



Prairie Islander

THE NEWSLETTER OF THE MACON COUNTY CONSERVATION DISTRICT

Living on the Edge: Part 3

The Importance of the Edge Between Habitats: A Crucial Ecological Transition

Jerry Culp

This article is a continuation from the Spring and Summer editions of the *Prairie Islander*; you can find Parts 1 and 2 on our website under Information > News & Media.

5. Microclimates and Environmental Diversity

The transition zones between habitats often create unique microclimates. For example, the boundary between a dry grassland and a forested area may produce varying temperatures, humidity levels, and wind patterns that are not found in the interior of either ecosystem. These microclimates provide specialized conditions that can support different species of plants and animals that might not thrive in the more extreme conditions of either neighboring habitat. For instance, some plants might need the full sunlight of a prairie but also benefit from the cooler, moister conditions at the edge of a woodland.

These microclimates are not just important for individual species but also contribute to the overall complexity and function of the landscape. They provide opportunities for new ecological processes to unfold, such as the establishment of new plant communities or the development of niche habitats for wildlife.

6. Conservation Implications

From a conservation perspective, the importance of habitat edges cannot be overstated. As human development continues to alter natural landscapes, the creation of fragmented habitats often leads to more pronounced edges. These fragmented edges can, in some cases, have negative impacts on species that are sensitive to disturbance or that require large, continuous habitats. In these situations, managing the integrity of the edges between habitats becomes critical for maintaining biodiversity.

Conservation efforts focused on preserving or restoring ecotones can help mitigate the negative effects of habitat fragmentation. For instance, creating buffer zones along edges or ensuring connectivity between fragmented patches of habitats can provide corridors for wildlife movement and preserve ecological processes. By recognizing the



importance of these transitional areas, conservationists can design strategies that enhance biodiversity and ecosystem health on a larger scale.

Conclusion

The edges between habitats—ecotones—are much more than mere boundaries; they are dynamic, diverse, and ecologically significant areas that support a wealth of biodiversity, facilitate essential ecological interactions, and provide resilience to environmental changes. Whether they are acting as critical habitats for wildlife, enhancing species diversity, or helping ecosystems adapt to shifting climates, habitat edges play a vital role in maintaining the health of our natural world. Protecting and managing these transitions is not only essential for the species that rely on them but also for the overall stability of ecosystems in an ever-changing environment. Understanding and conserving these important spaces is key to ensuring the continued vitality of the planet's ecosystems.





WEATHERING THE COLD, PART ONE: Brumation

Taylor Buley

Illinois is home to over 54,000 different species of wildlife, and the majority are species of insects. Often, the time of year dictates when we can see some of our more familiar species. As fall and winter begin to make their way into Illinois, the animals we see moving around begin to change. But where do our animal friends go if we are not seeing them anymore? When winter moves into Illinois, animals who cannot handle the cold generally have three options: Brumate, Hibernate, or Migrate.

Brumation is the term used for the period of inactivity some ectothermic (cold-blooded) animals experience in the winter months. Because ectotherms cannot control their internal body temperature, as the outside world cools, so do they – and brumation is an adaptation that evolved to keep them alive in cold conditions. While brumating, many animals stop eating and will very occasionally wake up to drink. Snakes, lizards, and terrestrial turtles will burrow or find a hole in the ground or fallen tree to rest in. Aquatic turtles will bury themselves in mud at the bottom of their pond or stream to brumate. During this time, they



will absorb oxygen directly from the water and through their skin, allowing them to stay underwater for several months. Some examples of Illinois reptiles that brumate are box turtles, painted turtles, blue racers, gray rat snakes, and many more of our approximately 65 reptilian species.



Reptiles are not the only ones who brumate. Frogs, toads, and salamander species in Illinois also brumate!

Most frog species survive our winters by brumating in the mud in ponds, rivers, and lakes. The mud acts as insulation, keeping their body temperatures above freezing. American toads will bury themselves in soil below the frost line to survive winters. They will move up and down within the soil depending on how far the frost line penetrates. Some frogs, such as wood frogs and gray tree frogs, can brumate in leaf litter or under tree bark. These species accumulate glycerol in their body which moves through their system and acts as antifreeze, allowing them to survive the freezing temperatures. Salamanders, such as tiger salamanders and small-mouthed salamanders, will find shelter under logs and leaf litter and in burrows or rocky crevices to brumate.





