

Arkansas OUT *of* DOORS

The Official Publication of the Arkansas Wildlife Federation | Vol. 49, No. 3, Summer 2021





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1st Place Winner 10th Grade, and
Co-Best In Show in 2021 Wildlife of
Arkansas Student Art Contest



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ARKANSAS WILDLIFE FEDERATION PRESIDENT'S MESSAGE

Summer is here even though for some of you it started out with Memorial Day weekend a bit cold. For my family, it was great to start out the summer trout fishing with my family on the White River at Norfolk, AR. My step-son caught some fish on both the White River and on Dry Run Creek. They also got to watch some Bald Eagles which made our Memorial Day weekend even more meaningful.

We are truly excited to present the 2021 Wildlife of Arkansas Youth Art Contest winners. As you can see from the front cover, the level of skill and representation of Arkansas' wildlife and natural features by the students was spectacular. Due to the pandemic, we made the shift to an online submission format but that did not keep youth from participating as we had more than 600 pieces of art submitted. Thank you to Sharon Hacker, Jim Taylor, Mandy Clark and GERALYN HOEY for their countless volunteer hours to make this such a great success!

Even with my 50 plus years of exploring the wilds of Arkansas, I have never been good at remembering all the plants and trees. The Arkansas Natural Heritage Commission has a brand-new field guide to help us nature lovers identify Arkansas' trees, shrubs and woody vines. Look for the article to learn more about the field guide and where you can find it.

Also in this issue, you will find the second of a two-part series about the National Wildlife Refuges found in Arkansas. We are truly blessed to have Johnny Carrol Sain continuing his musings and this issue its about appreciating even the smallest of places and species close to home. Lola Perritt is back with one of her great Wild Kids articles about the age-old tradition of chasing fireflies during long summer nights. Also check out some history of Unsung Heroes of American Conservation. Dan Chapman with the US Fish and Wildlife

Service shares the incredible story about the role played by African-Americans in the CCC (Civilian Conservation Corps). I love learning about our conservation history and this is an important story that everyone should know and share.

This spring's state legislative session was very busy. Take a look at the News of Note section to learn about some of the issues AWF worked on. We were also excited to have the Recovering America's Wildlife Act introduced in the U.S. House of Representatives back in April. If funded, Arkansas would be eligible to receive over \$15 million in funding annually to help recover species that are on the decline. We have 377 species of greatest conservation need in our state currently. This will also be a game changer for habitat, water quality, nature education and other areas of our work. We are proud to have Representative French Hill as a cosponsor of this bipartisan bill. And hopefully by the time you read this, the Recovering America's Wildlife Act will have been introduced in the Senate.

Visit www.arwild.org to find the full Wildlife of Arkansas art exhibit and remember to check us out on Facebook for program updates and other great posts about finding wildlife around Arkansas.

"The battle for conservation will go on endlessly. It is a part of the universal battle between right and wrong" –JOHN MUIR

Charles S. Buckner, III (Trey)
President

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Arkansas Wildlife Federation Mission Statement

To promote conservation, responsible management and sustainable use of Arkansas' fish, wildlife, habitat, natural resources and outdoor recreational opportunities through education and advocacy.



Arkansas OUT of DOORS

OFFICIAL PUBLICATION OF THE
ARKANSAS WILDLIFE FEDERATION

PRESIDENT

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LAYOUT / DESIGN

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Arkansas Out of Doors is published quarterly, 4 times per year by the **Arkansas Wildlife Federation**. This is the official publication of the **Arkansas Wildlife Federation**. Printed matter includes hunting and fishing news, sporting information, articles on pertinent legislation, with special emphasis on environment and pollution problems. All **Arkansas Wildlife Federation** members are entitled to receive one copy of each issue of **Arkansas Out of Doors** for one year.

Permission is granted to reprint any news article or item printed in **Arkansas Out of Doors** with credit, please.

Views and opinions, unless specifically stated, do not necessarily represent the positions of the **Arkansas Wildlife Federation**.

ISSN0884-9145

POSTMASTER: Send form 3579

and address changes to:

Arkansas Out of Doors, P.O. Box 56830,
Little Rock, AR 72215, or call 501-414-2845.

Third Class postage paid at Little Rock, AR
and additional mailing offices.

Arkansas Wildlife Federation

P.O. Box 56380

Little Rock, AR 72215

Email Address: info@arwild.org

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Nesting bald eagles on
Big Lake NWR - Roy Herron

ARKANSAS' NATIONAL WILDLIFE REFUGES - PART 2

This is the second of a two-part series about the National Wildlife Refuges found in Arkansas. The National Wildlife Refuge (NWR) System was founded by President Theodore Roosevelt in 1903. NWR are public lands and waters administered by the US Fish and Wildlife Service (USFWS). The NWR System is a diverse network of lands and waters dedicated to conserving America's rich fish and wildlife heritage. Refuges offer people access to a range of popular activities that depend on thriving fish and wildlife populations. These priority public uses include fishing, hunting, wildlife observation, photography, environmental education and interpretation. There are 568 NWRs in the United States (Green River NWR in Kentucky became the 568th last year). Arkansas is blessed with having 10 NWRs ranging from mountains to lowland wetlands. Part 2 in this series includes six NWRs in the northern half of Arkansas.

Big Lake National Wildlife Refuge

Steven Rimer, Refuge Manager

Big Lake National Wildlife Refuge is located near the town of Manila in Mississippi County, Arkansas. The refuge was established in 1915 by Executive Order of President Woodrow Wilson to serve as an inviolate sanctuary, reserve, and breeding ground for native and migratory birds. It is one of nation's oldest refuges and is 11,038 acres in size. Once a free-flowing river system, the New Madrid earthquakes of 1811- 1812 changed the Little River into the lake and swamp environment that exist today. Due to the refuge's location, significant bottomland forest habitat, and abundance of bird life, it was recognized as a Globally Important Bird Area by the American Bird Conservancy in March of 2001. The refuge also contains

5,000 acres that is recognized as a National Natural Landmark, and 2,144 acres of the refuge is designated as part of the National Wilderness Preservation System. The refuge consists primarily of wooded swamps and open water. Big Lake is a shallow lake with an average depth of three feet. The swamp areas are characterized by stands of black willow, button bush, and towering cypress trees. Tree species on higher ground include cottonwood, green ash, hackberry, sycamore, river birch, and a variety of oaks.

The refuge annually winters several species of waterfowl. Peak numbers in January and February can exceed 200,000. Wood ducks are year-round residents and annually raise approximately 2,500 young on the refuge. There are three bald eagle nests on the refuge; one of the nests is viewable from the Timm's Point observation platform. More than 225 bird species have been observed on the refuge. Other wildlife to look for are beavers, otters, raccoons, wild turkeys, white-tailed deer, bobcat and the occasional armadillo. Visitors can participate in a variety of activities including fishing, deer and small game hunting, hiking, wildlife viewing, boating/kayaking, and wildlife photography. The refuge holds summer classes for elementary school students so they can learn about the refuge and the wildlife that lives there. More information about Big Lake NWR can be found on the refuge website at <http://www.fws.gov/biglake> or call (870) 564-2570

