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**FRONT COVER** A perched Bald Eagle eyes its next meal. Bob Gress photo.

**INSIDE COVER** An early fall morning in the Sunflower State. Jon Blumb photo.

Editorial Creed: To promote the conservation and wise use of our natural resources, to instill an understanding of our responsibilities to the land.

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# No Place Like Kansas

ith COVID-19 restrictions easing up in the past year, I've been able to travel to in-person meetings with other fish and wildlife leaders across the U.S. and Canada. My travels have taken me to North Carolina, Oklahoma, South

Dakota, Colorado and Texas. And at every meeting, I was able to explore a little bit of each state, as hosts were eager to show off their "homes" that they were proud of. All were enjoyable and pretty, but each time I returned to Kansas, I was struck by the remarkable beauty we have here.

North Carolina was lush and green in spring with huge leafy trees, a great variety of shrubs and carefully-manicured lawns. But none of that could compare with the gentle green of the Flint Hills, burned a few weeks before. The kind of burn that lightly shades the hills and draws, revealing characteristic rocks, ridges, and wallows that are soon to be obscured as the fuzz elongates into the tallgrass prairie.

Oklahoma was pretty in early summer, and staff there made efforts to display their characteristic red dirt and colorful Indian Blanket flowers on their prairie. My return home soon found me in our southcentral Red Hills with Indian Blanket plus dozens (plural!) of other spectacular prairie flowers at the peak of their showiness in the Flint Hills.

The Black Hills of South Dakota were neat in July, with its rocks and pines, but they were quickly forgotten when my return home found me in our unique oak savannahs mixture of fine tolerant, woodland prairie falling into the cool, clear waters of Toronto Reservoir at Cross Timbers State Park.

In August, the Rockies in Colorado, as always, were spectacular. Returning to Kansas, however, I was hit with the peak of frilly, bright purple Gayfeather, the deep blue of Pitcher Sage, and an array of the most gorgeous yellows, as our sunflowers began to explode in blooms. Kansas again won the competition as our side was bolstered by the thousands of monarch butterflies visiting those flowers on their way south, instead of 500 miles to the west.

Texas in September was brown, dry and dusty. Everyone there was happily pointing out their state's size, which is indisputable. So that meant that they had an indisputably large amount of brown, dry and dusty. My reuniting with Kansas quickly reminded me that everywhere here is prettier than there. On top of that, the sunflowers in the Sunflower State had become even more gorgeous by September, and all our honeybees were on a shopping spree for their winter groceries.

I sure am lucky to be in Kansas!



# LATEST NEWS

### KDWP Staff Successfully Re-introduce Threatened Fish Species



Jeff Seim, KDWP ecologist, assists with reintroducing Plains Minnows into the Arkansas River.

As election workers tear down and pack up polling stations, and coffee shops bustle with side conversations about the future of The Sunflower State, one small-but-mighty "candidate" is quietly entering a race of its own - a race to re-establish its kind as a thriving species in Kansas waters. And thanks to the aid of Kansas Department of Wildlife and Parks Fisheries and Ecological Services staff, the campaign of the Plains Minnow is off to a promising start.

A native species that was once abundant in the sandy streams and rivers of the Kansas and Arkansas river basins, the Plains Minnow has substantially declined in numbers statewide since 1970. These declines have long been attributed to changes in streamflow volumes and patterns due to groundwater mining and surface water diversions - such as dams, levees, pumping stations, irrigation canals, or other manmade structures.

The Plains Minnow was listed as a Species in Need of Conservation in 1987 prior to being reclassified as Threatened in 2003 under the Kansas Nongame and Endangered Species Conservation Act. Still, 19 years later, not all was lost.

Over the past two years, KDWP staff have collected more than 250 mature Plains Minnows from the Salt Fork Arkansas River in Barber County in hopes of propagating the species. The adult fish were safely transported to the Department's Kansas Aquatic Biodiversity Center in Farlington, KS where they were carefully managed to be captively propagated and reared for release into areas where they once thrived. And KDWP is proud to announce that the staff's multi-year efforts have paid off.

The initial adult population of Plains Minnows collected from the wild by KDWP has since grown impressively to more than 2,500 captive-bred fish large enough for stocking in native waters. And on Monday, Nov. 7, that's exactly what happened.

Dan Mosier II, senior manager of fish culture at KDWP, led the late-morning delivery effort to systematically release the newly-reared Plains Minnows into the Arkansas River via a public access point in Oxford, KS.

"This 2022 year-class of minnows were transferred from the KABC's live transport trailer to a 'soft release' containment structure in the river," said Mosier. "This structure, pioneered by KDWP's Ecological Services Section, allowed the minnows to become fully adjusted to the river's current before being released."

"The value of this type of conservation effort is that it can help ensure the long-term viability of this native species throughout its current and historical distribution in Kansas," added Mark VanScoyoc, biodiversity survey coordinator and ecologist for KDWP. "By bolstering native populations, we become one step closer toward down-listing, and potentially removing this species, from its threatened status."

While the race to re-establish the Plains Minnow has really just begun, staff are confident this initiative - combined with further propagation efforts and monitoring - will serve as a guide for many more native species recovery efforts in the future.

### KDWP to Receive \$4.3 Million in Grants to Conserve At-risk Wildlife



Of the more than \$4.3 million in grant funding slated for Kansas, \$3,994,790 will be dedicated to wetland habitat conservation.

