Osborne Oracle

Spring 2025

Clayton County Conservation

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Listening to the Trees by Kenny Slocum, Naturalist & Resource Manager

The predictable succession of Clayton County's forests in the springtime bring a number of welcome sights and sounds.

The first honking of geese overhead hearken the start of bird migration. On warm days in late February, tiny midges appear almost like specks of dust blowing on the wind, but with a mind of their own.

By early March, I start to notice the swelling of buds on the trees. Sap movement, triggered by the temperature differential between day and night, begins to transport sugars and nutrients from the roots to the branch tips, allowing the purple of box elder twigs to grow a little more vibrant, contrasting with the fuzzy gray buds.

Silver maples, with their delicate red inflorescence, have already begun to flower. Barely noticeable, these earliest of early-season flowers play a crucial role in supporting the pollinators awakened by warming temperatures. Bumblebees can start flying once temperatures reach the lower 40's—though anymore that can happen in the dead of winter, too. They usually know enough to wait.

I have only just started to see the first emergences in the understory; the crinkly leaves of invasive motherwort, and the mottled leaves of cut-leaf coneflower have poked their heads out beneath the duff of last year's growth.

In a few short weeks, the first blooms of hepatica and

spring beauty will come crashing through the brown and announce the arrival of spring in earnest.

These early stages have much to tell us about the past, present, and future of each forest, if we know how to listen. One of the great perks of a career as a naturalist is learning to translate.

I may not have the fluency of a forester speaking in his native tongue of silviculture, or a botanist's grasp of the grammar that is plant systematics, or heaven forbid an entomologist's patience in observing galleries and galls. But I can get by.

Hearing the story of a stand starts with the loudest voices, the trees themselves. Unlike the rest of the chorus, the trees holler year-round, telling their story in creaks and groans in the winter winds and soft rustles in the growing season.

"I am aspen! Friend of the grouse, a pioneer, first to

colonize a clearcut! I am the alpha of afforestation; cut me down and I will sprout back with even more vigor than before."

Aspens typically signify a "young" forest.

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Quaking aspen flowering on April 3rd

Listening to the Trees ... continued from page 1

Perhaps a retired pasture, perhaps a clearcut, perhaps a natural event like a tornado or derecho. They signify a recent history of heavy disturbance. These young forests are critical habitat for many birds who relish the high stem density that larger creatures can't easily navigate.

I typically do not expect to find beautiful spring woodland wildflowers in these forests; these are forests in development, transitioning from a landscape of taller grasses and herbs. They need time for the seeds of bloodroot and ginger to find their way in, carried by ants and beetles.

"Behold, the biggest Bitternut you ever did see! My progeny lined out like Russian dolls beneath my canopy, unbothered by the browsing animals and vying with hackberry and elm in the understory. The logger called us

'junk,' but look at us now!"



Bitternut Hickory bud

Over time, logging will shift a forest's composition. Careful planning can leverage that shift for the better, but I often see "high-graded" forests comprised mainly of those three species where all of the more commercially valuable oak, maple, and walnut have been removed.

Typically these forests have the highest rate of undesirable shrubs and understory plants, too; lots of garlic mustard,

honeysuckle, and multiflora rose who thrive on the regular disturbance of the soil by dragging and skidding. Left to its own devices, this type of forest will persist for a long time and need a lot of help to get back on track.

"I am the ironwood. Don't let my small stature fool you; I grow slowly in the shade of my oak neighbors, but I may live for hundreds of years. Dry soils and desiccating winds I can take, but unlike my neighbors, fire sets me back immensely."

Virtually any oak woodland in Iowa these days has ironwood forming a major component of the understory, but this assemblage is relatively novel. These woodlands get my attention, for they likely have gone

mostly undisturbed. Any grazing or logging occurred with a light touch (and you can tell the logging happened if



Large bur oak surrounded by ironwood

many oaks have two trunks), enough to keep the herbaceous layer relatively intact. A fire or two and a little thinning could unmask a high-quality oak woodland, home to an array of fascinating flowers and grasses.

A few herbaceous associates like horse gentian, sedges, and bottlebrush grass suggest restoration work won't wake up as many weedy invasives in the understory, since the plants and seeds are already present and waiting for an opportunity to thrive.

