



Conservation News



A Quarterly Publication of the Muscatine County Conservation Board

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Doodoo Data and Drivetime Easy Listening!

Summer is always busy for both the parks staff and education staff with the Muscatine County Conservation Board. Along with our normal summer nature programming we agreed to help the Iowa Natural Heritage Foundation with bat surveys!

Since 1990 we have helped the Iowa DNR with frog and toad surveys each year, we have assisted with water sampling in streams throughout Muscatine County, and we even helped coordinate the collection of waste tires for the Iowa DNR. But bats are a new thing for us. So, when the request was made for assistance from County Conservation Boards we quickly said “sure, we’ll help.!”



Bat Surveying



Research in Iowa, and other Midwestern states, has shown that bat populations are declining. Some, like the Indiana bat are endangered species, and others are heading that way. The decline is the result of several factors. One is a condition called white-nose syndrome. It is caused by a fungus (*Pseudogymnoascus destructans*, *Pd*) that lives in cold damp places, such as caves where bats may be hibernating. The *Pd* fungus can grow on the bare skin of bat wings or on their face. The fungus damages the skin causing the bats to become active which wastes energy that bats need to complete their

winter hibernation. If bats come in contact with the fungus on other bats or on walls of the cave they can develop the white-nose syndrome.

A second reason bats numbers are on the decline is due to habitat loss. Many bats live in or near wooded areas. Some like red bats, silver-haired bats, and hoary bats live in treetops sheltering under leaves. Others, such as little and big brown bats, northern long-eared bats and Indiana bats, make use of hollow trees and loose bark on dead trees for shelter. These wooded areas are frequently removed for road or building construction projects, and for expansion of agricultural lands.

The goal of the bat surveys is to try and identify which species are living in different parts of Iowa, to learn which species are most common, and to test for the presence of the fungus causing the white-nose syndrome.

Mid-May to mid-June: Guano. The first survey was to see what species were living in known bat roost sites, and whether the *Pd* fungus was present in those sites. For instance, at the Saulsbury Bridge Recreation Area we know where some bats roost in the summer. To check this population, we collected...guano (bat poop). Yes, we were provided a very nice large baking sheet which was placed under the roost site to catch bat droppings as they rained down. Each week for four weeks a dedicated Naturalist (Dave Bakke) collected and packaged the guano, and stored it in a freezer (not with food). After four weeks a volunteer from the Iowa Natural

Heritage Foundation came to pick up the samples. Someone somewhere will thaw these samples and test them for the presence of the Pd fungus, and identify the species of bats by comparing dropping shapes and sizes. Who wants to be a scientist? ☺

July: Listening. The second survey involved collecting acoustic recordings of bats to identify the species and relative abundance. Two techniques were used, stationary recorders and mobile recorders attached to a vehicle. This equipment was again provided by the Iowa Natural Heritage Foundation. Pam Joslyn, Michelle Berns, and Dave Bakke set up and ran the recording equipment. The stationary recorders were placed at Shield Prairie and the Saulsbury Bridge Recreation Area. These recorders were set to automatically turn on at 7:00 pm and record bat echolocations until 7:00 am the following morning. These ran for four consecutive nights, listening in on bat activity each night.

The mobile recorder was deployed two nights during the week when the stationary recorders were in operation. We would leave at 9:30 on the two evenings and drive a 15-mile route at 20 miles per hour. Along the way we picked up contacts with 85 bats the first night and 115 the second night.

This survey was very interesting and lots of fun! Data will be analyzed this fall and we hope to get a report this winter.



Memorials

A Crabapple tree adopted in Discovery Park ***In Memory of Dolores Zamudio.***

A Sugar Maple tree adopted in Discovery Park ***In Memory of Elaine “Lainey” Henry.***

A Red Maple tree adopted in Discovery Park ***In Memory of Donna Middle.***

A Crabapple tree adopted in Discovery Park ***In Memory of Maria Cervantes.***

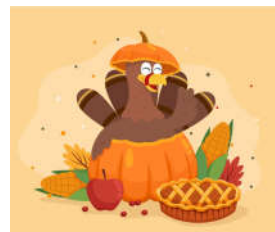
Learning Center Closed



The Environmental Learning Center will be closed to the public on Thursday & Friday, November 3-4 for the statewide Iowa Association of Naturalists conference.

Holiday Closings

The Conservation Board offices and Environmental Learning Center will be closed on Friday, November 11 and Thursday & Friday, November 24 & 25.





Thank you to all those who generously gave time, talent, funding and/or materials to help make our programs, projects, and areas better than ever.

