

NATURAL LAND INSTITUTE

Conserving Land
in Northern Illinois

Notes from the Field

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This Eastern Towhee photo was taken at Seward Bluffs Forest Preserve and is a bird of conservation concern. It is listed in the Illinois Wildlife Action Plan. More than 60% of shrubland bird species have experienced a widespread decline in the eastern United States. Photo: Dan Williams



A White-eyed Vireo, seen at Rock Cut State Park, is a bird that depends on shrubland habitat. Photo: Barbara Williams

Shrubland Birds Rely on This Niche Environment

Declining numbers in a diminishing habitat

By Dan Williams

Shrublands are not often discussed in popular publications, nor are they mentioned with the same frequency, if at all, in discussions that concern prairies, savannas and forests, so a definition might be helpful. What are shrublands, anyway?

The University of Illinois Extension defines “shrubland” as

“a plant community dominated by shrubs that are smaller than trees, usually with multiple trunks, that reach a vertical height of less than 15 feet and are mixed with grasses and

forbs. They may exist naturally or as the result of fire or other disturbance.”

When scientists and property managers refer to shrubland, they are not referring to patches of invasive species like honeysuckle, buckthorn or autumn olive, but native species like hawthorn (*Crataegus spp.*), Dogwood (*Cornus spp.*), Crabapple (*Malus spp.*), or American Hazelnut (*Corylus americana*). In 2020, Nancy Kuhajda reported that the Illinois Natural History Survey identified only 180 acres of shrubland prairie of good to fair quality remaining



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The foreground features prairie with shrubland in the background at NLI's Lost Flora Fen on Raccoon Creek. Photo: Dan Williams



Shrubland habitat seen from a distance at Nachusa Grasslands. Photo: Dee Hudson



Shrubland at Nachusa Grasslands. Photo: Dee Hudson

in Illinois.”¹ That paltry number is cause for alarm and raises sobering questions about the species that depend on that habitat for survival.

The problem, of course, is loss of habitat. Unfortunately, the birds and other species which depend on shrubland habitat often have no choice but to try to make use of whatever is left. Often those are thickets of invasive

species, like non-native honeysuckles.

Major causes of habitat loss are, in no particular order, real estate development, changes in agricultural practices, invasive species, lack of fire, and the focus of land management on forests and prairies without attention to the plant community that often lies between them. Once, there were Redcedars growing at **Ayer's Sand**





Brown Thrasher at Lost Flora Fen

Photo: Barbara Williams

Prairie Nature Preserve in Carroll County, Illinois. A pair of Loggerhead Shrikes nested in the cedars. When the undesirable cedars were removed, the shrikes stopped nesting there. Fortunately, there were other Redcedars across the road from the preserve where shrikes have nested for approximately 20 consecutive years since.

Loss of habitat means fewer places for the birds that occupy those vegetative niches. More than 60% of shrubland bird species have experienced a widespread decline in the eastern United States.



Prairie Warbler at Colored Sands Forest Preserve. Photo: Dan Williams

Chicago Wilderness lists 13 bird species that depend on shrublands. You are likely familiar with many of them, but perhaps, you have also noted that you are encountering fewer of each. Here are 18 species normally associated with shrublands: Gray Catbird, Brown Thrasher*, Indigo Bunting, Black-billed Cuckoo*, Eastern Towhee*, American Woodcock*, Loggerhead Shrike*, Blue Grosbeak, Bell's Vireo*, White-eyed Vireo, Yellow-breasted Chat*, Clay-colored Sparrow, Golden-winged, Blue-winged*, and Prairie* Warblers, Willow Flycatcher*, Eastern Kingbird and Northern Bobwhite.²

Many other species of plants, invertebrates, reptiles, and others depend on shrublands. Their populations are shrinking, too, and some of them are also on the **Illinois State List of Endangered/Threatened Species** such as the Ornate Box Turtle or Plains Hog-nosed Snake.



Loggerhead Shrike at Ayer's Sand Prairie Nature Preserve.