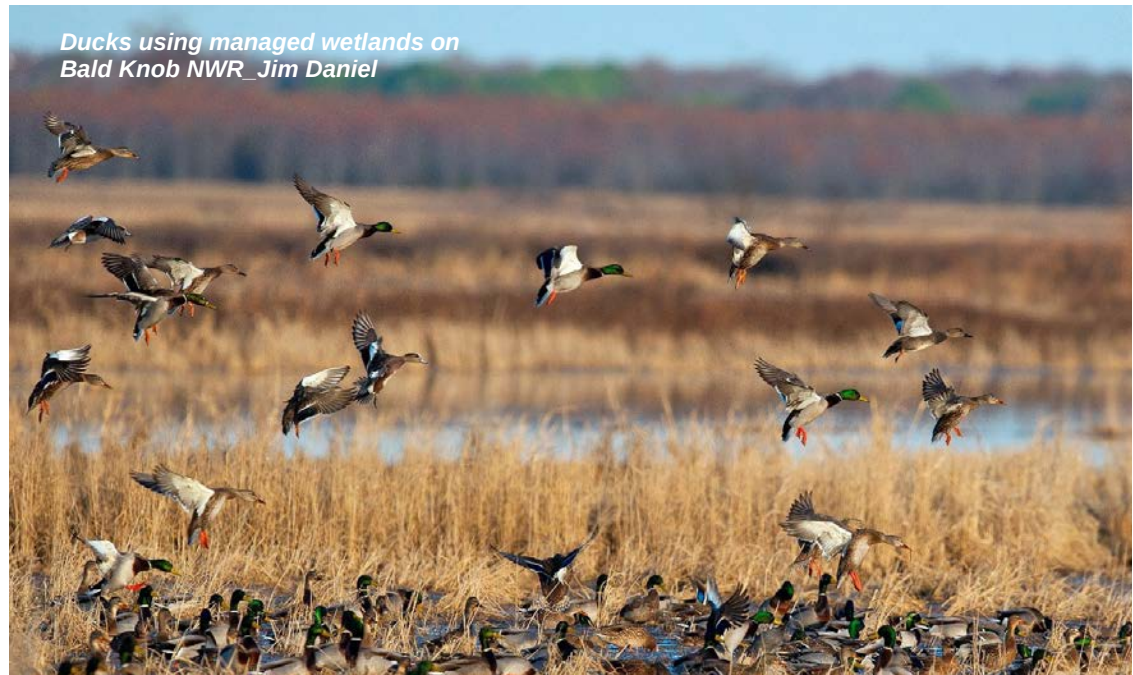
Bald Knob National Wildlife Refuge

Paul Provence, Refuge Manager

Located south of the town of Bald Knob in White County, Arkansas, Bald Knob National Wildlife Refuge encompasses approximately 15,000 acres of forested wetlands and croplands. Located along the Little Red River and situated on the western side of the Mississippi Alluvial Valley where the delta meets the Ozarks, this refuge is an important area in conserving wildlife habitat. Bald Knob NWR was established in 1993 to protect and provide feeding and resting areas for migrating waterfowl. Acquired under the auspices of the North American Waterfowl Management Plan, this refuge provides a migratory stopover area and winter home for large concentrations of ducks and geese.

Prior to its acquisition, the area that is now refuge was a thriving commercial rice farming operation. Following its es-

tablishment as a national wildlife refuge, reforestation efforts began and now over 7,000 acres of previously converted bottomland hardwoods have been restored. With a management strategy primarily focused on migratory waterfowl, approximately 4,500 acres were retained as cropland and is managed using a cooperative farming program. A special feature of the cropland management program on Bald Knob NWR is that 100% of the water used for irrigation is surface

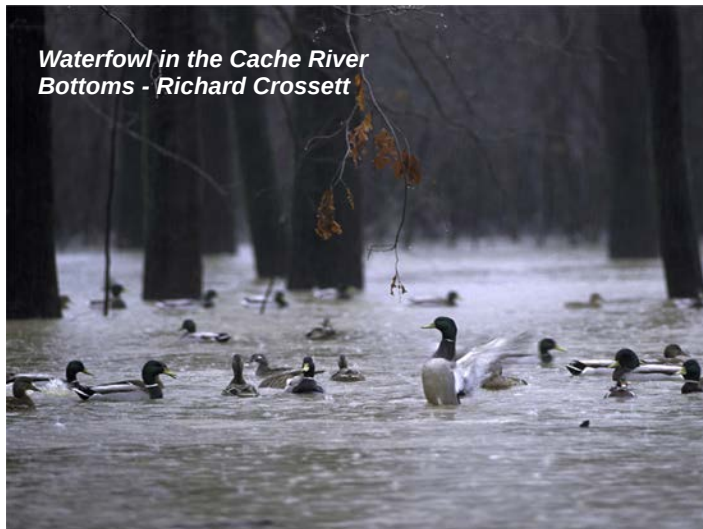


Ducks using managed wetlands on Bald Knob NWR Jim Daniel

water; there are no deep wells on the refuge. Drawing water from the Little Red River and utilizing surface runoff from the foothills of the Ozarks, an intricate system of re-lift pumps and canals enable the refuge to sustainably irrigate thousands of acres and provide forage for millions of migratory ducks, geese, and shorebirds annually.

Bald Knob is a critical staging area for Northern Pintails, with more than 200,000 once counted in a single day! Even though waterfowl receive top priority from a management standpoint, many other wildlife species thrive here including shorebirds, wading birds, and songbirds. The refuge has been named as an "Important Birding Area" by Audubon Arkansas. Bald Knob NWR is a premier shorebird viewing area in Arkansas. The drawdown of flooded, previously cultivated fields is timed to match the peak shorebird migration and offers a feast of invertebrates in the exposed mudflats. Birders from across the country travel to the refuge to enjoy the many unique and often rare sightings of a multitude of species making their way to the Gulf Coast and beyond. Various small and big game and sportfish species also are common, so hunting and fishing are extremely popular activities - especially waterfowl hunting. Bald Knob NWR is rich with wildlife, so come, look, and experience the refuge's treasure! For additional information, please visit the refuge website at <http://www.fws.gov/baldknob> or call the office at (501) 724-2458.

>>



Waterfowl in the Cache River Bottoms - Richard Crossett

Cache River National Wildlife Refuge

Jonathan Windley, Refuge Manager

Cache River National Wildlife Refuge was established in 1986 and is located in Jackson, Monroe, Prairie, and Woodruff Counties in Arkansas. Cache River NWR was created for the purposes of protecting, conserving, restoring, and enhancing wetland ecosystems and other habitats for migratory birds and other fish and wildlife. Other refuge goals include maintaining current or improved distributions of migratory bird populations, and to sustain an abundance of waterfowl and other migratory birds consistent with the goals of the North American Waterfowl Management Plan and the international obligations contained in the migratory bird treaties and conventions and other agreements with Canada, Mexico, and other countries. Cache River NWR is designated as a "Wetland of International Importance," and is part of the Cache-Lower White Rivers Globally Important Bird Area. The refuge is located in the most important wintering area in North America for mallard ducks.

The Cache River Basin is characterized by meandering channels, shallow sloughs, oxbow lakes, baldcypress-tupelo brakes, and scrub/shrub wetlands. The topography includes natural levees, stream channels and a series of shallow ridges typical of the flood plain. Bottomland hardwood forest was historically the predominant habitat type in this basin, and currently accounts for about 50,000 acres of the refuge. In addition, approximately 21,000 acres of marginal croplands have been reforested on the refuge and about 3,000 acres of croplands are actively managed through a cooperative farming program.

Cache River NWR is a national priority for land acquisition and purchases have continued on a willing-seller basis. The refuge now includes more than 73,000 acres situated in scattered tracts along the Cache River, White River, and Bayou DeView. Habitat management activities focus on restoring and managing bottomland hardwood forests, herbaceous wetlands, and croplands for wintering waterfowl, which may

number upwards of 500,000 during peak use. Additionally, the refuge manages forestlands and other habitats for neotropical migratory birds, wading birds, shorebirds, and other native wildlife. Waterfowl and white-tailed deer hunting and fishing are among the most common uses of the refuge, but abundant populations of small game also provide great hunting opportunities. Wildlife observation, photography, and boating also are popular activities on Cache River NWR due to the diversity and abundance of wildlife that can be seen and the scenic beauty of the bottomland hardwood forest, other wetlands, and aquatic systems. The Bayou DeView Water Trail runs through the refuge and provides amazing views of old-growth stands of baldcypress-water tupelo and a diversity of wildlife. To learn more about Cache River NWR, please visit the refuge website <http://www.fws.gov/cacheriver> or call the refuge office at (501) 203-7253.