In an announcement made by the U.S. Fish and Wildlife Service on Oct. 19, 2022, the Kansas Department of Wildlife and Parks will receive a portion of more than \$66.7 million in matching grants to be distributed across 16 states and Guam in support of imperiled species. The grant dollars are made possible by the Cooperative Endangered Species Conservation Fund - grants that contribute millions annually to support implementing state and territorial programs that conserve and recover federally listed and at-risk species on non-federal lands.

"This grant funding makes it possible for us to conserve nearly 1,600 acres of critical wetland habitat that will not only benefit species most at risk, but many other species that depend on wetlands for food, shelter and respite during migration," said KDWP Secretary Brad Loveless. "We know we can't conserve imperiled species without first conserving their habitat, so this is a great 'next step' towards paving the way for these projects, as well as future efforts to conserve critical habitat across our great state."

Authorized by Section 6 of the Endangered Species Act and partly funded through the Land and Water Conservation Fund, \$4,306,820 from the CESCF will be distributed to Kansas to support habitat conservation.

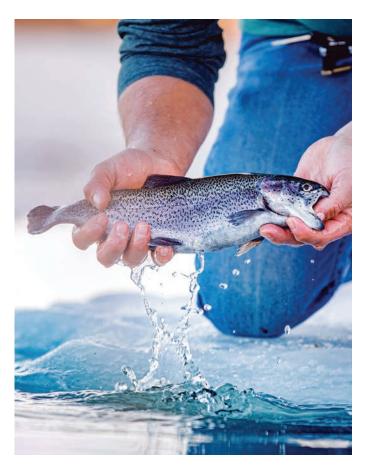
Of the more than \$4.3 million in grant funding slated for the Sunflower State, \$3,994,790 will be dedicated to wetland habitat conservation in support of Whooping Cranes and

Eastern Black Rails, with the remaining \$312,030 supporting Kansas' Aquatic Safe Harbor Agreement.

"Thanks to decades-long partnerships like the one we have with Ducks Unlimited, we've been able to restore, renovate, and protect critical habitat for a variety of native species," said KDWP Assistant Secretary Stuart Schrag. "Now, being the recipient of this federal Recovery Land grant for the first time ever only elevates what KDWP and Ducks Unlimited can do together to positively impact critical landscapes and the wildlife that depend on them."

Ducks Unlimited - a non-profit organization dedicated to the conservation of wetlands and associated upland habitats for waterfowl - played an active role in KDWP's grant application process, recognizing the vital importance of stopover habitat for the federally-endangered Whooping Crane, as well as nesting and brood rearing habitat for the federally-threatened Eastern Black Rail.

"The partnership between KDWP, Ducks Unlimited, and the U.S. Fish and Wildlife Service to secure these funds is a prime example of how collaboration can greatly benefit imperiled species," said Matt Hough, Manager of Conservation Programs in Kansas for Ducks Unlimited. "Working together toward the common goal of conserving wildlife are what these relationships are all about, because when we protect wetlands and associated habitats, both wildlife and people will benefit."



### **Trout Season Now Open**

The wait is over for Kansas trout anglers, as Nov. 1 marked the opening day of trout season. More than 30 waters are being stocked with rainbow trout, providing anglers across the state with winter fishing opportunities.

Kansas' trout season runs through April 15, 2023, and anglers can find a list of stocked locations on ksoutdoors.com along with a stocking schedule. This year, waters will be stocked from October through December and again mid-February through March.

While most fish stocked will be rainbow trout, Kansas anglers have occasionally caught palomino trout, or golden rainbow trout. Not to be confused with golden trout, golden rainbow trout have a genetic variation that many fish growers selectively breed to create a novelty fish for anglers to pursue. While all fish stocked will be a catchable size, a few lunkers will also be added to give anglers the opportunity to catch a trophy!

Anglers 16 and older who fish for trout must have a \$14.50 trout permit and a fishing license, unless exempt. Kansas youth 15 and younger can purchase a youth trout permit for \$7. All anglers with a trout permit may keep five trout per day unless the water is posted otherwise.

To purchase a trout permit, visit gooutdoorskansas.com, download the GoOutdoorsKS mobile app, or visit a license vendor near you.

### Applications Available for New Kansas Kids Lifetime Hunting, Fishing License

The Kansas Department of Wildlife and Parks is proud to announce the application period for the state's all-new lifetime hunting and fishing license for kids will begin October 14, 2022. Any resident youth who is 7 years old or younger at the time of application will be eligible to have a Kansas lifetime hunting and fishing license purchased on their behalf at a reduced rate: \$302.50 for those 5 and younger, and \$502.50 for those 6 or 7 years old. Paper applications can be downloaded HERE; Electronic applications will be available beginning January 2023.

"Our children and grandchildren are absolutely the future of natural resource conservation in our state, so we're proud to offer a special avenue for them to enjoy Kansas' outdoors throughout their life," said KDWP Secretary Brad Loveless.

Individuals wishing to purchase a Kansas Kids Lifetime Hunting and Fishing License for a youth in their life can ensure seamless processing of their application by adhering to these four tips:

An application must be completed for each child, including proof of Kansas Residency. Incomplete applications will be returned.

- This calendar year only, KDWP will honor all eligible applications that are completed, submitted and postmarked by December 31, 2022, even if the child has recently "aged out." After December 31, 2022, only resident youth age 7 years old or younger at the time of application and postmarked date will be eligible.
- Applications will be processed by Licensing staff in the order they are received. And applicants will be notified once their application is approved.
- Due to the already reduced rate, payment plans will not be available for the Kansas Kids Lifetime Hunting and Fishing License; Payment is due in full at application.

