanic Garden
Chicago Ornithological Society
Chicago Park District
Citizens for Conservation
City of Chicago, Department of Environment
The Conservation Foundation
Conservation Research Institute
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
Friends of the Chicago River
Friends of the Parks
The Grove National Historic Landmark
Hammond Environmental Education Center
Illinois Department of Natural Resources
Illinois Natural History Survey
Illinois Nature Preserves Commission

Indiana University Northwest
Lake County Forest Preserves
Lake Co. Stormwater Management Commission
Lake Michigan Federation
Lincoln Park Zoo
Long Grove Park District
Max McGraw Wildlife Foundation
Mchenry County Conservation District
Metropolitan Water Reclamation District of Greater Chicago
Morton Arboretum
The Nature Conservancy
No. Cook County Soil & Water Conservation District
Northeastern Illinois Planning Commission
Openlands Project
Prairie Woods Audubon Society
Save the Prairie Society
Schaumburg Park District
John G. Shedd Aquarium
Shirley Heinze Environmental Fund
Sierra Club, Illinois Chapter
St. Charles Park District
Sustain, The Environmental Information Group
Thorn Creek Audubon Society
Urban Resources Partnership
US Army Corps of Engineers, Chicago District
US Dept. of Energy, Argonne National Laboratory
US Dept. of Energy, Fermi National Accelerator Laboratory
US Environmental Protection Agency, Region 5
US EPA Great Lakes National Program Office
USDA Forest Service
USDA Natural Resources Conservation Service
USDI Fish & Wildlife Service
USDI National Park Service
The Wetlands Initiative
Wild Ones Natural Landscapers, Ltd.
FEATURES

SAVING HABITAT FOR BIRDS by Peter Friederici ............ 4
A report on what scientists have been finding about the wild birds in the Chicago region: nesting success, habitat restoration, and the new Bird Conservation Network.

BIRDS AND BUILDINGS: LETHAL COMBO by Sheryl De Vore ... 9
For close to 20 years Dave Willard, manager of the Field Museum's bird collections, has been collecting the birds that smack into McCormick Place during migration. What has he learned, and what can be done about it?

WILDERNESS WALK ..................................... 10
A leisurely nature ramble, with some of the region's great photographers.

DEPARTMENTS

INTO THE WILD ............................................. 13
Our guide to the best natural areas of the region—what to do and see, when to go, where to hike, bike, canoe, ride horses, watch birds, even find solitude.

NATURAL EVENTS CALENDAR ............................... 20
What's debuting on nature's stage this season with tips for where to see, hear, and find the natural wonders of Chicago Wilderness.

BENTHIC BRAIN BENDER ................................. 21
Welcome to the cool world of stream creatures! Learn how to identify these six stream dwellers and calculate stream health.

MEET YOUR NEIGHBORS ................................... 23
Meet tiger salamanders, secretive amphibians. Meet John Rogner, new field supervisor of the US Fish & Wildlife Service: a man who likes to get wet. Meet Jane and John Balaban, longtime volunteer stewards in Cook County; amateur botanists of the highest order.

NEWS FROM CHICAGO WILDERNESS .................. 26

GUEST ESSAY ............................................. 30
Seeing afresh the places where we live and work: excerpts from an essay by Tony Hiss from the new book, Prairie Passage. Photographs by Edward Ranney.

READING PICTURES ....................................... 32
Black and White!

COVER PHOTO: White trillium carpet the floor of Messenger Woods in Will County. Photo by Joseph Kayne.
OPPOSITE: Shooting stars and prairie grasses grace Chiewaukee Prairie in southeastern Wisconsin. Photo by Joseph Kayne.
It's a tough time to be a bird. There are lots of bird watchers around to admire your plumage and song, but for many species it's increasingly difficult to find a home. Just consider the downward trends in the nationwide populations of a few of the species that nest in the Chicago Wilderness region.

Henslow's sparrow - Populations of this grassland species shrank by an estimated 94 percent in northern and central Illinois between 1958 and 1983, and by 93 percent continentwide.

American bittern - This secretive wading bird has been declining by an average of more than two percent a year in the United States.

Red-headed woodpecker - This striking savanna dweller's population has been dropping in the region at an average rate of over 1.5 percent a year.

Historically, many birds declined due to fairly straightforward factors. Hunting wiped out a few for good (the Eskimo curlew, the Carolina parakeet) and extirpated others from the Chicago region (the wild turkey). Uncontrolled pesticide use imperiled the reproduction of many predatory birds, such as bald eagles and peregrine falcons. Thanks to restrictions on hunting and pesticides, and thanks to vigorous reintroduction programs, some species have bounced back.

Other threats facing many birds of our region today are more insidious because they can't be traced so easily to a single source. For instance, many bird species face greatly reduced quantities of suitable habitat. It's a problem that comes into sharp focus in the Chicago Wilderness region, where burgeoning development has caused the habitats preferred by many birds to become rare—and where an exceptional diversity of habitats, with its accompanying diversity of birds, dramatically increases the complexity of management decisions.

Thanks to the region's large percentage of protected land and an active restoration movement, there is opportunity to improve conditions for many birds. But doing so isn't always easy. There's no free lunch in nature: burning a woods often enough to benefit red-headed woodpeckers may decrease populations of shrub-nesting yellow-breasted chats.

Regional birding clubs and Audubon groups recently banded together to form a new Bird Conservation Network to ensure that the concerns of birders—and the data they can provide—are incorporated in land management plans. It is birders, after all, with their long history of volunteer monitoring, who have been the primary force in documenting the region's avian richness.

"We realized that we could be stronger by pooling resources among the bird clubs, and that we could command more respect from agencies as a coalition of 8,000 or 10,000 members," says Christine Williamson, conservation chair of the Chicago Ornithological Society. The BCN has been working with Chicago Wilderness, especially with land management agencies, to formulate guidelines for conservation and monitoring of bird populations.

To consider the problems birds and land managers face, it's important to look separately at different habitats. (Remember, too, that these habitats form a continuum; there's no sharp line that separates a savanna and an adjacent forest.) It's also important to have a global perspective. Some birds are rare here because the core of their range lies elsewhere, such as the black-throated green warblers that nest in the area's introduced pine groves. Other species, such as the red-headed woodpecker or Henslow's sparrow, are uncommon but in the heart of their range here. Saving their habitat is likely to be more ecologically significant than saving that of species more common elsewhere. "For some grassland species, we have populations that are potentially globally significant," says Douglas Stotz, a conservation biologist at the Field Museum.

Recent ornithological research in Illinois, some of it described here, is helping land managers develop priorities for conservation. This research makes clear that integrating the needs of humans with those of other species is going to be an ongoing task for those who wish to maintain the region's biological diversity.
Feathered Salvation

“Birds can save the world.” So proclaimed Dr. John Fitzpatrick on April 26 at the 15th annual Smith Symposium held at Ryerson Woods. It’s not an altogether surprising assertion from one of the nation’s pre-eminent ornithologists. Fitzpatrick, now director of the Cornell Lab of Ornithology, was for many years bird curator at the Field Museum and director of the Archbold Biological Station in Florida.

Birds can save the world? Consider, for a moment, what John Fitzpatrick meant. He contends that if we pay attention to birds, they will tell us an enormous amount about the health of the planet. Informed and motivated people will then make needed changes.

In Hawaii, bird extinctions signaled that an ecological disaster was underway. According to Fitzpatrick, scores of species once abundant in Hawaii are now gone from the Earth. Major causes were the feral pigs and invasive plants that changed the ancient character of the forest on which these birds had depended.

In North America, the peregrine falcon (see page 32) and the Northern spotted owl have compelled us to focus on what's happening on the landscape.

“Our lives will not be dramatically diminished if the spotted owl goes,” Fitzpatrick said. “But the Earth as we know it will change forever if we lose the great forests of the Pacific Northwest and that's what the spotted owl is telling us.”

What are the birds telling us here in the midwest? The bobolink, the meadowlark, in fact all our grassland birds, have declined by more than 90 percent since 1950. Henslow's sparrow, a species that depends on wet tallgrass prairies for its survival, may be the next candidate for federal endangered species status.

And what about the birds of the oak woods? The redheaded woodpecker, which some have called the "poster child" for its ecosystem, has been listed as a species of deep concern by Partners in Flight, an international organization devoted to bird conservation. "Red-headed woodpeckers are very highly associated with open woodlands and intimately associated with the ecology of oaks," says Dr. Jeffrey Brawn, an ecologist with the Illinois Natural History Survey.

Fitzpatrick studies rangewide data from Breeding Bird Surveys. He says that, if trends continue, the red-headed woodpecker will become extinct in his lifetime. “It would be very sad to lose it,” he says. “But what's even more important is what the data on this bird tell us about what's happening to the oak forest. We're losing the character of a major ecosystem—on which a great many species depend.”

In this issue we bring you a report from the front—about the birds of our region. Here scientists have been studying the effects of ecological restoration in a variety of habitats. The bird news is a wake-up call, but it's not all bad, as Peter Friederici reports on page 4. Here, too, birders have formed a new Bird Conservation Network to bring the concerns of bird lovers to the forefront of conservation planning. Working with scientists and land managers, they have begun to develop a regionwide network of monitors — citizen scientists who will report on what the birds are telling us (see page 8).

“We want to advocate for birds and make sure they get a fair hearing,” says Jerry Garden, president of Chicago Audubon Society. “At the same time, we also need to look at the big picture. The health of birds depends on the health of whole ecosystems.”

Some people plant butterfly gardens. Some cut destructive buckthorn from the forest preserves. Some write letters to decision makers. Some simply read Chicago WILDERNESS magazine, and discuss the issues with others. As an appreciation of ecosystem health becomes a part of the culture, the public increasingly will insist on effective solutions to ecosystem concerns.

“Young and old, public and private, we’re doing it together,” John Fitzpatrick said. “Besides, it’s a heck of a lot of fun.”
Illinois is the Prairie State, so it's telling that many once-abundant tallgrass prairie birds have become extremely uncommon here. In examining their declines, it's not enough to point out the obvious: almost all Illinois prairies disappeared early in the state's history. But most grassland birds don't seem to care whether they're nesting among native or introduced grasses. It's not the composition, but the structure, of their habitat that matters. In other words, it's not the species of grasses but the shape, height, and density that matter to birds. Many prairie birds thrived even after native grasslands vanished because they could feed and breed quite nicely in the pastures of introduced Eurasian grasses.

It wasn't until after World War II, when soybeans and corn replaced most midwestern pastures, that grassland species began declining precipitously in Illinois and elsewhere. Data from the Breeding Bird Survey, a volunteer monitoring effort coordinated by the US Fish & Wildlife Service, reveal that, since 1966, nesting populations of bobolinks have dropped by more than 92 percent in Illinois, and by 37 percent across its range. Grasshopper sparrows declined 85 percent in Illinois and 66 percent rangewide; eastern meadowlarks, 61 percent in Illinois and 53 percent rangewide.

Many prairie birds have very particular structural preferences. Upland sandpipers, for example, nest in tall grasses, but bring their chicks to shortgrass areas to feed on insects there; originally they probably thrived where bison had grazed. Bobolinks remain among tall grasses. Loggerhead shrikes, which prey on insects, rodents, and other birds from exposed perches, need scattered small trees.