Holla Bend National Wildlife Refuge

Carla Mitchell, Refuge Manager

Holla Bend NWR, established in 1957, is located about six miles southeast of the city of Dardanelle, in Pope and Yell Counties in west central Arkansas. The refuge is situated on a meander in the Arkansas River, named "Holla Bend," that was cut off when the U.S. Army Corps of Engineers straightened the channel in 1954. The boundaries of the 6,616-acre refuge are roughly defined by the main channel of the Arkansas River and the cutoff meander channel. The principal focus of the refuge is providing a wintering area for ducks and geese that use the Arkansas River corridor as they migrate along the Mississippi and Central Flyways. The number of waterfowl on the refuge in any given year varies depending on water levels and weather conditions further along the flyways. Mallards are the most abundant duck species, but visitors also may observe American widgeons, gadwall, wood ducks, green-winged teal, blue-winged teal, northern pintail, northern shovelers, snow geese, Canada geese, Ross' geese, trumpeter swans, American white pelicans, and even a whooping crane! The refuge supports mi-



Woodcock foraging on Holla Bend NWR - Carla Mitchell



Logan Cave National Wildlife Refuge

Carla Mitchell, Refuge Manager

Logan Cave NWR covers 123 acres near the northwest corner of Benton County, Arkansas and includes a limestone solution cave with approximately 1.5 miles of passageways. The refuge was established in 1989 to protect cave inhabitants, including the endangered gray bat (*Myotis grisescens*), endangered Benton cave crayfish (*Cambarus aculabrum*), and the threatened Ozark cavefish (*Amblyopsis rosae*). The cave also has historically provided habitat for the endangered Indiana bat (*Myotis sodalis*).

grating waterfowl through management of natural habitat, moist soil units, and farming.

Habitat management programs on Holla Bend NWR also produce favorable conditions for neotropical migrant songbirds, which use the refuge as a rest stop during fall and spring migrations to replenish energy reserves for their long journey to and from wintering areas in Central and South America. Many songbirds use the refuge for breeding and nesting during the spring and summer. Songbirds that can be observed include painted buntings, indigo buntings, prothonotary warblers, Kentucky warbler, LeConte's Sparrow, bobolinks, and scissor-tailed flycatchers.

More than half of refuge visitors come to watch wildlife, and the opportunity to view bald eagles is an important draw. The refuge also provides opportunities for environmental education, interpretation, and wildlife photography. There also are excellent opportunities for fishing and deer and small game hunting, although these activities are limited to ensure that they are compatible with refuge purposes and provide a high-quality experience. Additional information about Holla Bend NWR is available on the refuge website <http://www.fws.gov/hollabend> or please call (479) 229-4300.

There are only two known entry points for the cave: the sinkhole and spring. The sinkhole consists of a steep sided funnel shaped depression about 50 feet in diameter located on a forested hillside. The spring entrance is located on a hillside under an overhang rock bluff. Most of the refuge consists of hillsides that support a mature climax community of oak and hickory.

Groundwater surfacing within the cave forms a stream, which flows, throughout the cave and at the outfall forms Logan Spring, which drains to Osage Creek just south of the refuge. Osage Creek is a major tributary of the Illinois River, which is the main drainage in southwestern Benton County, and their confluence is about 1.2 miles south of the refuge. In past years, spring water from the cave had a measured flow of approximately 5 million gallons per day and supplied the Logan community, a fish hatchery, and 49 fish ponds. Logan Cave NWR is closed to public entry and use in order to protect the sensitive habitats and endangered species inhabiting the cave ecosystem. For more information about Logan Cave NWR, please visit the refuge website https://www.fws.gov/refuge/Logan_Cave or call the Holla Bend NWR office at (479) 229-4300.

Continued on page 17...

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Company 3776. Photo by Civilian Conservation Corps.

Unsung heroes of American conservation

African-Americans played huge, but little-known role in creation of wildlife refuges

By Dan Chapman, Fish and Wildlife Service, Public Affairs Specialist
(reprinted with permission from Dan Chapman)

St. Charles, Arkansas – Naomi Mitchell is the clerk and treasurer for this small White River town (pop. 230) renowned for duck hunting. She also, for a fee, plucks ducks clean. And, in her spare time, she runs the local museum, a folksy repository of many things St. Charles.

Tucked into a back corner of the museum, which shares space with the Town Hall, is an exhibit featuring the Depression-era Civilian Conservation Corps. It chronicles the construction work done by the young, dollar-a-day men of Company 1741 and Company 3791 who helped create a national wildlife refuge from the bottomlands of the White River.

But there was another CCC unit that did the unsung work of felling the oaks, dredging the streams and laying the corduroy roads that ran through the refuge. Company 3776 was further down river, closer to DeWitt, and separated – in many ways – from the St. Charles' units. Co. 3776 was all-African-American. Cos. 1741 and 3791 were all White.

"There was a time when they were all segregated," Mitchell says. "I don't know much about the Black camp."

Richard Kanaski does. Kanaski, a U.S. Fish and Wildlife Service (Service) archaeologist, is compiling information about the little-known history of the African-American CCC enrollees throughout the South.

His immediate goal: Apply for National Register of Historic Places status for the Dale Bumpers White River National Wildlife Refuge.

His ultimate goal: Shine a spotlight on the major, yet large-

ly hidden role played by African-Americans in rebuilding this country from the depths of the Great Depression.

"It's part of our history and we're working to acknowledge it," Kanaski says. "We're adding depth to the history of the CCC and, in particular, the African-American presence. They played a major role in the development of our refuges today."

'TWO WASTED RESOURCES'

In 1933, with the nation in the grip of the devastating depression, President Franklin Delano Roosevelt created by executive order the CCC. Men between the ages of 17 and 28 were paid \$30 a month (with most of a paycheck sent directly to family back home) to build refuges, parks, hatcheries, levees, reservoirs, campgrounds, roads and trails across rural America. The Army-like program ended in 1942 as the nation ramped up to fight World War II and manufacturing jobs abounded. By then, more than 2.5 million young men had worked a CCC job.

The demand for work coincided with another necessity of American life circa 1930. Rural lands the country over were laid waste by poor farming practices and natural resource depletion. Eroded farmland immiserated already struggling families. Fish, ducks, deer, bear, beaver and other animals had disappeared from many fields, waterways and mountains. Droughts withered the crops, dried up the streams and, with the help of howling winds, sent mountains of once-arable soil into the sky.

One writer said Roosevelt "brought together two wasted resources, young men and the land, in an attempt to save both." The CCC men had a job to do, and they did it.

They worked on more than 40 wildlife refuges, building roads, residences, levees and fire towers. They planted millions of trees, garnering the nickname "Roosevelt's Tree Army." They also restored riverine and coastal habitats critical for migratory birds.

In Arkansas, the CCC erected 450 buildings, laid 6,400 miles of road, planted 20 million trees and strung 8,600 miles of telephone wire. At White River, the young men basically created the refuge out of whole cloth. The White CCCers built the refuge buildings and residences. The Black CCCers, stationed downriver in Jack's Bay, mostly

built fences, truck trails, fire breaks, levees, and cleared the river channel.

FDR established the refuge from bottomlands and farmsteads in 1935 with the mandate to protect and conserve migratory birds – mallards, Canadian geese, scaups, Gadwalls, prothonotary warblers – and other wildlife. The Service acquired 110,000 acres along a 60-mile stretch of the White River. The CCC helped raze “undesirable” farm buildings, re-plant hardwoods and create impoundments that attracted the birds.

“The Service told the architects, ‘We’re not a high-falutin’ agency and we don’t need glorious buildings. We need functional buildings where you can go in and clean the mud off your boots’ ” Kanaski learned from his research. “Some of the buildings built by the CCC are still standing today.”