Photo: Dan Williams

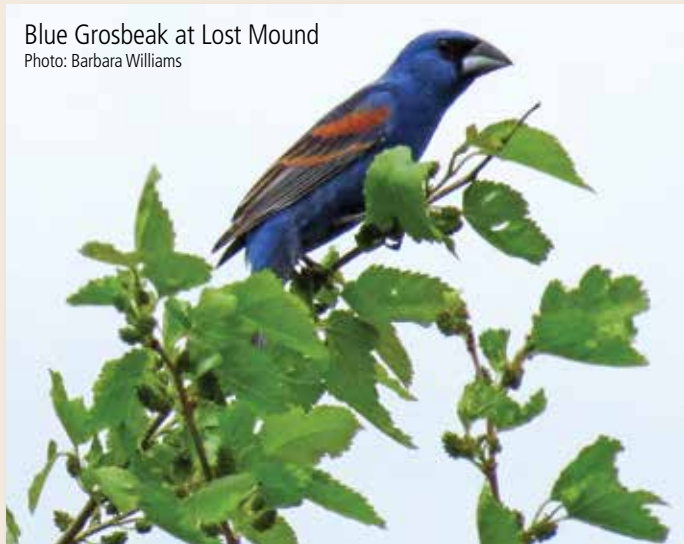
Historically, shrublands were a dynamic habitat that occurred between forests and prairies in areas affected by fire, certain soil types, other disturbances, or in a combination of multiple factors. In the mosaic of natural vegetation changes before human modification of habitat, shrubs were able to ebb and flow over time as they adjusted to disturbance. The species that occupied that habitat moved with them. That is no longer true except in places where habitat is actively managed by removal of invasives and by regular use of prescribed fire to control invasives and intrusion by trees. Much is still poorly understood regarding fundamental demographic processes associated with each species, so the management of such habitat is complicated.³

If you visit natural areas in northwest Illinois, you will see some existing shrubland patches at Nachusa



Blue Grosbeak at Lost Mound

Photo: Barbara Williams



Grasslands, NLI's Lost Flora Fen and Nygren Wetland Preserve, the Lost Mound Unit of the Upper Mississippi National Wildlife Refuge in Carroll and Jo Daviess counties, and on the edges of various prairie and forest restoration in forest preserves. Many remnant shrublands on the edges of agricultural fields have been removed through changes in farming practices.

1 Kuhajda, Nancy. Missing the Middle: The Importance and Fragility of the Shrublands Habitat, University of Illinois U-C, College of Agriculture, Consumer and Environmental Sciences, Illinois Extension, December 17, 2020.

2 Species denoted with an asterisk (*) are listed on the Illinois Wildlife Action Plan

3 Akresh, Michael E., King, David I., and Brooks, Robert T. Demographic response of a shrubland bird to habitat creation, succession and disturbance in a dynamic landscape. Forest Ecology and Management, Forest Service, U.S. Department of Agriculture.

Managing Land for Shrublands

By Alan Branham, *Executive Director, Natural Land Institute*

As a lifelong birder, I was glad to read Dan Williams' article on shrubland birds and it presents an ongoing challenge for the Natural Land Institute (NLI) stewardship team to manage a land for all species. No, we won't manage for this habitat in prime relic tallgrass prairie (note his prior article on grassland birds in *Notes from the Field*, Summer/2025), but many old field areas and woodland edges contain this key habitat. It is always tough to make the decision to reset an area for long term conservation: this means clear cut or at least remove the oldest brush to reset it, a term called coppicing and widely practiced in England to protect the biodiversity there.

Besides the birds there are actually some pretty interesting elements of our flora that also thrive in this successional habitat. Hawthorns are one that now have become of conservation concern as they lose this habitat to the extremes of forest and grassland. Some species of small trees like Pin Cherry (*Prunus pensylvanica*) are now becoming quite rare – a few literally clinging to existence. Redcedars are so bad mouthed for their aggressive tendencies, but they are one of the best habitat creators when not engulfing remnant prairies. They too, need to be reset periodically, living for centuries (and even

over a millennium) on cliff faces. Where will our two species of aspen: Bigtooth and Quaking Aspen (*Populus grandidentata* and *P. tremuloides*) find a niche in the future? They are the pioneer forest but what is that anymore?