These birds are also picky about their habitat's extent—they are extremely "area-sensitive," as ornithologists put it, and won't nest in grasslands that are too small in area. For example, upland sandpipers rarely nest on sites of less than 100 acres. Jim Herkert, a biologist with the Illinois Endangered Species Board who has conducted extensive research on grassland birds, did a survey of Henslow's sparrows in which he found the birds nesting on only one patch of grassland smaller than 250 acres. "This may be a matter of predation," he says. "A lot of predators use woody edges as travel corridors." In large grassland areas, then, birds have more room to avoid predators traveling along the edges.

In Illinois, most prairie restoration projects have been less than 25 acres in extent. Valuable as those places are for rare plants—and the human soul—they don't do much for prairie birds.

"A lot of the prairie restoration work we've done so far has had a botanical focus," says Herkert. "We're really just now getting to restorations on a scale that allows us to think about animal life."

The main site he has in mind in the Chicago Wilderness region is the new Midewin National Tallgrass Prairie, site of the former Joliet Arsenal. It will ultimately comprise 19,000 acres—enough space to allow for an almost complete array of prairie birds. Most of the land is now covered with row crops or with extensive pastures of Eurasian grasses; thanks to the latter, the preserve hosts the state's largest population of nesting upland sandpipers, as well as loggerhead shrikes, Bell's vireos, bobolinks, and grasshopper sparrows. It's also near Goose Lake Prairie State Natural Area, a 2,500-acre swath of mesic grassland that has never been plowed. Goose Lake is one of only about a half-dozen sites in the entire range of the Henslow's sparrow where this species nests reliably in large numbers.

Managers hope to restore much of Midewin to native grassland managed with fire and with grazers, possibly including reintroduced bison and elk. Thanks to the preserve's size, they should be able to maintain grazed areas for upland sandpipers, tallgrass patches for bobolinks, and occasional trees for loggerhead shrikes and Bell's vireos.

"At Midewin we've got the size to get the birds and other animals back along with the plants," says Herkert. "It's not prairie now, but there's a lot of grass there already, and the majority of birds that we would hope to attract to a restoration are already there. So the goal will be bolstering populations and getting them to move into native grassland."
The Chicago Wilderness region is renowned for its oak lands not because these once-widespread savannas and open woodlands were or are unknown elsewhere, but because of intensive restoration here. Thanks to pioneering biological research by Stephen Packard, Ron Panzer, and many others, scrubby woodlands are being restored to rich expanses of grass and wildflowers studded with wide-spreading oaks.

These expanses are also forming good homes for a suite of birds that prefer some space between the trees and shrubs they call home. Here red-headed woodpeckers and great crested flycatchers perch on exposed branches and sally out after flying insects. Baltimore orioles glean caterpillars in treetops. Indigo buntings and blue-winged warblers forage lower, in shrubs.

The Illinois Natural History Survey's Jeffrey Brawn, an ecologist who has studied bird reproduction in these areas, says there are about 50 breeding species associated with midwestern oak savannas and woodlands. "Some of them," he says, "have previously fallen through the cracks as far as conservation goes." There have been some substantial declines: Breeding Bird Survey data indicate that eastern wood-pewees declined by 36 percent in Illinois from 1966 through 1991; great crested flycatchers dropped 35 percent.

Many birds of savannas or open woods are not often found in denser forests. When oak woodlands don’t burn, they become too overgrown for some birds. Even shrub-loving species such as blue-winged warblers are forced out when thickets grow into dense collections of trees.

Bird populations may also suffer as the composition of wooded areas changes. Little is known about the preferences of midwestern birds for particular plants, but some open woodland species, including great crested flycatchers, eastern wood-pewees, and rose-breasted grosbeaks, show a propensity for foraging in oaks, which support substantial insect populations. The sugar maples and other trees of denser forests apparently support fewer insects, and hence fewer birds, than oaks. Ornithologists are not sure why this is so, but Chicago Wilderness is focusing attention on just this kind of question, both for scholarly learning and for its practical implications.

"The viability of many bird species is enhanced by thinning and burning underbrush," says Brawn. "And the birds that come back most readily are those most strongly associated with oaks." Indeed, Brawn's 1997 data indicate that 13 of 19 savanna and open woodland species had greater nesting success in restored or burned areas versus those in unrestored sites.

Restoring woods with fire may also help nesting birds avoid predation. Data are scanty, but Brawn believes populations of common nest predators such as raccoons and some snakes may diminish when trees and shrubs are thinned. "We know that rates of nest predation are lower in restored areas," he says.

One quality of open woodland birds should allow them to thrive in the Chicago Wilderness region: unlike prairie species, for some reason most don’t mind small areas. "Historically, many savannas were probably always fragmented," Brawn points out. Their birds should do well in today’s patchwork landscape.

Savannas and oak woodlands also seem to be especially important to migrant birds. The Chicago area is a major migration corridor; birds follow the shore of Lake Michigan or the north-south river corridors. "It’s incredible how many birds pack into some areas during migration," says Scott Robinson, an ornithologist with the Illinois Natural History Survey. "Restoring oak woodlands and savannas is likely to improve conditions for migrants, especially if a shrub layer is maintained."
The birds that live in midwestern forests—whether dry uplands or moist bottomlands—have garnered a lot of conservation concern in recent years, in part due to Scott Robinson’s work. He has studied the reproductive success of forest songbirds, mainly in central and southern Illinois, and has found that an astonishingly high percentage of nesting birds fails to successfully raise young. There are two main reasons for this.

First, most Illinois forests are small patches that have a relatively high proportion of edge to forest interior. Predators that eat eggs or nestlings, such as crows, grackles, cats, raccoons, and skunks, tend to thrive along edges. They curtail many nesting efforts.

Second, agricultural areas support large populations of brown-headed cowbirds. Cowbirds don’t build their own nests; instead, they lay their eggs in the nests of other species. Because cowbird eggs hatch quickly, and because their chicks are aggressive, many host parents end up unknowingly raising an adopted cowbird rather than their own young. Savanna and grassland birds evolved in conjunction with cowbirds—a Great Plains species that once followed bison herds—but forest birds did not. They haven’t had time to develop defenses against them. As a result, Robinson’s field researchers have found high rates of cowbird parasitism among wood thrushes, scarlet tanagers, and other forest species.

Much of the Chicago Wilderness region supports fewer cowbirds than in rural Illinois, probably because there isn’t much agriculture nearby anymore. But it does support large numbers of other nest predators, many of which thrive in suburban environments.

“Very few tracts in the area are large enough to provide buffering against predators,” adds Robinson, who says that large numbers of deer are probably also responsible for removing ground cover that could shield the nests of ground-nesting birds. “There’s no direct evidence of that,” he says, “but it’s hard to imagine that it doesn’t make a difference.”

The upshot is that the Chicago metropolitan area is likely a “population sink” for many forest species: because nesting success here is very low, birds disperse into the area from other places where reproduction is more successful. That may seem like bad news, but it may not be a big deal in global terms because forest birds have never had core populations here.

“We’re between the two main regions of forest diversity, the southeast and the north woods,” says Douglas Stotz. “We’ve got bits and pieces of both, but we’re not that important in the overall picture for breeding forest birds.” Stotz and Robinson agree, though, that some forested areas—especially native oak woods—are vital to migrants, especially those along the north-south river corridors and the Lake Michigan shoreline.
Wetlands

Historically, much of the Chicago region was, in a word, soaked. Geologically young, the region was poorly drained, and water stood in innumerable low spots. Variable rainfall and winter runoff created an ever-changing landscape of open water, cattail marshes, sedge meadows, and other wetlands. Breeding birds, most of them migrants from the south, were able to take quick advantage of changes by flying to marshes offering whatever water level they preferred. “They moved around and looked for the best habitat,” says Charles Paine, a biologist at the Max McGraw Wildlife Foundation in Dundee.

Or they could. About 90 percent of Illinois’ wetlands have been lost, mainly to draining for farming and development. A larger proportion has survived in the Chicago Wilderness region, but still the extent of available habitat is much reduced. The Illinois Department of Natural Resources says that about 30 birds on the state’s list of threatened and endangered species rely on wetlands. Among the signal species are some coveted by birders because of their secrecy, such as American and least bitterns and king rails.

Paine has been trying to determine what features affect the presence and nesting success of marsh birds in the region. His preliminary conclusions: large marshes support a greater diversity of birds than small ones; marshes that are part of a wetland complex have a greater bird diversity than isolated ones; marshes with diverse habitats have a wider range of birds than homogenous ones. It’s also not known just how important the region is for the migration of wetland birds, though Paine has a guess. “South of here there aren’t many wetlands,” he says, “so we may be quite important for migrants.”

The main priority in protecting marsh birds, both breeding and migrant species, may be stemming the course of future development, even outside wetlands. When houses, roads, and parking lots cover previously open land, water runs off more quickly. That can make water levels in marshes rise precipitously, rendering them useless for some species, even flooding nests. Nonpoint pollution, such as oil flushed from parking lots, is also a pollution hazard that’s difficult to combat or even to monitor.

But solving such diffuse problems will be difficult, especially in wetlands that are also coveted by people. Cutting back on speedboat use of the Chain O’Lakes, for example, might keep some waterside nests from being flooded, but politically it would be very difficult.

Top left: Great egret. Above: immature sora

At present, only 2.3 percent of Illinois is classified as wetlands; 30 birds on the state’s threatened and endangered list rely on these areas.
Birds and Buildings: Lethal Combo

by Sheryl De Vore

In the last 20 years, more than 26,000 migrating birds died crashing into a single building along the Chicago lakefront. David Willard, manager of the bird collection at the Field Museum, has retrieved these birds from McCormick Place Convention Center during spring and fall migration and preserved them as specimens. The numbers seem staggering, yet they represent, in fact, a small fraction of the bird fatalities that occur annually when vast numbers of traveling birds collide with skyscrapers, TV towers, and picture windows. "There is hardly a prominent building in downtown Chicago that has not caused bird fatalities during migration," he says.

Willard's collection began in 1978 when a birder told him that birds were hitting the windows at McCormick Place near the museum. The next morning, he wandered over and discovered four dead birds, including a yellow-billed cuckoo. Willard resolved to collect the birds and see what he could learn about migratory patterns and population trends. "For several years after that, we casually checked the building, sometimes finding birds, sometimes not," says Willard. "By 1982, we realized that, as unfortunate as these casualties were, here was an extraordinary data source. We now have 15 years of excellent data."

Birds migrate at night using the stars as a navigational tool and often following a corridor along a body of water such as Lake Michigan. Lit buildings can disorient them, attracting them to their deaths. Willard speculates that, from a vantage point over the lake, the low, dark mass of McCormick Place may appear to be a cluster of trees. To birds it might look like a haven of food and shelter.

"Our sample now consists of 26,000 birds salvaged," says Willard. "One particular day, he found more than 200 birds. That sounds appalling. But you need to put that into some sort of context. In the spring of 1996, for instance, we picked up 2,000 birds along the Chicago beaches that died over the lake in a single severe storm, which is a natural phenomenon."

The McCormick Place data show that numbers of the most common species collected there have remained fairly constant. "If these birds were in massive decline, there would be fewer at McCormick Place," says Willard. Exceptions include the ovenbird, Nashville warbler, and rose-breasted grosbeak. "Rose-breasted grosbeak numbers have declined steeply at the McCormick Place study site," he says.

"Those data reflect the Breeding Bird Survey research that shows the rose-breasted grosbeak is declining in the upper midwest," says Doug Stotz, a Field Museum conservation biologist. "Pinpointing trends in this way is of major conservation value."

"Unfortunately, the only real increase we are seeing is in the European starling," says Willard about a species introduced from Europe and now regarded as a pest here.