The CCC-built compound in St. Charles sits on a bluff overlooking the river on the edge of town. Three brick homes with terracotta-tiled roofs stand nearby, though two are condemned. There’s also a fire tower, also condemned.

A corner of the museum is given over to an exhibit entitled, “History of CCC Camps in St. Charles.” Pictures show White workers building the refuge compound and living on refurbished river boats, known as quarter boats, along the White. More pictures of camp life grace the annual report and *The Quack-Quack*, the company newspaper.

SEPARATION OF DUTIES

Mitchell ducks into her museum office and returns with an album of old photos. Inside are pictures of Black men cutting trees, milling the wood, pushing wheelbarrows and making duck boxes from bark. Although the men helped build the refuge, Mitchell says, they weren’t working in St. Charles so they’re not part of the exhibit.

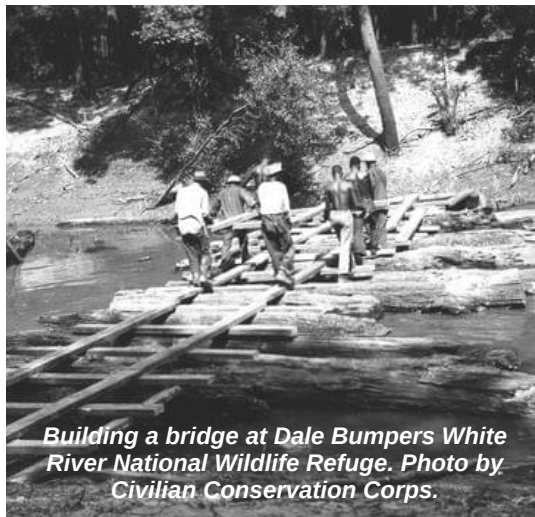
“The White crews did most of the buildings,” Kanaski says. “The Black crews got stuck with the erosion control, earth-moving, the planting of trees and other tasks that promoted habitat restoration. The CCC, like a lot of other things at the time, was segregated.”

It wasn’t supposed to be that way. Roosevelt’s order creating the CCC stated that “no discrimination shall be made on account of race color, or creed.” Corps leaders, though, ignored the president and created separate White, Black and Native American camps with only a few exceptions in the North.

In the South, the reasoning was as twisted as the racism that ruled much of African-American life. Southern governors and state officials refused, at first, to fill the CCC ranks with Blacks. As one Georgia official said, “It is vitally important that negroes remain in the counties for chopping cotton and for planting other produce.” Others claimed that south-

ern communities wouldn’t accept the mingling of Whites and Blacks.

Georgia was particularly opposed to African-American participation. No Blacks had been selected in Clarke County where they comprised 60 percent of the population. By July 1933, only 143 Blacks statewide had joined the corps; 3,567 Whites had. In Mississippi, only 46 African-Americans were enrolled.



Building a bridge at Dale Bumpers White River National Wildlife Refuge. Photo by Civilian Conservation Corps.

Calvin Gower, writing in the *Journal of Negro History*, said Blacks finally made inroads into the southern camps by the mid-30s. Even then, though, their jobs were restricted by race. He quotes Robert Fechner, the CCC director, as rationalizing the admission of Blacks “because of the natural adaptability of Negroes to serve as cooks.”

In all, there were 150 segregated camps across the country. Eventually, African-Americans made up 10 percent of the CCC workforce, which was on par with national population figures. Yet scholars like Olen Cole

Jr., who wrote *The African-American Experience in the Civilian Conservation Corps*, noted that Blacks suffered disproportionately higher levels of poverty and joblessness than Whites. And, while White enrollees were employed in the construction trades, Black enrollees were relegated to tree cutting, kitchen duty and mosquito-control projects.

“The contributions of all-African-American camps were vital to the development and maturation of the nation’s major parks and conservation infrastructure,” Olen wrote.

Now, nearly a century later, their largely unsung, yet critically important conservation work is finally getting its due.

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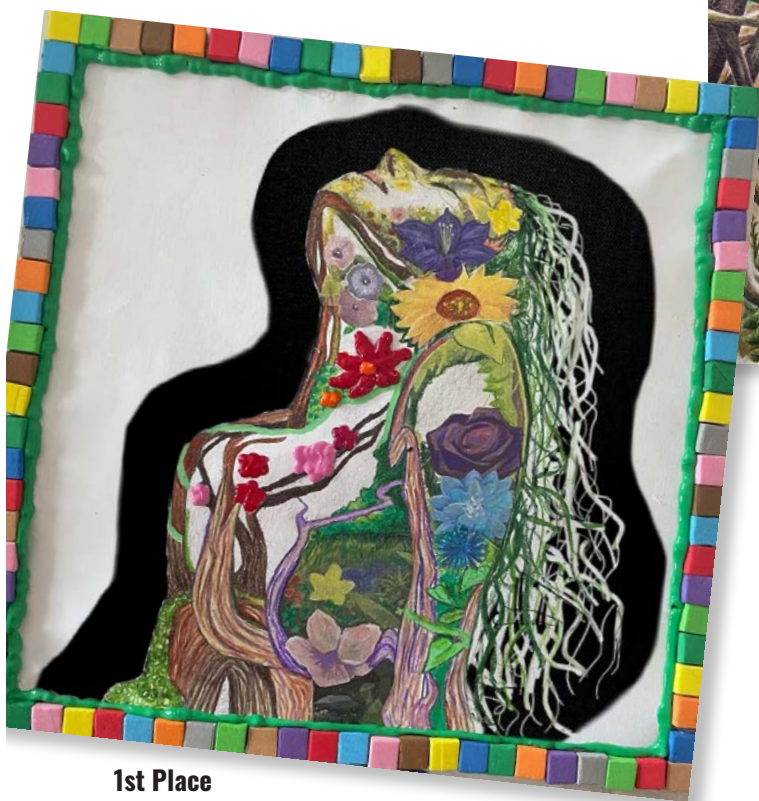
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2021 Wildlife of Arkansas Student Art Contest Winners

The Arkansas Wildlife Federation (AWF) and Creative Ideas again hosted the annual Wildlife of Arkansas Student Art Contest promoting wildlife education through the arts. To overcome the challenges faced this past year, the Wildlife of Arkansas competition was held online with more than 600 students from kindergarten through 12th grade submitting images of their artwork and a panel of jurors selecting the winning pieces of art. The winning artwork from each grade is on display at the virtual art exhibit at www.arwild.org. The competition is supported through an education grant from the Arkansas Game and Fish Commission (AGFC). Thank you to our volunteers, Sharon Hacker, Jim Taylor, Geralyn Hoey and Mandy Clark, for your commitment to making this program a success.



1st Place - 10th Grade & Co-Best in Show



**1st Place
11th Grade & Co-Best in Show**

Special thank you to our jurors for their time and expertise reviewing and selecting the winners for this year's contest.

BRYAN WINFRED MASSEY

Sr., Professor of Art-Sculpture/3D Design, University of Central Arkansas

JESSIE HORNBOOK

Assistant Professor of Printmaking, University of Central Arkansas

PETER P. BELLA, JR.

Assistant Professor of Art, University of Central Arkansas

"The Wildlife of Arkansas Student Art Contest was a great success and to be a member on the jurors' panel was indeed a privilege. It was impressive to see how well the competition was attended with submissions and how wonderful this year's online student art contest was assembled. The submissions never seem to disappoint and were, as always, impressive examples of outstanding instruction and student talent. The past year of uncertainty and challenge was not present in the works of art that were presented by this year's participants. Rather, the submissions were bountiful with brilliant colors, expressions of joy and happiness and represented a variety of wildlife — from the fluttering butterflies to the wading fish in their pools. To see these young artists succeed through challenging times and uncertainty is reassuring that our youth are ready to be our future leaders and educators."