Some herbs that need this second growth include an orchid: Lily Twayblade (*Liparis liliifolia*) – a wildflower I've not seen in a long while because these successional lands get choked out, especially by invasive buckthorn and honeysuckle. Yes, we even had a native buckthorn: Lanceleaf Buckthorn (*Rhamnus lanceolata*) that appears to be another lost flora and absolutely needed successional lands. It has the typical black berries on female plants but they don't last into winter — they are immediately devoured by wildlife or just drop by late summer.

One bird Dan didn't mention is because it is long gone, but still found to our north: Ruffed Grouse. This bird absolutely must have second growth and dies out in maturing forest — a bird I grew up with in Northeast Iowa but is now gone from there, too. I wrote about Upland Sandpipers for the grassland and I guess I can dream about hearing the drumming of a Ruffed Grouse once again, too.





A rare Northern Meadow Jumping Mouse (*Zapus hudsonius*) was discovered during the BioBlitz at Silver Creek Woods Preserve. Note the long tail. They also have very long hind legs that give them a Kangaroo like hopping ability.

Photo: David C. Olson Photography

Quest for the Star-nosed Mole BioBlitz Report

By Alan Branhagen, *Executive Director, Natural Land Institute*

More than 750 species of larger life forms: slime molds to fungi, plants, invertebrates from planaria to insects, and vertebrates from fish to birds and mammals were documented at the Natural Land Institute's Silver Creek Woods Preserve during its bioblitz on June 19, **Secrets of the Night** and June 20, **Quest for the Star-nosed Mole**.

Besides a prior fish survey in Silver (Rock) Creek, little inventory of the site's life had been conducted. The land was owned and protected by the Natural Land Institute's (NLI) founder **George B. Fell** and his wife, **Barbara**, long before it became an NLI preserve – their notes mention the Star-nosed Mole!

The site is named after the meandering Silver Creek which flows, un-dredged and un-tiled through the preserve. The prior fish and macroinvertebrate survey in 2019 revealed state endangered Mottled Sculpins.

Our bioblitz found stoneflies, which are an indicator of high quality streams. We did not have a fish specialist to shock and relocate the sculpins during the blitz but they are certainly still present.

The meandering creek flows through a low floodplain wetland, largely now infested by invasive reed canary grass (RCG) but with intermittent good stands of native plant species and a rather open woodland. It is here, in these wet areas that the mole tunnel runs we have observed are likely made by the event's mascot: Star-nosed Mole (they are subterranean and aquatic mammals). We did not find the mole during the event but will continue our non-lethal surveying to document this species. Yes, we could set a mole trap in one of the runs but that would be against what we stand for. The common Eastern Mole was also missed on the survey though its runs were noticed in the upland woods both

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Silvery Spleenwort (*Deparia acrostichoides*) is a special fern that grows in rich undisturbed forests. Photo: Alan Branhagen



Crown-tipped Coral Fungus (*Artomyces pyxidatus*)

Photo: Ben King



Wrinkled Peach mushroom (*Rhodotus palmatus*)

Photo: Alan Branhagen



Painted Lichen Moth (*Hypoprepia fucosa*)

Photo: Angella Moorehouse



Dogbane Beetle (*Chrysochus auratus*) on Indian Hemp.

Photo: Angella Moorehouse

American Snout (*Libytheana carinenta*)

Photo: Angella Moorehouse





12-Spotted Skimmer (*Libellula pulchella*) Photo: Angella Moorehouse



Meadow Fritillary (*Boloria bellona*) Photo by Christopher Reisetter



Rusty Crayfish (*Faxonius rusticus*) An invasive species easily identified by its rusty spot. Photo: David C. Olson Photography



Common Snapping Turtle (*Chelydra serpentina*) Photo: Christopher Reisetter



Bluegill (*Lepomis macrochirus*) Photo: David C. Olson Photography



Brook Stickleback (*Culaea inconstans*) Photo: David C. Olson Photography



Creek Chub (*Semotilus atromaculatus*) Photo: David C. Olson Photography



before and after the event! Sneaky subterranean diggers that they are – they eat mostly worms, insects and other invertebrates (not plant roots) and help aerate soils.