Willard has also uncovered some interesting rare finds, including three black rails, a species rarely seen in Chicago, plus the state's first specimen of a painted bunting. While these are exciting to discover, Willard says the single rare specimen offers few clues to population trends. That type of information can only be gained from reviewing data of the more common species, those that are regularly found at the data site.

"The 10 most frequently collected species account for more than two-thirds of the individuals found there," says Stotz. These include the song sparrow, dark-eyed junco, swamp sparrow, white-throated sparrow, merlin, fox sparrow, ovenbird, Lincoln's sparrow, American tree sparrow, and Tennessee warbler.

Because Willard and other Field Museum personnel and volunteers carefully preserve each specimen they collect, they are gathering other information such as sex ratios, measurements, and breeding status. Mary Hennen, bird collections manager for the Chicago Academy of Sciences, is using data on hermit thrush weights in a study of that species. She, too, collects birds regularly, in her case at the John Hancock building.

One of Willard's most intriguing finds involves the American woodcock, which performs a fascinating aerial mating display in March and April in the Chicago Wilderness region.

"We found a highly skewed ratio of female woodcocks to males at the data site," says Willard. "What's really interesting," he says, "is that these females' ovaries are highly developed, and that means they are almost ready to lay eggs."

"The doctrine on woodcocks says they mate and nest all within 500 yards," says Willard. But his McCormick data spawned an intriguing theory that females may mate one place, then migrate elsewhere to lay their eggs.

While these data provide insights into bird population and biology, Willard is concerned about the migration fatalities at buildings, TV towers, and even home picture windows. Indeed, estimates range from 96 million to 960 million birds are killed annually from hitting buildings in North America.

How can we undo the lethal combination of lights, glass, and migrating birds? "If an urban building can have the lights turned off at night, the number of birds killed can be reduced," Willard says.
Let's take a peaceful walk in the wilderness. Let's walk in Messenger Woods. Sounds and smells of unseen birds, blue-eyed mary by the thousands, ancient wood molding back to soil—this is spring in a prairie grove.

Nature dissolves time. The moment transcends generations; Pottawatomi families walked this same land. They taught their children the great white trillium and the blue-eyed mary, just as we may teach them.

Wilderness walk
Let's wile away an hour or two with polywogs and the black-crowned night heron at McGinnis Slough. The time goes slow or fast, we hardly notice.

Let's walk by Lake Defiance. Keek! Black terns cry somewhere in the distance. Keek! We wander at random, now by the marsh, now under the oaks. Celestial sounds from a russet-backed veery serenade a yellow lady-slipper. Bird and flower practice their perfection together.
Where is the wilderness? These robin chicks joined the world in downtown Chicago: a bush, by a front doorstep, at LaSalle and Oak. The Virginia rail was photographed in migration, passing through one of the midwest's great birding spots—Magic Hedge, Montrose and Lake Shore Drive—perhaps on its way to the wetlands at Illinois Beach State Park.

Let's take a walk in the wilderness. It's worth a trip to a quiet place. And it's also every day around us. Let's loaf an hour or two with nature.
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 CUBA MARSH FOREST PRESERVE
2 BLUFF SPRING FEN NATURE PRESERVE
3 LAKE RENWICK HERON Rookery
4 NOOSIER PRAIRIE NATURE PRESERVE
5 THE MAGIC HEDGE
There are many streams and lakes throughout the Chicago Wilderness area, especially in the forest preserves or conservation districts, where you can go to witness the stream creatures shown on page 21. They generally live under rocks, in old leaf packs, on fallen trees that are in the water, and in the mud of rivers and lakes. Refer to the education pages (21 & 22) in this issue for more information on benthic macroinvertebrates.

Friends of the Chicago River

Friends’ is a not-for-profit organization dedicated to fostering the vitality of the Chicago River for the human, plant, and animal communities within its watershed. Friends has an extensive education program—the Chicago River Schools Network—that helps teachers meet educational goals for their students by using the Chicago River in their curriculum and encourages them to conduct action projects with their students that improve the Chicago River. Friends has many other programs, such as canoe trips, walking tours, and stewardship projects that get people involved in making a difference. To get involved or for more information, call (312) 939-0490, e-mail friends@chicagoriver.org, or visit the website www.chicagoriver.org.

Illinois EcoWatch Network

RiverWatch is part of the Illinois EcoWatch Network, a volunteer-based statewide network of ecosystem monitoring programs. It is coordinated by the Illinois Department of Natural Resources as part of the Critical Trends Assessment Program. Existing state databases, though extensive, are insufficient to accurately assess ecosystem health on a statewide basis. EcoWatch addresses this information gap by linking the efforts of professional state scientists with those of trained volunteers. In addition to widening the scope of citizen involvement in ecological research efforts, EcoWatch programs provide state scientists with comprehensive data to supplement professional scientific databases. The data collected by Citizen Scientists provides baseline information to state scientists who evaluate long-term trends in ecosystem health. The data are also used by local citizen groups and various state agencies and are available for anyone to access and use.

RiverWatch Report: 1997

- 521 volunteers trained, an increase of 178 over 1996
- 15 percent of 1L streams monitored
- Of the 60 sites monitored on the Fox and Des Plaines Rivers, 28 had good water quality (based on the Macroinvertebrate Biotic Index, see p. 21), 25 had fair water quality, six ranked poor and one was very poor
- Stoneflies, indicators of good habitat and water quality, were found at 12 sites along the Fox and Des Plaines
- Of 23 sites monitored in Cook County, only five showed good water quality

Explore the EcoWatch website at http://dnr.state.il.us/inringif.htm
For further information, call (847) 635-6650.

(Reporting by Camriena Tait Bowman)
Woodlands and large tracts of open grassland join the namesake wetlands to make Cuba Marsh Forest Preserve a popular spot for both humans and wildlife. This site, like many area preserves, was farmed for years, then faced subdivision into housing tracts. But nearby residents opposed the developer’s plans and urged its preservation as natural land. The Forest Preserve District began acquiring the land in 1976. Preserve staff removed drainage tiles to restore the natural water flow and worked with conservationists to devise a restoration plan that includes tree plantings and occasional controlled burns.

While the 600-acre preserve is popular green space in a highly developed area and provides much-needed habitat for a number of plants and animals, much of the land is not yet restored to its native state. The grasslands that occupy much of the preserve are mostly non-native plants, leftovers from when the land was pasture. The grasses attract birds such as bobolinks, meadowlarks, eastern kingbirds, and bluebirds; restoring quality prairie should attract an even greater variety. Removal of drainage tiles, reseeding, and burns are all important. The change must be made gradually, however, to avoid disturbing the birds already living there.

Buckthorn, an aggressive, non-native species, currently chokes much of the 90 acres of oak woodlands. Buckthorn leaves grow early in the spring and stay on the plant until late fall. Other understory plants get no sunlight and die off. The resulting lack of diversity hurts the entire ecosystem: fewer species of plants attract fewer insects, which attract fewer birds. The District continues to remove buckthorn throughout the woodlands to encourage a more savanna-like environment.

The 130 acres of wetland include a hemimarsh, a mixture of plants and open water that attracts a great variety of birds. Endangered species such as pied-billed grebes, least bitterns, and yellow-headed blackbirds all nest there. Herons and egrets make regular stopovers, although they have not nested at Cuba Marsh; they probably fly in from rookeries on the Fox River. Forest Preserve workers recently restored a wooded knoll in the middle of the wetlands, hoping the herons will take note and set up a rookery there.

On the eastern side of the preserve sits Lake County’s only dry hill prairie, not surprisingly on the only part of the site that was never farmed. There visitors will find rare plants with poetic names like prairie smoke and seneca snakeroot. The area is not on the trail system, but the District hosts frequent guided walks and nature programs.

Hiking, jogging, and biking are permitted. The trails, paved with crushed limestone, pass through a good portion of the preserve. Restrooms and drinking water are located near the parking lot. Cuba Marsh is open from 6:30am to sunset. For more information, call the Lake County Forest Preserves at (847) 367-6640.

**DIRECTIONS**

Cuba Marsh is between Lake Zurich and Barrington. From the south, take Rte. 53 to Rand Rd./US 12 west. Go about four miles, then turn left (west) onto Cuba Rd. The entrance is on the left after about 1.5 miles, just past the intersection with Ela Rd.

— Chris Larson
Bluff Spring Fen Nature Preserve — Cook County

Tucked away at the edge of Bluff City Cemetery just south of Elgin in far western Cook County, Bluff Spring Fen Nature Preserve is a testament to the power of active land management and habitat restoration. Packed into its 90 acres is a stunning variety of high-quality habitats. Before restoration began in 1979, the site was a favored place for fly dumping, off-road vehicles, and gravel quarrying. Volunteers removed the trash and worked to restore the degraded prairies and fen. In 1987 the state dedicated the entire site as a nature preserve. Despite some off-road tracks still visible in the soft soil, the site’s recovery has been dramatic.

Small hills and a savanna with massive bur oaks occupy the western half of the preserve, along with a sedge meadow and meandering streams. The eastern half of the site is wide open, with a high quality fen, a low-lying and springy wetland that’s home to many distinctive plants adapted to grow in the calcium-rich water and alkaline soil.

Near the fen are several kames. These small, gravelly hills—left by the melting waters of a receding glacier—provide excellent habitat for dry prairie plants like the beautiful prairie smoke. Between the kames and the fen is a mesic prairie that had been grazed to extinction; its restoration, though on-going, has been successful so far.

The fen contains the site’s greatest plant variety. Of the 400 species known to grow at the preserve, most are found here. The plants put on a vivid show of green leaves and multi-colored flowers all summer long. Of course, a variety of flora goes hand-in-hand with diverse fauna. Visitors will see and hear birds everywhere. The usual northern Illinois birds are all well represented, including great horned owls, wood ducks, red-tailed hawks, and red-winged blackbirds. And it doesn’t take much effort to see more unusual species like blue-gray gnatchatchers, red-headed woodpeckers, and willow flycatchers. Many warblers stop by during their May migration.

More than 50 species of butterflies have been recorded at the site, including a dozen—like the mulberry-wing skipper—that survive only at high-quality wetlands; their presence is a sign of just how successful the restoration has been. Several rare skippers live in the sedge meadow; mid-June through July is the best time to spot rare butterflies like the Baltimore checkerspot in the fen. And a wide variety of more common butterflies flutter through the preserve from May until the first frost. Coyotes, deer, and many smaller mammals roam here, while painted, snapping, and mud turtles live near the waters. In the crystal streams, you may catch a glimpse of a mottled sculpin, a rare and strange-looking bottom-feeder that, like the butterflies, is a sign of a high-quality habitat.

While no biking or horseback riding is allowed here, Bluff Spring Fen is a prime spot for hiking, birding, and enjoying the wide variety of plants that grow among the site’s varied topographies. There are several miles of unpaved trails providing easy hikes. An excellent map and guide are available in a kiosk near the parking lot. For more information, call (312) 346-8166.

DIRECTIONS

In southeast Elgin, take Bluff City Blvd. east (from Rte. 25) or west (from Rte. 20) to Bluff City Cemetery. Enter the cemetery and follow the signs to the small parking area and entrance to the Fen at the cemetery’s southern edge.

—Chris Larson
LAKE RENWICK HERON ROOKERY — Will County

Through the fall and winter, the Lake Renwick Heron Rookery is a quiet place, closed to the public because there just isn't much to see. But come spring, the preserve harbors some of Chicago's most spectacular birdwatching, with performances by thousands of herons, egrets, and other endangered and threatened wading birds. Visitors are welcomed on Saturday and Wednesday mornings throughout the season.