KINDERGARTEN

**1st place - *Monarch on a Butterflyweed*
by JASPER HANKINS**

2nd place - *Busy as a Bee* by Cynthia Rorie

3rd place - *The Nature Rainbow* by Jon Ryan Boyd

Honorable Mention - *Fishy* by Emmalee Slavings

1ST GRADE

**1st place - *Widgeon Duck Swimming*
by ERIN HANKINS**

2nd place - *Tweet tweet scissortail flycatcher* by Tavish Anand

2nd place (tied) - *Arkansas Red Fox* by Louie Urena

3rd place - *Squirrel on a Log* by Finnegan Stevens

Honorable Mention - *Beautiful Butterfly* by Madison Collingsworth

2ND GRADE

**1st place - *Happy Spring!*
by NETHRA NIRMAL**

2nd place - *Little pond...big animals* by Holt Williams

3rd place - *Baby Bird* by Elijah Smith

Honorable Mention - *Arkansas Wildlife Harmony* by Chloe Parry

3RD GRADE

**1st place - *Hummingbird in Arkansas*
by SYDNEY FAULKNER**

2nd place - *Sunrise at Beaver Bridge* by Asmi Pathak

3rd place - *Raccoon* by Blake Ritter

Honorable Mention - *Black Bear* by Harper Hill

4TH GRADE

**1st place - *The mighty waterfall*
by SAANVEE PATRO**

2nd place - *Big Bear* by Marley Guajardo

3rd place - *Survival in the wild* by Vaibhav Sathish

Honorable Mention - *Snapping turtle* by Emily Collingsworth

5TH GRADE

**1st place - *The sparrow*
by ISABELLA HENDRICKS**

2nd place - *Eastern Bluebird* by Akia Mitchell

3rd place - *Northern Mockingbird* by Bella Hale

Honorable Mention - *Cedar Waxwing in Spring* by Rose Ware

6TH GRADE

**1st place - *Arkansas Oriole*
by COLLIN LITTLE**

2nd place - *Fox and Buttercups* by Ellie Birch

3rd place - *Arkansas Flower* by Mallory Lafferty

Honorable Mention - *Black Bear* by Inara Rupe

Honorable Mention (tied) - *Diana Fritillary Butterfly* by Abby Chi

7TH GRADE

**1st place - *Arkansas Bobcat*
by CARA JACKSON**

2nd place - *Just Keep Swimming* by Skylar Maxwell

3rd place - *The Mysterious Beauty of the Crow* by Mallory Vasilj

Honorable Mention - *Peaceful Perch* by Jade Ross

8TH GRADE

**1st place - *Swan*
by ELIZABETH MITCHELL**

2nd place - *Eye of a Bobcat* by Lluvia Flores

3rd place - *Reflecting Thirst* by Ethan David

Honorable Mention - *Neverland* by Kyrsey Hernandez

9TH GRADE

**1st place - *Honeybee*
by SETH JACKSON**

2nd place - *Raccoon* by Emily Akers

3rd place - *Together* by Gisela Hendricks

Honorable Mention - *Into the Wild* by Hannah Jackson

10TH GRADE

**1st place - *Goliath*
by AVERY HENLEY**

2nd place - *Reds Grandma house* by Gautami Lohakare

3rd place - *Serenity* by Lifted David

Honorable Mention - *Bird* by Sadie Akers

Honorable Mention - *Trout Adventure* by Dominic Sellers

11TH GRADE

**1st place - *Full of Nature*
by MIMI RYALL**

2nd place - *Natural State* by Rylee Smith

3rd place - *Cutthroat trout* by Sidney Wire

Honorable Mention - *Beetle life* by Hannah Penn

12TH GRADE

**1st place - *Red-winged blackbird at a Stream*
by DAYE (CATHERINE) KWON**

2nd place - *The Herron Family* by Karissa Herron

3rd place - *Swamp at Golden Hour* by Brenna Metts

Honorable Mention - *Arkansas nature* by Raphael Delgadillo

BEST IN SHOW (TWO PIECES TIED)

