WOODED COMMUNITIES

Pillars of Mighty Cathedral Aisles

*The crown of a bur oak (*Quercus macrocarpa*) spreading out as wide as it is tall recalls the open savannas of pre-settlement times. The Millennium Oak, located at The Morton Arboretum in Lisle, Illinois, pre-dates Illinois' 1818 statehood.*

*Marsh marigolds (*Caltha Palustris*) brighten spring days in wet forests and flatwoods in the Chicago Wilderness region.*

Trees in the Chicago Wilderness region once grew as lone sentinels on the prairie. They grew in open groves and sun-dappled woodlands where they sometimes attained the noble shapes that reminded visitor Ellen Fuller of cathedral pillars 150 years ago.

These wooded communities varied over time and space. They blended into each other on their borders. The categories we have created to describe them are only rough descriptions of nature.

Climate, soils, topography, and drainage set limits on the kinds of natural communities that can live in our region. Other forces shape the landscape within the limits created by these factors. In our landscape, in the thousands of years before large-scale settlement, fire was the most important shaping force.

In those times it was the frequency and intensity of fire that determined whether a given piece of ground would be an open grove or a dense forest. We can arrange the pre-settlement wooded communities on a shade gradient, and when we make such a division, we find that our shade gradient is also a fire gradient. The more open communities grew in places where fires came often and burned with some intensity. Shadier places saw fewer fires or less intense fires. Some of our dense forests are fire sensitive communities that could live only where fires were rare events.

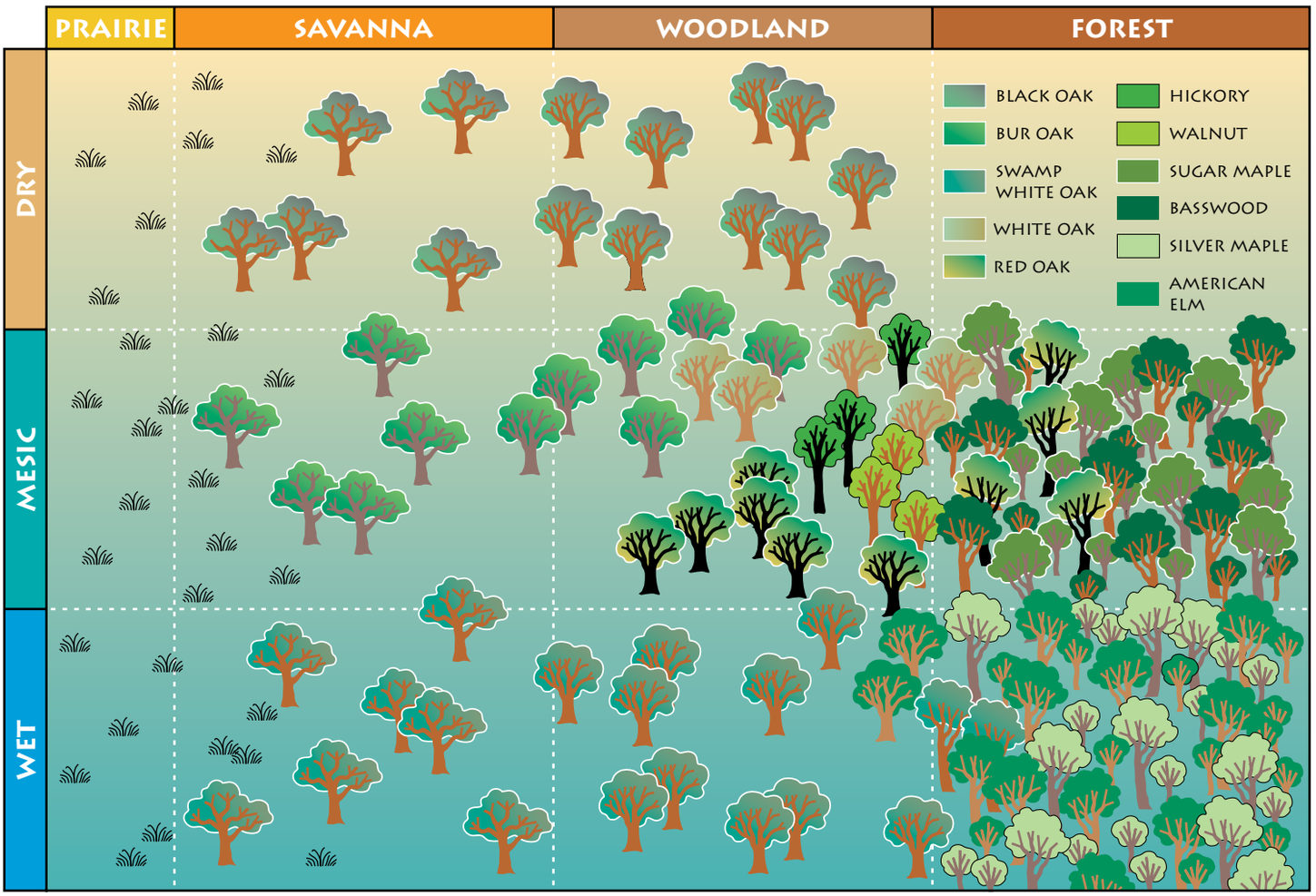
Our sunniest places were prairies where no trees grew. The next community on our gradient is the savanna. Savannas are considered grasslands with some trees. Ample sun reaches the ground, promoting the growth of a heavy turf of grasses and wildflowers that is fuel for fires.

