



The Cost of Extinction

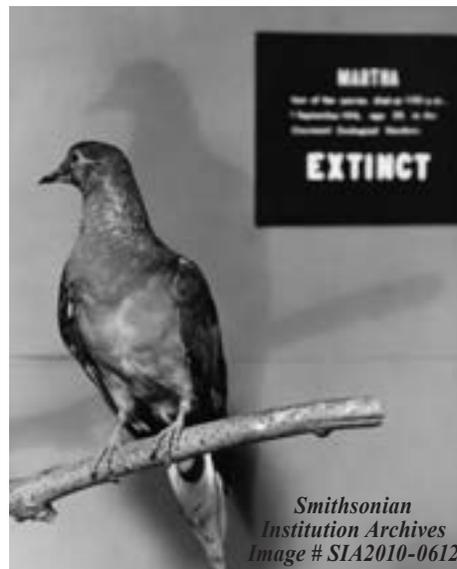
What is the cost of extinction? In the early 1900s, the market price for a bird that once numbered in the billions was just about 50 cents a dozen—a little more than 4 cents per bird. Today, that species is gone, and we'll never fully understand the loss or accurately calculate the cost.

This month we recognize the 100th anniversary of the extinction of the passenger pigeon. On September 1, 1914, the sole survivor of this once thriving species, a female named Martha, died in captivity at the Cincinnati Zoo. The pigeon's demise was preceded by other North American birds including the Labrador duck in 1878 and the great auk in 1888 and followed afterwards by the colorful Carolina parakeet in 1918 and the heath hen in 1932. A wave of extinctions began soon after European settlement.

Believed to have been the most numerous species of bird in North America, numbering as many as 5 billion, a flock of pigeons passing overhead would darken the sky and take days to pass. One well-known account describes a single flock as measuring 6 to 8 miles wide and over 125 miles long!

Native American tribes and sustenance pioneers consumed pigeons for food. By the late 19th century, however, market hunters killed birds by the thousands and with the emergence of the railroad, large quantities of fresh meat could be moved more quickly and at a greater distance. Pigeons were packed into barrels and shipped to markets in the East and many were even used as hog feed. While pigeons were easy to kill due to their habit of grouping together on the ground, faster methods of harvesting were required to keep pace with demand. Grain soaked in alcohol made the birds drunk and easy to net. A single bait bird, called a "stool pigeon," placed on a stool with a string tied around its leg would flutter to the ground when the stool was knocked over, thereby attracting more birds.

Within a couple of decades, the passenger pigeon slipped into extinction causing many to wonder where they had gone and even some to surmise that flocks had flown to the moon or drowned in the sea. In the past, little was known about the pigeon's biology and its low birth rate. Generally, only 1 egg was laid, so its population didn't replace itself rapidly. Educational opportunities to share information with others rarely existed and there were few, if any, laws regarding harvesting game.



Sign reads: "MARTHA, last of her species, died at 1 p.m., 1 September 1914, age 29, in the Cincinnati Zoological Garden. EXTINCT."

A similar situation existed in Missouri in 1937 during the time of the formation of the Missouri Department of Conservation. Today, biologists closely monitor populations of both game and nongame animals and habitat management is done throughout the state on public and private land with the assistance of private landowners. Conservation Agents enforce regulations regarding the use

of Missouri's natural resources and educational opportunities are abundant. Early conservationists made efforts to try to save the passenger pigeon including one petition in 1857 dismissed by the Ohio State Legislature, but it was too late.

Wildlife species are managed as populations—not as individuals—unless their decreasing numbers create cause for concern. Today, efforts are being made to restore the greater prairie chicken, a relative of the extinct heath hen, by live-trapping them in Kansas, where they are abundant, and releasing them onto suitable habitat in Missouri. Other species of wildlife including hellbenders, peregrine falcons, and pallid sturgeons are tracked individually through surgically implanted data storage tags or by other identification markers visible on legs, fins, or wings. The goal is to never have another "Martha"—the last known individual of a species. Many other species have been brought back from near extirpation (extinct within the state of Missouri) since 1937 including white-tailed deer, turkey, Canada geese, and bald eagles.

To learn more about passenger pigeons and other extinct North American birds, we invite you to participate in events at the Springfield Conservation Nature Center on **September 12 and 13**. Activities for all ages and the **premiere of the documentary *The Lost Bird Project*** will be included. (See page 4 for details.)

We may never know the cost of extinction. While it would be impossible to define it in economic terms, because how do you put a price on something you've never seen, it's even more difficult to describe on a human level. We'll never see a passenger pigeon or marvel at a flock as large as they once numbered, and for those reasons alone, we are all the poorer. So why do we recognize this anniversary of demise? Because, forgetting the passenger pigeon "is another kind of extinction."