The low grassy habitat along the creek also revealed a Meadow Jumping Mouse which have become quite rare – this was the 5th i-Nat record for Winnebago County. The mouse was captured, photographed professionally by **David Olson** and released right where it was first captured. These mice have a bit of “kangaroo” in them with long hind legs and an amazingly long tail which counterbalances their long-jump hopping abilities.

The site’s old growth, original block of woods has had some recent restoration work (removal of invasive shrubs with some tree seedling planting), with the help of **Roscoe Sportsmen’s Club**, but otherwise has not been “messed” with in many decades. There were some very special finds, foremost the Indiana Bat which is Federally Endangered and requires open, old growth woodlands for its summer habitat. A special fern, Silvery Spleenwort, was also documented and is another key indicator of rich, undisturbed forests – it has a conservation coefficient of 10. Plants with that number (the highest) are found only in undisturbed natural lands.

Fungi are an important part of our biodiversity and we were happy to have an amateur mycologist, **Ben King**, out surveying those for us. He found moss rust which is quite rare – and even a fungus that attacks caterpillars – he showed me the mummified caterpillar with the fungus protruding from it. I found Wrinkled Peach Mushroom, which Ben told me is also uncommon. He found the aptly named Crown-tipped Coral Fungus which does look a lot like it belongs in a coral reef! The species count for fungi totaled 55.

Reading a list of the recorded life is also quite entertaining – the common names of so many animals, especially insects, are quite amusing and spurring one’s imagination into what they look like. Both Woodland and Shaded Fuzzy Ants were photographed, then there was the butterfly, the American Snout, Meadow Spiddlebug, Whiplash Beetles, Dancing Kiss Fly, Long-tailed Dance Fly, and the damselfly: Springwater Dancer



A Pawpaw (*Asimina triloba*) grove at Silver Creek Woods Preserve
Photo: Kim Johnsen

that is really quite rare! The name that stood out most to me was Carnival Candy Slime Mold – I gotta see a picture of that one! When it comes to Latin names our jumping mouse is known as *Zapus hudsonius* and most are surprised to know our beloved American Robin has the Latin name of *Turdus migratorius*.

So, from living jewels like the aptly named Emerald Jewelwing (a damselfly), Dogbane Beetle and Six-spotted Tiger Beetle (all stunning and iridescent, looking right out of the rain forest) to dull and cryptic like Eastern Wood-Pewees and Willow Flycatchers we now have a better grasp of what lives at Silver Creek Woods Preserve. It will help guide us in managing the property to make sure the habitat for this diverse bunch remains and is stewarded properly.

Finding the pawpaw grove on the site in 2022 was a surprise and an accident – Stewardship staff didn’t know this normally more southerly understory tree was present and killed the oldest tree in a prescribed fire (it has since spread into an even bigger thicket).

I like Aldo Leopold’s quote: “The first part of intelligent tinkering is to save all the parts” so we must respect all these “parts” if we are to conserve the land – we know they are all a part of a complex food web that works together to maintain the health of the land.



Exciting Wildlife Research This Year

By Grace Wieland, *Field Biologist*

From the smallest masked shrew to the mighty bobcat, we recorded a wonderful variety of wildlife using our preserves this year. Understanding what animals are present helps our staff better manage and steward the land. This summer was particularly exciting for wildlife research at NLI because we added three new survey methods including: small mammal trapping, acoustic bat monitoring, as well as a new camera trap technique.

This year, NLI acquired 10 Sherman traps. These small, aluminum live-traps are specially designed to capture small mammals such as mice, shrews, voles, and moles. These traps were instrumental in capturing live specimens for the Silver Creek BioBlitz. Overall we had 18 captures including white footed deer mice, voles, a jumping mouse, and a masked shrew.

Another exciting addition to our research toolbox was a bat monitor, purchased with funds donated to NLI for this purpose by Dan and Barbara Williams. The device works by detecting, recording, and translating the high-frequency echolocation calls that bats emit while flying and hunting. This gives us an idea of what bat species are flying over us at any moment. You can read more about our survey at Lind-McGeachie Preserve in Cate Nelson's article.