Our open woodlands are some of the most distinctive communities in the region. Here grew white oaks (*Quercus alba*), bur oaks (*Quercus macrocarpa*), and red oaks (*Quercus rubra*), along with shagbark hickory (*Carya ovata*), bitternut hickory (*Carya cordiformis*), and black walnut (*Juglans nigra*). The understory in these woods was equally varied. Some had thickets of shrubs like American hazel (*Corylus americana*) and wild plum (*Prunus americana*). Other forests were open enough to allow farmers to drive a team and wagon through them. The species of trees in these woods were adapted to frequent fire. The canopy was open enough to allow oak seedlings and saplings to grow.

Our dense forests included some communities where fire was still a factor. At the heart of many prairie groves were stands of red oak (*Quercus rubra*) and black maple (*Acer nigrum*). And small areas had communities dominated by sugar maple (*Acer saccharum*) and basswood (*Tilia americana*) where fire played little or no role.

We can also divide our wooded communities into categories based on soil moisture. In our region moisture conditions for plants are mainly affected by soil texture and drainage.

The classifications scientists use to describe natural communities give a short, simple name to a very complicated thing. When we talk of



"oak savannas" or "oak-hickory forests," we are referring to communities that may include hundreds of species of plants, and—when you add up all the beetles, spiders, snails, and centipedes—thousands of species of animals. When we study a real natural area and decide what communities are present, we look at the entire biota, all the living things. Overall differences in the biota tell ecologists whether a given community developed as an open woodland or a dense forest. The biota also help us identify communities that have been seriously harmed by the changes that large-scale settlement has brought.

All of our wooded communities have been changed by the altered conditions that have followed settlement. The suppression of fire, in particular, has had a profound effect. With fire gone from the community, fire sensitive trees such as box elders (*Acer negundo*), ashes (*Frax-inus spp.*) and sugar maples have moved into oak forests, open woodlands, and savannas, places where they could not survive when fire was an active force.

These trees cast a dense shade. If we looked only at the amount of shade, we might today identify a remnant open woodland or a savanna as a dense forest. But if we look at the more conservative plants and animals, those most tied to a particular community, we see herps and wildflowers typical of open woodlands. The biggest and oldest trees are white and bur oaks, open woodland trees.

All these things tell us we are not looking at land that was originally a dense forest; we are looking at a savanna or open woodland undergoing a process of decay. The species that live in these communities, the species that with their combined activities create these communities are dying out. Thousands of years of history in this place and millions of years of evolutionary history are dying with them. Only a poor mix of a few trees, some weeds and much bare ground remains. Fortunately restoration can reverse this trend.

WOODED COMMUNITIES IN THE CHICAGO WILDERNESS REGION

This diagram arranges the pre-settlement wooded communities of this region on two axes. One separates them according to soil moisture from wet to dry and the other according to the density of the tree canopy. This density gradient is also a fire gradient. Fires burned hotter and more often in the communities to the left of the diagram. Communities to the right saw fewer fires.

WOODED COMMUNITIES

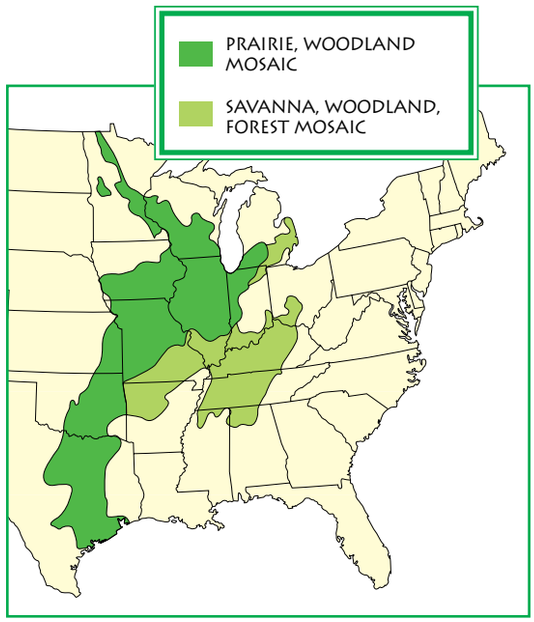
Savannas

At Rollins Savanna in central Lake County, more than 450 acres of former farmland have been restored as part of a massive habitat restoration and preservation project.