—Linda Chorce, Nature Center Manager

Joplin Office in the Wildcat Glades Conservation & Audubon Center

201 W. Riviera Drive, Suite B, Joplin, MO 64804 • mdc.mo.gov/node/292



The Joplin Conservation Office, located in the Wildcat Glades Conservation & Audubon Center, is your local connection to Missouri's fish, forests, and wildlife. Stop by and purchase hunting and fishing permits, attend a nature program, go for a hike, enjoy a picnic, or access Shoal Creek. Within the 190 acres of Wildcat Park, you will find a diverse mix of wildlife habitats rich with flora and fauna. From I-44, take exit 6, and turn south on MO-86. Turn right on Riviera Drive to enter Wildcat Park.

HOURS:

Monday–Friday: 8 AM–5 PM
Closed all state holidays.
Audubon Center hours vary.

TO REGISTER FOR A PROGRAM:

Programs are free. Call 417-629-3423 to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list.

Ask The Naturalist

Why Do Leaves Change Color?

Even though the green of chlorophyll is what you see during the growing season, there also are hidden colors in the leaves. Those are carotenoids. They're the same pigments that make carrots orange and corn and daffodils yellow.

In the fall, shorter days and cooler nights mean there's less energy for food-making. The chlorophyll starts to break down. The green disappears and the yellow carotenoids can finally be seen in such trees as hickory, ash, birch, maple, sycamore, cottonwood, and sassafras.

The red and purple colors aren't hiding in the leaves. They're newly created in the fall when sugars are made during warm days, then trapped in the leaves during cool nights. The trapped sugars change chemically into anthocyanins, which appear red and purple.

The more sunshine during the day, the more red color is created. That's why shaded leaves will be less red than those that get lots of sun. If the weather is cloudy and the nights stay warm, there won't be as much vivid red in such trees as maple, sweetgum, oak, and dogwood.

Other factors besides contrasting temperatures also affect fall color. Trees that don't get enough water during the growing season may drop their leaves quickly before they color. And if it gets very cold early, that kills the leaves before they have time for a fall display.

In good seasons, Missouri's fall color may slowly change from mid-September to peak in mid-October. By late October, the colors fade and the incredible show is gone.

September Events

Stream Team Monitoring And Cleanup

September 6 • Saturday • 1–3 PM
Wildcat Glades Conservation & Audubon Center (Joplin)

No registration required (ages 7 and up)

Join the Missouri Stream Team program and get involved in keeping our streams and rivers healthy. Come explore and learn for an afternoon of fun as we show you how we check water quality in Silver and Shoal Creeks through chemical and biological monitoring. We'll also walk the shoreline in Wildcat Park and remove any trash.

Introduction To Archery

September 11 • Thursday • 5:30–7 PM
Walter Woods Conservation Area (Joplin)

Registration required (families, ages 7 and up)

Learn the fundamental skills and safety of archery shooting. Discover the fun of this family activity and learn together outdoors. We will teach the basics including bow nomenclature, hand set, bow set, pre-draw, and proper stance to help you shoot more consistently and accurately. All equipment will be provided.

October Events

Campfire Cooking With Kids

October 4 • Saturday • 3–5 PM
Walter Woods Conservation Area (Joplin)

Registration required (families, ages 5 and up)

Learn how to cook outside over the campfire for your next adventure.

Parents, grandparents, and mentors discover fun and tasty ways to cook a meal and involve the whole family. We will be stirring up and tasting several delicious dishes while enjoying time in the out-of-doors.

Prairie Jubilee

September 27 • Saturday • 10 AM–4 PM
Prairie State Park (Mindenmines)

No registration required (all ages)

Explore the tallgrass prairie through conservation displays and discover the importance of bison to the prairie while taking a hayride to view the herd! Visitors will see a glimpse of Missouri's past through live demonstrations, games, activities, and living history programs. Special music performances by the award-winning duo, *WildHeart*, will capture the attention of audiences young and old. This Parents' Choice Award winning duo performs original music with motion and a conservation message for a wild and unforgettable journey through our natural world. Pulled Bison BBQ sandwiches and refreshments will also be available for purchase. Hosted by the Department of Natural Resources, join us and learn about the importance of our local prairie areas and how you can get involved at this biennial event. For more information call 417-843-6711.



Kids love campfires

Andy Dalton Shooting Range and Outdoor Education Center

4897 N. Farm Road 61, Ash Grove, MO 65604 • mdc.mo.gov/node/288



September & October Events

Great Outdoors Day

September 27 • Saturday • 8:30 AM–3 PM

No registration required (all ages)

The 20th Annual *Great Outdoors Day* event will be held on the Bois D'Arc Conservation Area and at the Andy Dalton Shooting Range and Outdoor Education Center. This event encourages participation in the shooting sports of archery, rifles, and shotguns located at the range and fishing, camping, fly tying, and canoeing at the Aquatic Education Pond located on the area. There is no registration for this free one-day event. All firearms and ammunition are provided and no personal firearms are allowed.