In a deep, rumbling voice, from a steep north slope – "I am the maple, the end of the line in Iowa's forests. I cast a shade so deep none but my own seedlings will grow. Even they will struggle, advancing only once I topple and they



Maple-basswood forest in late spring; note the lack of understory plants

can taste the sunshine again."

Maple-basswood forests are climax communities. A mature version features ancient decaying logs, and countless fungi thriving in the persistent dark, humid environment. Little in the way of plants, though, occurs on the forest floor in this environment.

It is essential we learn to hear these stories to become good stewards of the land. We need to at least have some passing understanding of the other voices, too; the flowers, the shrubs, the insects, the birds, they will all tell their side of the story too if we listen.

One of the great joys of Clayton County's forests is their diversity, not just of species, but of "gestalt," the indescribable "vibe" that emerges from the sum of its parts. Each stand is unique, with its own unique composition and history.

We have to understand that before we can properly guide it into the future. A fire won't always help, and will often hurt. A log harvest won't always hurt, and will often help. Listen to the trees, and they will tell you what to do. And if you need to, do not hesitate to call a translator.



The Master Conservationist Program is a collaborative program offered by ISU Extension and Outreach, County Conservation Boards, and local conservation leaders and professionals. The intensive blended online and inperson curriculum is developed to equip Iowans interested in natural resource conservation with the knowledge and skills necessary to make informed decisions about natural resources and to become local leaders and educators. Master Conservationists are individuals that share an interest in the sustainability of Iowa's natural remaster sources and in becoming better stewards of those resources.



Clayton County Conservation Board's -_- Upcoming Events & Programs _-_ &

JAMAICAN GARDEN TOUR

OSBORNE AUDITORIUM THURSDAY, APRIL 10TH AT 10:00 AM

Join Clayton County Conservation Director, Jenna Van Meeteren, for a Jamaican Garden Tour Presentation at the Osborne Welcome Center!

Participants will observe a short slide show from a recent trip to Whitehouse Jamaica and learn about flowers and fruits of the Caribbean

Registration is not required for this free event



Pasque Flower Hike

Friday, April 18, 5:00 PM Motor Mill Historic Site

Come and join Clayton County Conservation for a guided hike at the Motor Mill Historic Site. We will meet in the campground at 5:00 PM. Participants should come prepared for a fairly strenuous off-trail hike in search of this iconic early spring flower.

Motor Mill 2025 Season

Open Memorial Day th<mark>rough Labor Day</mark>
Motor Mill Historic Site
Noon-5:00 PM

Additional tours available upon request, pending staff and volunteer availability.

Earth Day Hike: Birds, Blooms, and Mushrooms

Tuesday, April 22nd 5:30 PM

Osborne Nature Center

Discover a world of color as you walk through the Osborne Forest. We will look for returning songbirds and spring jewels hidden amidst the forest floor. This will be a moderate walk accommodating all ages and abilities.

Backbone Fishing Clinic

Saturday, June 7th

Backbone State Park

Take advantage of free fishing weekend with a day at Backbone Lake! Naturalists will be on site offering demonstrations and live critters to view between casts.

Midsummer Prairie Hike

Saturday, June 21st, 10:00 AM Becker East Wildlife Area

Join a naturalist for a "status check" on the CCCB's newest prairie planting. We will compare species to the seed list, and discuss the art and science of prairie management.

Motor Mill Night Hike

Friday, July 18th, 9:00 PM Motor Mill

Enjoy a beautiful walk on a quiet summer night through the Turkey River Valley. Hear the hooting of owls, the croaking of frogs, the chirp of bats, and with a little luck all the rest of the chorus of Iowa's summer nights!

Late Summer Mushroom Hunt

Saturday, August 23rd, 9:00 AM

Osborne Park Archery Range

There's more to life than just morels. Come out for this guided hike in search of late summer mushrooms! The success of the hunt will depend on the rains, but there's always interesting things to see at the Osborne Archery Range.

Fall Foliage Frenchtown Float

Saturday, September 27th, 10:00 AM

Frenchtown Park

Registrations Required

Strap on a lifejacket and enjoy the quiet backwaters near Guttenberg at a sleepy little place called Frenchtown. Clayton County Conservation will have vessels available, but participants are encouraged to bring their own. Children under 16 must have an adult present. Fishing poles welcome for licensed anglers.