Black oaks are the most common trees in the sand savannas.

Bur Oak

*Bur oaks (*Quercus macrocarpa*) are the most common trees of the Midwestern mesic savanna groves. Their thick, corky bark help the large trees survive intense fires. Even fires hot enough to kill the above-ground parts of the tree cannot harm the roots. Dormant buds at the base of the dead trunk spring to life and produce new stems. Enormous root masses called grubs grow over the years. With these well-established root systems feeding them water and nutrients, the young stems need only a few years without fire to grow tall enough to get their crowns above the flames, giving them a good chance of surviving fires. Concentrations of bur oaks in the Chicago Wilderness region often mark places where fire was frequent in the past.*



Savanna trees have broad crowns, an indication that they grew in places where they had space to spread out. Some old savanna oaks are as wide as they are tall.

Sand savannas grow on dunes along Lake Michigan and inland on sandy soils. Black oaks (*Quercus velutina*) are the dominant trees in these savannas, although white pine (*Pinus strobus*) and jack pine (*Pinus banksiana*) are part of this community in the Indiana Dunes. The understory of the sand savanna is mainly species typical of dry prairies.

The sandy soils of the sand savanna create a dry environment that makes it easier for fires to burn through them. However, these soils have very low fertility. Because of this low fertility, the annual production of new leaves, stems, and twigs is small. Low productivity means there is little fuel for fires, so when fires do break out, they are likely to be small.

The ability of oaks to resprout from their roots after the above ground parts of the tree have been killed by fire is one of the reasons they are able to thrive in fire-dependent communties such as savannas. Resprouts often grow into trees with two or more trunks rising from one root system.

Wet savannas grow on land with a subsoil of clay that prevents water from draining away. Standing water may be present in spring and early summer, but by autumn, the ground is dry enough to allow a fire to burn through the grove. Swamp white oaks (*Quercus bicolor*) are the most common trees.

The major tree of the mesic savanna is the bur oak (*Quercus macrocarpa*), our most nearly fireproof local tree. Bur oak savannas occupy silt-loam soils as well as gravel soils.

Bur oak savannas have nearly vanished. Grazing killed off much of the understory and fire suppression allowed fire sensitive trees and shrubs to invade. These cast enough shade to prevent the oaks from reproducing.

The understory in these savannas was either graminoid—which means dominated by grasses—or shrubby. American hazel (*Corylus americana*) and wild plum (*Prunus americana*), which can both grow in areas with moderate fire regimes, were typical shrubs.

Open Woodlands

The open woodlands of the Chicago region were one of the most distinctive and diverse community types in our native landscape. Oaks, as a group, were the most common trees in these woodlands, but the exact composition of the community was quite varied.

On mesic soils—places where soil moisture lay between the extremes of wet and dry—combinations of oaks and hickories (*Carya spp.*) might be found. Mixed oak woods where bur oak, white oak, and scarlet oak (*Quercus coccinea*) grew together were also present. Smaller amounts of black cherry (*Prunus serotina*) might also be present, but the thin bark of this species leaves it vulnerable to fire.

Trees in open woodlands grow much closer together than savanna trees, and their crowns are correspondingly narrower. However, enough light reaches down to the lower trunks to allow branches to grow low on the trees.

The presence of fire in open woodlands prevents invasive species such as ashes and sugar maples from taking over the community, and the open quality lets in enough light to permit the oaks to reproduce and maintain themselves as the principal trees.

In the native landscape, when healthy open woodlands could be found throughout the region, these communities were home to some spectacular concentrations of wildlife. The many nut-bearing trees—oaks, hickories, and walnuts—along with the presence of American hazel (*Corylus americana*) shrubs in the understory, provided rich food sources for the now-extinct passenger pigeon (*Ectopistes migratorius*) and for wild turkeys (*Meleagris gallopavo*) as well. The latter species has been extirpated from this region, but could be reintroduced.

In the understory, plants typical of the open woodlands include yellow pimpernel (*Taenidia integerrima*), a species that might be found in border zones between woodlands and prairies. Wild hyacinths (*Camassia scilloides*) grow in woodlands and savannas.

Our open woodlands have been hit especially hard by the changes settlement has brought. In addition to invasions by native trees, this community has been especially vulnerable to the exotic invading shrub called common buckthorn (*Rhamnus cathartica*). The conditions of medium shade seem ideal for this species. Buckthorn and the native invaders create such dense shade that they kill the understory plants and effectively prevent the oaks from reproducing.