***Goliath* by Avery Henley, 10th Grade
Full of Nature by Mimi Ryall, 11th Grade**

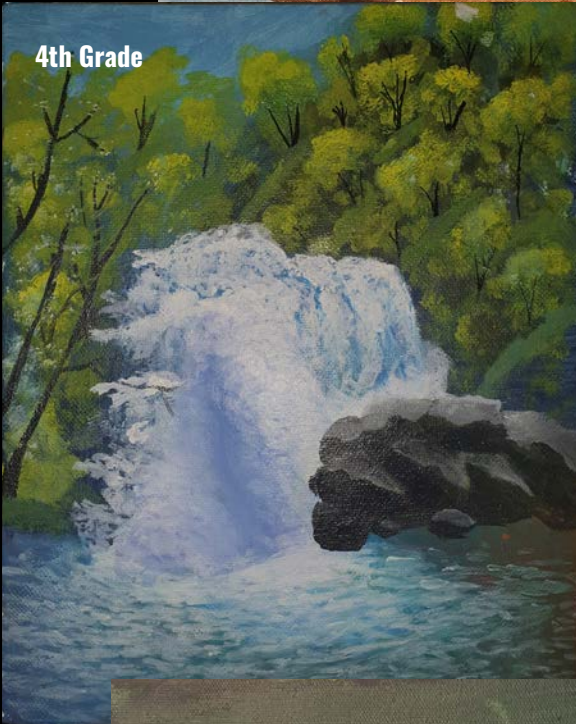
1st Grade



3rd Grade



4th Grade



9th Grade

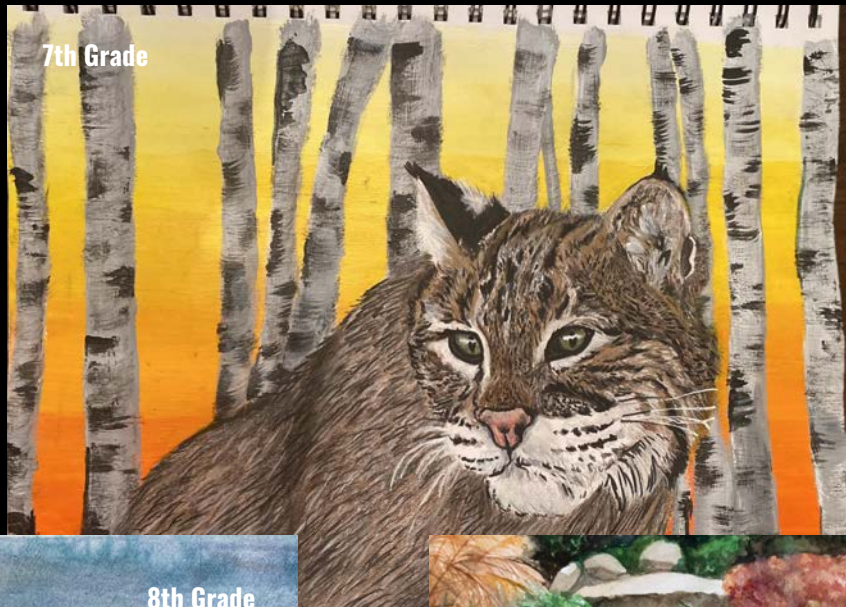


Kindergarten



5th Grade

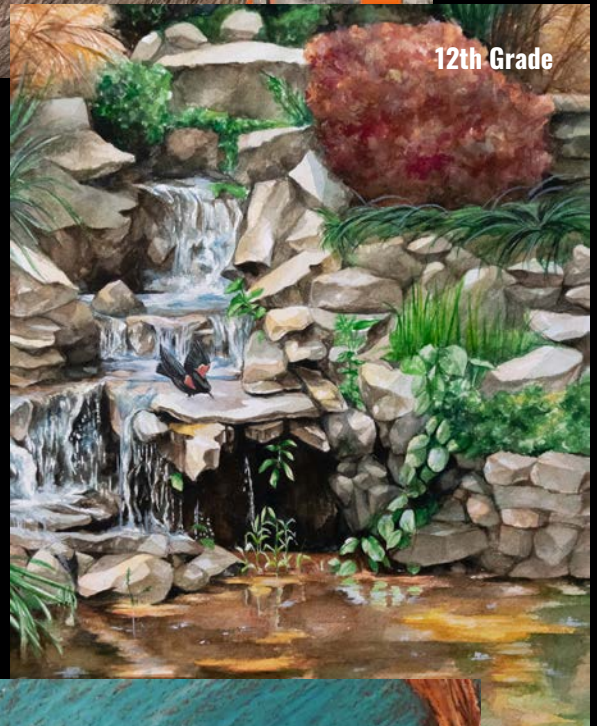




7th Grade



8th Grade



12th Grade



2nd Grade



6th Grade

Highly Anticipated Field Guide Exceeds Expectations

By Ruthie Berryhill, ANHC Education & Information Coordinator

Unless you are a botanist, forester, or other natural scientist, it is likely that while spending time in Arkansas's great outdoors, you've come across a tree, vine, shrub, or other plant that you can't identify. What do you do? Sure, there are apps for that. Another option is to carry a field guide.

At 536 pages, "Trees, Shrubs, and Woody Vines of Arkansas" is by far the most comprehensive and up-to-date guide available on the topic. It is also small enough to carry with you on short wilderness walks or throw in a backpack for longer trips. The guide is published by the Ozark Society Foundation (OSF), and co-authored by Jennifer Ogle, botanist and collections manager of the University of Arkansas (UA) Herbarium; Theo Witsell, the Arkansas Natural Heritage Commission's (ANHC) ecologist and chief of research; and Johnnie Gentry, former director and curator of the UA Herbarium and emeritus professor of biology at the UA.

With more than 1,500 color photographs, illustrations, and maps, the guide has already garnered quite the following. The first printing of 2,625 books quickly sold out and the book

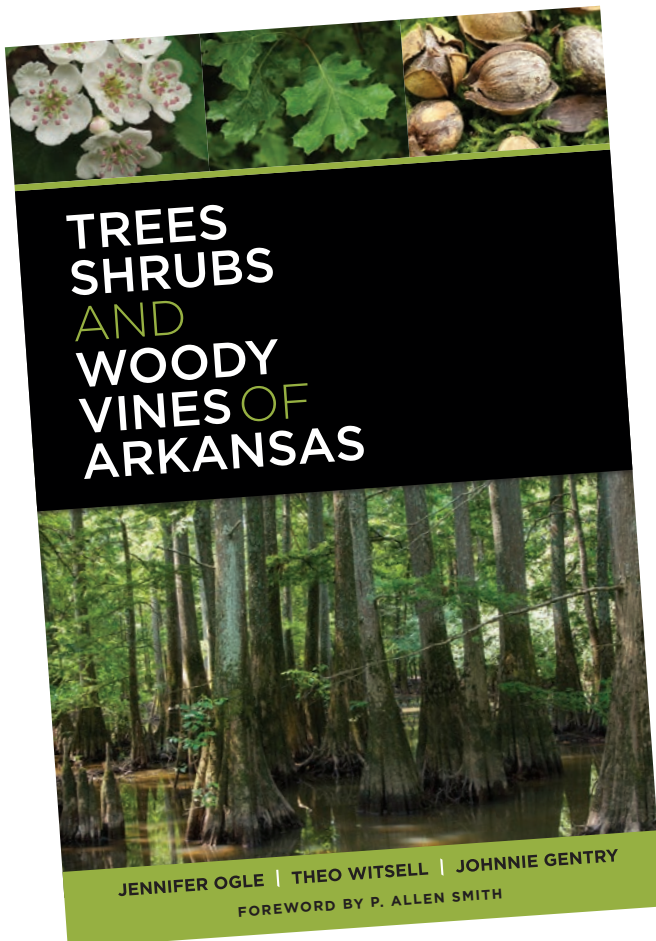
is now in its second printing. And it is no wonder – the book includes descriptions of 471 woody plants, up-to-date information on species names, ranges, and habitats as well as updated county-level distribution maps, 16 plates of botanical illustrations, and cultural and historical information about the plants and habitats of the state. Notes on the plants include lesser-known aspects, such as:

- Pawpaw is pollinated by flies and beetles drawn to the flowers, which resemble decaying flesh in both color and fragrance. Commercial pawpaw growers sometimes hang dead animals among the trees to draw in more potential pollinators.
- Yaupon Holly is the only known North American plant that contains caffeine and was a major ingredient in "Black Drink," a beverage used by many southeastern Native American tribes
- Japanese Honeysuckle is one of the most widespread and troublesome invasive species in the state.
- American Wisteria was noted by naturalist Thomas Nuttall, who wrote in 1819 that Arkansas boatmen on the lower White River used this species as a substitute for rope.
- Witch-Hazel capsules open suddenly with enough force to eject seeds as far as 30 feet.
- Tree-of-Heaven (also called Stink-Tree) leaves, when damaged, release a malodorous scent not unlike rotten peanut butter

With all of these details, the guide will aid the novice in learning more about Arkansas's ecology or help the more experienced outdoors enthusiast finally answer the question to what type of oak tree she's been seeing on her regular hike. Regardless, whether used outdoors as a field guide or indoors as a reference book, "Trees, Shrubs, and Woody Vines of Arkansas" is an invaluable resource for hunters, hikers, outdoor enthusiasts, amateur botanists, as well as schools and libraries. It can be purchased through the UA Press at <https://www.uapress.com/product/trees-shrubs-and-woody-vines-of-arkansas/> and other booksellers.

The OSF was established as a nonprofit organization in 1975 and works with the Ozark Society and other state organizations to support and promote conservation, education, and recreation activity in the Ozark-Ouachita region and surrounding lowlands. The OSF is a major publisher of high-quality conservation and nature-related books about the Ozark-Ouachita mountain region. For more information on the OSF, visit www.ozarksociety.net/foundation.

The ANHC, an agency of Arkansas Heritage, focuses on science-based conservation to protect Arkansas's biological diversity and maintains a statewide System of Natural Areas made up of more than 70,500 acres. The ANHC's Arkansas Heritage Program biodiversity database tracks the location and status of rare animal and plant species, as well as natural communities in Arkansas.





Wapanocca Lake on Wapanocca NWR - Steven Rimer

...continued from page 9

Wapanocca National Wildlife Refuge

Steven Rimer, Refuge Manager

Wapanocca National Wildlife Refuge was established in January, 1961 as a sanctuary for migratory waterfowl. The refuge was formed when Wapanocca Outing Club agreed to sell their land to the U.S. Fish and Wildlife Service. Wapanocca Outing Club was founded in 1886 when a group of Memphis waterfowl hunters purchased Wapanocca Lake. Club member Nash Buckingham, a famous outdoor writer, developed a passion for conservation while hunting at Wapanocca.

The refuge is literally an island of forest in a sea of agriculture. Lying only four miles west of the Mississippi River and 15 miles northwest of Memphis, the refuge is an important stopover for waterfowl traveling the Mississippi Flyway and for neotropical song birds as they migrate to and from Central and South America. Wapanocca Lake formed 5,000 years

ago when the Mississippi River changed course. There are four distinct habitat types located at Wapanocca NWR - freshwater impoundments, bottomland hardwood forests, croplands, and grasslands that provide habitats for a wide variety of fish, wildlife, and plants. The lake is surrounded by old-growth baldcypress forest, which remains flooded year-round. The water elevation in the lake normally drops about two feet during hot, dry summers and refills during winter rains. The refuge manages Wapanocca Lake and the surrounding bottomland hardwood forest to provide high quality habitat for wintering waterfowl and breeding forest birds. It is one of the last areas in the Arkansas Delta where large concentrations of waterfowl find a winter sanctuary.