Deer Rifle Sight-In Days

October 25–November 14

Daily 8:30 AM–4:30 PM

No registration required and regular range usage fees apply

Hours are extended and days added for deer hunters to have the opportunity to bring their favorite deer rifles to sight them in. Taking time to sight-in firearms helps ensure a quick, clean kill and reduces wounding loss. This also provides an opportunity for quality family time and honing shooting skills. If you have not been to the range, take a few minutes and review the range procedure video online at mdc.mo.gov/node/25379.

Making Missouri's Outdoors Accessible To All

We help all people Discover Nature

It is one of the goals of the Missouri Department of Conservation (MDC) to remove barriers and provide assistance to all citizens so they can discover nature and understand the importance of conservation and their individual role in hunting, fishing, or simply enjoying nature. In March 2004, people representing different agencies came together to find common ground for planning an event to fill a special need in Southwest Missouri. The result of that first meeting is an annual event held on the third Saturday in June and is called *Day at the Range and Outdoor Adventure Fair (DATR)*.

The goals of the event were simple: (1) provide an opportunity for people with disabilities to experience and participate in outdoor activities, (2) introduce people with disabilities and their families to additional opportunities to experience Missouri's outdoors using the National Wild Turkey Federation's (NWTF) *Wheelin' Sportsmen* program model, and (3) increase interest and participation for the support of conservation programs and the preservation of the hunting and outdoor heritage through active participation.

The first event in June 2004 was attended by 109 people. It has grown to more than 1,100 people attending the 2014 event with nearly 500 being disabled participants and the remainder guests and volunteers. The big winner in this event is the participant. Higher self-esteem, more confidence, and lots of big smiles are seen when they catch a fish or shoot a gun for the first time. These events challenge the participant to test their personal limitations. Many people think that due to a life-altering situation they can no longer do the things they once enjoyed, which is not the case. While some folks need a piece of adaptive equipment to successfully participate, equipment is provided to them at no cost for their special day.

One of the largest benefits of this program has been the long-term partnership of the three primary stakeholders—the Southwest Center for Independent Living, NWTF Sho-me Gobbler Chapter *Wheelin' Sportsmen*, and MDC. This event has won state and national recognition including “best event of its kind in the nation” from NWTF. The DATR committee has provided trainings to various agencies across the country and the event has become a successful model for many agencies and organizations to follow.

The DATR committee has also created managed deer and spring turkey hunts and is now planning its first pheasant hunt to further engage participants with disabilities in enjoying nature through hunting. These opportunities are accessible through an established application process managed by the range staff. If you know of someone with a disability who you believe would benefit from our programs and events, we invite you to tell them about us and encourage them to get involved. For more information on these and other opportunities for individuals with special needs, call the shooting range at 417-742-4361.

—Mike Brooks, Outdoor Education Center Supervisor



To get to the Andy Dalton Shooting Range and Outdoor Education Center, take US Highway 160 west of Willard, turn south on Farm Road 61, and go 2.5 miles, facility on the west side of road. Facilities include an outdoor education center and archery, rifle, pistol, and shotgun ranges, including skeet and trap.

HOURS:

September 14–April 14

Monday and Thursday: 9 AM–4:30 PM

Friday–Sunday: 12 NOON–4:30 PM

April 15–September 13

Monday: 9 AM–4:30 PM

Thursday: 9 AM–7:30 PM

Friday–Sunday: 12 NOON–4:30 PM

Closed Tuesdays, Wednesdays and all state holidays. Hours are subject to change.

FACILITIES AND FEES:

Available for individual and group use. Call for information and possible restrictions.

- Rifle/pistol range fee: \$3 per booth per hour
- Trap/skeet range fee: \$3 per person per round of 25 clay targets
- Shotgun patterning range: \$3 per person per hour
- Archery range: \$3 per person per hour
- Group use fee: \$20 per hour plus \$3 per round of 25 clay targets

TO REGISTER FOR A PROGRAM:

Programs are free. Call 417-742-4361 or email DaltonRange@mdc.mo.gov to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list.

Springfield Conservation Nature Center

4601 S. Nature Center Way, Springfield, MO 65804 • mdc.mo.gov/node/287



The Springfield Conservation Nature Center is located in southeast Springfield just west of US-65 off the James River Freeway (US-60). Indoors, enjoy nature exhibits, attend programs, purchase hunting and fishing permits, browse through a nature-related gift shop, and pick up free conservation brochures. Outdoors, enjoy three miles of hiking trails through a variety of natural communities. Call to schedule a naturalist-led program for your organized group.

CURRENT HOURS:

March 1–October 31

Building: Tuesday–Saturday: 8 AM–5 PM

Sunday: 12 NOON–5 PM

Closed Monday

Trails: Sunday–Saturday: 8 AM–8 PM

TO REGISTER FOR A PROGRAM:

Programs are free. Call 417-888-4237 to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list.