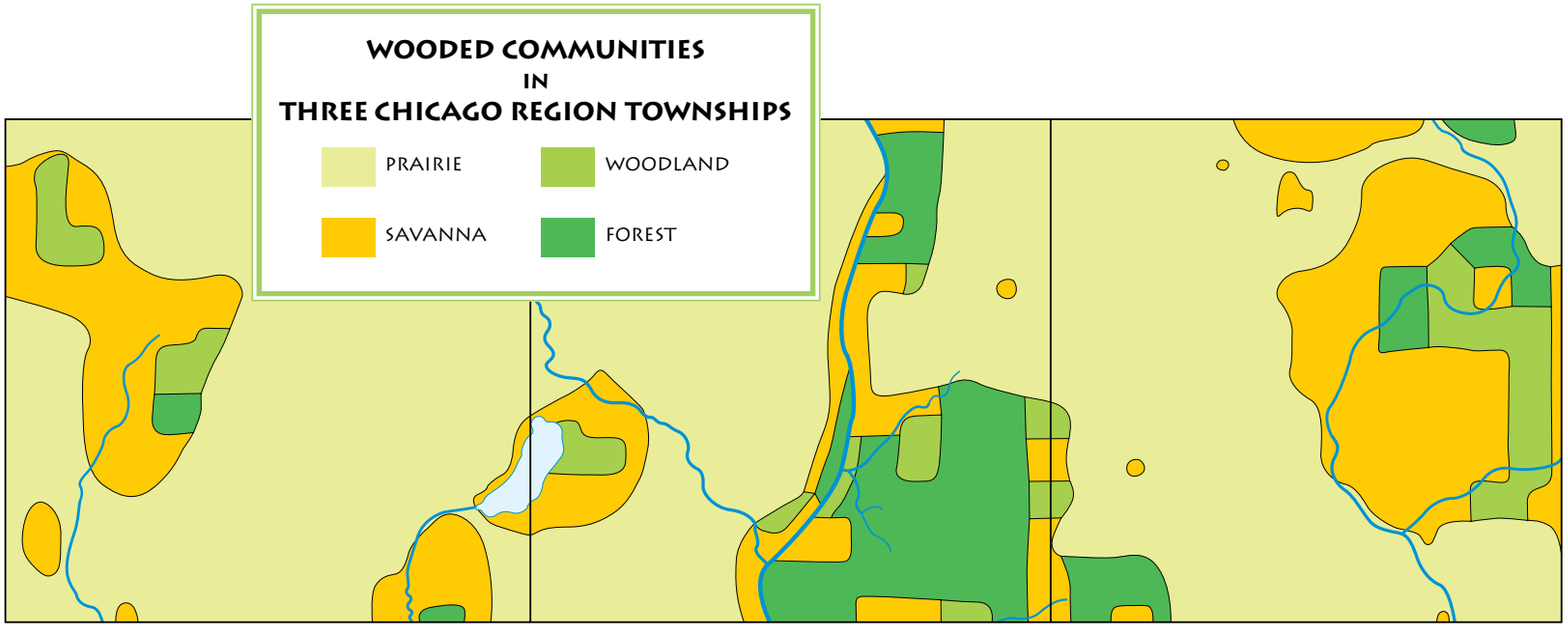
In recent years, restoration and management, including prescribed burnings, have revived many open woodlands. Typical understory plants have returned, and oaks are beginning to reproduce again.

In dense forests, most wildflowers bloom in early spring before the trees leaf out. In woodlands such as the one shown here, more light reaches the ground and more flowers bloom in mid and late summer.

Open oak woodlands with rich understories are one of the natural wonders of the Chicago Wilderness region.

Black Maples and Sugar Maples

*Botanists still argue about the differences between black maples (*Acer nigrum*) and sugar maples (*Acer saccharum*). The two species appear quite similar in many important respects, and some specimens today show characteristics of both. Older trees are more distinctive, and in the pre-settlement landscape, they behaved in quite distinctive ways. Sugar maples were confined to places where fire almost never came, while black maples could be found in forests and woodlands where fire was a regular occurrence. Black maple would have been the more common species then and the major local source of maple sugar.*



This map of the presettlement vegetation in three townships in eastern Kane and western DuPage County shows the effects of fire on the distribution of wooded communities. Prairie areas on the map are on flat glacial outwash. Wooded areas are on moraines where hills give fires a patchy distribution. Land east of rivers and Nelson Lake Marsh was relatively protected from fire. The most fire-sensitive community, a mesic forest, grew on the east bank of the Fox River.

WOODED COMMUNITIES
Flatwoods

Flatwoods communities are a product of topography and the complex, multi-layered deposits left by the glaciers. They develop on land that is flat or gently sloping. Below the surface, usually between 24 and 36 inches deep, is a layer of clay that restricts the movement of water down into the ground.

This clay layer is not the virtually waterproof hardpan found under southern flatwoods, but the clay is enough of a barrier to hold back water for long periods. Most of the time, the soil above the clay layer is saturated, and the water moves in sheets over the surface.

During spring and early summer, water may stand on the surface in puddles and shallow ponds. By late summer, both the surface and the soils above the clay layer, may be completely dry. Small knolls may support plants typical of dry situations, while wetland species grow in the low places.