It's important to note that anyone born on or after July 1, 1957 must be certified by an approved course in hunter education before they can legally hunt in Kansas, except that anyone 15 years old or younger may hunt without hunter education certification provided they are under the direct supervision of an adult 18 years old or older; The purchase of a Kansas Kids Lifetime Hunting and Fishing License does not eliminate this requirement.

# FROM KDWP STAFF

# BIRD BRAIN Winter Birding with Mike Rader

Late fall through early winter is an excellent time to bird in Kansas, with the influx of waterfowl, Sandhill Cranes, raptors, gulls and various sparrow species highlighting the season. Drought conditions have led to some interesting circumstances, with many marshlands lower than normal or even dry, making the habitats supplied by the numerous reservoirs and smaller lakes more important than ever. Drought conditions also influence what natural food is available for all species that winter in Kansas. Grass and weed seeds will be scarcer in some areas, so you may have an opportunity to attract more birds to your yards than in a typical winter.

The number of waterfowl can be spectacular with just under 30 species that can be seen regularly. The migration typically begins in August and September with the influx of Bluewinged Teal. The teal and wood ducks are mostly gone by mid-October but other ducks replace them, such as Ruddy Ducks, Northern Pintails and Northern Shovelers. As these species thin out, we see higher Gadwall and American Wigeon numbers, as well as many diving duck species, including Lesser Scaup, Ring-necked Ducks, Redheads, Canvasbacks and Buffleheads. Mergansers, Common Goldeneye and Mallards reach their respective peaks later as the weather worsens to our north. We are fortunate to host some of the more unusual duck species like Long-tailed ducks, all three species of scoters and a few other oddities. Other waterbirds, such as loons and grebes, can also be seen during this early winter period.

The goose migration parade usually involves the movement of locally-produced Canada Geese and Greater White-fronted Geese. Later, as the weather gets colder, we see the massive numbers of Snow and Ross's Geese, fresh from breeding grounds in the high arctic, as well as good numbers of Cackling Geese (the miniature versions of the familiar Canada Goose). White-cheeked geese (Cackling and Canada) have various races and sizes, so check out a good field guide while trying to determine which species you could be seeing.

Swans have been gracing our wetlands and reservoirs with



Winter is an ideal time to see good numbers of cackling geese.

increasing abundance in the last several years, with large numbers of Trumpeters in the eastern half of the state, sometimes numbering in the low hundreds in extreme northeast Kansas. Their recovery from being endangered a few decades ago is a real success story and it is an awesome sight to witness their increased usage of Kansas during winter. Smaller Tundra Swans have been regular visitors to Quivira National Wildlife Refuge during recent winters, but drought conditions could affect how long they stay.

The Christmas Bird Count season begins in mid-December and ends the second weekend of January. Participating in one or even several of these counts is a great way to see an abundance of birds with like-minded people who love of being outdoors and viewing the avian visitors we have in the state. More information about Christmas Bird Counts can be found at ksbirds.org or on the Wildlife Watching tab at ksoutdoors.com.

Now, get out there and have a safe and fun winter birding season!

# WHAT AM I? ID Challenge

Using only the image and clues below, see if you can figure out this month's mystery species!



### Clues:

- 1. When threatened, I "bark" to alert others of my kind.
- 2. I live throughout the central and eastern United States.
- 3. I like to stash food away, which I relocate using my keen sense of smell.
- >>> See answer on Page 8.



# Safe Boating While Fishing

with Chelsea Hofmeier



Boats and kayaks bring many opportunities to recreate in a completely different environment. Fishing from a kayak, for example, can be a fun change from fishing on a bank or a dock, but it also comes with additional safety considerations.

Here are a few tips to make your wintertime fishing trip from a vessel a safe and successful one:

- Make sure everyone wears a life jacket. Life jackets on the market today are far more comfortable than in previous years, so it's easier than ever to find a style that will work for you.
- Check the forecast before you go and watch for changes while you are on the water.
- Wear appropriate clothing and gear for the conditions, to include sturdy footwear, layers of clothing, and sunscreen (even in winter).
- It is not recommended to fish or boat alone, especially in winter, but if you do, file a float plan with a family member or friend. And if boating alone, wear an engine cut-off switch and have a boarding ladder handy in the event you unintentionally end up in the water.
- The primary cause of fishing accidents on the water are capsizing, falls overboard, and flooding or swamping, so pay special attention to your vessel's weight capacity and distribute your gear (and passengers) evenly. Fishing often involves a lot of equipment but keeping your boat neat and free of clutter while fishing will also prevent any chances of a mishap leading to an injury or fall overboard.

You may not be able to guarantee a successful day of catching fish, but if you follow these boating safety tips while fishing, you can guarantee a safe return from on the water.



# **Lead-Free Hunting Ammunition?**

with Kent Barrett

Last November, the Center for Biological Diversity sued the U.S. Fish and Wildlife Service to prohibit the use of traditional lead ammunition and fishing tackle on 2.3 million acres of public land across 147 wildlife preserves. While this lawsuit is ongoing, hunters need to be aware of the future of our chosen activity and how the use of non-toxic - also known as non-lead - ammunition requirements are beginning to develop. In fact, lead-free ammunition is already mandated for use in the state of California for all hunting.

There are effective non-lead alternatives to our traditional lead projectiles. Over the last two years of pandemic-induced supply disruptions, we have not had a reliable supply of all-copper bullet alternatives. But, in fairness, we didn't have a reliable supply of any ammunition or components. Fortunately, this seems to be encouraging companies like Barnes, Winchester, Hornady, Federal, Nosler and others to produce functional alternatives to traditional leadbased projectiles. What are the differences between the traditional lead core ammunition that we have used in the past and newer allcopper bullets being produced today as a non-toxic alternative?