September Events

Marvelous Mushrooms Of Missouri

September 4 • Thursday • 7–8 PM

Registration begins August 15 (ages 12–adult)

Jay Justice, co-founder of the Arkansas Mycological Society and author of *The Fungi of Arkansas*, will share information about the common mushrooms in Missouri. Common edible and poisonous species of mushrooms as well as information about unique species will be shared from his 30 years of experience. This program is provided by the Missouri Mycological Society.

Story Time With Ms. Ladybug

September 10 • Wednesday • 11–11:30 AM

No registration required (ages 2–6)

Join Volunteer Naturalist Joyce Tolliver as she reads a nature story and shares activities with your 2–6 year olds. Please, no organized groups.

September Events

Hike For Homeschoolers

September 11 • Thursday • 10 AM–12 NOON

Registration begins September 2 (ages 5–adult)

The hot, sultry days of summer are drawing to a close and the animals and plants are getting ready for the change of seasons. Join us to investigate what's happening on the nature center trails.

Lost Birds–Activity And Outdoor Movie Night

September 12 • Friday • 6:30–9 PM

No registration required (all ages)

Bring the family to enjoy an evening devoted to remembering the passenger pigeon on the 100th anniversary of its extinction and learning about other endangered and extinct Missouri birds. Children's activities, games, and art projects take place from 6:30–7:30pm followed by a short presentation and a nature movie for all ages. The feature presentation *The Lost Bird Project* (geared more toward adults) will begin at approximately 8pm. This hour-long documentary chronicles sculptor Todd McGrain's efforts to place bronze statues at the location where five different North American birds went extinct in the last 100 years because "forgetting is another kind of extinction." The *Montreal Mirror* describes the film as "a stunning and evocative work about art, nature and our imperiled planet." Bring your own chairs and beverages (nonalcoholic) and we'll provide the popcorn and educational fun.

Lost Birds–Remembering Missouri's Extinct Birds

September 13 • Saturday • 1–4 PM

No registration required (all ages)

Stop by anytime to learn more about the passenger pigeon as we recognize the 100th anniversary of its extinction. Enjoy activities, exhibits, games, and art projects to learn more about other endangered and extinct Missouri birds. The hour-long documentary film *The Lost Bird Project* (geared more toward adults) will be shown at 1:30 and 3pm. *See above for film description.*

Backpacking For Beginners

September 18 • Thursday • 7–9 PM

Registration begins September 2 (ages 10–adult)

Join avid outdoorsmen Volunteer Specialist Don Brink and special guest Richard Donaldson for an introduction to backpacking. Learn about the types of equipment, things beginners should know, and places to go in the Ozarks. After attending this program, you'll be ready to venture out on your own.

Babes In The Woods

September 19 • Friday • 10–11 AM

September 20 • Saturday • 10–11 AM

Registration begins September 2 (ages 0–2)

Bring your children ages 0–2 for a guided nature walk with Volunteer Naturalist Dana Tideman. Bring a stroller and join the fun.

Hiking Club

September 20 • Saturday • 8 AM–5 PM

Registration begins September 2 (ages 18–adult)

Explore the White River Valley Trail System at Table Rock State Park with Volunteer Naturalist Pat Stritzel. Meet at the nature center and carpool. Bring a sack lunch and water and wear comfortable hiking shoes. **Hike is five miles and rated moderate to difficult.**

Monarch Celebration

September 20 • Saturday • 10 AM–2 PM

No registration required (all ages)

Stop by anytime and help us celebrate the fall migration of monarch butterflies with crafts, games, monarch tagging, and more.

Monarchs Rule!

September 20 • Saturday • 1–4 PM

Registration begins September 2 (ages 5–adult)

Every fall millions of monarch butterflies wing over the Ozarks to their winter home in Mexico. Join Volunteer Naturalists Bob and Ruby Ball and Dana Tideman for an indoor/outdoor adventure to explore the fascinating behavior and life cycle of these beautiful travelers.

Conservation TEEN Club

Missouri Snakes

September 23 • Tuesday • 6:30–8 PM

Registration begins September 2 (ages 12–17)

Come and learn about both venomous and nonvenomous snakes that call Missouri home. You will get to see and touch (if you want) some of Missouri's nonvenomous snakes. Snacks and drinks provided after the program.

Conservation Kids' Club

Snakes Up Close

September 25 • Thursday • 6:30–7:45 PM

Registration begins September 2 (ages 7–12)

While the mere thought of a snake may make parents shudder, kids love them. Come to this month's meeting to learn all the fun facts about Missouri's most misunderstood reptile. Please, no younger siblings and only one adult per group of kids.