Fire played a major role in determining just what sort of community developed in this wet/dry situation, but long term fire suppression has made it difficult for us to gauge the extent of fire's effects. Common species are swamp white oak (*Quercus bicolor*) and various ashes (*Fraxinus spp.*), especially black ash (*Fraxinus nigra*). Huge old bur oaks are a feature of some flatwoods. The absence of fire has allowed silver maple (*Acer saccharinum*) to become common.

Early spring is wet in the flatwoods.

It is likely that in presettlement time when fires were frequent, flatwoods were more open and savanna-like than they are now. The change in tree density can lead to changes in the plants of the understory. Open flatwoods share many ground layer plants with sedge meadows. Fire-starved flatwoods are often too shady for such species. Fire-starved flatwoods also contain some of the largest and most vigorous specimens of poison ivy (*Rhus radicans*) in our region. The vines climb to the sky by clinging to the trunks of the largest trees.

Forests

Dense forests were rather rare in the native landscape of the Chicago region. Probably the most common type, the black maple-red oak forest was adapted to periodic fires.

Our forests were sometimes found along rivers or in sheltered ravines near the shore of Lake Michigan where the topography inhibited fires.

At the eastern edge of our region, the American beech (*Fagus grandifolia*), one of the dominant trees in the forests of the eastern states, reaches the western edge of its range. Other prominent species of the beech-maple forest—trees, shrubs, and understory herbs, grasses, and ferns—also are not found west of Porter County, Indiana. A community that dominates much of the landscape to the east is here more like our fens and bogs. It was confined to islands where special circumstances made things suitable for it to grow.

Climate differences may be involved in these changes and soils play a role too, but fire seems to be the major factor. The dominant trees of the eastern forest have little resistance to fire. In the Chicago Wilderness region, oak woodlands and savannas grow on lands that would be covered with beech-maple forests just a few miles to the east.

Our floodplain forests are poorly understood, and few high quality examples exist. Silver maple (*Acer saccharinum*) is a dominant species in this forest, growing along with ashes (*Fraxinus spp.*). Before Dutch elm disease struck, American elm (*Ulmus americana*) was an important species in this community.

*White trilliums (*Trillium grandiflorum*) bloom in early spring in an oak forest in Chicago Wilderness region.*

The groundlayer today is often rather sparse. However, this may represent a post-settlement condition. Because our sewer and drainage systems direct so much water into our rivers immediately after rains, flooding patterns are quite different than they were before settlement. Other changes in these communities may be involved as well.

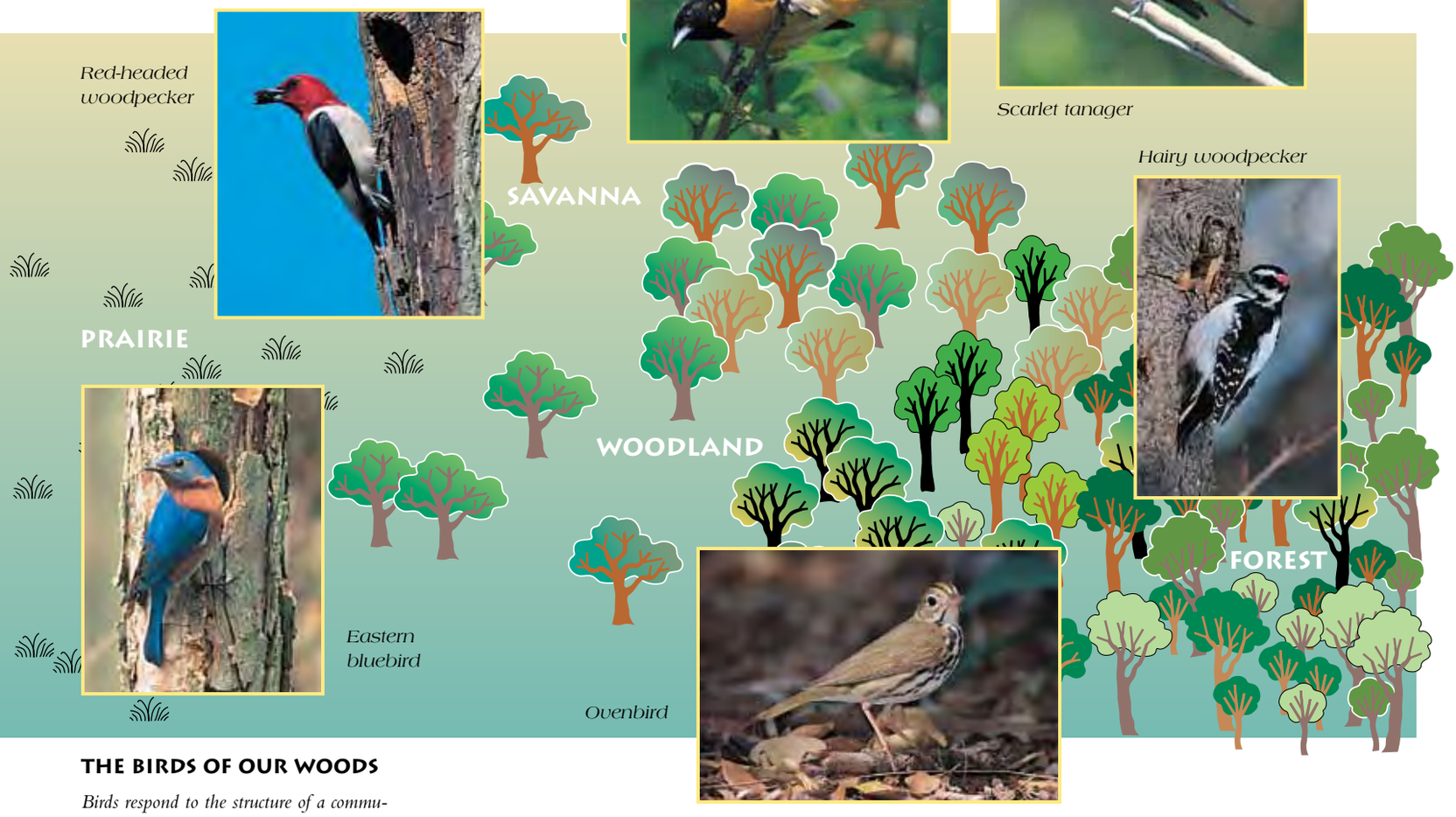
Fire suppression has allowed trees of the floodplain forests to invade upland sites where they did not grow prior to settlement. Swamps, forested areas that stay wet year around, are absent from the Illinois portion of the Chicago Wilderness region . They do occur at the Indiana Dunes. Red maple (*Acer rubrum*) is a major species in these swamps.