For more information on any of these programs, call 563-245-1516, or visit www.claytoncountyconservation.org

Clayton County Day Camps



Register now for Summer 2025! Click here for registration

Day Camps

June 24—Osborne Outdoor Recreation 8-12 years old 9:00-3:00

July 16—Motor Mill S.T.E.A.M. 6-12 years old 9:00-3:00

July 23—Beyond Trout at Bloody Run 8-12 years old 9:00-3:00

July 30—River Rats Paddle Camp 13-17 years old 9:00-4:00

Nature Kids (10 AM)

For children ages 3-7

May 3rd—Spring

May 24th—Worms

June 14th—Mossy

July 5th—Trail Hike & Volga Beach

July 26th—Ice Cream



Master Conservationist Program Coming August-September 2025

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better stewards of those resources.







O.W.L.S.

Older, Wiser, Livelier Souls

"Silos & Smokestacks Grand Tour" Looking for an excuse to get out of the house, meet new friends, and enjoy a good meal while exploring our area?

Join us the 3rd Thursday of each month March through November.

April 17 - Mines of Spain/E.B. Lyons Museum May 30* - Historic Clermont

Sites TBA: Jun 19, Jul 17, Aug 21, Sep 18, Oct 23, Nov 20

Check our website and facebook as dates approach for updates!

Reservations are required for both program and lunch

Call with questions on cost or time



Osborne Nature Center

Phone: 563-245-1516 www.ClaytonCountyConservation.org

Species Spotlight—The Bobcat - by Abbey Harkrader, Naturalist

Over the last several years sightings of our large predators like bear, mountain lions, and wolves have become more and more common. Populations of these large predators are increasing and becoming more stable in our neighboring states, causing them to wander into Iowa more frequently. Included in these new sightings are bobcats.

Fear of large predators caused Iowa's early settlers to eliminate most large predators by the late 1800's. Government elimination bounties helped to speed up this process until the big three were

extirpated from Iowa altogether.

Bobcat populations took a heavy hit too, but were never eliminated. There were a few remote wild places left in Iowa where bobcat remained, like extreme southern Iowa and here in northeast Iowa. The few that remained were shy and elusive, only a lucky few were able to catch a glimpse of one until their populations began to recover starting in the 1990's.

About 30 years ago it had become evident in southern Iowa that their population was beginning to recover and maybe they could eventually come off the endangered species list. The biologists with the Department of Natural Resources (DNR), with the help of university biologists, began to extensive

of university biologists, began to <u>extensively study this</u> <u>animal.</u>

Anytime a bobcat was accidentally killed, the biologists would collect as much data as they could from it. The teeth would tell them the age, the bloodwork would give them genetic data, they would look for diseases and the overall health of the animal, and scarring on the female's uterus would tell them how many times they had young and how big the litters were.

Another key factor they investigated was their stomach contents. Biologists were very curious about how much of their diet was from birds. As the population increased, hunters were becoming concerned about the effect on the gamebird population and other birds. The biologists were amazed by the results.

Out of about 100 samples, only 3 had evidence of eating

any birds. One had pheasant, one had eaten from a turkey, and one from a raptor. There is a strong possibility one or two of these samples were scavenged parts rather than a kill. 0.3% is a very small statistic showing bobcat do not normally target birds.

The biologists found their main diet is 60% rabbits and the remainder is mostly other small mammals and occasionally carrion scavenged from deer carcasses.

The DNR's research and population data supported their decision to downgrade the bobcat's status from Endangered to Threatened in 2001, and in 2003 they removed them from the Threatened Species List. They continued to aggressively study them as they decided whether the population could sustain a harvest season.

In 2003 they began a new 10-year study which focused on radio tracking and genetic studies. What they found was that the population was expanding mostly from the south and their genetic relatives were connected to the southern genetics in Missouri.

Northeast Iowa bobcats have been found to contain two genetic sources. The older established population was small and

connected to genetic populations to our north, but as the population grows from the south, new genetics are coming in with markers of the southern population group.

Biologists also found their ranges were very solitary and averaged 7 square miles for most females and larger territories for males of about 22 square miles on average. These studies enabled a limited harvest season to be opened in 2007 in extreme southern Iowa with strict harvest quotas.