The refuge hosts a number of opportunities for visitor activities, including more than 12.5 miles of well-maintained gravel roads, a 600-acre lake, and fishing and wildlife-viewing pier. The 1.75-mile Cypress Discovery Canoe Trail is a wonderful water trail that takes you deep into the cypress swamp and is both relaxing and a great place to view wildlife. The primary visitor activities include deer hunting in the fall/winter and crappie fishing in the spring. Visitors also enjoying wildlife viewing, wildlife photography, and boating/canoeing. More information is available at the refuge website <http://www.fws.gov/wapanocca> or call the refuge office at (870) 343-2595.







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ARKANSAS WILDLIFE News-of-Note



Arkansas Dark Sky Fall Festival – October 1 and 2, 2021, Gilbert AR

The Arkansas Natural Sky Association and the community of Gilbert are hosting Arkansas's first Dark Sky Fall Festival. Scientists are discovering that light pollution is doing more than just diminishing our ability to see the stars at night. Many living things need and have evolved to adapt to darkness and naturally dark night skies have a big role to play in supporting wildlife and ecosystems. Gilbert has among the darkest skies of any community in Arkansas and the Buffalo National River Dark-Sky Park is a cornerstone around which we can build a responsible lighting ethic in the state. The International Dark-sky Association's Dark-Sky Reserve concept involves building a network of communities and other local government support all along the river, ultimately making an example for other areas and communities in the state. So, treat yourself to some star therapy, ponder your place in the universe, and experience local arts, crafts, and music - all set in one of the most beautiful places on earth. To learn more about the activities and schedule for the Festival, visit <https://darkskyarkansas.org/fall-dark-sky-festival/>



wildlife from becoming endangered. In Arkansas, that means \$17 million annually to AGFC to help the 377 species in need through targeted conservation actions including habitat restoration, education, species reintroductions, research, and more. There is a lot

we can we do for these species, but finding the money is a challenge. Right now, the federal funding available is about five percent of what is needed to prevent wildlife from becoming endangered. Generally, it is cheaper and more effective to step in as a wildlife species is starting to decline rather than waiting until it is threatened with imminent extinction. If a species is in such bad shape that it qualifies for the "emergency room" measures of the Endangered Species Act, it is much more difficult – and more expensive – to recover the species. Saving wildlife is an investment in a clean, sustainable, and thriving economy for rural and urban communities alike.

AWF is grateful to Representative French Hill for being a co-sponsor of this legislation in the House. Please reach out to your members of congress to encourage them to support Recovering America's Wildlife Act for the sake of Arkansas's wildlife, economy and preserving our Natural State. If you would like to add your organization or businesses' name to a letter of support, please email hoeyg@nwf.org.

Recovering America's Wildlife Act

We're making great progress in Congress to move this important piece of legislation forward. The Recovering America's Wildlife Act will be the most significant investment in wildlife conservation in many decades. The bill will fund state-led efforts to help wildlife at risk and to prevent



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AWF in Action

Chronic Wasting Disease Plan – Several calls happened between AWF, NWF, National Deer Association and AGFC to better understand the plan and updates to be voted on by the AGFC. Following those calls, AWF submitted a letter in support of the plan. The plan passed at the February Commission meeting and AGFC leadership was very grateful for AWF's support.

Virtual fly-ins – Through online conference meetings, AWF board members and volunteers met with the AR congressional delegation advocating for support of federal bills important to conservation and wildlife, including conservation programs in the Farm Bill, public lands protection and investments, grassland restoration incentive-based programs, and funding for threatened species in the Recovering America's Wildlife Act.

Pine Tree Research Station land sale – AWF board member and treasurer, Jim Taylor, worked closely with Backcountry Hunters and Anglers to fight off the sale of the Pine Tree Research Station property to private individual(s). AWF submitted a letter to the members of the AR state legislature supporting two bills to block the sale. Both bills passed which is a significant win for AR public lands. But there will be more work as funding is still needed for AGFC to purchase the land from the University of Arkansas.

License fee increase bill – After more than 30 years without an increase, the AGFC requested support from the state legislature to increase resident hunting and fishing licenses. The original bill had some confusing language which was not well supported by the legislature. A revised bill was submitted with new clarifying language, however the bill did not pass. AWF lead a group sign on letter in support of this new bill with about 15 other organizations

and even though the bill did not pass, AWF continues to advocate for license fee increases in the future. Other groups supporting the license fee increase included Backcountry Hunters and Anglers, Ducks Unlimited, and Congressional Sportsmen Foundation.

Arkansas Sovereignty Act – If passed as originally written, Senate Bill 298 would have had significant unintended consequences for fish and wildlife in Arkansas. The original bill stated as "Concerning the Right to Bear Arms in the State of Arkansas; and Concerning Other Constitutional Rights" was intended to focus on providing additional protections for gun owners. Unfortunately, it included language which would have made Arkansas ineligible to receive upwards of \$19 million in federal Wildlife and Sportfish Restoration funding. After the Governor's veto and before a final vote to override the veto, the House proposed another bill with revised language which passed and was signed by the Governor. AWF thanks the Congressional Sportsmen Foundation for their leadership in negotiating new language in order to protect this important fish and wildlife funding for Arkansas.



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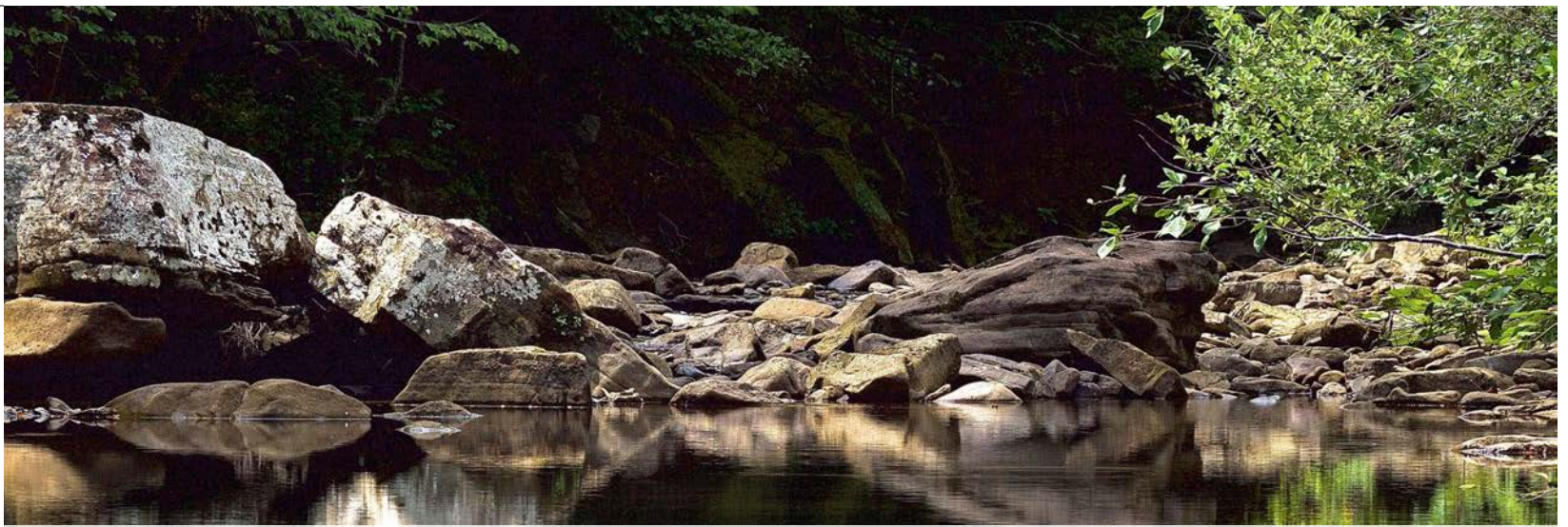
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headwaters

Story & photos by Johnny Carrol Sain



The pool is barely wider than my 9-foot fly rod.