Fungi

Fungi play three major roles in ecosystems. They are decomposers that break down dead tissue and release nutrients in the tissue for reuse in the system. They are disease-bearers—Dutch elm disease, for example, is cause by a fungus. And they grow on plant roots and help plants absorb nutrients from the soil. These mycorhizzal (the word means "root-fungus") fungi absorb plant juices as food and deliver minerals to pay for their keep. In laboratory experiments, trees grown without mycorhizzal fungi are seriously stunted. The earth-star fungus (far right) is a decomposer. The ecology of the fungus at near-right is unknown. In the Chicago Wilderness region, our backyards may be as mysterious as the Amazon.

WOODED COMMUNITIES

Birds



THE BIRDS OF OUR WOODS

Birds respond to the structure of a community, nesting where the size and density of trees and shrubs meet their needs. Within each community, they fill different niches based largely on what they eat and how and where they get their food. Woodpeckers search the bark of trees, mainly on trunks and larger limbs, for insects. They do not compete directly with insect-eating species that search chiefly among the leaves and small twigs in the crown of the tree or with ground-feeding species. These divisions of the habitat allow large numbers of species to occupy the same grove of forest.

Birds tend to respond strongly to the structure of the plant community. In wooded communities, the size and density of both trees and shrubs affect bird populations far more than the presence or absence of any particular species of woody vegetation.

Some of our more common birds—robins, for example—nest wherever there are trees, from city parks and neighborhoods to dense forests. Most species are more specialized.

Northern (or Baltimore) orioles (*Icterus galbula*) favor open savanna groves. However, they have also adapted to the artificial savannas we create in parks, where they build their hanging nests high in the crowns of tall trees.

Scarlet tanagers (*Piranga olivacea*), like the orioles, feed on insects and fruit. Orioles feed from the tree tops down to low shrubs, while tanagers do their foraging more exclusively in the crowns of trees. Scarlet tanagers prefer woodlands and forests where trees grow more densely than in savannas.

As a group, woodpeckers feed on the trunks and large limbs of trees. Their powerful beaks and heavy skulls allow them to dig through bark and wood to find beetle grubs and other insects that feed on the trees.

Hairy woodpeckers (*Picoides vilosus*) prefer dense forests and are more likely to be found in large blocks of forest rather than in small wood lots. Their smaller cousins, the downy woodpeckers (*Picoides pubescens*) live among young trees, and in open savanna groves.

Red-headed woodpeckers (*Melanerpes erythrocephalus*) are a species of open woods and groves. Their populations have dropped precipitously in recent years, perhaps because of the influx of red-bellied woodpeckers (*Melanerpes carolinus*), which may outcompete their brethren for food and nesting sites. Closely related to red-headed woodpeckers, red-bellied woodpeckers also favor woodlands and forests. They are one of several species that

has expanded their range northward into the Chicago Wilderness region, likely in response to climate changes.

Eastern bluebirds (*Sialia sialis*) inhabit our savannas. They need trees for nest sites—they nest in holes—but feed over open ground. Groves scattered across the prairie are ideal habitat for this bird.