Kent Corporation - bird seed for our viewing blind

Stanley Center for Peace & Security - camp forks for our environmental education program

Muscatine Veterinary Hospital - meds for Louie our Kingsnake

Scott & Diane Davis - framed nature prints

Carol Duffe - monarch butterfly rearing supplies

Tanner Seefeldt - big bluegill for our aquariums

Don Lampe - moving the bee hives in Discovery Park

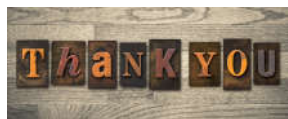
Elise Hepker - monetary donation to our environmental education program

Wilton Outdoor/Gun Show - monetary donation

St. Mary's/Mathias School - dip nets for our environmental education program

Fidelity Bank & Trust Five Star Club - monetary donation

Quad-Cities Women's Outdoor Club - monetary donation



Volunteers

Donald Holladay - helping with the tree give-away

Katrina Harkness - helping with the Kids Fishing Seminar & Derby and school fieldtrips

Summer Nature Camp Volunteers

Diane Farrar

Donna Godden-Alloway

Drew Kurriger

Cathy Jackson

Cherie Lovell

Kathi Eichelberger

Become a Friend

Thank you to all our "Friends" whose donations to the Muscatine County Conservation Foundation support the development and enhancement of environmental education and conservation projects in Muscatine County.

Sarah Lande

Jean L. Scott

Bob Vocke & Karla Lauritsen-Lavene Payne Memorial

Rickert & Patti Christiansen-Lavene Payne Memorial

Sara Anderson

Ivan Lenz

The names of all donors go into our donor book and those who donate \$250 or more receive a plaque on our donor wall located in the Environmental Learning Center. Please include the form below with your donation and become a "Friend" today.



A Gift For the Conservation Foundation

I would like to become a Friend,
please accept my donation.

- ☐ Sponsor \$10—\$49
- ☐ Partner \$50—\$99
- ☐ Patron \$100—\$249
- ☐ Guardian \$250—\$499
- ☐ Steward \$500—\$999
- ☐ Benefactor \$1000 +
- ☐ I would like to donate my time.

Name _____

Address _____

Phone _____

E-mail _____

Thank you for your support!

Please make checks payable to:
Muscatine County Conservation Foundation
PO Box 109, Muscatine, IA 52761



Programs and Special Events



Halloween Drive-thru

The campers are going all out and decorating their campsites for Halloween. Visitors can drive through to view the decorated campsites. The first 500 kids receive a treat bag. The event is free, but monetary donations will be taken for the Muscatine Humane Society and the Muscatine Food Pantry.

Saturday, October 15 6:30-8:30 p.m. Saulsbury Bridge Recreation Area
Free family event

Adult Programs

Fire Building/Cookout

Can you start a fire with one match? Or with flint and steel? That is the challenge if you want to eat. Minimum of 10 required to hold the event. Preregistration required by September 26.



Saturday, October 1 4:00-6:30 p.m. Saulsbury Bridge Recreation Area
\$5.00/person

Rock Wrapping

Join us for some nature art. We'll learn about rock wrapping. If you have a favorite rock you would like to wrap bring it along. Minimum of 10 required to hold the event. Preregistration required by October 31.

Saturday, November 5 1:00-3:00 p.m. Environmental Learning Center
\$5.00/person



Pine Needle Baskets

Join us to make a pine needle basket. Minimum of 10 required to hold the event. Preregistration required by November 28.

Saturday, December 3 1:00-4:00 p.m. Environmental Learning Center
\$10.00/person

Download a registration form at www.muscatinecountyconservation.com or call the office (563)-264-5922.

Shelter Rentals

The Conservation Board has picnic shelters at Discovery Park, Saulsbury Bridge Recreation Area, and Jack Shuger Memorial Park that may be reserved. Contact the Conservation Board office at conservation@muscatinecountyiowa.gov or (563) 264-5922 or for more information.

Reservations may be made no earlier than one year in advance.

Discovery Park

Discovery Pond Shelter (#1) \$20 (no electricity)

Learning Center Shelter (#2) \$40

Saulsbury Bridge Recreation Area

Chicken Creek Shelter (#1) \$25

Boat Ramp Shelter (#2) \$25

Jack Shuger Memorial Park

Shelter \$25

Saulsbury Lodge Rental

The Saulsbury Lodge is available for rent. This enclosed building is air conditioned and has the capacity to seat around 75 people. It's a great setting for a family reunion, small wedding reception, graduation or birthday party. Prices vary depending on the day of the week and type of event. Contact the Conservation Board office at (563) 264-5922 or conservation@muscatinecountyiowa.gov for more information. Reservations may be made no earlier than one year in advance.