I have personally used all-copper ammunition from Hornady and Barnes for out-of-state hunts for almost a decade; they've worked great for me. But there are differences that we must accept to make the best decisions possible for our hunts. Copper is about 30% lower in density than lead, meaning the bullets are longer and lighter than traditional lead-core bullets. This is where ballistic coefficient, or BC, and sectional density come into play.

There are limits to the length and weight of projectiles that can be stabilized from barrels with standardized twist rates. For this reason, all copper bullets are considered by some to not shoot as accurately as traditional lead-core projectiles. This may make a difference to a long-range target or bench rest shooter where accuracy is all that matters, but for a hunter shooting within normal hunting ranges, this should not provide any problems. Accuracy should be acceptable and adequate retained velocity expansion should be sufficient.

Speaking of expansion, all-copper bullets are uniformly harder than lead-core bullets. Today, most copper bullets will have a polymer tip incorporated into a design to initiate rapid expansion of the bullet upon impact. But reliable expansion may not occur after the bullet slows to less than 2000 fps retained velocity. To provide adequate expansion and produce the necessary shock to kill an animal efficiently and humanely, close shots will need to be considered instead of trying to make the longest shot possible.

To date, there is no scientific data to indicate that using traditional lead-core ammunition presents a significant danger to humans or the environment. But as we look ahead and see how public perception is forming on this issue, educating ourselves on how using non-lead ammunition could affect one's hunt looks to be a prudent thing.



# **Tree Stand Safety**

with Colonel Gregory Kyser



Falls from treestands are a common accident while hunting deer. Jon Blumb photo.

Halloween has come and gone, and Autumn is in full swing with Thanksgiving just around the corner. For many, it's time to head to the woods to enjoy another deer hunting season in Kansas.

Kansas game wardens are once again out in force to protect Kansas' natural resources and those who enjoy them. Each year, unfortunately, game wardens are called to investigate a variety of accidents that occur during hunting season. This year already, there have been several accidents involving hunters who have fallen from treestands while deer hunting. While these individuals suffered injuries, they did survive to hunt another day. To ensure you make it home safely after a treestand hunt, follow these basic safety rules:

- 1. Always wear a full-body harness, also known as a fall-arrest system.
- 2. While climbing into or out of your treestand, remember to maintain three points of contact (two hands and one foot, or two feet and one hand) at all times.
- 3. Use a lifeline when climbing into or out of your treestand.
- 4. Do not attempt to hand carry your weapon up or down the treestand. Instead, use a haul line to raise or lower your bow or unloaded firearm.
- 5. Double-check all straps holding your stand, as they may have deteriorated in the weather or been damaged by rodents. And, always inspect screw-in steps for stability.
- 6. Let family or friends know where you will be hunting and when you plan to return.
- 7. Carry a cell phone on your person so you can easily call for help in the event of an accident.

The Law Enforcement Division wishes you Happy Holidays and a safe and successful hunting season.



# **Dirty Girl Adventures**

with Tanna Wagner



When the going gets tough, the tough get... dirty? At least, that was the case for Denise Selbee-Koch and Jennifer Woerner, outdoor adventurers, and coowners of Dirty Girl Adventures. Founded on their shared vision of creating and designing adventurous experiences to encourage, empower, and motivate people, Denise and Jennifer have put in over a decade's worth of work getting people onto the trails and into the water for hiking and kayakingbased events.

In 2019, the group found their permanent home in Topeka's Arts and Entertainment District, in a space they appropriately dubbed "Compass Point." It is here that the two founding Dirty Girls - with shared backgrounds in social work, occupational therapy, environmental education, outdoor adventure, fitness, and nutrition - laid down roots to continue serving fellow outdoor adventurers and expand their growing suite of programming and events.

Today, Denise and Jennifer are proud to offer access to a retail gear shop, yoga, art classes, introductory classes on adventure gear and techniques, selfimprovement, international travel. Midwestern adventures, and local hiking, kayaking, and camping adventures. The two also host "Listen, Learn & Grow" events where they or their guest speakers lead discussions on key topics related to the outdoors, mindfulness, leadership, and personal growth. To learn more or register for your own Dirty Girl adventure, visit their site at dirtygirladventures.com

"MHATAM I?" answer: hox squirrel



### Pot Pie

with Dustin Teasley

Ahh...cooler weather and some rain - finally. Cooler weather brings the hunting seasons and desire for tasty comfort foods such as chili, chicken and dumplings, and one of my favorites - homemade pot pies. Although labor intensive, pot pies are a meal I deem well worth the effort. Whether it's made with deer, pheasant, rabbit, turkey or squirrel, the key to a delicious pot pie is the gravy. Here's how I prepare the mouthwatering meal. Give it a try; you won't regret it.

### Step 1

Preheat oven to 350 degrees.

Mix eggs and milk in a bowl; add cubed meat. Set aside.

Mix flour, cumin, paprika, salt and pepper in a gallon-sized storage bag. Set aside.

### Step 4

Heat oil (or Crisco or bacon grease) in a large pot over medium heat. Place cubed meat from the egg/milk mixture into the bagged flour mix; shake until meat is coated. Place the coated meat cubes into the hot pot, brown the cubed meat on all sides, then place on a plate for later use. Scrape the pot to loosen the breading that has stuck to the bottom of the pan.