Briefs



CREATURE FEATURE

One of our commonly forgotten neighbors in Illinois is the bobcat (*Lynx rufus*). These small felines were nearly eliminated, or extirpated, from Illinois by the mid-1900s. They can now be found statewide after receiving protection as a state-threatened species from 1977 to 1999. Results of recent research at Southern Illinois University in Carbondale estimate there are over 23,600 bobcats living in Illinois.

Bobcats can weigh up to 40 pounds and stand up to two feet tall at their shoulders. They have tufted ears with false eyes on the back, long legs, and a four- to six-inch-long tail. False eyes are white markings on the back of their ears that can be used for communication or deterring predators. These felines are mostly nocturnal and solitary. Breeding occurs from January to June, but mainly in February and March. Bobcat kittens are weaned by two months old but will usually stay with mom for nine to twelve months. Bobcats live in forests with a dense understory for cover and denning sites but will hunt the edge of forests and fields. They have been known to eat a variety of smaller wildlife and aid in controlling small mammal populations such as mice, voles, squirrels, and rabbits. Bobcats are good climbers and will eat birds as well. They are also capable of taking down deer and will ambush ones laying down.

Due to their increase in numbers, a regulated bobcat hunting season began in 2016. The harvesting of bobcats is regulated by the IDNR (Illinois Department of Natural Resources) to ensure a healthy population of bobcats persists in the state. There are limited permits issued, and hunters are limited to one bobcat per season. According to the IDNR, one bobcat was harvested from Macon County during the 2024-2025 season.

Bobcats have been seen on a few Macon County Conservation District sites, including at Rock Springs!

Homeschool Programs

Homeschool children ages 5-15 can join a naturalist and explore nature and history topics through discussion, hands-on activities, crafts, and games. Homeschool students will spend time indoors and outdoors, investigating concepts and engaging with nature. \$15/child. Register online by date specified.

KEEPERS OF THE FOREST

Wednesday, December 10, 10am-12pm

What does 'conservation' mean? Learn some of the many techniques that natural resources workers use to care for our forests and beyond, and help us spread some seeds. Register online by December 8.



GEOLOGY OF ILLINOIS

Wednesday, January 14, 10am-12pm

Discover the unique geological history of Illinois, from its early days as a shallow, inland sea all the way to present day. We will look at rocks and fossils, and go outside to find evidence of this millions-of-years-old story. Register online by January 12.



OWLS OF ILLINOIS

Wednesday, February 11, 10am-12pm

Learn about Illinois' eight species of owls and dissect an owl pellet. Register online by February 9.





Happenings

Events located at Rock Springs Conservation Area and open to all ages unless otherwise indicated.
Register online by noon at MaconCCD.org, unless otherwise noted.

Hours

OFFICES OPEN

Monday-Friday, 8am-5pm

NATURE CENTER OPEN

Monday-Friday, 8am-5pm

Saturday, 9am-5pm

Sunday, 1-5pm

TRAILS OPEN

Daily, 7am to sunset

Holidays & Closings

OFFICES & NATURE CENTER CLOSED

Wednesday, December 24, Christmas Eve

Thursday, December 25, Christmas Day

Thursday, January 1, New Year's Day

NATURE CENTER OPEN, OFFICES CLOSED

Monday, January 19, MLK Day

Monday, February 16, Presidents' Day

Macon County
Conservation District



Special Events

CHRISTMAS TEA

Governor Oglesby Mansion

Sunday, December 7, 1-4pm

Stop by the Governor Oglesby Mansion to enjoy a traditional Christmas afternoon tea. Experience this historic Victorian home beautifully decorated by the Decatur Garden Club. Also, this year the Macon County Association for Home and Community Education will be serving up Emma Oglesby's orange marmalade and shortbread cookies. A limited number of jars of marmalade will be available for purchase. Suggested donation of \$5/adult and \$2/child to attend. No reservations necessary. Located at 421 W. William Street in Decatur, IL.