Nature And The Arts

Patterns By Nature

September 26 • Friday • 7–8:15 PM

Registration begins September 2 (ages 12–adult)

Come share the adventures of Volunteer Naturalist and Photographer A.D. (Art) Daniels as he interprets patterns by nature. Celebrate the biodiversity of life as he examines an assortment of ecosystems including prairies, glades, woodlands, and wetlands. Rediscover our natural world as he enthusiastically shares his images, experiences, and thoughts gathered from across the Ozarks and beyond. This journey includes a wide array of interesting plants, animals, and landscapes. Be sure to view his photography on exhibit during September.

September **Little Acorns** programs are listed on page 5.

Springfield Conservation Nature Center

4601 S. Nature Center Way, Springfield, MO 65804 • mdc.mo.gov/node/287

October Events

Homeschool Outdoor Fair For The Birds!

October 2 • Thursday • 9:30 AM–3 PM

Registration begins September 16 (all ages 5)

Enjoy free bird-related educational fun for all ages. Guided hikes, activities, programs, demonstrations and more will be provided by Springfield's leading organizations, institutions, and agencies related to the natural world and science. Bring a sack lunch and plan to spend the day. Call for a flier of the day's events.

Conservation TEEN Club Archery For Beginners

October 4 • Saturday • 9 AM–12 NOON

Registration begins September 16 (ages 12–17)

You don't have to be a hunter to become a skilled archer. Learn a new skill and spend time practicing at the Andy Dalton Shooting Range at the Bois D'Arc Conservation Area. No experience is necessary. Meet at the range; gear and snacks will be provided.

Primitive Skills Day

October 5 • Sunday • 1–5 PM

No registration required (all ages)

Primitive Skills Day returns! See demonstrations in flint knapping, bow and arrow construction, making cordage out of plant fibers, beadwork, and fire making from some of the Ozarks best primitive skills specialists. Try your hand at some of these age-old skills and enjoy Dutch oven cooking demonstrations. Drop by anytime.

Story Time With Ms. Ladybug

October 8 • Wednesday • 11–11:30 AM

No registration required (ages 2–6)

Join Volunteer Naturalist Joyce Tolliver as she reads a nature story and shares activities with your 2-6 year olds. Please, no organized groups.



Halloween Happening Spider Spree



October 23 • Thursday • 6:30–9:30 PM or October 24 • Friday • 6:30–9:30 PM

Get ready for some nighttime fun and surprises during our annual guided Halloween hikes. Costumed spiders will serve as trail leaders to introduce you to the incredibly important role spiders play in the web of life. Guided hikes will be led on a first-come, first-served basis with the last hike leaving at 9pm. Indoor activities and games will be provided to keep you entertained while waiting for the trail hikes. Plan on spending at least 1.5 hours. Be prepared for some entertaining and extraordinary sights without the frights! A free shuttle bus will be provided for overflow parking from nearby Bryan University. *No registration required and fun for all ages!*

Babes In The Woods

October 10 • Friday • 10–11 AM

October 11 • Saturday • 10–11 AM

Registration begins October 1 (ages 0–2)

Bring your children ages 0-2 for a guided nature walk with Volunteer Naturalist Dana Tideman. Bring a stroller and join the fun!

Nature And The Arts Music Inspired By Aldo Leopold

October 10 • Friday • 7–8 PM

Registration begins September 16 (ages 12–adult)

Mike Fraser and Tenley Hansen are folk musicians who specialize in traditional music of the Ozarks. Aldo Leopold, known as the "Father of Conservation" and author of *A Sand County Almanac*, has inspired Mike and Tenley to compose original music that will be integrated into the program. Mike is the author and musician behind the popular Conservation Department-produced CDs *Fiddles and Forests* and *Voices of the Hills*. Mike and Tenley began performing in 2006 as members of the Shortleaf Band.

Fall Tree Identification

October 18 • Saturday • 9–11 AM

Registration begins October 1 (ages 12–adult)

Join Volunteer Naturalist and retired forester Earl Niewald for a tree identification hike. Learn to identify common trees by a variety of methods and enjoy spectacular fall color on this guided hike.

Hiking Club And For Adults Only Hike And Float

October 18 • Saturday • 9 AM–12 NOON

Hike And Float For Families

October 18 • Saturday • 1–4 PM

Registration begins October 1 (ages 12 and up with an adult mentor)

What better way to enjoy an autumn day than by a hike and a float trip. We'll hike two miles on the nature center and Ozark Greenways trails then float back to the nature center on Lake Springfield.

Please limit to one per month.

Little Acorns

Programs are 45 minutes in length.

September Events

Hey! Big Daddy

September 5 • Friday • 11 AM or 1:30 PM

September 6 • Saturday • 11 AM

Registration begins August 15 (ages 3–6)

Hey! Who is hurrying, scurrying, and weaving in and out of the leaf litter? It's Big Daddy Longlegs! Hurry in to find out some amazing facts about these long-legged forest creatures.