Add bouillon, onion and garlic to the pot; cook until bouillon is dissolved. Add 4 tablespoons of flour from the bagged flour mixture into the pot; stir with a whisk until dissolved and browned. Add water; whisk until gravy thickens. Cook for 10 minutes, stirring occasionally. Continue to cook until gravy reaches desired consistency. For thinner gravy, add more water.

2 eggs

½ cup milk

1 pound game meat, cubed and deboned

1 ½ cups all-purpose flour

½ tsp cumin

½ tsp paprika

Salt and pepper to taste

1/4 cup oil (or Crisco or bacon grease)

2 cubes bouillon (I use beef for deer and squirrel, chicken for birds and rabbit)

½ cup onion, chopped

2 cloves garlic, crushed

1 cup water

2 tbsp butter

1 (19 ounce) package mixed frozen vegetables

(carrots, peas, corn, green beans)

1 (16 ounce) can whole new potatoes, drained 2 prepared pie crusts (supermarket refriger-

ator section)

### Step 6

Place vegetables and whole new potatoes into gravy. Cook for 5 minutes; add spices or more bouillon to taste. Once ready, place the cooked cubed meat into the pot and simmer for another 5 minutes. Remove from heat.

Coat the inside of a deep-sided cast iron skillet or Dutch oven with cold butter. Place one pie crust in the skillet and kneed it to the shape of the pan. Poke holes into the bottom of the crust with a fork and trim excess crust from around edges. Place in oven for 5 to 10 minutes until golden brown.

### Step 8

Pour the vegetable, meat and gravy mix into the cooked pie crust. Cover with the second pie crust, seal the edges and cut away any excess dough. Poke the top of the second pie crust with a fork to allow steam to escape.

### Step 9

Bake until pastry is golden, and filling is bubbly, 10 to 15 minutes. Cool before serving.



### Rabies

### with Shane Hesting

Most monsters disappeared after Halloween, but some monsters just won't go away. In fact, one such holdout that I'll mention below is just 180 nanometers long and 75 nanometers wide - in other words, it's a monster that's invisible to the naked eve. Microscopic hemorrhagic disease viruses kill thousands of deer annually. Tiny, environmentallystable Chronic Wasting Disease prions eventually emaciate numerous deer down to skin and bones. And then there's a zoonotic disease (a disease that can be transmitted from animals to humans) deemed 100% fatal if left untreated: Rabies. Rabies is a true monster and has been lurking around since 2000 B.C. Every known case of Rabies must be taken seriously, for it is a disease that affects the brains of mammals, causing severe neurologic symptoms followed by death. Once symptoms arise, it's too late for treatment. Worldwide, approximately 59,000 people die of Rabies every year.

#### How is Rabies transmitted to another mammal?

The Rabies virus is in saliva, peripheral nerves, cerebral spinal fluid, the brain and spinal cord; the virus is not present in blood. Therefore, the virus is typically transmitted through the bite of an infected mammal. Blood splashed in the face or other parts of the body - unless it is mixed with saliva or the other matters mentioned above - is not considered a means of transmission. The virus doesn't live long outside the body or in a cooling dead body, which is ironic, considering it is so deadly once it gets into a warm, suitable host.

### What are the symptoms of Rabies?

Rabies typically presents in one of two ways: furious or paralytic. With furious Rabies, affected mammals become aggressive and demonstrate unprovoked attacks on other animals and inanimate objects - the stuff portrayed in those horror movies like the classic movie "Cujo."

With the paralytic presentation, the drama just isn't there and doesn't sell those movie tickets as fast, but it's still just as deadly. Mammals with the paralytic presentation of Rabies typically remain still, recumbent, almost in a coma-like state. For example, all the rabid skunks I've euthanized over the years were exhibiting the paralytic form of Rabies. Many of them looked like they were already dead until the chest moved due to light breathing.

Excessive salivation, convulsions, and involuntary musculature twitching/shaking are common in both presentations. Once symptoms manifest, death is imminent. With humans, one of the first symptoms is a tingling, prickling, itchy sensation at the bite wound and there may be flu-like symptoms. The incubation time of the virus to onset of symptoms varies greatly, with a typical incubation period of 3-12 weeks. Importantly, a bite closer to the head/brain will result in less incubation time than a bite say on a toe. However, a latent period of up to one year can occur, which is troubling. Since the start of record keeping on Rabies cases, only 14 people are documented to have survived after symptoms arose.



Rabies-Positive Red Fox, Colby, June 19, 2020. Photo by Kevin Klag



#### Is Rabies found in Kansas?

Yes, Rabies is a common zoonotic disease found in Kansas. Here, the strain or type of Rabies is the striped skunk strain that is endemic to the southcentral United States. We currently don't have the raccoon strain that is found east of the Mississippi River, but raccoons can get the skunk strain.

Animals detected with Rabies in Kansas include but are not limited to: cats, dogs, cattle, horse, sheep, skunks, coyotes, red fox, and bats. Interesting fact: Virginia opossums are rarely affected by the virus; this is thought to be due to opossums having a lower body temperature compared to other mammals.

#### What do I do if I'm bitten by a mammal?

- 1. Thoroughly and vigorously wash the wound with soap and water.
- 2. Immediately call your health provider and provide the details about the case.
- 3. Call your county health department and provide the details about the case.
- 4. If you are unable to reach your healthcare provider or county health department, call the Kansas Department of Health and Environment Epihotline at (877) 427-7317; they are available 24/7, 365 days a year. (If the animal is a wildlife species, then call KDWP at (620) 342-0658 or email the KDWP Disease Program Coordinator at shane.hesting@ks.gov to aid in coordinating the response.)

