

A Prairie Calling

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FRIENDS OF
NACHUSA
GRASSLANDS



Oak Savanna

Photo: Charles Larry

The Great Rift Valley in Africa may seem like a surprising place to start an exploration of the Midwest savanna. But it's the cradle of mankind, and some anthropologists argue that to this day we genetically carry a certain familiarity with that landscape. Even if you've never

stepped foot into a savanna, it's why you may feel like home when you do.

What is a savanna? Experts and laymen alike have never agreed on an exact definition, but the discussion for our Northern Illinois region generally includes essential components.

STRUCTURE

The spacing of trees and their structure are the most distinguishing characteristics. Widely spaced oak and occasional hickory trees provide shade canopy over 10% to 60% of the area.

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From the air one can best see the scattered trees and open canopy structure that makes savanna different from woodlands and forests. Savanna can be a transition zone between full sun prairie and more heavily shaded woodlands.

A savanna tree canopy has trees well-spaced from one another. Often called “open grown,”

savanna trees tend to have all their lower limbs because the trees are well-spaced from one another and more sunlight pours through the canopy to reach the lower branches. In contrast, woodland trees grow closer together, and since less light reaches the lower branches, these branches usually die off. □

Understory

Savanna understory includes grasses, flowers, and shrubs. Where the tree canopy is open, there is more available sun, and the prairie plants will flourish. When the tree canopy covers at least half the sky, woodland plants that require more shade will thrive.

Importantly, there are also savanna specialists, plants that prefer part-sun and part-shade. Since the savanna provides light conditions of full sunlight, partial sunlight, and shade, there is more species diversity here than in either the prairie or the woodland.

A mixture of oak grubs and shrubs comprises the shrub layer, including Iowa crab and hazelnut. Mid-story trees are primarily oak and hickory juveniles, also known as recruits, that are waiting for their chance to become part of the canopy. □



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Yellow Violet



© Dee Hudson

Starry Campion



© Dee Hudson

Wild Geranium



© Dee Hudson

Bottle Brush Rye



© Dee Hudson

Jack-in-the-pulpit



© Environmental Protection Agency

Silky Rye



Redheaded Woodpecker

The stunning redheaded woodpecker is the iconic bird of the savanna. It flashes its red hood and white tail feathers as it flits about the sun-dappled savanna. And its future is reliant on healthy oak savanna and oak woodland.

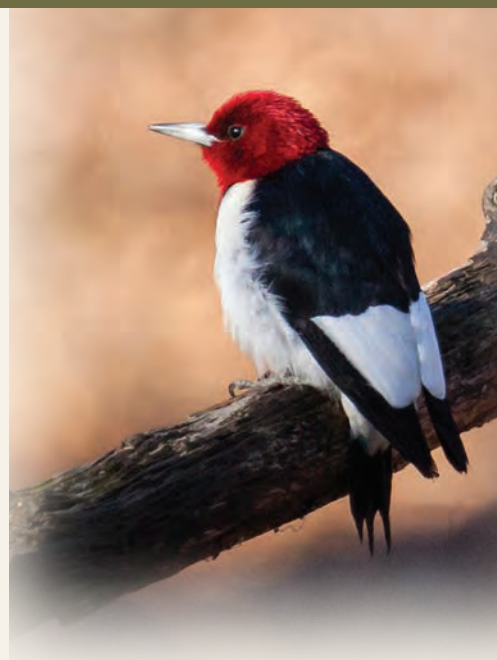
The “redheaded” is uncommon and declining throughout much of its range due to habitat loss. Research indicates that they prefer oak woodland, particularly oak savannas, which feature scattered large trees with patches where sunlight reaches the ground. Large standing dead trees, also known as snags, are especially important places for redheaded



woodpeckers to nest in the summer and to cache food year-round. Adjacent clearings and an open understory also are important to provide opportunities to forage for food.