Deep Lakes Park Cabin Rentals

Visit www.muscatinecountyconservation.com to find out more about cabin rental at Deep Lakes Park as well as current specials. The cabins are open year-round. Reservations may be made up to one year in advance.

Camping at Saulsbury

The Saulsbury Bridge Recreation Area campgrounds are open. Camping fees are as follows.

- Main Campground \$20/night
- River Campground \$17/night
- Primitive Campground \$10/night
- Permanently Handicapped \$15/night

You can save on camping in the main campground with a coupon book for \$100 - that's six nights for the price of five. Available at the Environmental Learning Center or from the park ranger.

We will also continue with the "Free Wednesdays" and the "Two-for-One" camping specials.

TWO-FOR-ONE Camping Weekends

Camp the first night (Friday) in any of the campgrounds at Saulsbury and stay for the next night (Saturday) FREE on the weekends listed below.

October 7-8
October 21-22



FREE Wednesdays

Camp in any of the campgrounds at Saulsbury on any Wednesday in April-October for free.

Summer Extern

We were fortunate to have an extern again this summer. Pamela Joslyn, entering her 30th year of teaching, is a science educator at Muscatine Community School District. She received her B.S. in Genetics from Iowa State University and a M.S. in Science Education from Montana State University. She is currently studying STEM education through Drake University as a PhD student, emphasizing socioscientific issues. Pamela has taught physics, AP Physics I & II, chemistry, earth science, physical science, biology, and middle school. Selected as a recipient of the Catherine Miller Explorer Award from the Stanley Foundation, Pamela toured Zimbabwe, Botswana, Namibia, and South Africa, and she provided outreach opportunities to her local community connecting cultures, wildlife and geology.

Pamela has developed various engineering activities including a security system (with lasers and photoreceptors), cardboard boat regattas, design of cell phone cases, and car crash tests. During the spring semester of 2020 Pamela researched how the design process in science and engineering practices and problem-based learning is taught in STEM and/or science classrooms in the Helsinki area. Pamela collaborated with the University of Helsinki in Finland through the Fulbright Distinguished Award in Teaching.

An advocate for community partnerships, Pamela piloted a community-school partnership to reduce organic waste through a collaboration with the City of Muscatine. This summer Pamela worked as an extern through the Iowa STEM Teacher Externship Program. During the summer, STEM educators work side-by-side with knowledgeable and skilled employees who help bring the classroom curriculum to life. The Iowa STEM Teacher Externships provide educators with the exposure to answer questions about real-life application, prepare students for careers they may have in the future and improve educational experiences. To enhance the classroom experience, Pamela will develop kits and programming to supplement the Iowa Core science standards for various grade bands.

Pamela was a great help with the SPARK program and summer nature camps as well as many other programs and projects held throughout the summer.

Creature Feature

Tree Bats

Here in the Midwest bats are a common part of wildlife communities both in town and out in the countryside. They are easily seen right after sunset as they come out to begin feeding on flying insects. Many of these bats spend each day roosting under bridges, the eaves of houses, cracks or gaps in old buildings, and in wooded areas where loose bark in dead trees or abandoned woodpecker holes offer shelter. But, some bats we are seeing in the evening are not roosting under bridges or near buildings, but high in the leafy tops of trees. Collectively they are referred to as “tree bats”.

The three “tree bats”, all common in the Midwest, are the eastern red bat, hoary bat, and the silver-haired bat. These bats spend the day resting high amongst the leaves and small branches of trees. It is possible with patient careful searching, with binoculars, to spot these well camouflaged creatures, but good luck! They often roost hanging upside down by one foot where they twist and turn in the breezes just like the leaves and twigs around them.

As sunset nears red bats are some of the first bats to begin feeding. As darkness falls the hoary bats and silver-haired bats come out to feed along with little brown, big brown, northern long-eared, evening bats and others.

The tree bats often choose to hunt for moths, but will also catch a variety of other insects such as, beetles, katydids, mosquitoes, mayflies, cicadas, and any of the numerous other night time flying insects.

These bats typically mate in late summer or early fall; however, fertilization of the eggs is delayed by the female, with birth the following spring or early summer. Gestation is 80-90 days for the red bat, 40-50 days for the hoary bat, and 50-60 days for the silver-haired bat. All these bats typically have twins, but can have 1-4 young. Initially young will cling to

the mother while roosting. When the mothers leave to feed during the evening and early morning the young are left clinging to a branch. Most young are able to fly within a month. Lifespan varies from 2-10 years depending on local conditions, habitats, and migration challenges.

Being a bat is not easy. They are prey for raccoons and opossums, both skilled climbers, and blue jays, crows and owls will kill bats when the opportunity arises. Bats that end up on the ground, due to injury or illness, face a much larger number of predators both wild and domestic. Habitat loss is another problem for bats. Loss of trees (including dead standing trees) due to construction of roadways and buildings, and expansion of agricultural practices makes survival more difficult not just for bats and birds, but for a whole host of other forest dwelling creatures.