Each year they add more counties and open more tags to reflect their growing population. Bobcats are still a protected species here in Clayton County. The wildlife biologists decided last year that though the population is increasing here, their populations were not established enough to warrant opening a season yet.

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The Osborne Partners for Education Endowment Fund was started by Susi Nehls and Roy Blair in memory of Susi's father, Dr. Joe Hickey. Dr. Hickey's research led to the legislation that protected birds of prey like the bald eagle. Dr. Hickey's passion for teaching others about the natural world was sparked early by adults who introduced him to the wonders of nature.

https://www.dbqfoundation.org/donors/giving-center/osborne-partners-education-endowment

Bobcat at Osborne's Native Wildlife Exhibit

The Bobcat (continued from page 5)

They decided that Delaware and Jones Counties had established a sustained population and opened a harvest season there for the first time this winter.

DNR Game Biologist <u>Vince Evelsizer</u> said, "Their population is looking really strong there right now. We know that they are in other counties like Dubuque and Clayton, but we need to wait longer to let that population settle first."

Clayton County Conservation conducted a survey in 2022 of citizen observations to find out how common they were.



This map looks like there are many bobcats in our county, but closer inspection reveals that many of these sightings are clusters for the same individual.

Remember, they establish strong territories with averages of 7 or 22 square miles for females and males respectively, and dislike encroachment except during mating season.

The map shows at least 9 clusters with a few outliers and at least 8 clusters that have young. As the number of sightings increase in this county, people should remember that bobcats pose no threat to humans.

These animals are relatively small and very wary of us. Males average 25 lbs and females average 18 lbs. with the largest recorded in the recent studies of 35 lbs.

They can be identified by their fluffy facial ruff, small ear tufts, and by their short "bobbed" tail that is only about 5 inches long. They also usually have spotted markings of varying degrees, especially on the lower body.

Their tracks are much more rounded than a canine track, are about 2" x 2", and lack claw marks because cats retract their claws when walking. If you see one, consider yourself lucky to have witnessed the recovery of one of Iowa's amazing native species.

Clayton County \$49K IRA Direct Payment Shines A Light On Solar Returns by Kelsi Davis, CCED Coordinator

Over the past several years the motivation for local governments to "go solar" has risen increasingly due to federal funding opportunities like the <u>Inflation Reduction Act</u> (IRA).

The IRA, passed into law in 2022, reimplemented federal clean energy tax credits through 2033. Additionally, it expanded access to include non-taxable entities such as local governments, schools, hospitals, and non-profit organizations. Tax-exempt organizations can apply for a direct payment from the Investment Tax Credit for Energy Property (called Clean Electricity in 2025).

This direct payment offers reimbursement for 30% of the cost of a renewable energy project like solar. Without incentive opportunities leading to increased returns on investment, rural governments may lose some options to expand capacity and services for their county. Solar, as one option, can provide more consistent, predictable energy bills and reduce greenhouse gas emissions.

In Clayton County, the Auditor's Office, with resources from the Clayton County Energy District (CCED), used

federal funds to offset the cost of solar, which maximized their return on investment and reduced their energy footprint. Following other local successes, Clayton County Auditor Jennifer Garms proposed a solar project to County Supervisors based on the high return on investment potential and the ideal orientation of the office building located in Elkader.

After Garms highlighted the benefits of the investment, the County Supervisors approved the installation of a 76-kilowatt solar system. Local contractor Wulfekuhle Electric installed the 190-panel array on the building in the summer of 2023. The system is expected to produce nearly 100,000-

kilowatt hours of electricity each year.

During the first year, this saved the county around \$10,000. Accounting for continually rising energy costs over the life of the system, the average savings are estimated at over \$18,000 per year.



Left to right: Joleen Jansen, Jennifer Garms, Amy Sargent, and Kelsi Davis

Solar Returns (continued)

After the system began operating in August of 2023, former CCED Program Director Joleen Jansen approached the county, offering guidance to secure an Inflation Reduction Act direct payment. Jansen and fellow clean energy professionals attended webinars covering the details of the direct pay option. They shared this information with the Auditor's office and other eligible non-taxable entities.