A number of raptors and water-loving birds visit Lake Renwick, but the nesting birds have given this site its regional renown. The large great blue herons, standing four feet tall, are the state's most common heron. Great egrets and double-crested cormorants are both on the state's threatened species list. Also at Lake Renwick are the state-endangered black-crowned night herons. Typically nocturnal birds, they appear only occasionally during the day. Lake Renwick also hosts small number of cattle egrets, a plentiful species typically found in prairies and pastures, not wetlands.

Migrating herons start to arrive from the south in March; other birds soon follow, jostling for prime nesting spots. (Each species prefers a different nesting height, so there is no interspecies fighting: great blues, for instance, take the top of the trees, while night herons prefer the bottom.) The preserve remains closed during this period to foster nesting success. The Rookery opens to the public the first weekend in May.

Lake Renwick itself occupies most of the preserve's 320 acres. From the visitor's center, a quarter-mile walk leads to the shoreline viewing platforms, 750 feet from the two main nesting islands. It's a spectacular sight. The islands and the far shore are covered by birds in constant movement, wading along the shoreline, diving for fish, and taking off and landing from all directions. June is particularly exciting, when newborn chicks test their wings and learn to fly. The preserve provides tripod-mounted viewing scopes, or bring your own binoculars and telephoto lenses.

The out-migration starts as early as July, when some birds head north to fatten the chicks and shape up before heading south for winter. Other birds take off in August; by the end of the month, the rookery is all but empty again, and it closes to visitors for the winter.

Like many lakes in the Chicago area, Renwick started near the turn of the century as a gravel quarry. Springs turned it into a wetland, which has long attracted birds; some reports say herons have been nesting at the site since the 1930s. When the quarry closed in 1983, conservationists campaigned to preserve the site. In 1990, the Will County Forest Preserve District and the Illinois Department of Natural Resources acquired the land; it's now an official state nature preserve (dedicated in 1992), operated by the Forest Preserve District.

The Rookery is open to the public just two mornings per week, from the first weekend in May until the end of August. On Saturdays it's open from 8 until noon; volunteers staff the visitor's center and guides conduct short interpretive programs at 9, 10 and 11am. The rookery opens at 10am on Wednesday mornings for a one-hour visit; if no visitors are there at 10, the staff closes it back up. As a state nature preserve, picnicking and pets are prohibited. For more information, call the Will County Forest Preserve District at (815) 727-8700.

DIRECTIONS
From I-55, exit at US 30/Plainfield Rd. near Plainfield. Take Rte. 30 west for about a mile. At Renwick Rd. (there's a sign and a stoplight), turn right. The entrance to the rookery is on the left, about 1/4 mile down.

— Chris Larson

[Map of Lake Renwick Heron Rookery]
Unlike many natural areas in the Chicago region, which were drained and farmed before being restored to their natural states, the core area of Hoosier Prairie was never plowed. Some light grazing wasn’t enough to destroy the native plants, and today it’s a healthy area noted for both its size and its broad diversity.

The Indiana Department of Nature Preserves bought the core 335 acres in 1976. Subsequent purchases brought the total to over 500 acres today; the acquisition of several hundred additional acres is pending or planned.

Part of the site demonstrates natural processes in action. Adjacent to the parking lot is an old wheat field, added to the preserve as a buffer. Most of the plants in the old field are still exotics, like Queen Anne’s lace and Kentucky bluegrass. But native prairie plants are slowly—and naturally—recolonizing the area, with more plants like big bluestem and marsh blazing star appearing every year.

Like many natural areas near Lake Michigan, Hoosier Prairie owes much of its biodiversity to swell-and-swale topography, a remnant of dunes that formed thousands of years ago when the shores of Lake Chicago (the precursor to Lake Michigan) were here. Like the Indiana Dunes, the Prairie contains niches of biological communities that are commonly found far to the north. Bracken and sweetfern, for instance, typically grow in the north woods; they came here with a changing climate during the last ice age. When the climate warmed up, the plants held on in isolated pockets like this one.

The elevation at Hoosier Prairie changes less than 10 feet across the entire preserve. But that’s enough for a great variety in natural communities, from marshes and wet prairie to upland oak savannas and mesic prairie. There are roughly equal amounts of wet and dry areas.

A variety of wildflowers and sedges grow in the wet prairie; cattails dominate the prairie marsh but one also finds swamp milkweed and blue flag there. The upland areas include healthy bur-

and white-oak savannas and mesic prairie, with Indian grass, rattlesnake master, and wild quinine.

As one might expect at a botanically rich area wedged between heavy urbanization and agriculture to the south, birds descend in large numbers on Hoosier Prairie. Yellowthroats, swamp sparrows, woodcocks and song sparrows are common. A small number of red-tailed hawks and great horned owls nest at the site. American and least bitterns, a number of rails, and many ducks and geese splash in the wetlands and waters. The location of Hoosier Prairie at the southern point of Lake Michigan also attracts many migrating birds. Over 120 bird species have been recorded here; a broad array of land animals and insects are here too.

Because of its status as a state nature preserve, there are few activities allowed at Hoosier, and much of the site is off-limits to visitors. But an excellent trail, about 3/4 mile long, gives a good sample of the rich nature here. The first leg is covered with crushed limestone; the rest is rough and, because of the low topography, can get rather wet at times. Boots are highly recommended!

**DIRECTIONS**

From I-80/94, exit at US 41/Indianapolis Blvd. South. After 3.5 miles, turn left on Main Street. Less than a mile and you’ll see a sign at the edge of the preserve; the parking lot is just ahead on the right. For more information, call the Indiana Department of Natural Resources at (219) 843-5012.

---

**Chris Larson**

---

**HOOSIER PRAIRIE NATURE PRESERVE — Lake County, IN**

---

**Chicago Wilderness**

---

Thirteen-lined ground squirrel
There's a pleasing touch of irony in the history of the Magic Hedge. Land that was once a missile base now provides habitat for different, friendlier airborne creatures: it's one of the most spectacular birding sites in the entire Chicago area.

The Magic Hedge is a small area of trees, shrubs, and grasses on a small hill at sandy, wind-swept Montrose Point on the Lake Michigan shoreline along Chicago's north side. In the 1950s and 1960s, when the Army operated a NIKE base here, the Hedge grew up along the base's border. The base was dismantled around 1970, but the Hedge has remained.

A heavy human presence deters nesting in the area, but it's a great place to see birds during their spring and fall migrations. The Hedge has a reputation for attracting a disproportionate number of rare birds. Barn owl, golden-crowned sparrow, and Kirtland's warbler have all turned up. The nearby beach has attracted snowy owls, peregrine falcons, and buff-breasted and purple sandpipers. Early August is especially dramatic, when purple martins gather in the area in groups of several thousand, then take off en masse for their winter homes.

The Magic Hedge owes its popularity among birds primarily to geography. Between Chicago and the forests of southern Illinois and Indiana, there are few places for birds to rest and feed: it's mostly farmland. Birds spend time in Chicago, resting and feeding either before or after their long, barren migratory flight.

Flight patterns, too, have an effect. While some types of birds pass inland through the Chicago area, following the Fox or Des Plaines river valleys, many birds fly along the lakeshore—over the water, but well within view of land. Swooping down the western shore of Lake Michigan, they suddenly come across Montrose Point, a man-made spit of land jutting several hundred yards into the water. The trees, shrubs, and grasses there make it a very inviting place for birds to stop, so they do. For the same reasons, Lincoln and Jackson Parks along the near north and southern lakefront also attract large numbers of migratory birds.

The Hedge is on land owned by the Chicago Park District. In recent years, the District has allowed a nearby grassy meadow to grow taller, providing even better bird habitat; some grassland birds and butterflies have been spotted here. The District has also planted various shrubs known to provide shelter and sustenance for birds.

Visitors are also likely to witness some of the threats to urban bird habitat—litter, unleashed dogs, and "social" trails through the Hedge area made by fishermen and beach users. Nonetheless, the Hedge is still a significant harbor in the annual migration of thousands of birds, and a magical place to watch them.

**DIRECTIONS**
From Montrose Avenue, east of Lake Shore Drive, turn right on Montrose Harbor Drive. At the first curve in the road, a small hill can be seen to the east; the Hedge is right there. A "Magic Hedge" sign is on the south side of the area; other signs denoting the area as a migratory bird habitat can be found on the Hedge's north side.

— Chris Larson
Here's what’s debuting on nature's stage in Chicago Wilderness by Sheryl De Vore

**June**

**Female snapping turtles lay six to seven dozen eggs on open, slightly hilly areas.**

The female uses water carried in her bladder from a nearby lake or river to loosen soil. In early morning or toward evening, she digs a hole and lays the eggs. This is a large turtle, measuring up to three feet in length and weighing up to 30 pounds as an adult. Observe from a distance. You might find nesters near any relatively clean body of water. They are dangerous. Observe from a distance.

**Grassland birds display for their mates.**

Look for the male bobolink, with its black stomach and white back, as if it were wearing a reverse tuxedo. Listen for its rolling call as it flies over the grasslands to attract a mate. Look for the eastern meadowlark with its lemon yellow breast decorated with a large black “V.” Can you hear its “see you-see-see-yer” call as it perches atop a grassland shrub?

**Gensburg-Markham Prairie Nature Preserve (Cook County).**

In the town of Markham, IL, at the junction of I-57 and Highway 6 (159th St.), go east on 159th for one mile to Whipple Ave. Turn north 2 blocks to the preserve entrance.

**Monarch butterflies return to feed in nectar and lay their eggs.**

They wintered en masse in Mexico. Now they are flying north to mate. The female lays translucent white eggs beneath a milkweed leaf, which provides food for the caterpillars after hatching. Adults sip sweet nectar from the flowers. Why not plant some milkweed in your backyard to attract these orange and black beauties? Find them in any open flowery area.

**July**

**Young woodpeckers beg for food from parents.**

Tree cavities provide perfect habitat for nesting woodpeckers including the Downy and the Hairy Woodpecker, which look similar except that the Hairy is larger. The adult males have red on their heads. The females don’t. The young look like miniature adults with shorter tails. The tail feathers are the last feathers to grow on young songbirds. Providing sunflower seeds at backyard feeders may attract adults with young.

**Black Partridge Woods Nature Preserve (Cook County).**

Take the trail leading through mesic forests of basswood and oaks. In Lemont, IL, take Lemont Road north across the Des Plaines River to 111th Street (Bluff Rd.), then southwest one mile to the preserve.

**Chain O’ Lakes State Park (McHenry and Lake Counties, IL).**

Hairy woodpeckers have nested at the oak point day use area. In Spring Grove, IL, at the intersection of Wilmot Rd. and Rte. 173, take Rte. 173 east to the Oak Point Day Use Area entrance. The main entrance to the park is off Wilmot Rd., south of Rte. 173.

**Swallow Cliff Woods Nature Preserve (Cook County).**

Find them in any open flowery area. A member of the long-horned grasshopper family, it is a favorite by the female for its mate. The true or northern katydid to Bliss Rd. Follow Bliss Rd. to the entrance.

**Augus**

**Katydid sing their buzzy songs on hot summer nights in the woods.**

In late summer at twilight, the male katydid sings, “chi-chi” (pause). chi-chi-chi.” A member of the long-horned grasshopper family, the true or northern katydid lives in trees where the female deposits her eggs on twigs or underneath bark. The katydid, among other insects, provides food for birds and other animals.