Miniature Music Makers

September 17 • Wednesday • 11 AM or 1:30 PM

Registration begins September 2 (ages 3–6)

Grasshoppers, crickets, and katydids provide some of the familiar sounds of summer. Join Volunteer Naturalist Nancy Ryan and learn how and why they make "music" and make a little insect music yourself.

Mudbug Mystery

September 24 • Wednesday • 11 AM or 1:30 PM

Registration begins September 2 (ages 3–6)

Have you ever heard of a mudbug? Come and learn about these "crusty" creatures, also known as crayfish, and see some up close.

October Events

'Possum Trot

October 3 • Friday • 11 AM or 1:30 PM

October 4 • Saturday • 11 AM

Registration begins September 16 (ages 3–6)

Where do opossums live? Do they swing by their tails? What do they have in common with dinosaurs? "Trot" on over to find out the answers to these questions as well as many others.

Going Batty

October 15 • Wednesday • 11 AM or 1:30 PM

October 18 • Saturday • 11 AM

Registration begins October 1 (ages 3–6)

Bats are one of the most misunderstood animals in nature. Go batty as we learn the truth about bats, how they survive at night, and why they are so important.

Bear Tales

October 29 • Wednesday • 11 AM or 1:30 PM

Registration begins October 1 (ages 3–6)

The black bear population is increasing. These interesting animals represent all things that are wild in the Ozarks. Join us as we learn about these amazing animals.

Temporary Exhibits

September • Nature Photography

by A.D. Daniels

October • Missouri Prairies And Glades

by Bob Ball

Shepherd of the Hills Fish Hatchery and Conservation Center

483 Hatchery Road, Branson, MO 65616 • mdc.mo.gov/node/290



The Fish Hatchery and Conservation Center is located on 221 acres in Branson off Highway 165 next to Table Rock Dam. Outdoors, visitors will experience an active fish hatchery with 700,000 rainbow and brown trout in 30 pools with opportunities to feed the fish. Indoors, enjoy a 3,500 gallon aquarium and hands-on nature exhibits and purchase hunting and fishing permits. The area also features four hiking trails, a picnic area, a boat ramp, and access to Lake Taneycomo.

FACILITY HOURS:

Memorial Day–Labor Day

Sunday–Saturday: 9 AM–6 PM

Remainder of Year

Sunday–Saturday: 9 AM–5 PM

AREA AND TRAIL HOURS:

4 AM–10 PM

The area is open to fishing 24 hours daily, but special permits and regulations do apply. Check the current fishing regulations or call for details.

TO REGISTER FOR A PROGRAM:

Programs are free. Call 417-334-4865, Ext. 0, to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list.

FISHING

LAKE TANEYCOMO:

Before fishing on Lake Taneycomo, become familiar with the regulations and restrictions. Come by for a free brochure of the entire lake including fishing accesses. For specific details about trout fishing here and across the state, visit mdc.mo.gov/node/5603.

September and October Events

How Animals Teach Their Young

September 13 • Saturday • 7–8:30 PM

Registration required (all ages)

It's school time for Missouri animals! Just what does "teaching" mean? What knowledge and skills do young animals need to know? Different types of animal parents use unique methods to teach their young. We will see if this is an easy or difficult process as well as comparing wildlife teaching methods to our own. Come discover a variety of teaching methods used by our outdoor neighbors.

Night Sounds

October 24 • Friday • 7–9 PM

Registration required (all ages)

This is our annual Halloween-style night hike. This short guided hike will feature the natural sounds of night. Several stations will help you learn the sounds of a variety of animals and plants. In addition to identifying the sounds, you will also find out why some of the sounds are being made. After the hike, there will be activities and treats in the Conservation Center. Dress for the weather and bring a flashlight.

It's Brown Trout Spawning Time

Autumn is a busy time at Shepherd of the Hills Fish Hatchery because both fall breeding rainbow and brown trout begin their annual spawning. Unlike adult rainbow trout, which stay at the hatchery throughout the year, spawning brown trout are captured as they come out of Lake Taneycomo up a fish ladder.



Brown trout using the fish ladder

Brown and rainbow trout belong to the family of fish known as Salmonids which include salmon species noted for their migration out of the seas and into freshwater streams to reproduce. Unlike salmon, trout don't go back to the exact place where they were hatched, but do move from their year-round habitat upstream to more suitable spawning sites.

At least a few of Lake Taneycomo's brown trout choose the special fish ladder. The trout swim up a series of pools and waterfalls leading to the hatchery building. Once a good number of browns are trapped at the top of the ladder, the fish go through what is called "air-spawning." Hatchery personnel hand-spawn the male trout to collect the male's sperm which is called milt. Then the females are injected with a bit of oxygen through a hypodermic needle to collect their eggs into a bowl. The milt is poured into the eggs for fertilization. Then the eggs are moved into the hatchery building to incubate, hatch and grow into 10- to 12-inch stocking-sized brown trout. After the adult fish go through the spawning process, they are released back into the lake.