The vast majority of wildlife — even bats — do not have rabies. However, it is best practice to not handle live wild mammals.

### Are there any exceptions to this?

Yes. For example, if a bat is found in a room with a sleeping person, an intoxicated/inebriated person, a child, or person with mental disabilities or any other person who cannot clearly communicate for themselves, is considered an exposure from a human safety perspective. That bat would be euthanized and sent off for Rabies testing. The reason for this assumption of exposure, especially for bats, is because bat bites can easily go unnoticed, and these types of exposures have a history of being fatal.

The vast majority of wildlife - even bats - do not have Rabies. However, it is best practice to always leave wildlife in the wild and to not handle live wild mammals.

#### Advice to Hunters and Trappers

It is always wise to wear nitrile or latex gloves when handling recently trapped or harvested wildlife, but especially mammals.

If you're a furharvester or hunter who handles a lot of fresh mammal carcasses, it would be wise to consult a primary care physician to see about getting vaccinated against the Rabies virus and checking antibody titers at different time intervals based on what a primary care physician recommends.

Lastly, educate yourself. For more information on Rabies, visit www.cdc.gov.

When an organism is born, it becomes part of the beautifully complex, collective thing we call life. And, at some point, all lifeforms will experience disease. "Disease" is simply defined as "a departure from health. "From trauma to tissue (e.g., collisions and broken bones and edema) to viral and bacterial infections that kill cells and destroy vessels to parasites that attack organs and tissues, the list of causes of departure of health is virtually endless. When we come across a diseased organism in the field, we refer to it as "ADR: Ain't Doing Right."

# FROM KDWP PARTNERS

# Call of the

# Strength in Numbers

Wild(scape) with Marc Murrell, Executive Director, Kansas Wildscape Foundation



There's a lot of truth to the saying that there's strength in numbers. No matter the type of project, I've found the Kansas Wildscape Foundation fairs best when we involve multiple people or partnering organizations. And that's exactly what we plan to focus on in 2023, starting with YOU!

If you haven't received one already, be on the lookout for an introductory E-Newsletter on behalf of Wildscape and KDWP. If you don't see it already, you can manually sign up at www.kansaswildscape.org. Brad Loveless, KDWP Secretary, and I penned the first one to describe our shared desire to get Wildscape more involved with KDWP conservation projects. Wildscape's mission is to create outdoor opportunities for all Kansans and we can't think of a better organization to partner with to accomplish this goal than KDWP.

Many outdoorsmen and women spend thousands of dollars on their outdoor pursuits. Imagine the total spent for

activities like fishing (boat, boat insurance, personal property taxes, gas, bait, equipment, etc.) or hunting (deer tree stands or blinds, archery or firearms gear, gas, warm clothing, etc.) The total amount of money spent to enjoy these activities is steep. Additionally, many are annual members of conservation groups like Ducks Unlimited. National Wild Turkey Federation, and Rocky Mountain Elk Foundation, contributing financially above and beyond their licenses and fees all in the name of conservation.

Hunters and anglers have heeded the call for conserva-

tion funding for decades and are responsible for so many success stories, it's hard to list them all. They regularly step up to the plate to benefit projects or causes that they're passionate about, making them some of the finest grassroots advocates out there. That's why we'll never forget about outdoorsmen and women here at Wildscape - and that includes you, yes you, the one reading this magazine!

Some of the ways Wildscape has recently worked with KDWP to advance conservation in Kansas has been creating recreational opportunities for families that include visiting a state park and staying in a wonderful cabin for a weekend. And, combining resources to advance the R3 (recruitment, retention, and reactivation) initiative by increasing participation in outdoor recreation through events, and offering education to those who have vet to realize why the outdoors is such a special place (like in the photos pictured here).

These projects are just a couple examples of what can be accomplished when everyone pitches in - we get real Kansans out and enjoying the outdoors. And hopefully, they'll enjoy themselves so much that their one good experience will turn into two, and three, and so on. And eventually, they'll too, become advocates and join forces with the likes of Wildscape and KDWP.

Whether you're supporting conservation through the purchase of a license, by joining a conservation group, or simply by reading this magazine, I encourage you to consider one additional avenue: Donating to Wildscape. All money raised by Wildscape is spent in Kansas for Kansans for the sole purpose of creating wonderful outdoor opportunities. After all, there is strength in numbers, literally and figuratively. Consider making a tax-deductible donation to Wildscape today and let's make sure Kansas outdoors remain open and accessible to all.





### **Fall Fruits**

### with Krista Dahlinger, President



American Bittersweet

Fall and wintertime strolls through wooded areas reveal the colorful fruits of climbing and vining plants.

American Bittersweet, Celastrus scadens, is a climbing woody vine that circles around tree trunks as it grows upward to seek sunshine at the top of the tree canopy. In the fall, round fruits are covered in bright yellow-orange capsules that split open to reveal the bright red fruit inside. Plants grow from fallen or animal-dispersed seeds, and young vines creep along the woodland floor until they locate a (usually) young tree to climb. American Bittersweet vine may overwhelm young trees over time with their weight or by restricting upright tree growth. In the fall and into winter, after most leaves have dropped, the red fruits are easily seen high in the tree canopy. Rabbits, squirrels and birds eat the fruits and help disperse the seeds. American Bittersweet grows across all but the western counties in Kansas.