Lastly, while researching methods to capture Star-nosed Moles, I learned about the Adapted-Hunt Drift Fence Technique (AHDriFT). The AHDriFT array combines two different survey tools: trail cameras and drift fences. The array uses a fence to funnel animals into an upside-down bucket where a trail camera is placed. Inside, the animal's photo is taken as it enters and exits the bucket. Our staff is then able to see what the array "captured" when looking through the photos. In this way, the array is fully remote and non-lethal, making it incredibly easy and cost-effective for our stewardship team to use. So far, our arrays have recorded small mammals, frogs, toads, snakes, and even some curious birds. Thank you to Howard and Lauren Knodle for their donation to buy trail cameras and Sherman traps and to the Williams for their donation for the bat monitor.

We are eager to keep using these techniques as we continue to manage and restore native habitats across NLI properties.



Grace Wieland shows the camera that sits inside the bucket to capture photos of small mammals that find their way inside it.

Photo: Adrienne Olson

Conservation in Mind for Bats

By Cate Nelson, *Natural Resources Technician*

Grace Wieland and I recently found ourselves working the night shift at Lind-McGeachie Preserve, just a stone's throw from Silver Creek Woods Preserve. After bioblitz surveys at Silver Creek indicated the presence of the federally and Illinois endangered Indiana bat (*Myotis sodalis*), we headed downstream to hear what might be hanging out (like a bat) at one of our nearby preserves.

Bat surveys are conducted using a microphone that can capture echolocation calls—sounds, inaudible to the human ear, whose echoes a bat uses to “see” their surroundings and locate food. Echolocation calls are

unique to each species, though closely related species may be hard to distinguish. In the field, software on an iPad makes a quick identification, prioritizing speed over accuracy, and gets hearts racing with exciting suggestions. Our initial survey suggested that several rare species were present, including the Indiana bat, tricolor bat, and little brown bat.

The Indiana bat is an endangered species whose population has halved after it was added to the federally endangered list, so supporting them is a conservation priority. They are part of the *Myotis* family, a group of bats named after their mouse-like ears. These tiny mammals are long-lived, with an average lifespan of nearly six years, but they only raise one pup per year, making it difficult to increase their numbers. They face threats from all sides, including poisoning by pesticides, overwintering habitat loss, and, recently, the spread of white-nose syndrome, which has resulted in a staggering 19% population loss since the fungal disease was first identified in New York in 2006.

Knowing all this, seeing “*Myotis sodalis*” pop up as a suggestion when surveying is incredibly exciting! However, we didn't want to get ahead of ourselves. The Indiana bat, and other species in the *Myotis* family, have brief echolocation calls that can be hard to distinguish. To verify, we contacted U.S. Fish & Wildlife Services and Illinois Bat Conservation Program specialists. They were able to confirm that our recordings included another *Myotis* species of interest, little brown bats, as well as evening bats and big brown bats. Our current recordings are inconclusive on the presence of the Indiana bat at Lind-McGeachie Preserve, but the experts agreed that the site is good potential habitat for rarer species like the Indiana bat. It's yet another reminder of why these properties are so valuable. In the meantime, Grace and I are gearing up for some great late nights—we'll be consistently conducting bat surveys in order to better manage sites like Lind-McGeachie and Silver Creek Woods Preserves and support their resident bats.



Cate Nelson (L), and Grace Wieland (R) watched the Echo-Meter monitoring device to see what species of bats were at Lind-McGeachie Preserve in July. Photo by Alan Branhagen



Volunteer Restoration / Stewardship Days

Dress for the weather in layers, wear natural fiber outerwear and sturdy closed toe shoes. Bring a water bottle, snacks and your own work gloves if possible. Some gloves and tools may be available on site. Other tools and equipment will be provided as available.

Contact Land Stewardship Staff with any questions:

Kyle Hulbert, Director of Land Stewardship — 608/214-9215, khulbert@naturalland.org

Grace Wieland, Field Biologist — 815/494-0095, gwieland@naturalland.org

Cate Nelson, Natural Resources Technician, cnelson@naturalland.org

Pop Up Stewardship Events

The stewardship team schedules volunteer restoration days as needs arise at various NLI preserves. You will be notified by email a few days in advance of where, when and what type of tasks will be needed. Send an email to volunteer@naturalland.org and request to be added to the volunteer email list. If you would like to be added to the prescribed burn list request this specifically.