Visitors can view the trout as they leap from pool to pool up the fish ladder. It is located next to the picnic area at Lake Taneycomo's first fishing access below Table Rock Dam. The best time for watching is late August through December.

You can see a mount of the world record brown trout caught on 2-pound test line at the Shepherd of the Hills Conservation Center. This 25 plus-pound brute was caught just upstream from the fish ladder on Lake Taneycomo. For more information, contact the Conservation Center at 417-334-4865, ext. 0.

—Bryon Putman, *Naturalist*

Southwest Regional Office

2630 N. Mayfair Avenue, Springfield, MO 65803 • mdc.mo.gov/node/257

Great Outdoors Day

In the rush-rush culture we live in, it's getting harder to find time to get our families to enjoy the outdoors. It's not that the opportunities aren't there, it's finding the time or taking the time to participate in these activities. Before you permanently shelve your family's potential outdoor trips, consider this: There's a lot of nature around us that your family might be missing. Outdoor activities can be educational, good exercise, and good mental therapy for our overstressed psyches. Most importantly, they can be fun.

One thing you hear about the Ozarks is it's a great place to enjoy the outdoors. But if you don't have any experience in outdoor recreation, you're probably saying, "All this outdoors stuff sounds great if you're an expert, but how do I get started?" If that's a question you've been asking, circle Saturday, September 27, on your calendar. On that date, area residents of all ages will be able to find out what's great about the Ozarks outdoors at *Great Outdoors Day*. This Missouri Department of Conservation event will run from 8:30 am to 4 pm at the Bois D'Arc Conservation Area and Andy Dalton Shooting Range and Outdoor Education Center. It is the local celebration of *National Hunting and Fishing Day*. The event will include various types of firearms and archery shooting opportunities. All firearms and ammunition are provided and no personal firearms are allowed. All activities will offer hands-on opportunities supervised by experienced personnel. Fishing programs, including two free public fishing sessions, will be at the Bois D'Arc Conservation Area's Aquatic Education Pond (bring your own fishing equipment and bait).

But *Great Outdoors Day* isn't only about hunting and fishing. Canoeing demonstrations will be given at scheduled times. If you thought beans and weenies were the only food that could be fixed on a camping trip, visit the Springfield Greene-County Park Board's station to see the variety of outdoor-prepared dishes that can add flavor to any outing. The main purpose of events like *Great Outdoors Day* is to give visitors ideas. In future decades, we would all like to look back on past activities we did with our kids, things that helped bond us together as families. Long journeys sometimes begin with little steps. Perhaps some of those steps are waiting for your family in the form of an outdoor activity.

For information about *Great Outdoors Day*, call the Southwest Regional Office at 417-895-6880, the Andy Dalton Shooting Range and Outdoor Education Center at 417-742-4361, or the nature center at 417-888-4237. Information about *Great Outdoors Day* and other Missouri Department of Conservation activities can also be found online at mdc.mo.gov/SouthwestEvents.

—Francis Skalicky, Media Specialist



The Southwest Regional Office is conveniently located just west of the intersection of US-65 and Kearney in Springfield. The public may obtain information on land management, nuisance wildlife, educational opportunities, river and pond management, and more, as well as purchase hunting and fishing permits and obtain area brochures for Conservation Department areas.

HOURS: Monday–Friday: 8 AM–5 PM
Closed all state holidays

PHONE: 417-895-6880

Hunting Seasons

Archery Deer and Turkey

September 15–November 14
November 26–January 15, 2015

Firearms Turkey

October 1–31

Firearms Deer

Urban Zones Portion*
October 10–13

Early Youth Portion
November 1–2

November Portion
November 15–25

Antlerless Portion*
November 26–December 7

Alternative Methods Portion
December 20–30

Late Youth Portion
January 3–4, 2015

*view open areas in the *2014 Fall Deer & Turkey Hunting Regulations and Information*

Hunter Education Sessions

Classroom Sessions

Location

Location	Date/Time
Springfield Conservation Nature Center	September 13 • Saturday • 8 AM–12 NOON October 11 • Saturday • 8 AM–12 NOON
Wildcat Glades Conservation & Audubon Center . . .	September 9 • Tuesday • 6–10 PM October 15 • Wednesday • 6–10 PM

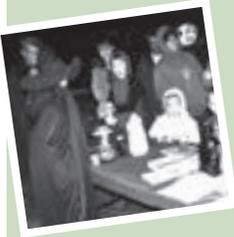
Skills Sessions

Location

Location	Date/Time
Springfield Conservation Nature Center	September 13 • Saturday • 1–5 PM October 11 • Saturday • 1–5 PM
Andy Dalton Shooting Range	September 13 • Saturday • 8 AM–12 NOON October 18 • Saturday • 8 AM–12 NOON
Wildcat Glades Conservation & Audubon Center . . .	September 10 • Wednesday • 6–10 PM September 24 • Wednesday • 6–10 PM October 21 • Tuesday • 6–10 PM

Visit mdc.mo.gov/node/3722 to register for these sessions and to check for session changes and/or additions.