GEMINID METEOR SHOWER

Friends Creek Conservation Area Group Camp

Saturday, December 13, 9-11pm

Join us at the Friends Creek Conservation Area Group Campsite to view the strongest meteor shower of the year. These meteors originate near the constellation Gemini and are usually bright and colorful. We will have hot chocolate available in our brand new, timber-framed pavilion. Wear warm clothing and bring a lawn chair and blanket if you like. \$3/person. Register online by December 12. Min/Max: 5/50.

60th ANNIVERSARY PANCAKE BREAKFAST

Saturday, February 28, 8-11am

Kick off our 60th anniversary celebration with a bit of nostalgia! Staff will be serving up all-you-can-eat pancakes, sausage, orange juice, milk, and coffee. Before or after breakfast, enjoy an educational maple syrup program and tasting. Breakfast served between 8 and 11am. Maple syrup programs held at 8:30, 9:30, and 10:30am. \$10/person. No registration required.

MACON COUNTY CONSERVATION DISTRICT BOARD OF TRUSTEES & STAFF

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Gussie Reed, 1st Vice President

Kevin Chapman, 2nd Vice President

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Jimmy Rade, Secretary

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Contact Us

Macon County Conservation District • 217-423-7708

mccd@MaconCCD.org

MaconCCD.org



Connect with Us

Follow us on social media!
MaconCCD.org



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Music

The following programs are free and open to the public at Rock Springs Nature Center.

DULCIMER CLUB

Saturdays, 10am-12pm

December 6 & 20

January 3, 17, & 31

February 14 & 28



ACOUSTIC MUSIC JAM

Sundays, 2-4pm

December 14, January 11, & February 8

Art

NORTH GALLERY ARTISTS

Barn Colony Artists

November & December

Discover works in watercolor, pastels, oil, and mixed media depicting subjects from nature to portraits by talented artists in our community.



Decatur Camera Club

January & February

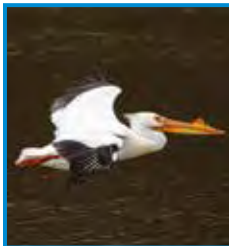
Enjoy a wide variety of photography, including scenes of trees, birds, landscapes, and more from talented local photographers.

SOUTH GALLERY ARTISTS

Dave Castor

November & December

Explore animals, nature scenes, and landscapes through the lens of photographer Dave Castor.



Brock Rowland

January & February

View photographs of plants and animals that our Program Specialist and gallery coordinator Brock Rowland has spotted on his outdoor adventures.

Mini Camps

Children ages 1 through 5 will explore nature with an adult companion through crafts, activities, songs, and stories. These camps are a great stepping stone for little ones to spend time with other children and have the comfort of a loved one nearby. Fee is \$8/child. Register online by noon the day before camp. Min/Max: 4/12.

PAJAMA PARTY

Tuesday, December 2, 9:30am

Thursday, December 4, 9:30am

Discover what animals do in the cold months. Join in the fun by wearing your favorite pajamas, which keep us warm just like an animal's fur!



MAJESTIC EAGLES

Tuesday, January 6, 9:30am

Thursday, January 8, 9:30am

Learn about our national bird and why they're so much easier to find in the winter.



DINOSAUR STOMP

Tuesday, February 3, 9:30am

Thursday, February 5, 9:30am

Explore what makes dinosaurs so cool by viewing replica fossils, artifacts, and models.



Meetings

MACON COUNTY CONSERVATION DISTRICT XSBOARD MEETINGS

Third Wednesday of each month, 5:30pm

December 17, January 21, and February 18

DECATUR AREA AUDUBON SOCIETY MEETINGS

Connect with Decatur Audubon on Facebook.

ROCK SPRINGS QUILTERS

Wednesdays, 9-11am



Happenings

Events located at Rock Springs Conservation Area and open to all ages unless otherwise indicated. Register online by noon at MaconCCD.org, unless otherwise noted.

December

PREScribed FIRE PROGRAM AND EXHIBIT SHOWCASE

Sunday, December 14, 2pm

What are the benefits of managing land with fire, and how do staff know when conditions are right? Join a naturalist to learn all about prescribed fire, then enjoy our quarterly exhibit on the same topic. Free. Register online by December 12. Min/Max: 5/30.