Riffles are mere trickles, and the creek itself disappears just beyond the next pool, filtering through porous karst into underground channels for several yards and then back to the surface. The stretches of dry, sun-bleached rock appear alabaster from a distance. But closer looks offer a washed-out watercolor spectrum. The subtlety in mineral chroma is telling of the entire austere experience. You don't come here for a lot of smallmouths or for big smallmouths, which is probably why hardly anyone comes here at all.

Most don't even know this place exists. It's a tiny tributary cutting through vertical topography in a backwoods county that's mostly National Forest. The turnoff from the main dirt road onto what could barely be called a road leading here is subtle, too. You've got to know where it is and then you've still got to look carefully. The two-track immediately falls into a mud hole that serves as a moat. It keeps two-wheel-drive vehicles out. Greenbrier and overhanging maple limbs guaranteed to dig into paint (leaving a scar that may or may not buff out) frame the chocolate-colored water. No pretty boys allowed. All of this works to narrow the appeal.

My friends don't understand why I come here so often. It's an hour's drive. I live within 20 minutes of much better fishing, and I'm short hours away from world-class river smallmouth angling with regular 20-inch fish that I've not ever experienced. "You've never fished the Eleven Point?" Incredulous looks always follow these type questions. I shake my head with a sheepish grin and they shake theirs in wonderment as I tell them about the wild bass, the ebony jewelwing damselflies, and how a place doesn't give up its secrets in only a casual relationship. "Man, why don't you just drive another hour and catch some pigs?" It's impossible to explain. I do come here for the fishing. But also, I don't.

There's a prehistoric feel here. Fossils are embedded and imprinted in the limestone, which is itself a kind of fossil. It's the skeletal remains of various marine organisms, a remnant of the ancient sea that once covered this land before colliding continents created an upheaval of terrain-altering proportions. South of here and across the Arkansas River, the Ouachita Mountains rose and were crushed, the rock folded into east-west running ridges. But the Ozarks thrust upward as a singular plateau with creeks like this one slow-

ly eating away at the softer stone creating hollows and benched ridges.

This trip so far has produced more creek chubs on the wooly buggers and poppers than smallmouth, easily three to one. Chubs hit with abandon. Their big mouths and bronzy colors have even made me second guess what exactly was on the hook a few times. But a surrendering spirit gives them away. They lack stamina and succumb quickly. Their sausage-shaped bodies covered in small, thin, and flexible scales even feel soft. They are predatory minnows, though, a fact that by itself makes them cool, actively competing with smallmouth and green sunfish for top spot in this creek. And they are eager. I fool them with ease while smallmouths and even the longear sunfish eye the fly with suspicion.

I work my way up the creek from pool to riffle through dry stretches and continue to catch fish. I see smallmouth everywhere in the glass-like water. They see me, too, and they don't seem to care. They watch me cast then rush the olive wooly bugger fly in a pack. Occasionally, greed will overpower caution and one will grab the fly. I've got to be quick with the hookset. They often spit it out faster than my senses can realize I've got a bite. None are bigger than a foot long, and one bite is all I'm allowed from each pool or riffle. One catch or one whiff and I'm done for that stretch of water.

As I push upstream, the bed narrows considerably with ridges on both sides compressing and tilting its bank. This is the end of my journey today. Boulders big as cars fill the last pool as water rushes down, cleaving the steep stony soil uphill far as I can see. I doubt the waist-high water would be even knee-deep without displacement from the boulders.



Witch hazel and tag alder reaching for sunbeams crowd the sliver of open air above making backcasts all but impossible, so I roll the bugger toward a jumble of rock and watch the floating line immediately dart under with a take. The strip and raised rod work to bury the hook and a feisty bronze bass rockets from the water, fierce and wild and likely untouched by any other hands. In all probability, I've been its only encounter with a human. The fish and these headwaters are pristine, a word I don't think I've ever used before, and the rarest of designations nowadays.

The boulders, this tiny pool, the minuscule bass in competition with minnows, are all reasons why I'm here. And then there are other reasons that I can't even articulate except to say that despite the diminutive nature of these waters, I feel connected to something galactic, something immeasurable. Something timeless.

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Arkansas Wild Kids



Lighting Bugs

By Lola Perritt

NOTHING EPITOMIZES SUMMER'S ARRIVAL MORE THAN THE FIRST FLASHES OF LIGHTING BUGS!

There are over 2000 species worldwide with about 170 species found in the United States and Canada. Much of Arkansas has the perfect habitat for them. Many of us grew up observing and catching them. My Uncle Monk showed my brother and me how to catch them and put them in onion blades to make "magic wands." Unfortunately, future generations may no longer be able to enjoy this fascinating creature unless steps are taken to stop its demise. Anecdotal reports of local declines are growing and some species may be at risk of extinction but monitoring data is scarce, as demonstrated by my limited data of known Arkansas species and populations.

As with so many other species, the major cause of decreasing populations of both plants and animals, including fireflies, is habitat loss followed closely by pesticides and herbicides, which can kill them directly or reduce food sources. Fireflies spend much of their lives as larvae feeding on soft-bodied invertebrates like snails, slugs, and earthworms found in and around leaf litter, vegetation, and rotting logs. Light pollution is another cause for the decline in fireflies, since it interferes with most fireflies' ability to locate each other for mating. All of these causes are especially true for urban areas.

It is difficult to find data on Arkansas firefly populations because very few are researching them. Fireflies are not flies at all but members of the Lampyridae (glowing light) beetle family. They generate light through a process known as bioluminescence. Bioluminescence is "cold light" which means that the light produced generates very little thermal energy or heat, usually less than 20% as compared to a incandescent light bulb which generates 80% thermal energy to produce light. There are at least three species of fireflies found in Arkansas: Big Dippers which make a J-shaped flash of light by dipping in its flight while flashing; Black Fireflies which only glow as larvae, uses pheromones to locate mates and are more active during the day; and Blue Ghosts that don't blink but emit a continuous stream of light.

There are things that adults can do to protect and ensure these fascinating creatures will be around for future generations to observe and enjoy:

- Introduce children to fireflies at an early age and teach them to appreciate them for their beauty and importance to the diversity of life necessary for sustainability of other species.
- Protect, enhance and/or create habitat by avoiding or limiting pesticide use, minimizing activities that could cause trampling of larva, eggs and flightless females, set aside natural areas of your yard or property, plant native plants of varying heights, enhance moisture availability, and use paths to avoid trampling fireflies.
- Eliminate or reduce unnecessary artificial lighting by using motion detectors or timers, shield out bright outdoor lighting to only illuminate the intended area, switch out bright outdoor lighting for red bulbs or cover existing bulbs with red filters, and close curtains at night to reduce the amount of indoor lighting spilling outdoors.
- Contribute to a community science project which will increase knowledge for researchers by helping track flashing firefly populations by adopting and monitoring it all summer through Firefly Watch hosted by the Massachusetts Audubon: www.massaudubon.org/get-involved/sciencefirefly-watch and/or record your firefly sightings and get help with identification through iNaturalist: www.inaturalist.org/projects/fireflies-of-the-usa-and-canada
- Advocate for fireflies and their needs in your community by working with your municipalities to pass policies that promote firefly-friendly practices, work with local parks and natural areas to protect firefly habitat, join or start a local chapter of the International Dark Sky Association: www.darksky.org, and ensure firefly-watching sites are protected from artificial light at night, trampling, and other negative impacts.

Check with Arkansas State Parks and other venues like the AGFC Nature Centers and Botanical Garden of the Ozarks for additional information about firefly programs now that Covid-19 restrictions are being lifted.

For a schedule of public star parties (when Covid permits) visit the Central Arkansas Astronomical Society online. caasastro.org

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