**The Grove (Cook County).**

Owned by the Glenview Park District and located on Milwaukee Ave., just south of Lake Ave. You can reach The Grove off I-94 west from Chicago by exiting at Lake, going west six miles to Milwaukee Ave., then south to the preserve.

**Bliss Woods Forest Preserve (Kane County).**

At the intersection of Rte. 56 and Rte. 47 in Sugar Grove, IL, go north of Rte. 47 until it veers to the right to Bliss Rd. Follow Bliss Rd. to the entrance.

**Perseids meteors shower the sky at night.**

Choose a cool, warm evening just before midnight by your favorite country road away from town lights. Look near the constellation of Perseus for meteor showers, which occur in August every year. Meteors are bits of stone or metal from space that glow when they enter the Earth’s atmosphere. Meteor showers occur regularly each year.

**Compass plants bloom in prairies.**

Look for this four-to-10-foot tall native prairie plant with stiff, bristly, large, deeply-lobed, alternate leaves. The leaves of this plant face directly east and west hence the species name: compass plant.

**Skokkie River Nature Preserve (Lake County).**

In Libertyville, IL, at the intersection of Rte. 60 and St. Mary’s Rd. (east of Milwaukee Ave.), go north on St. Mary's Rd. to the preserve entrance. Take this opportunity to compare restored with unrestored savanna. Drive the main road through the preserve and note ‘The Trails’ parking area. The Trails is an unrestored savanna. On the other side of the road is the restored savanna, which was burned as well as seeded and planted several years ago. Which area has blooming wildflowers and grasses? Where can you hear great crested flycatchers?
Have you ever thought about the many different kinds of life a stream supports? Have you ever wondered what types of creatures might be living under rocks or in the sediment on the stream bottom? Welcome to the world of benthic macroinvertebrates. Aquatic insect larvae, crustaceans, worms, and molluscs are all benthic macroinvertebrates. That is, they are bottom-dwelling (benthic) animals that have no backbone (invertebrates) and are large enough to see with the naked eye (macro). They are a vital link in the aquatic food web connecting aquatic plants, algae, and leaf litter to the fish community.

A stream combines physical, chemical, and biological characteristics which respond to natural and human-caused disturbances, such as flooding, drought, construction, pollution, and channelization.

We can measure the extent to which these disturbances affect a stream by observing changes in both the types and numbers of organisms living there. Benthic macroinvertebrates are such "indicator organisms" based on their need for dissolved oxygen and their tolerance of varying levels of pollution in the water over time. Some species are highly pollution-sensitive, while others are more pollution-tolerant. Therefore, changes in their types and numbers over time may indicate changes in the habitat and water quality of the stream. Each of the organisms pictured has an assigned Tolerance Value (Tv) which describes, on a scale of 1-12 (1 = highly pollution-sensitive; 12 = highly pollution tolerant), its level of sensitivity to the effects of adverse physical or chemical changes in a stream.

See next page for game rules...
Benthic Macroinvertebrate Quiz:
Age 11 and older: for two or more players
- Carefully cut out each picture.
- Laminate or cover with clear contact paper for durability.
- Place the game cards picture side up on the table.
- Write or copy the name and the list of characteristics of each creature on a separate sheet.
- One person serves as quizmaster and reads aloud a single characteristic of one stream creature.
- If no one can guess the correct creature, the quizmaster reads a second characteristic, and so on.
- The first player to correctly identify the creature must then point to the correct picture to receive five points.

Variation: Give bonus points for using the Latin name
Suggestion: Devise your own game based on other well-known games such as Jeopardy, Family Feud, etc.

Benthic Macroinvertebrate Identification:
All ages
- Take the pictures with you when you visit a local stream to help with identification.
- Laminate to protect the pictures.

Note: See the list on page 14 of locations in local Forest preserves or conservation districts where you can go to witness these amazing creatures. Remember, these are living organisms. So, after observing them, place them carefully back in the stream. Public landowners do not allow collection of these organisms without a permit.

Macroinvertebrate Field Day - Saturday, July 18
You are invited to join Members of the Illinois EcoWatch Network on a field trip the morning of Saturday, July 18th at Tyler Creek in Elgin. You'll get a chance to collect some macroinvertebrates and then identify them using microscopes. Who knows, maybe you'll like it so much, you'll become a Citizen Scientist! Call (847) 635-6450 to reserve space and get directions.

Game one

Leech
- Hirudinea
- Moves by stretching and contracting like an inchworm
- Possesses two "suckers" on either end of body
- Tan to light brown in color
- Body appears to be segmented
- Tolerance value = 8.0
- Length 5 to 40mm

Sowbug
- Isopoda Asellidae
- Silver gray in color
- Segmented body with pair of legs attached to each segment
- Aquatic "pill bug"
- Body flattened
- Tolerance value = 6.0
- Length 5 to 22mm

Caddisfly
- Trichoptera Hydropsychidae
- Three darkened plates
- Shaped like letter "C"
- Hairy gills on the abdomen
- Well developed head
- Tolerance value = 5.5
- Length 2 to 40mm

Riffle Beetle
- Coleoptera Dryopidae & Elmidae
- Small dark brownish-black
- Long toes each have 2 tarsal claws
- Six frog-like legs
- Three distinct segments
- Tolerance value = 5.0
- Length 10 to 16 mm

Game two

Clinging Mayfly
- Ephemeroptera Heptageniidae
- One pair of developing wings on back
- Three long tails
- Feathery gills located along sides of abdomen
- Broad, flat head/flat body
- Tolerance value = 3.5
- Length 5 to 22mm

Stoneflies
- Plecoptera
- Each leg has two tarsal claws
- Hairy gills found under legs
- Two pairs of developing wings located on back
- Two long tails
- Tolerance value = 1.5
- Length 5 to 35 mm

Game material supplied by Friends of the Chicago River and Illinois EcoWatch Network.
Photo Credits: Denise Stoeckel, IL Natural History Survey (Sowbug, Caddisfly, Riffle Beetle); Dr. Barry Poulton, Environment & Contaminants Research Center, USGS (Leech, Stoneflies).
Tiger Salamander:
The secret life of an amphibian

In spring when the warm rains come, a male salamander awakens and slithers to a shallow pond where many more males have congregated to begin a miniature ballet. The only ones invited to the dance are the females. The males greet them nose-to-nose, pushing the other males aside, as they engage in a primeval ritual.

Thus begins another part of the double life of the secretive salamander, an animal that looks and sometimes behaves like a reptile but is actually an amphibian.

The salamander sheds its skin as reptiles do but would dry out if it basked in the sun as a snake does. It looks like a lizard, but it has smooth, moist skin, whereas a lizard has dry, scaly skin.

Salamanders are more secretive than other amphibians. Unlike frogs, salamanders don’t sing loud, raucous mating choruses in spring, but pursue their mates quietly. They are a vital part of the food web in woodland ephemeral ponds, seldom betraying their presence to human searchers.

The salamander’s ancestors appeared 350 million years ago when Earth consisted of one large landmass surrounded by a vast ocean. Some small fish evolved into creatures that developed legs in place of fins, allowing them to live on land and sea. Thus amphibians lead double lives.

The largest group of amphibians is the Anura, which consists of nearly 4,000 species of frogs and toads. Salamanders belong to a smaller group in the order Urodela. Some 350 kinds of salamanders exist in the world, 160 of those in the United States.

A salamander needs a dark, moist environment in which to live. Indeed, it must remain wet if it is to breathe, since it absorbs oxygen through both its lungs and its moist skin. This may explain why the salamander is most active on wet evenings.

The most common and largest salamander in the Chicago Wilderness region is the tiger salamander (Ambystoma tigrinum). As an adult, this dark-colored amphibian, sporting yellow spots, measures between seven and eight inches long. It swallows various prey whole including earthworms, insects, fish, frogs, other salamanders, and even baby mice.

The tiger salamander emerges from hibernation early in the Chicago region, often as early as March if spring is warm, to court and mate. The female lays 23 to 100 eggs loosely clustered on twigs or stems, a foot or more below the water’s surface.

In an hour, the eggs quadruple in size, and in two weeks, the eggs hatch into creatures with flat heads and wide mouths that trap hundreds of microscopic plants and animals. The young have no arms or legs, just fin-like tails to help them swim. Unlike adults, they breathe through gills.

As the water-bound young mature, their front and hind legs begin to grow. The gills disappear, and lungs form, at which time the adolescent salamanders must come to the surface to breathe. Finally they leave their watery home, heading for cover on land, burrowing into loose soil or leaf mold to keep wet and camouflaged during the day.

Salamanders can be a tasty meal for birds, snakes, shrews, voles, fish, frogs, even spiders. That’s why a salamander is built to run so swiftly. Some salamander species secrete a chemical that makes them distasteful to a would-be predator.

When autumn approaches, salamanders retreat beneath the ground to hibernate until spring.

Within the last 50 years, the populations of many species of amphibians including frogs, toads, salamanders, and newts have declined markedly. An international group of scientists—The Declining Amphibian Populations Task Force—has been studying the causes of this decline. Preliminary data show that the decrease could be due to human activities such as habitat destruction and pollution. For more information on the status of salamander populations, contact The Terrestrial Salamander Monitoring Program, Patuxent Wildlife Research Center, 12100 Beech Forest Dr., Laurel, MD 20708-4038, or send e-mail to frog@usgs.gov.

—Sheryl De Vore
John Rogner: Down by the River

This man loves to get wet. Given the slimmest excuse, he'll grab a pair of waders from the supply closet and head for the nearest creek. Instantly he's studying the current, looking for pools and eddies where the fish might be. Of course, as Field Supervisor for the Chicago field office of the US Fish & Wildlife Service (F&WS), John Rogner has a professional excuse—and a closet stocked with waders, seine nets, depth measuring tools, and other supplies for a person whose "office" is most properly outdoors.

The legal mandate of the F&WS is to help preserve and restore migratory birds, endangered species, and other flowery, furry, scaly or feathery friends. But Rogner comes to this vocation from a youth spent most happily mucking around on the banks of the Kishwaukee River near Belvidere, Illinois. "I was down there every day fishing, catching crayfish, laying on logs, and floating down the river on a summer afternoon," he recalls. "It was all unstructured. I explored and observed and started to love it."

Rogner earned degrees in biological sciences from Northern Illinois University, specializing in fish known as darters. "Oh, they are neat fish," Rogner says. "They're the warblers of the North American fish world." For his graduate studies, Rogner researched geographic variation in the redband darter, which is endemic to Tennessee. (About eight species of darters are found in the Chicago Wilderness region.)

Rogner, 43, now lives in Kane County near Elgin with his wife, Sue Elston, and hunting dog, Lena (named after a hydric soil series, he points out: Lena Muck). Following a stint farming near Belvidere with his brother-in-law, Rogner joined the Army Corps of Engineers in 1983 to work in the wetland regulatory program. In 1991 he joined Dr. Benjamin Tuggle, who was establishing a brand-new office for the F&WS to serve six counties of northeastern Illinois. The agency wanted to become more involved in environmental education and urban areas. Tuggle served as the first chairman of the Chicago Region Biodiversity Council (Chicago Wilderness). Last September, Rogner succeeded him as Field Supervisor and was named Vice Chairman of the Council.

Outside its highly respected refuge system, the F&WS has mostly worked with farmers. "Traditionally, the F&WS has been an agent of the 'back 40,'" Rogner says. "But we're hoping to develop a model for how the Service should operate in urban areas."