NATURE'S HOLIDAY DAY CAMP

Monday, December 22, 9am-3pm

Let Nature Center staff keep the kids busy and entertained while you spend time doing last-minute shopping, wrapping gifts, cooking, or simply taking some time for yourself! During this one-day camp, children will make a take-home craft and ornament, learn about what animals do in the winter, make s'mores, and spend time exploring outside. Snacks will be provided in the morning and afternoon. Please pack a sack lunch. For children currently attending kindergarten through 8th grade. \$40/child. Register online by December 18. Min/Max: 4/20.



January

A MOON BY MANY NAMES

Saturday, January 3, 7pm

Learn about the different names for the full moon and how they came to be, then look at the moon through our telescope and roast a marshmallow over the fire. \$5 per person.

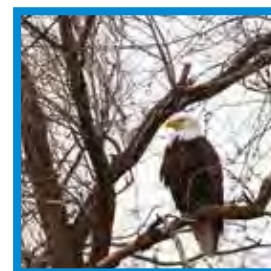
Register online by January 2. Min/Max: 5/30.



VAN TRIP TO KEOKUK FOR BALD EAGLE APPRECIATION DAY

Saturday, January 17, 8am-7pm

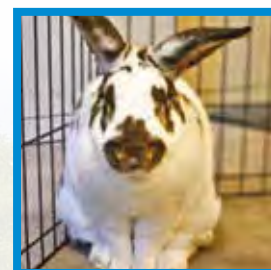
Journey to Keokuk, Iowa for their 42nd annual Bald Eagle Appreciation Day! Enjoy a live raptor show from the World Bird Sanctuary of St. Louis, check out nature displays and historical artifacts, and browse through the vendor booths. Food is available for purchase at the event. \$30/person. Register online by January 16. Min/Max: 4/10.



BIRDS, BEANS, AND BASIL

Saturday, January 24, 9:30-11am

Join a naturalist for some coffee or hot chocolate around the campfire, and meet our educational ambassador Basil the rabbit. Then take a leisurely walk along the trail to learn about winter birds and how animals adapt to cold temperatures. \$5 per person. Register online by January 23. Min/Max: 5/30.



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Register online by noon at MaconCCD.org, unless otherwise noted.

February

VAN TRIP TO THE INDIANAPOLIS CHILDREN'S MUSEUM

Tuesday, February 10, 8am-6pm

Whether you're a kid or a kid at heart, the Indianapolis Children's Museum has something for everyone! As the largest children's museum in the world, visitors can explore exhibits about dinosaurs, trains, space, history, and much more.

\$30/person. Admission and lunch are on your own. Register online by February 9. Min/Max: 4/10.



SUCCULENTS AND SWEETHEARTS: TERRARIUM WORKSHOP

Saturday, February 14, 2pm

Bring a friend or loved one to design a small, valentine-themed terrarium at Rock Springs! Supplies and cookies will be provided. \$15/person. Register by February 12. Min/Max: 5/20.



DECATUR'S FIRST PHOTOGRAPHERS

Saturday, February 21, 2pm

Several professional photographers briefly stopped in or called Decatur their home in the years before and during the Civil War. Learn about their history as we discover our first local photographers, find evidence of their time in Decatur, and view some of their surviving work. Free. No registration required.



Take Your Pick

Below you'll find activities offered at multiple times or locations. Events located at Rock Springs Conservation Area and open to all ages unless otherwise indicated. Register online by noon at MaconCCD.org, unless otherwise noted.

WILDERNESS WALKS

Thursdays at 4pm

December 18, Rock Springs Conservation Area

January 8, Fort Daniel Conservation Area

January 29, Griswold Conservation Area

February 19, Sand Creek Conservation Area

Join a naturalist on a leisurely walk along a District trail to explore and learn a little something along the way. Free. Register online by noon the day prior. Min/Max: 1/30.



VAN TRIP TO PEORIA AREA FOR EAGLE VIEWING

Saturdays, January 31 & February 7, 9am-6pm

Hop in our passenger van and join us for a trip to the Peoria area to search for overwintering bald eagles. We will visit three or four locations in search of America's national symbol, with a stop for lunch along the way. \$30/person. Lunch is not included in the cost. Register online by January 30 and February 6. Min/Max: 4/10.