Down on the forest floor, ovenbirds (*Seiurus aurocapillus*) and wood thrushes (*Hylochichla mustelina*) search for insects amid the leaf litter. Ovenbirds build their nests on the ground, while wood thrushes nest in tall shrubs and small trees. Nesting success of both these bird species is thought to be low, because our fragmented forests allow for predation and parasitism.

Cooper's hawks (*Accipiter cooperii*) are bird-eating species that seems to favor open woodlands as nesting sites. They are one of the predator bird species that has rebounded dramatically since the pesticide DDT was banned in 1972.

Red-tailed hawks (*Buteo jamaicensis*) are definitely birds of the savannas. Our most common large raptor, they build their nests high in the trees, but hunt by soaring over open fields. A landscape that mixes prairies and woodlands is ideal habitat for this bird.

The red-tailed hawk is a savanna specialist.

Eastern towhees (*Pipilo erythrophthalmus*), yellow-billed cuckoos (*Coccyzus americanus*) and loggerhead shrikes (*Lanius ludovicianus*) are among the birds that nest in shrubby openings within or at the edge of woodlands.

Of the eight owl species that frequent our region, great horned owls (*Bubo virginianus*) are the most common. But barred owls (*Strix varia*) may have the most recognizable call. Their hooty "who cooks for you, who cooks for you all" can be heard in the deep, moist forests and wooded swamps it prefers.

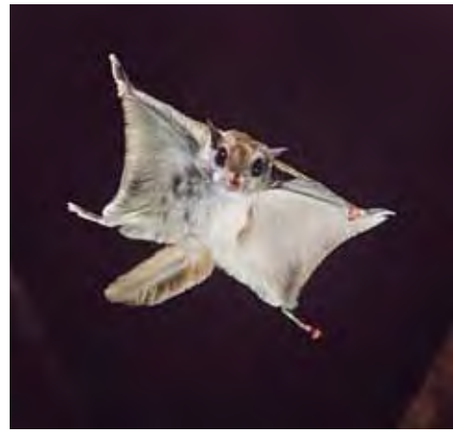
Shrews are among the most active mammals because they need to eat almost constantly. Just a few hours without food could mean starvation. With poor hearing and eyesight, they rely on smell and touch to find their prey, and then disable it with paralyzing venom in their saliva.

Mammals

Although coyotes are the biggest local predators, northern short-tailed shrews (*Blarina brevicauda*) may be the fiercest in spite of their tiny size. Measuring up to five inches from base of tail to pointy snout, the gray, velvet-furred animals spend much of their time underground or under leaf litter. Voraciously omnivorous, their diet ranges from fungi and seeds, to insects and slugs, to woodland voles (*Microtus pinetorum*) and even the occasional fellow shrew.

White-footed mice (*Peromyscus leucopus*) are another woodland species that are common but seldom seen. Unlike shrews and voles, which build elaborate tunnel systems in search of food, white-footed mice mostly wait until dark to forage—sometimes by climbing trees and shrubs—in search of the seeds and fruits that make up the majority of their diet.

Other woodland mammal species that wait until dusk or dark to feed are bats. Species common to our region are big brown bats (*Eptesicus fuscus*), eastern red bats (*Lasiurus borealis*), and hoary bats (*Lasiurus cinereus*.) The only mammals that can fly, bats feed exclusively on insects. A single bat can eat up to 3,000 insects in one night. During the day, they take refuge from predators and the weather by tucking themselves under the loose bark of trees, or roosting upside down in hollow tree cavities.



Flying squirrels don't really fly, but rather glide on loose folds of skin that stretch from their front to back feet. Strictly nocturnal, they are rarely seen. But their presence in wooded areas is an indicator of good ecosystem health.

*White-footed mice (*Peromyscus leucopus*) often wait until dark to feed. Because of their abundance, they are an important part of the food chain.*

WOODED COMMUNITIES

Herps

The larva of a blue-spotted salamander has gills that allow it to live in the water of a vernal pond. Adults hunt on the forest floor.

Vernal ponds are temporary pools wet only in spring. They are essential breeding habitats for amphibians. Fish—major predators on eggs and tadpoles—cannot live in the temporary ponds.

In early spring, long before the leaves have emerged on the forest trees, the thumbnail-across-a-comb songs of western chorus frogs (*Pseudacris triseriata*) and the clear whistles of spring peepers (*Pseudacris crucifer*) bring life to the dormant woods.

The center of life for these spring singers and other amphibian species is the woodland vernal pond. Formed of melting snow and early spring rain, the ponds dry up during the summer. Their temporary nature makes them ideal breeding grounds for amphibians because fish—which feed on eggs, tadpoles, and salamander larvae—cannot live in them.

Tiger salamanders are the most common salamander species in savannas. Their long maturation period requires ponds that stay wet well into the summer.