The redheaded woodpecker is one of only four North American woodpeckers known to store food. They are fierce defenders of their territory. They may remove the eggs of other species from nests and nest boxes, destroy other birds’ nests, and even enter duck nest boxes and puncture the duck eggs. Redheaded woodpeckers dart out from perches to capture flying insects or glean them from the ground or shrubs, but only rarely drill into trees.

Today, loss of snags, fire suppression, firewood harvest, vehicle-caused mortality and, most significantly, ecological succession of open woodlands/oak savannas to closed-canopy woodlands, all



pose significant threats. Non-native invasive shrubs such as common buckthorn (*Rhamnus cathartica*) may also degrade savanna and woodland habitat and thus pose a threat to redheaded woodpeckers.

Due to their increasing rarity, visitors are often amazed and enraptured to see them as a rather routine part of Nachusa’s savanna. □

Photos: Dee Hudson

SAVANNA ANIMALS

Savanna supports a wide range of birds that like the edges between grasslands and woodlands. Standing dead trees are essential for the health of the iconic redheaded woodpeckers. See vignette above.

FIRE

Fire is absolutely critical to savanna habitat.

Brush and small trees are thinned by frequent low-intensity fires. While we burn recovering savanna almost every year, that fire

frequency will gradually shift to every other year or even less. Oaks thrive in this repeat fire scenario because they have thick bark and re-sprout repeatedly if they are set back by fire. We also thin brush with saws and brush mowers when starting a restoration.

For thousands of years native Americans burned savanna to attract game and manage plant growth. When European settlers arrived, they were attracted by savanna for its protective shade and readily available wood. White

oak was especially desirable for building structures, and all tree species conveniently fueled settler hearths. The understory of grasses and flowers allowed for grazing, and the scattered trees provided comforting shade.

Grazing tended to maintain plant structure, but ultimately, the suppression of fire allowed for the take-over by shrubs and native trees that otherwise would not have withstood frequent burning. Savannas were part of the post-settlement agricultural landscape

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Under the Oaks

Restoration activist Stephen Packard is key to our current passion for protecting savanna. In the inspiring and true habitat mystery *Miracle Under the Oaks* by William K. Stevens, we watch Packard search for and finally uncover a “lost ecological community.” With his relentless curiosity, we marvel as Stephen demonstrates that savanna is, indeed, a unique habitat type with its own assembly of partial shade-loving plant species; that it is more than just prairie with trees; and that it is a critically endangered habitat worthy of protection.

Stephen also had a major role in the creation of Nachusa Grasslands. He asked, “Is it good enough to conserve only areas too small for most animals? Don’t we need more? To truly conserve plant communities, shouldn’t we try for some preserves large enough to conserve the rare animals too?” He wisely hired Bill Kleiman to be Nachusa’s first manager in 1993. □



Stephen Packard
©The Nature Conservancy



© Charles Larry

until the turn of the century when many were eventually over-gazed and lost.

Humankind has always been a part of savannas. Native Americans burned the habitat, and European settlers built under the oaks. Now we work to preserve this unique and highly threatened landscape.

SCOPE OF SAVANNA

The Nature Conservancy reports that oak savanna once covered about 27 to 32 million acres of the Midwest.

Sadly, savannas have become exceedingly rare in the northern Illinois region. Development has dramatically impacted the natural processes needed to maintain quality oak savanna ecosystems. Only a relative handful of quality sites remain, making the preservation of what remains essential.

NACHUSA SAVANNA

One bright spot is the Big Woods savanna at Nachusa which has been lovingly restored over 20 plus years by retired stewards Hank and Becky Hartman. A misnomer that stuck, Big Woods is actually a savanna that transitions into a beautiful oak-hickory woodland. The only thing that would make Big Woods better is for it to be greatly expanded. Protecting more savanna is definitely part of the long-term vision for Nachusa. □

BIBLIOGRAPHY & CONTRIBUTORS

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Miracle Under the Oaks by William K. Stevens.

Red-headed Woodpecker Species Guidance—Wisconsin Dept. of Natural Resources.