The resources covered general requirements such as acquiring an IRS registration number, determining an appropriate timeline for filing, proper tax forms, and other required documentation.

The Auditor's office frequently searches for opportunities to reduce spending and make improvements without impacting tax rates or county services.

Auditor Jennifer Garms and Deputy Auditor Amanda

Sargent recognized the importance of the IRA funds and began researching the process in more detail. They initiated the first step, obtaining an IRS registration number, in January of 2024 and waited around a month for approval.

The Auditor's office spent the next few months researching how to file proper tax documentation. The 990-T form, at the time of their filing, did not have an obvious

option for the IRA elective pay or for filing as a local government entity.

The CCED encouraged the Auditor's Office to employ local accounting services familiar with the 990-T submissions. They ultimately connected the County to Justin Vorwald with the Elkader Law Office. Two months after submitting their 990-T form, the county received a check for \$49,199.98 in December of 2024.

When asked if they would pursue another similar project, Garms responded that the county can't do every solar project immediately. Still, after this success, they plan to expand their solar resources in the future. She also mentioned how important incentives like the IRA can be for maximizing return on investment for small local governments and ensuring projects do not negatively affect taxpayers.

"Since the release of the Inflation Reduction Act in August 2022, the Clean Energy District Network has been focused

on the opportunities [the IRA] presents. We recognized early on that the Direct Payment program would be a game-changer for Clayton County's non-taxable entities, and the County stepped up as a willing pioneer. The CCED board is thrilled to see this opportunity realized and deeply grateful to the Clayton County Auditor's staff for navigating the complexities of the process. In the end, green meets green—our community is stronger thanks to significant energy cost savings and reduced greenhouse gas emissions at the county office building." — Joleen Jansen, CCED Board Member

Without incentives the project would still provide a worthwhile investment at \$164,000 with a projected 10-year payback. With the IRA direct payment providing \$49,000 and the American Rescue Plan Act covering another 40%, however, the upfront cost to the county dropped to under \$50,000. This allowed the county to use Local Option Sales Tax dollars to cover the remaining

balance without increasing tax rates or sacrificing crucial county services.

At the average annual energy savings rate, this reduced the payback period to under 5 years and provides an estimated \$450,000 return on investment over the life of the system!

The county has certainly recognized the benefits of renewable energy and plans

to incorporate this philosophy into new county properties. Existing buildings were not planned to include solar production and consequently may not adequately meet solar requirements.

The experience has shifted planning perspective to seriously consider how location, tree cover, and orientation affect solar feasibility in future county-operated buildings. An important step in planning for clean energy also includes identifying and eliminating inefficiencies.

The CCED offers energy coaching and auditing services to help local residents and businesses better understand their energy use and develop strategies to reduce their impact. The IRA and similar federal funding opportunities remain crucial for small local governments like rural Clayton County.

Renewable energy incentives not only maximize opportunity for current assets but also allow local governments to plan ahead for future investments in energy savings and emission reduction.



Clayton County Office Building with new solar panels

Clayton County Conservation

Osborne Conservation Center 29862 Osborne Rd, Elkader, IA 52043 (563) 245-1516

The Clayton County Conservation Board does not discriminate against anyone on the basis of race, color, sex, creed, national origin, age or handicap. If anyone believes he or she has been subjected to such discrimination, he or she may file a complaint alleging discrimination with either the Clayton County Conservation Board or the Office of Equal Opportunity, U.S. Dept. of Interior, Washington, D.C. 20240



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uralist/Resource Manager
Office Manager
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Clayton County Energy
District Coordinator

Website: www.claytoncountyconservation.org
Facebook: Clayton County Conservation
Instagram: @ClaytonCountyConservation

Osborne Nature Center & Gift shop Hours

Monday-Friday



8:00am - 4:00pm Weekend Hours

(Starting April 1)

Saturday

8:00am - 4:00pm

Sunday

Noon-4:00pm

Clayton County Conservation Board meetings are the second Tuesday of every month. Meetings are open to the public. See website for details, locations, and past meeting minutes.

The mission of the Clayton County Conservation Board is to promote the health and general welfare of the people and to encourage preservation, conservation, education, and recreation through responsible use and appreciation of our natural resources and cultural heritage.