Third Saturday Stewardship Day

Silver Creek Woods Preserve, 6040 Tipple Rd., Rockford, IL 61102

9:00 a.m. – 1:00 p.m.

Site Steward: Jim Akers, jnakers@hotmail.com

Send an email to Jim and ask to be added to the Third Saturday volunteer email list to get reminders about workdays and any changes.

Stewardship Wish List

In Order of Priority

- Pickup Truck: Replacement for our current midsize pickup that is beginning to fail mechanically
- Camera drone: for monitoring and invasive species mapping
- Tracks for UTV: for better access to our wetland properties
- Pull Behind Mower: for ATV/UTV: for trail and maintenance mowing
- Construction Lumber: 2x4s, 2x6s, 4x4s, etc. (New or Reclaimed)
- Misc. Mechanics tools: socket sets, vise grips, pipe wrenches, etc.



Volunteer Jeff Anderson helped install this bluebird nest box at Silver Creek Woods Preserve this past spring. Photo: Jim Akers

NLI is partnering with Friends of Illinois Nature Preserves to host the upcoming Volunteer Restoration Days

Sun., Oct. 25 | 1:00 p.m. – 4:00 p.m.

Beach Cemetery Prairie Preserve

11500 E. Big Mound Rd., Davis Junction, IL



Restoration work will focus on removing the fence and the brush (that shades out prairie plants) along the fence line surrounding the Nature Preserve. Please register with the QR code here.

Sun., Nov. 22 | 1:00 p.m. – 4:00 p.m.

Harlem Hills Prairie Nature Preserve

4979 Flora Dr., Loves Park, IL



Join the Harlem Hills Prairie Watchdogs for restoration work that will include cutting and burning non-native invasive brush in this rare remnant gravel prairie. Please register with the QR code here.

LYNDON-AGNEW PRAIRIE NATURE PRESERVE

The Whiteside County Natural Area Guardians (NAGs) host weekend workdays at this NLI preserve periodically. Check their Facebook page to see their schedule:

<https://www.facebook.com/WhitesideNAGs>, or email them to find out more: nagsofwil@gmail.com.



Are You a Member?

Scan this code with your
phone camera for quick
access to join NLI or renew
your membership today.

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Notes from the Field  Fall, 2026

Please register for events at www.NaturalLand.org or call 815/964-6666.

Upcoming Events

Photo: Jill Kennay

Sat. Oct. 24 | OAKtober Hike

Cost: \$5 each, \$10 family,

Free for NLI Members | 1:30 PM

Burr Oak Valley Nature Preserve, across from
Cross & Crown Lutheran Church, 7404 Elevator
Rd., Roscoe, Limited parking on site. Available
parking at the church.

NLI staff will lead a guided walking tour through
the rolling hills of Burr Oak Valley Nature
Preserve starting at 1:30 p.m. and lasting about
two hours. Learn about the restoration process
in the prairie and woodlands, hear about why
the remnant dolomite prairie is so special, and
find out why oak trees and their ecosystem are
so significant. Dress for the weather, wear sturdy
closed toe shoes. Hiking stick recommended.
Registration requested.

October is **Oak Awareness Month** in Illinois,
otherwise known as **OAKtober!** Oaks have played
an important part in the history of Illinois. The
state tree is the White Oak. Long living oak trees
provide food and shelter for birds, mammals, and
insects. Humans depend on the shade of oak trees
to cool the air and their homes, helping reduce
energy use and costs. Oaks store more carbon
dioxide than other tree species, delivering clean air.



Hikers get a rare opportunity to see the beauty of Burr Oak Valley Nature Preserve during the OAKtober Hike since it is not open to the public.



Tue., Dec. 8 | Holiday Open House

Free | 4:00 – 7:00 PM | 320 S. Third St., Rockford

Celebrate the holidays with NLI. Enjoy mingling with staff,
Trustees, and each other. Snacks, sweets, cider and punch
served. Registration requested.



Photo:
Patrick Yarbrough

Guests enjoy fellowship and food at the NLI Holiday Open House