Bristly Greenbrier, Smilax tamnoides, is a vining plant



**Bristly Greenbrier** 

that climbs trees, fences, shrubs and hardscapes to access sunshine. The vine produces tendrils that circle around plants and structures, anchoring it in place as the terminal end of vines continue to grow. Vines are covered in bristles that become stouter and darker in color with age. Tender new growth at the leading edge of the vine is palatable with a fresh green citrus flavor. The fruits are blue-black in color and grow in drooping clusters. Greenbrier spreads by rhizomes, by fruit that falls to the ground or that is eaten and dispersed by animals. The plant has an unpopular reputation because of its bristles; however, Greenbrier has a long history of use as an edible plant that has also been used to make tea and traditional medicines. Bristly Greenbrier is found in the eastern half of Kansas.

While you are outdoors this fall and winter, look up into the tree canopy to see if you can find colorful fruits on climbing vines.



# **Ducks Unlimited's Kansas Water Initiative Aims to** Improve Sunflower State's Water Issues

with Ben Romans, Communications Specialist



For generations, landowners and residents of the Sunflower State have struggled with too much, not enough, or unclean water. The Kansas Water Initiative (KWI) is a new Ducks Unlimited (DU) habitat delivery and fundraising opportunity that aims to alleviate several of those problems.

Central Kansas is home to one of the most important migratory bird complexes in North America, but it is also an area dominated by crops and ranch land, which makes water an even more precious resource. That's why DU is working with area producers to improve water availability, while removing invasive plant species that can further deplete waterways and the underlying aquifer.

In Western Kansas, DU's work focuses on restoring degraded playas by removing sediment and planting native grassland buffers that will improve water quality and provide important wildlife habitat.

Eastern Kansas, the most populated region in the state, suffers from water quality and flooding issues. To help mitigate these issues, DU is implementing conservation practices along the area's many rivers and streams to reduce sediment and pollutants from entering waterways.

"The Kansas Water Initiative focuses on more than just waterfowl habitat. These projects will improve water quality and quantity, mitigate floods and deliver win-win scenarios for farmers, ranchers, and other landowners across the state," said DU CEO Adam Putman, "What's more, the program aims to deliver custom solutions because water needs vary so much across Kansas."

If you or someone you know is interested in learning more, contact Matthew Hough at (308) 850-2717, mhough@ducks.org, or Shawn Heggen at (816) 500-9805, sheggen@ducks.org.

DU is the world's largest nonprofit organization dedicated to conserving North America's continually disappearing waterfowl habitats. Established in 1937, DU has conserved more than 15 million acres thanks to contributions from more than a million supporters across the continent. Guided by science and dedicated to program efficiency, DU works toward the vision of wetlands sufficient to fill the skies with waterfowl today, tomorrow and forever. To learn more about our work, visit www.ducks.org.





s principal mesopredators in Kansas, raccoons are highly adaptive and productive mammals. Found in the arid high prairies in western Kansas to the tallgrass prairies of the Flint Hills,

from the canyons of the Gypsum Hills to the Ozark Plateau, raccoons are abundant in all regions of our state. When in season, raccoons can be trapped and harvested for both their fur and meat. Here's how.



While processing issues and changes in fashion trends have recently softened the market for wild-caught furs, this season's outlook still shows promise.

# Why Trap Rawoons?

While market demand for wild-caught furs has been "soft" in recent years due to processing issues and changes in fashion trends, this season's outlook shows some promise. Fur houses such as Groenewold Fur & Wool Company, and Fur Harvesters Auction Inc., predict a stronger value for premium raccoon selections this season. Furharvesters targeting raccoons should focus on catching raccoons mid-to-late season, as premiums will be placed on larger furs with heavy coats. Conversely, smaller raccoons, early-caught raccoons, or damaged furs will have little-to-no value in the market this year. Although the fur market is the primary outlet for raccoon trappers, hunters and houndsmen and women, it's important to recognize other outlets and uses for this plentiful resource.

The practice of sending off raw furs to a tannery like Moyle Mink & Tannery, and receiving your own tanned furs, has gained recent popularity. Tanned furs can be sold, given as gifts, or used to make garments, pillows, quilts, or other decor for your home. It's important to note, in Kansas, that raw or untanned furs can only be sold to a licensed fur dealer.

Additionally, more people are turning to hunting, trapping, and foraging to source their food locally. The locavore movement recognizes the value in sourcing and eating local foods.

For those who have never tried it, raccoon meat is a mild protein similar in taste and texture to dark poultry meat, but with a higher fat content. When preparing raccoon, a parboil or cooking over a grill or grate can help remove some of that excess fat. Raccoon meat is versatile and can be prepared in a variety of dishes, including pot roast, BBQ, and tacos to name a few. In Kansas, licensed trappers can legally sell trapped furbearer carcass meat.

# Additional Ways To Harvest Rausons

Raccoons are primarily harvested through trapping methods. Equipment such as leghold traps, body-gripping traps, cage traps, and cable snares are most common. Trappers often find success by targeting waterways, croplands, and grain storage or livestock feeding operations, as these serve as food sources for raccoons.

Raccoons can also be taken in Kansas by running dogs. Houndsmen and women who participate in this season pursue raccoons along timbered waterways in hopes of "treeing" a raccoon.

Perhaps the least known method of harvesting raccoons is utilizing a predator call to call in

raccoons during the day for a shot opportunity with a rimfire rifle or shotgun. Calling raccoons with an electronic call that produces sounds of raccoons fighting can be extremely productive in denning areas. Try calling near cottonwood or sycamore tree groves, or even near abandoned farmstead buildings and houses.