FROGS AND TOADS

There are 13 species of frogs and toads in the Chicago Wilderness region. All of them court and mate in the water. Their young begin as eggs, which hatch into tadpoles. Without limbs or lungs, they remain in the water until they metamorphose into adults. As adults, spring peepers take to the trees. American toads (*Bufo americanus*) prefer moist areas with plenty of insects to eat. Mature western chorus frogs are equally at home in the woods and wet prairie areas.

Throughout their lives, frogs continue to absorb water through their skins. For this reason, they are considered an important indicator species; meaning that changes in their populations can help us detect changes in the environment. Pollution from agricultural pesticides, urban run-off, and acid rain are suspected in the dramatic decline of certain frog populations. Northern cricket frogs (*Acris crepitans*), which are smaller than many insects, once were found in large numbers throughout Illinois, but in the 1970s, they all but vanished from the upper Midwest. Another likely reason for the decline in frog populations is the lack of groundlayer plants in many of our wooded areas. The shade cast by infestations of invasive trees and shrubs has killed off low-growing plants that provide food, shelter and life-sustaining dew.

SALAMANDERS

Like frogs and toads, the 11 species of salamanders found in our region begin life in the water. Salamanders lay their eggs in the water. Developing young remain there, breathing through gills, until their lungs develop. Their dependence on water can be a problem in dry years. If ponds dry up before the young mature, they will die. Human alterations to hydrology—draining certain areas or diverting natural water flows—can be equally harmful.

Tiger salamanders (*Ambystoma tigrinum*), one of the most common salamanders in our

region, are particularly vulnerable to changes in hydrology. Because of the long time it takes to reach maturity, they must remain in the water until late July. Other common species, including spotted salamanders (*Ambystoma maculatum*) and blue-spotted salamanders (*Ambystoma laterale*), usually emerge about a month earlier. All three are called mole salamanders because they spend most of their adult period either underground or under something on the ground. Dead logs offer good cover as do the undersides of rocks.

Some of our native salamanders are quite rare. Four-toed salamanders (*Hemidactylium scutatum*), fond of boggy places with sphagnum moss, are known from only a few locations. Southern two-lined salamanders (*Eurycea cirrigera*) and smallmouth salamanders (*Ambystoma texanum*) live only along the Kankakee River.

SNAKES

Woodland snakes are not dependent upon vernal ponds. But like many other herp species, they are threatened by an insufficient amount of healthy, intact habitat. Eastern racers (*Coluber constrictor*) require large forested areas of 500 to 700 acres. Redbellied snakes (*Storeria occipitomaculata*) range widely from moist woods to prairie. However, like eastern racers, many are killed on roads, especially as they travel to and from their hibernation areas. Like many snake species, eastern racers often hibernate communally, in a den site called a hibernaculum.

Insects

Insects are the unsung heroes of our natural landscape. Among the hundreds of different species that populate our wooded communities, some break down waste material, cycling nutrients back into the soil. Some pollinate plants, enabling trees and wildflowers to flourish. Many anchor the bottom of the food chain, their eggs, larva and adult phases providing nourishment for herps, birds, mammals, and even other insects.

Like many plants and animals in our region, however, some insects are threatened by the one-two punch of habitat loss and invasive species. For certain butterflies and moths, the knock-out blow could be the treatment used to control their non-native counterparts.

First introduced to the United States in the late 1860s as an attempt to develop a better silkworm, gypsy moths (*Lymantria dispar*) have been responsible for defoliating huge swaths of wooded lands. One of the primary treatments to slow the spread of the gypsy moth is the spraying of Btk. This naturally-occurring bacterium kills gypsy moth caterpillars by disrupting their digestive systems. Unfortunately, Btk is equally lethal for about one hundred other species of moths and butterflies, whose larval stages coincide with that of gypsy moths. Many of these species are conservative, meaning that they are largely restricted to specific woodland habitats. Because of the fragmented nature of many of our wooded areas, the fear is that if conservative species are eliminated from a particular site, they could be gone from that site forever.

Although efforts to eradicate invasive Asian long-horned beetles (*Anoplophora glabripennis*) have been successful, many fear that emerald ash borers (*Agrilus planipennis*) are here to stay. Their larvae feed on the cambium layer of ash trees, which ultimately severs their circulatory systems. Since 2002, emerald ash borers have killed tens of millions of ash trees across 12 states and two Canadian provinces, and threaten to kill millions more, which could have a significant effect on many plant and animal species in our region's wooded communities.

*Eastern milk snakes (*Lampropeltis triangulum*) were named by way of myth. Early farmers, finding them in their dairy barns, imagined that they drew milk from cows. In truth, the snakes were there to feed on mice, which were attracted by waste cattle feed. Today, milk snakes still may be found on farmsteads—both active and abandoned. But their natural habitat is open savanna, where, in addition to mice, they prey upon voles, frogs, fish, birds, and even other snakes.*

The raspy songs of Western chorus frogs (above) are a common sound around our forest ponds in spring. Gray tree frogs (right) leave the water after they become adults and ascend into the trees to live.