Finally, migration. Some of our bat species can hibernate during the winter, but “tree bats” cannot. They, and other species of bats, must migrate. Most “tree bats” spend the winter in southern states, though other bats may venture into Mexico. Migration itself is very challenging. Windy and rainy weather makes travel more difficult, and finding a temporary place to roost, rest, or feed isn’t always easy. A new challenge in recent years has been the proliferation of wind turbines. Hoary bats and red bats are affected by these structures more than any other species of bats. Scientists are working to determine the reason for this, and the wind turbine industry is working to change designs to lessen the impacts of wind turbines on bats.

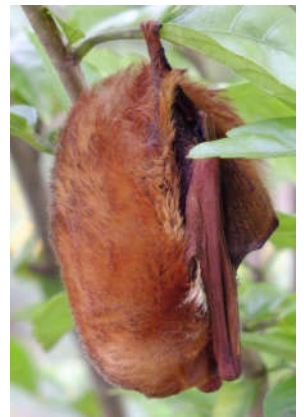
Though there are many myths and misunderstandings about bats they are vital parts of the environment. All of our midwestern bats are prolific insect eaters, and in large numbers they can have a significant impact on insect populations including harmful ones. Their homes in the forests and wooded areas are also home to many beneficial insects, birds, reptiles, and amphibians.



Hoary bat



Silver-haired bat

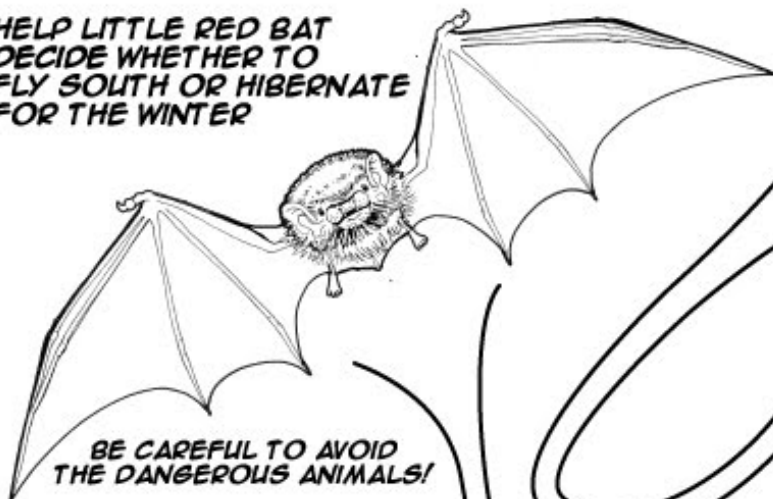


Red bat

Fun Facts

- There are over 1,300 species of bats making them the second most common mammal after rodents.
- Bats are the only flying mammals.
- Bats are the primary pollinators of the agave plant. No agave, no tequila!
- Bats can hang upside down for hours without using any muscles. They curl their toes around a branch, lock them in place and just hang.
- Baby bats are called pups.
- Bats have belly buttons.
- Around 80 medicines come from plants that rely on pollination by bats.

HELP LITTLE RED BAT
DECIDE WHETHER TO
FLY SOUTH OR HIBERNATE
FOR THE WINTER



BE CAREFUL TO AVOID
THE DANGEROUS ANIMALS!



OWL



FLY SOUTH WITH
THE SPARROWS!

RACCOON



FOX



WHAT WILL
SHE DECIDE??!!



CAT



HIBERNATE!





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MUSCATINE COUNTY CONSERVATION BOARD

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Mark Petersen	Member
Karen Hartman	Member

The Muscatine County Conservation Board meets the third Monday of each month at 7:00 p.m. Meetings are held at the Environmental Learning Center, 3300 Cedar Street in Muscatine. The public is welcome to attend.

If anyone believes he or she has been subjected to discrimination on the basis of race, color, national origin, age, gender, or handicap, he or she may file a complaint alleging discrimination with either the Muscatine County Conservation Board or the Office of Equal Opportunity, U.S. Department of the Interior, Washington, D.C. 20240

STAFF

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Michelle Berns	Naturalist
Kent Kaufman	Operations Supervisor
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Kristin Krumm	Assist. Park Officer/Maint. Tech.
Jill Ziegenhorn	Office Manager
Dave Schuler	Learning Center Assistant

Contact us at:

3300 Cedar Street, PO Box 109
Muscatine, IA 52761
P(563) 264-5922
conservation@muscatinecountyia.gov
www.MuscatineCountyConservation.com