Tuggle, who was establishing a brand-new office for the F&WS to serve six counties of northeastern Illinois. The agency wanted to become more involved in environmental education and urban areas. Tuggle served as the first chairman of the Chicago Region Biodiversity Council (Chicago Wilderness). Last September, Rogner succeeded him as Field Supervisor and was named Vice Chairman of the Council.

Toward that end, the F&WS has contributed $1.3 million since 1996 to support Chicago Wilderness projects ranging from scientific research to on-the-ground demonstration projects restoring creeks and woods and prairies to outreach through the Junior Earth Team.

Rogner stressed the importance of connecting urban and suburban dwellers with natural areas, "so that conservation becomes a part of our cultural fiber. We've got to be careful we don't put these areas up on a shelf and force people to admire them from a distance."

Rogner's own hands-on work on the land extends from his backyard, which he's been gradually restoring to oak savanna, to volunteer restoration efforts at Ferson Creek Fen, a St. Charles Park District site on the Fox River. He's also been a key member of the team of volunteers helping to restore the federally endangered eastern prairie white-fringed orchid in the region. Of his home project, he says, "I burn annually and I'm introducing hazelnut and viburnum. In the late fall the yard is a sea of blue with Short's aster and—oh!—here's an exciting thing. About five years ago I collected some seeds of bloodroot and slung them out there and forgot about them. Two years ago I saw a few basal leaves and this year I saw six flowering bloodroot plants. So I guess the point is, Chicago Wilderness is where you find it or where you make it."

—Debra Shore

Lake Renwick (Will County) and Bakers Lake (Cook County) are the only sites in Chicago Wilderness where all four local colonial wetland birds nest. These are the double-crested cormorant, great blue heron, great egret, and black-crowned night heron.
Jane and John Balaban: A Natural Partnership

They don't have formal academic degrees in conservation. Jane Balaban is a staff pharmacist at Evanston Hospital, and her husband John teaches math and physics at St. Ignatius College Prep in Chicago. Neither was particularly attuned to nature until their early 20s, when a college friend of John's introduced them to plants. Jane and John began taking courses at the Morton Arboretum and paying more attention to nature. "Ray Schulenburg really instilled in many people a sense of reverence for the native landscape," Jane says. The expertise they have developed over a quarter-century has given them local and even national renown. Recently, they were honored by The Nature Conservancy as one of only three recipients nationally of the President's Stewardship Award.

Both have taught restoration and science literacy courses at area universities, as well as segments of the Naturalist Certificate Program at the Field Museum. They've given lessons on sedge identification to field officers of the US Army Corps of Engineers and helped train volunteers with Friends of the Chicago River in woodland restoration. Jane also serves on the board of The Nature Conservancy's Illinois chapter.

They have devoted their efforts principally to two sites along the North Branch of the Chicago River: Bunker Hill in Chicago, not far from their home in Skokie, and Harms Woods in Glenview. As stewards of the sites—selected for their knowledge, expertise, and leadership ability by the Forest Preserve District—their responsibilities include helping to plan restoration projects, leading tours and teaching classes, and coordinating volunteer workdays. They also do lots of plain work—pulling weeds, clearing brush, dispersing seeds, burning brush piles, assisting on burn crews, and applying herbicides when needed (both Balabans are licensed by the state).

They've been at it a long time; restoration work began at Bunker Hill in 1980 and at Harms Woods around 1986. "Both sites are much healthier today," John says. "Pieces of them were nice, but other pieces were really abused. Today, they both are just gorgeous."

"We're always struck by how rich and diverse and healthy the sites are now," Jane says. When they started at Bunker Hill, for instance, the savanna had large amounts of mountain mint, a very tough native species, and few other native plants. After nearly 20 years of work, she says, "there's still mountain mint, but it's mixed in with a whole variety of rich and beautiful native plants like rattlesnake master, obedient plant, smooth phlox, and grasses and sedges."

John describes their motivation as a sense of duty to nature and to future generations of humans.

"There are plant species that have been here for 100 centuries," John says, "and in some sense have a right to continue to live here. I don't think we have to worry about maple trees dying out, but I think many other species would disappear if they were not cared for and watched over."

Jane agrees. "We're working to make sure that these very unique natural communities that have been here for so long continue to exist. And it's also a way of giving something back to society," she goes on. Working with other volunteers gives them "a real sense of community and shared purpose, and the realization that as an individual you can do something that has tremendous significance."

Restoration work also grants them fresh air and exercise, and the chance to experience what Jane calls "the day-to-day pleasure as we watch the land respond to what we're doing."

"And unquestionably, the people that you meet doing this kind of work are just outstanding people," John adds. "It's a wonderful way to spend your time."

They've had many successes, but they know that much work remains. "You can't just sit back and say 'let nature do its own thing' anymore," John says. "It's not possible." Vigilant weeding, reseeding damaged areas, and an occasional prescribed burn are all necessary to assist these sites toward a more healthy natural state, he says.

In 1996, the Cook County Board imposed a moratorium on restoration work throughout the county, responding to criticisms of a small minority. Though work has since resumed at Harms Woods and most other sites, the moratorium at Bunker Hill continues. "It has probably already set us back five or six years," John says. "Last summer, not even the weeds could be removed, so we had to watch them flower and set seed."

"On the other hand, the site itself is healthier than it was 20 years ago," he goes on, "so it should be able to fight off exotic invasions to some degree."

That optimism, based on a faith in natural processes, helps keep the Balabans going and motivates them to continue their education and restoration work, despite the occasional setback. "We've certainly gone through some very trying times over the last couple of years," Jane says. "But I really do have confidence that this very good, powerful work will continue. It's too important not to."

— Chris Larson
1 COWS WIN
The headlines proclaimed "COWS WIN, COWS WIN." A new rural baseball champion? A bovine uprising? Rather, it was a victory for environmental and historical preservation!
On March 17, Citizens Organized for Wagners (CO.W.S.) and the Glenview Park District received voter approval to purchase Wagner Farm, the last remaining family farm on the North Shore. Settled in the 1840s, the 20 acre working farm contains a natural wet meadow deemed by the Illinois Natural History Survey to have excellent restoration potential. The farm, located at Lake and Wagner Roads, has areas untouched by plows because of the presence of bluffs caused by ancient streams.
Containing species such as drooping bulrush (Scirpus pendulus), Allegheny monkey-flower (Mimulus ringens), and knotted rush (Juncus nodosus), the site offers a unique opportunity for restoration of native prairie and wetland vegetation.
Supporters see the site as a natural classroom for teaching respect for the environment and understanding of farming in Illinois state history. The community now awaits with crossed fingers acceptance of the offer made to trustees of the Wagner estate.

—Cathi De Grenier

2 NATURE GIVETH, AND NATURE TAKETH AWAY
The second mildest winter on record lulled the midwest into hope for an early spring. But then the sudden March 9 snowstorm blew in. Near Indiana Dunes, it pushed over a seawall, and washed away so much sand from a beachfront home that the house finally toppled into the lake, the occupant escaping only moments before.
At Indiana Dunes State Park, safety crews had to remove an estimated 100 downed or damaged trees that blocked roads and trails, red oak being the most common species. At the nearby National Lakeshore, however, which lost between 350 and 450 trees, stormy nature nurtured itself by knocking down some large crown trees in the forest interiors. "This opened up light gaps in the canopy, allowing for growth of additional plants and enhancement in biodiversity," said staff botanist Pam Benjamin. "Fallen logs also create new niches for micro-organisms and fungi which occupy them and decompose the dead wood and return nutrients to the soil," she said. "These logs also help create habitat for some amphibians, reptiles, and small mammals which can feed and breed there."

—Eugene Bender

3 BIG FISH STORY
Only seven years ago, a survey indicated that 85 percent of Chicagoans thought the Chicago River was an open sewer. And until the mid 1980s, most fish appeared to agree. "Fish can sense poor conditions. They used to swim into the river and, upon sensing the pollution, would turn around and swim back to the lake, or they would die," says Irwin Polls, biologist at the Metropolitan Water Reclamation District of Greater Chicago. Now, however, fish are venturing further into the river, sensing cleaner water. Polls attributes the increase in game fish to efforts begun in the mid-1980s, including the Tunnel and Reservoir Project (TARP) that altered local sewer systems' linkages to the river and artificial aeration stations installed on the north and south branches of the river. Sample collections that used to turn up only carp, goldfish, minnows, or at best a few bluegills and some largemouth bass now also reveal trout, salmon, northern pike, bowfin, alewife, smelt, pike, suckers, catfish, sunfish, temperate basses, perch, and stickleback. The average weight of a largemouth bass in the 1970s was under a quarter of a pound. More recently, however, samples average closer to one-half pound—roughly a seven-inch fish. Whether the game fish populations will continue to rise is an unanswered question, Polls says. "Even with water quality improving, a large amount of contaminated sediments still lie in the river. Insufficient habitat and toxic sediments are two problems for the future," Polls says. As new construction is planned along the river downtown and on the north side, attention to water quality should increase. An ordinance has been proposed to the city council that would set limits for new construction along the waterway, including a required setback of 30 feet from the river. "This should improve things greatly," Polls says.

—Nicole Kamins

4 FEN-IN-HILLS
Acquiring the "Rothschild Tract" adjacent to Lake-in-the-Hills Fen in McHenry County has long been a top priority for conservation. "For years we have looked over the western perimeter fence and wondered what treasures the five seeps and hanging fens there contained," said stewards Alan and Barbara Wilson. Lake in the Hills Fen is one of the largest and best quality prairie fens in the midwest. Many of these threatened and endangered species have their home in the preserve's nine seeps. At least six threatened and endangered species were known from that private land across the fence—including slender bog arrow grass and false asphodel. The District worked for six years to reach an agreement with the dozen people controlling the trust that owned the tract. Finally, on February 4, 1998, the McHenry County Conservation District announced the acquisition of the key parcel—131 acres for $2,750,396. Congratulations!

5 VIREOS IN STEREO
Red-eyed vireos and scarlet tanagers are widespread nesting birds in Chicago Wilderness woodlands. Since 1990, the volunteers of the Chicagoland Bird Observatory have been banding many species at their MAPS (Monitoring Avian Productivity and Survival) site at Waterfall Glen Forest Preserve in DuPage County. But, in the past, volunteers captured few vireos and tanagers since both species spend most of their time high in the tree canopy.
To increase the captures of vireos and tanagers, the team experimented with two tape recorders playing bird songs to attract territorial birds down from the canopy, placing speakers...
on either side of a small mist net. (Imagine a badminton net.) When a vireo’s or songbird’s song is played, a male will descend from the canopy to confront the 'intruder,' often flying right to the speaker. By alternating the sound from one speaker to the other, the bird is induced to fly back and forth, soon getting caught in the fine threads of the mist net.

Volunteers carefully remove each bird, then place a unique combination of color bands on its leg and release it unharmed. "With sufficient numbers of observations of known individual birds, we will develop a greater understanding of site fidelity and survival rate of these long-range migrants," said project investigator Dennis DeCourcey. To learn more about this program and volunteer opportunities with the Chicago Land Bird Observatory, call (708) 387-9265.