Halloween Hikes



Night Sounds

Shepherd of the Hills

October 24

Friday • 7–9 PM

Registration required (all ages)

See page 6 for more details.

Halloween Happening Spider Spree

Springfield Conservation Nature Center

October 23 • Thursday • 6:30–9:30 PM

October 24 • Friday • 6:30–9:30 PM

No registration required (all ages)

See page 5 for more details.



Nature Connections Newsletter

To begin receiving the newsletter by mail, call any of the offices listed in the newsletter and leave your name and address.

To begin receiving the newsletter electronically by e-mail, go online to mdc.mo.gov/govdelivery, enter your email and subscribe to "News, Events and Newsletters - Southwest Region."



September & October

\$6

20% off

\$7.20

Available at the Springfield Conservation Nature Center and Southwest Regional Office.

Gift Shop

Conservation Showcase:

Fall Color in Southwest Missouri

As nights get cooler and days get shorter, we all look forward to fall in the Ozarks. We start thinking of making sure our furnace is working, getting the sweaters out of storage, cutting firewood, possible Halloween costumes, and other activities as we prepare for fall. But it's not only us getting ready, trees are preparing too.

It's all about chlorophyll. This green pigment is what allows plants to produce their own food using the energy of the sun. As the days continue to get shorter and less sunlight is available each day, trees begin a complicated process. Reduced hours of sunlight mean the tree is spending more energy keeping its leaves than it can produce, so it starts to shut the little leaf "factories" down. Chlorophyll begins to break down and allows other pigments in the leaf to show up. This is the beginning of the beautiful fall color we enjoy. Depending on the species and what other pigments and chemicals are present in that species, we see reds, oranges, yellows, and purples start to show. Sugar maples (hard maples) are known for their beautiful fall color and are commonly planted in towns and cemeteries to add a splash of color when October comes around. Orange is probably the most dominant maple color, but reds, yellows, and other colors can be found on different species of maple. Red maple varieties are commonly sold in nurseries because they were specifically designed for brilliant fall color. They even have names such as "sunset," "autumn blaze," or "October glory."

Many factors influence the timing and intensity of color in the trees each fall. In general, fall color begins in late September or early October and peaks about the second or third week of October. A really cold or really warm year can change the timing by a week or two, but the main factor—day length—is consistent. The intensity of the colors can be linked to growth or stress on the tree, the rapidity of change from warm days to cool nights, and other factors.

As this color change is revealed by the decrease in chlorophyll, there is another incredible process going on in the tree. Different cell types are created at the base of each leaf to seal it for the coming winter and shed the now practically useless leaves. As these thicker cells develop, it allows the leaf to literally "fall" off the branch. Details of how fall color develops can be seen on the Missouri Department of Conservation (MDC) website at mdc.mo.gov/node/4566.

Fall color in Southwest Missouri can be quite variable and scattered. Generally, consistent color can be seen from smooth sumac, sassafras, and some yard trees that were selected specifically for that trait such as the maples mentioned previously. To fully experience fall color in Southwest Missouri, you need to drive to several locations. The color also does not develop at the same time at every location. Factors such as soil depth, aspect of the hillside, and tree species present influence the timing and intensity of color. To learn where MDC foresters are seeing color, visit MDC's website at mdc.mo.gov/node/4548 for current observations.

Fall color is sporadic. Listed below are some drives that often have good color at times during the season:

- Flag Spring Conservation Area has over 7 miles of gravel roads to travel by car. From Washburn, take Route UU northwest 1.75 miles, then the first public gravel road west 3 miles.
- US 65 from the Highlandville/EE exit, south of Ozark, south to the Arkansas line.
- Ozark Mountain Highroad (Highway 465) near Branson—which runs from US 65 west to Highway 76 for a distance of about 7 miles around the northwest side of Branson.
- The section of US 160 that runs from US 65 southeast to the Taney/Ozark county line.
- Glade Top Trail from Taney county to Ava in Douglas county.
- Highway H through Mark Twain National Forest from Christian to Taney county.
- Jolly Mill Drive in Newton county—take US 60 east from Neosho, then south on Wallaby Road, then east on Jolly Mill Drive.
- Lead Mine Conservation Area in Dallas County—drive State Forest Road to the Niangua River for fall oak color.

—Jon Skinner, Urban Forester
—Frances Main, Resource Forester