4 RARE GROUND SQUIRREL FOUND

Finding a rare Franklin’s ground squirrel was the highlight of the 1997 Wisconsin Small Mammal Survey. A stocky chocolate-brown prairie dweller, the Franklin’s ground squirrel is threatened by loss of habitat; it seems to be in severe decline throughout the range of the eastern tallgrass prairie. (The more familiar 13-lined ground squirrel was originally a short-grass prairie species of the Great Plains; it is found today in some parts of the Chicago region in sparse weedy areas.) One Franklin’s ground squirrel was caught, studied, and released by Survey volunteers at Chiwaukee Prairie this past year. It was the only Franklin’s ground squirrel recorded in three years of surveying throughout southern Wisconsin. Due to its rarity, this ground squirrel is listed as a mammal of Special Concern by the Wisconsin Department of Natural Resources. The pygmy shrew proved to be another animal of Special Concern making its home in Chiwaukee Prairie.

"It was quite amazing to be in such close proximity to creatures that are normally only seen as they scurry under the duff," said volunteer and zoology student Adam Savage, one of more than 100 volunteers who have participated in the Survey, a partnership among The Nature Conservancy, the Wisconsin DNR, and the University of Wisconsin-Madison. A total of five species of Special Concern were captured (and then released) in the 1997-1998 surveys: pygmy shrew, arctic shrew, western harvest mouse, prairie vole, and Franklin’s ground squirrel. According to a report by Survey project coordinator Nicky Anthony and Richard Baur, "Despite the small size of many of the preserves included in this study, many appeared to be exceptionally species-rich and capable of supporting a diversity of grassland-associated small mammals."

7 SHADES OF TIGER WOODS

Every year, the North Cook County Soil & Water Conservation District presents certificates of achievement to groups and organizations that have made a significant contribution to resource conservation. This February, one went to the Wilmette Park District which has joined with the Wilmette Girl Scouts Cadette Troop 426 and Friends of the Chicago River in a community partnership to improve water quality, wildlife habitats, and aesthetics at an 18-hole golf course owned and operated by the Park District. Three pond complexes and two floodplain areas will be restored with native species at the golf course, which is located at the intersection of Lake Avenue and Harms Road in Wilmette. The Golf Course ponds and floodplain areas lie adjacent to Cook County Forest Preserves and within the watershed of the North Branch of the Chicago River. With conservation and wildlife enhancement programs, the Wilmette Golf Course hopes to become a Certified Audubon Cooperative Sanctuary and join many other golf courses so certified. Already the Park District has sharply reduced herbicide use at the course and has installed nesting boxes for bluebirds (and, later, bats and wood ducks) built by New Trier High School students. On Tuesday, May 26, 1998, an estimated 200 Girl Scouts of all ages from Wilmette Public Schools District 39, Avoca School District, and St. Francis Xavier School will work in shifts to plant a variety of wetland and prairie plants. The Girl Scouts will also make interpretive display signs and create a videotape of their progress.

—Eugene Bender

5 MEET GN274

The Biodiversity Explorers, a group of students interns with the Field Museum, certainly lived up to their name. At Swallow Cliff Woods in Cook County, they discovered a mushroom species new to science. Identified as a member of the genus Amanita (still too new to have a species name, it goes by "GN274"), this fungus is a relative of some of the deadliest mushrooms in existence. The superficially similar "Death Angel," for example, can kill a person who eats it by destroying liver function and damaging kidneys. To a tree, however, these mushrooms can be essential to good health. According to researcher Patrick Leacock, "ectomycorrhizal fungi form a partnership with woody plants, where the plant benefits by increased uptake of water and nutrients (nitrogen, for example), and the fungus obtains food as excess sugars from the plant's roots." Leacock cautions that "we don't have a clue if GN274 is an edible species. Generally, however, Amanitas are to be appreciated for their beauty and importance as zoe symbionts but not eaten!"

9 DUNES OIL SPILL

It could have been a lot worse. Approximately 3,000 gallons of diesel fuel leaked from a Conrail train as it passed through Indiana Dunes National Lakeshore on April 14th. Two significant spills occurred, the first near the National Lakeshore's Long Lake area, where the train stopped due to brake damage from the as-yet undetected leak. Long Lake and its associated wetlands provide habitat for the endangered Kama blue butterfly. Upon discovering the leak, the crew tried to plug it and proceeded to Gary, Indiana, some six miles away, where the second major spill occurred. Conrail deserves credit for moving this train away from the Lakeshore when the leak was discovered.

10 MUSSEL WORK

Once the source of mussels by the boxcar load for the popular pearl button industry in the early 1900s, the Fox River had nearly been harvested to depletion by the 1940s. Last year, the Shedd Aquarium's Research and Conservation Dept. and the Illinois Department of Natural Resources conducted a survey to determine the abundance and diversity of river mussels along sections of the Fox River and in Springbrook Creek, a prairie creek tributary of the west branch of the DuPage River. They found:

- 12 living species of mussels along the Fox River (15 species were present in 1911, the height of the mussel fishery there);
- Of these, 40 percent were white helmetshells; 16 percent were giant flooters; 13 percent were plain pocketbooks; nine percent were round piggies; eight percent were three-ridges; and the remaining seven species accounted for 14 percent;
- No evidence of zebra mussels or Asian clams—both highly aggressive, non-native species—though zebra mussels may soon infest the Fox from the Illinois River;
- Five living species of mussels in Springbrook Creek, including a new record for DuPage County—the paper pondshell;
- High predation by muskrats appears to be causing the loss of many reproductive mussels.

Plain pocketbook (Laportella labiata)

Mapleleaf pondshell (Elodes fallopia)

Pondshells (Fam. Unionidae)
HELP FROM OUTER SPACE

In November 1997, the Field Museum received a grant of $195,500 from The National Aeronautics And Space Administration (NASA) to develop the Chicago Wilderness region's first-ever comprehensive Vegetation Map using satellite images and geographic information systems. Although the highest-quality natural areas were mapped in Illinois in the early 1970s, only sketchy information exists for most of the much larger, good and fair-quality sites. Survival of the region's globally significant biological diversity—especially the animal species—depends on the proper management of the much larger, restorable areas that surround and connect the higher-quality natural communities. Using satellite images (generated by Landsat Satellite in 1972, 1985, 1995, and 1997) and Geographic Information Systems modeling, "the Vegetation Map will provide a biological foundation for developing a regional recovery plan," says Dr. Yeqiao Wang, Assistant Professor of GIS and Remote Sensing at the University of Illinois, Chicago.

The mapping project will allow scientists and land managers to analyze trends in habitat fragmentation, degradation, and loss over the last quarter of the century. These trends will help pinpoint the nonlinear communities under most severe threat and the areas of highest conservation priority. In time, according to the Field Museum's Debby Moskovits, this project will enable us to monitor progress toward the region's conservation goals and fine-tune a regional recovery plan accordingly.

Chicago is one of three or four major metropolitan areas around the world that is known to harbor globally-significant concentrations of endangered natural communities. Ecologists and land managers from throughout the Chicago Wilderness are participating in compiling already existing ecological information which will allow experts working with Dr. Wang to derive significant biological information from the satellite images.

—Alison Carney Brown

THE BEST THINGS IN LIFE ARE STILL FREE

Chicago Wilderness, An Atlas of Biodiversity is a 64-page full-color book describing the plants, animals, and natural communities of the greater Chicago metropolitan area. Produced for the citizens of the region by the partner agencies of the Chicago Region Biodiversity Council ("Chicago Wilderness"), it has proven to be a wonderful resource for teachers, students, families, and everyone interested in the nature of this region. The first printing of 11,000 was quickly snatched up. Didn't get one? Not to worry! A new printing is now available. Pick up this outstanding free publication at any of five locations:

- Fullersburg Woods (3609 Spring Rd., Oak Brook, IL)
- Indian Dunes National Lakeshore Visitor Center (300 E. Kemil, at Highway 12, Porter, IN)
- The Nature Conservancy (8 South Michigan, Suite 900, Chicago, IL)
- Volo Bog Visitor Center (28478 W. Brandenburg Rd., Ingleside, IL)
- Willowbrook Nature Center (525 S. Park, Glen Ellen, IL)

You can also order it by sending $5 for shipping and handling, payable to: Greatwood Communications, Inc.

P.O. Box 208
Downers Grove, IL 60515-0208

Please include your full name and address and a phone number (in case the Atlas is returned undeliverable). Allow four to six weeks for delivery.

FOUR NEW MEMBERS: 61 AND GROWING

On March 25, the Chicago Wilderness added four new members. Wild Ones Natural Landscapers, Ltd. is a Wisconsin-based organization that offers support and education about the use of native plants in the home landscape. Members grow native plants in their yards and gardens, and exchange seeds, plants, and information with each other and other interested parties. The Hammond Environmental Education Center teaches local residents about the interaction of industry, people, and the ecology of the region to foster an appreciation of the interdependence of economic vitality and a healthy ecosystem. The Center will be working with the National Wildlife Backyard Habitat program this summer. The North Cook County Soil & Water Conservation District strives to prevent the degradation of natural resources, such as rivers, streams, and wetlands, by erosion and pollution. In particular, it supports habitat improvement by recommending and assisting streambank and shoreline stabilization. The Fort Dearborn Audubon Chapter of the Illinois Audubon Society has kept records from bird walks at Lincoln Park Zoo for the past 22 years. In addition to their work on bird conservation, members of this Audubon chapter also participate in activities involving butterflies, damselsflies, plants, bats, and other taxa.

PROTECTION FOR CALUMET?

The National Park Service (NPS) has concluded what conservationists have been saying for years: the Lake Calumet region deserves protection. A draft report of the "Calumet Ecological Park Feasibility Study," released in February, states that the area is eligible for designation as a National Heritage Area.

Congress had directed the NPS to consider the creation of a Calumet Ecological Park, based on a proposal from the Lake Calumet Study Committee. The draft report noted the "unique mosaic" of significant historic sites and rare natural areas—including important bird habitats and high-quality prairie remnants—but stated that the natural elements were not strong enough to merit designation as an "ecological park" which many in the region had desired. However, the NPS study recommended designating the Calumet region a National Heritage Area. Such a designation, the study concludes, "would afford the rare opportunity to [both] revitalize industry and protect natural communities."

"It was a welcome surprise," said Robert Kellner of the Calumet Ecological Park Association. Kellner hadn't expected Heritage Area designation to be an option. "It's not as good as we had hoped, but it's an avenue that opens the doors to greater possibilities" for the much-mistrusted Calumet region.

Dr. Jim Landing of the Lake Calumet Study Committee expressed some doubts. "The idea of a National Heritage Area doesn't appeal to me much. I think it misses the uniqueness of the Calumet circumstances." But, he went on, "I'm very happy that the Park Service listed federal designation as a possibility. That's really a step forward."

Phil Peters, chairman of the Chicago Region Biodiversity Council, sent a letter to the NPS, calling the draft "a generally excellent report." While Peters' letter isn't an official policy statement, it reflects a consensus among a group of Chicago Wilderness members, including government agencies and private organizations, that met to discuss the report. "The designation as a Heritage Area would be extremely helpful as we move forward with the complexities of the region as a common project for collaborative work by many local partners," Peters wrote. "We trust that this work will lead to increased attention and conservation progress in the Calumet region."

The NPS planned to complete its report by the end of April. It would then be up to Congress to consider the proposal to declare the region a National Heritage Area. If it does, public and private agencies would develop plans for managing the area's resources. Federal funds for Heritage Area projects may be available if the designation is approved.

—Chris Larson

GRAND MARSH ON KANKAKEE

The US Fish & Wildlife Service has proposed a major restoration in Illinois and Indiana. The Service would assemble the Grand Kankakee Marsh National Wildlife Refuge on 30,000 acres over a 30-year period. At 3.3 million acres, The Grand Marsh was once one of the largest inland marshes in North America. Before being largely...
Fifty years ago, just after the Second World War, the English set up their own national park system as a way of celebrating the peace, and modeled it on the Wordsworthian, or “green-line,” approach, as it’s more usually called. This means calling a park into being by taking a map and drawing a green line around the outermost limits of a special place. It’s an act that’s both imaginary and real—imaginary, because as far as ownership is concerned it’s exactly as it was, both inside the line and out; real, because now the place has public standing. In the special place now officially treasured as the Lake District National Park, for instance, national and local government agencies own almost no land at all.

A quarter of the land is in the hands of a much-admired, scholarly, and non-profit group of museum and parks administrators called the National Trust, and the other three-quarters is privately held. The government, whose role has been strictly limited by careful design, protects the national interest in the Lake District by championing its continuity, so that changes when they come (as of course they must) can be absorbed without compromising any of the recreational, historic, ecological, and scenic qualities that have already rewarded so many eyes and hearts.

Campaigning to bring the qualities of a special place into sharper focus is usually quiet work that’s underfunded. The one ground rule is that nobody can force anybody to do anything. Which sounds like saying that it works by consensus, but that’s a grudging word, often only a synonym for a truce. Whereas this process can only really be said to exist whenever or wherever or for as long as people are acting in harmony.

...The Chicago Outlet Valley was the first sliver of America to take on the risk of re-evaluating itself at this scale. It also became the first American special place to be nationally recognized for attacking problems by burnishing specialness: Under unprecedented legislation passed in 1984 by a Democratic Congress and signed into law by a Republican president, the entire Valley became the country’s first “National Heritage Corridor.” With this official federal designation, the Valley became a uniquely American green-line park. Valley land, as in English green-line parks, remains, and will never cease to be, predominantly privately owned. The American law acknowledges, as English laws do, that because the Valley is a special place, public rights have become attached to its private property.

But in the National Heritage Corridor, the national government has not taken on the mission of maintaining the cohesiveness of these public rights; it instead sets up an arena in which volunteers—citizens, businesses, non-profit groups, foundations and even agencies within local and state governments—are encouraged to step forward to champion the public interest.

Excerpts from essay by Tony Hiss reprinted by permission, Canal Corridor Association. Photographs by Edward Ranney. Prairie Passage is available at fine bookstores throughout the region or directly from the University of Illinois Press at (800) 545-4703. Copyright © 1998 by the Board of Trustees of the University of Illinois. Used with permission of the University of Illinois Press.
Black and White?

One of the world's most dazzling birds at one of the region's finest birding spots.

A peregrine falcon plummets from the sky to seize its prey at Montrose Beach near Magic Hedge. A kingfisher is about to become food and waste. Trash blows across the sand under the drama. Rob Curtis snaps the picture.

At first the bird and the issues seem black and white. So many things do. Life and death. People and nature. Chicago and wilderness. Killer and saint. Predator and prey. But then come the grays. Grays too are beautiful. Then comes color.

Strenly dividing the world into opposing camps usually makes perception poorer. There's less beauty, less subtlety—and also less reality.

We pick up trash and we make trash; sometimes we kill trees to restore the forest. Predators? The kingfisher, too, is a predator.

Roger Tory Peterson's Field Guide to the Birds (1980) lists the peregrine falcon's habitat as: "Mainly open country...formerly even cities."

But the species gradually died out entirely from the lower 48 states, declining fast in Canada as well. The disastrous data for peregrines helped us see the impact of DDT on the continental ecosystem. EPA (colorless bureaucrats? good guys in white hats?) clamped down hard, as was needed. The Chicago Academy of Sciences headed up successful efforts to restore a population of peregrines in and around Chicago. Now one pair even nests on the Northern Trust building near the Sears Tower. Watch for them over lakefront parks, and around the canyons of the Loop.

People vs. nature. Predator vs. prey. Black vs. white. And grays, and color.
drained for agriculture, the area served as a fabled breeding ground for wildlife now extinct in the region, such as trumpeter swan, prairie chicken, bison, elk, wild turkey, black bear, and timber wolves, along with countless other species of waterfowl and fish.

The proposal, which includes a sampling of the wetlands, oak savannas, and prairies that formerly blanketed the area, would be the largest restoration of its kind in the midwest. The region would again provide habitat for many of the 75 state-listed and five federal threatened and endangered species that once made homes there, including bald eagle, Mitchell's Satyr butterfly, sandhill crane, Indiana bat, copperbelly watersnake, Mead's milkweed, and eastern prairie-fringed orchid.

The refuge would also provide abundant recreational opportunities, including hiking, birding, and canoeing.

According to John Rogner, Field Supervisor for the US Fish & Wildlife Service, the refuge would "protect and expand the fine wetlands that survive today—and restore the natural upland ecosystems that once surrounded and nourished them."

The US Fish & Wildlife Service public comment period on the proposal to create the refuge extends until June 20. Letters can be sent to Thomas J. Larson, Chief, Ascertainment and Planning Division, US Fish & Wildlife Service, 1 Federal Drive, Fort Snelling, MN 55111-4056. A summary of the proposal and alternatives is available at http://www.fws.gov/r3pao/ext_affr/news.html.

—M. Kathleen Pratt

NATURAL WONDERS

In early April, Chicago Wilderness launched a year-long celebration of the nature of this region by designating a dozen spectacular natural areas and announced a series of guided nature walks throughout the next year to promote the natural wonders of the region. Woodlands bursting with wildflowers, wading birds gliding through wetlands, salamanders slithering in the mud, waves of tall prairie grasses. "All this splendor is within our reach, if we know where to look," said Phillip D. Peters, chair of the Chicago Region Biodiversity Council and director of Northeastern Illinois Planning Commission.

The 12 areas designated as natural wonders are:

- Chain O' Lakes Region (McHenry and Lake Counties)
- Glacial Park (McHenry County)
- Illinois Beach Preserves (Lake County)
- Illinois Boundary Prairies (Cook County)
- Indiana Dunes National Lakeshore (Porter County, IN)
- Messenger Woods (Will County)
- Midewin National Tallgrass Prairie (Will County)
- Nelson Lake Marsh (Kane County)
- North Branch Woodlands & Prairies (Cook County)
- Poplar Creek Forest Preserve (Cook County)
- Ryerson Conservation Area (Lake County)
- Waterfall Glen/Palos Preserves (DuPage County)

Upcoming guided nature walks:

- June 6, 10am - 12pm Marsh-N-Adventure, Glacial Park (McHENRY)
- June 7, 9:30am - 11am Animal Camouflage, Dropseed Prairie (COOK)
- June 20, 8:30am - 12pm Playground for the Very Wild, Midewin National Tallgrass Prairie (WILL)
- June 21, 9am - 12pm Camp Sagawau: From Canyon to Prairie (COOK)
- July 11, 10am - 12pm Knee Deep in Biodiversity, Waterfall Glen (DuPAGE)
- July 18, 9am - 10:30am Bobolinks & Butterflies, Poplar Creek (COOK)
- July 25, 4pm - 6pm Pinhook Bag Exploration, Indiana Dunes National Lakeshore (PORTER, IN)
- August 2, 10am - 12pm Prairies of the 21st Century, Gensburg-Markham Prairie (COOK)
- August 22, 8pm - 9:30pm Moonlight Serenade, Glacial Park (McHENRY)
- August 29, 9am - 11am Biodiversity & Wildflowers, Chain O'Lakes State Park, Spring Grove (LAKE)
- August 29, 10am - 12pm Prairie Views, Spring Bluff Forest Preserve (LAKE)

All walks are free of charge but require pre-registration by mail. For a Nature Walks brochure and registration form, call the Chicagooland Environmental Network at (708) 485-0263 x396.
Prairie Passage

Across the country, hundreds of towns, cities and regions are trying to discover if it’s possible to renew America by settling down and appreciating it.

In northern Illinois and wherever it’s been taking root, this process has to do with seeing afresh the places where we live and work. It leads to a new kind of positive bookkeeping for places, as people set up and get the feeling for an accounting system that turns our customary thinking about assets upside down and inside out.

As the photographs in Prairie Passage so meticulously and elegantly point out, time, as it flows through communities over decades and centuries, is not always an enemy and a thief, undermining worth, gnawing through value. Just as often, time’s a ripener and repairer, a force that can heal, scour, comfort, burnish, and recombine, sometimes restoring value, sometimes generating it. It’s the sense of time, the sustainer, that suffuses the activities and accomplishments this book records. The book’s recurring central image—the blue thread that dews its pages together—is its views of a narrow, shallow, long-abandoned and now rediscovered 19th-century canal, the Illinois & Michigan, an alteration to the landscape that an ordinary listing of assets might ignore or discard altogether, seeing it only as a liability, ill-used by time.

...The Illinois & Michigan Canal is one of those artifacts—planners call them “lovable objects”—that, even if they had no further story to tell, people can almost instinctively feel affectionate and protective toward, thanks to their size and shape and workmanship.

The integrity of such objects is not diminished by mere dilapidation. And this particular skinny old canal has yet another level of potential resonance, because, in landscape terms, it’s a lovable object nested within the kind of place where awe can linger long, long after great natural events. An immense natural force shaped the larger area around the canal—what’s there now is the remnant of a raging, icy torrent once as potent as Niagara or the Amazon and known to geologists as the Chicago Outlet Valley. Another name for it is the Prairie Passage. 

...Beginning in the late 19th century, Americans who recognized the value of superb wilderness landscapes campaigned to have the naturalness of those special places protected as public parks. In the 125 years since Yellowstone was set aside as America’s (and the world’s) first national park, we have both fulfilled and outgrown that original dream.

We have created the world’s most extensive system of natural sanctuaries, and from a planetary point of view are, despite lapses, within striking distance of setting aside enough land to permit the healing of the earth’s ecosystems and watersheds. But along the way we have, without quite defining it, been creating a second legacy, a parallel network of lived-in landscapes. These inhabited and semi-inhabited places take up at least as much room as the wild places that remain. And in the aggregate, they have as much deep meaning for us as the wild lands beyond them.

The old buy-it-up-and-set-it-aside national parks solution is irrelevant to this new situation, because humanized landscapes present a separate kind of complexity. This doesn’t just mean that, unlike protected wilderness parks, they’re mostly made up of private property. The truly complicating factor is that, in America’s new special places, much of the private property has sometimes rapidly and sometimes gradually taken on community-sustaining functions that don’t appear on title deeds—with the result that it now benefits entire communities as much as it does the owners of the moment. The “takings” clause of the United States Constitution properly guarantees that no private property may be expropriated for public purposes unless the owners receive full value for what they’re giving up.

But, because the situation hadn’t yet presented itself in the 18th century, the Constitution doesn’t incorporate a “givings” clause, that sets up a mechanism for identifying, working with, and further enhancing the unvoiced public value that private property often begins to accumulate in special places.

The idea that “public rights” can adhere to privately-owned land, as Charles E. Little, America’s leading environmental writer on public landscapes, has pointed out, was first voiced by one of humanity’s greatest poets; it appeared in print in 1810, in a short guidebook to the English Lake District written by William Wordsworth. The consummate beauty of that area, Wordsworth wrote, the totality created and sustained by its hills, ponds, villages, farms and woods, spoke so feelingly to every succeeding generation of the English people, it had come to constitute “a sort of national property, in which every man has a right and interest who has an
Kevin (12) and Corey (8) Callahan meet a painted turtle. Photo by Robert Kucera of Niles, Illinois.