As always, take the time to read and familiarize yourself with the fur trapping rules and regulations. Harvesting raccoons during the peak of the season is a fantastic way to extend the time spent outdoors and help manage the prey-to-predator balance on the Kansas landscape.

With species as abundant and widespread as raccoons, trapping can help manage the prey-to-predator balance.



# TYPES OF TRAPS

Before you head out to the field, here are a few types of traps to consider:

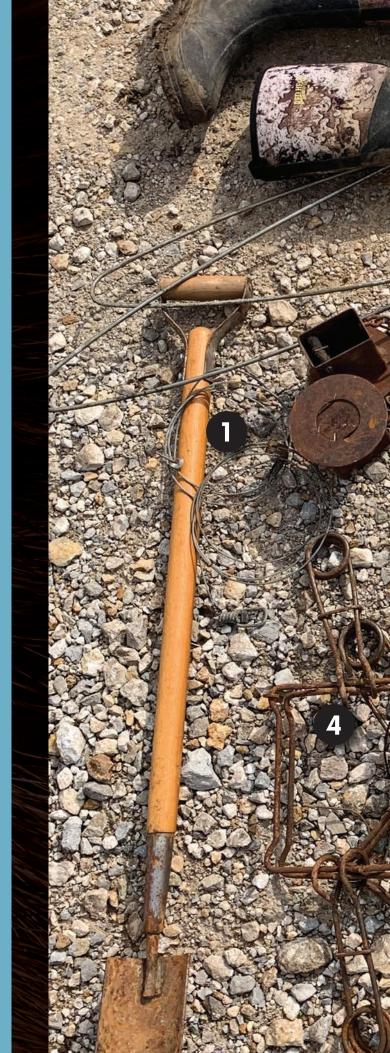
# 1 Cable Snare

is designed to capture animals by the neck loop over a path the target animal is known

# 2 Foothold or Leghold

# 3 lage

# 4 Body-Bripping







# Sas and Parks Contact To the Contac





# **Season Dates**

Youth Pheasant & Quail

Nov. 5-6, 2022

**Pheasant** 

Nov. 12, 2022 - Jan. 31, 2023

Quail

Nov. 12, 2022 - Jan. 31, 2023

**Prairie Chicken** 

Sept. 15, 2022 - Jan. 31, 2023

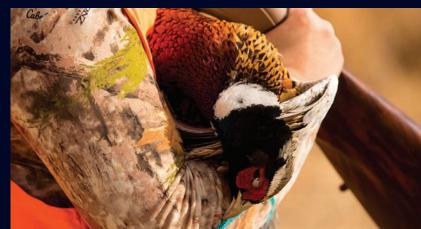
# **Forecast Factors**

Two important factors impact availability of upland game during the fall hunting season: number of breeding adults in the spring and the reproductive success of the breeding population. Reproductive success consists of both the number of hatched nests and chick survival. For pheasant and quail, annual survival is relatively low; therefore, the fall population is more dependent on summer reproduction than spring adult numbers. For prairie chickens, reproductive success is still the major population regulator, but higher adult survival helps maintain hunting opportunities during poor conditions. In this forecast, breeding population and reproductive success of pheasants, quail, and prairie chickens will be discussed.

Breeding population data were gathered using spring calling surveys for pheasants, quail, and prairie chickens. Data for reproductive success were collected during late-summer roadside surveys for pheasants and quail, which quantify both adults and chicks observed. Reproductive success of prairie chickens cannot be easily assessed using the same methods because they do not associate with roads like pheasants and quail.

Rainfall in Kansas varies greatly, from more than 50 inches of average annual rainfall in the far east to less than 14 inches in the far west. The amount and timing of rainfall plays a major role in reproduction for upland birds.

In the west, wet years typically improve the available cover and increase insect availability for chicks. In the east, dry years are typically more optimal, as heavy rains during spring and summer can reduce survival of nesting birds and young chicks. In 2022, Kansas was plaqued by limited precipitation and high heat for an extended period of time. This favored production in the eastern third of the state, while production in the western third of the state was limited.



# STATEWIDE SUMMARIES

### PHEASANT

Drought conditions intensified in Kansas over the past year and had a marked impact on pheasant production across much of their primary range. This was most noticeable in the High Plains region of the western third of the state where there were widespread declines. In portions of the North Central Smoky Hills region, spring precipitation was enough in select areas to support a strong initial nesting attempt resulting in an overall increase for the region. However, this was not widespread and was not enough to offset losses in other regions. The statewide pheasant index has dropped to levels similar to the previous drought cycle. These declines will be exacerbated by the loss of hunt-

able habitat, as the CRP program has continued to decline in enrollment and drought conditions opened much of the remaining CRP to be used for emergency forage for cattle across the entire Kansas pheasant range. This has the potential to artificially improve hunter success initially by concentrating birds in the remaining cover but will also likely concentrate hunting pressure. Despite declines, Kansas continues to maintain one of the best pheasant populations in the country and fall harvest will again be among the leading states. Simply note, hunters are likely to find challenging conditions and should be prepared to work for birds this season.

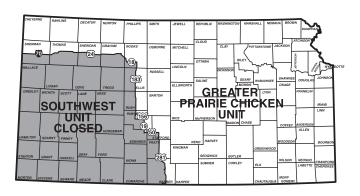
### QUAIL

Kansas has continued to support above-average quail populations with spring densities remaining similar to 2021. This included significant increases in spring densities in the central regions of the state this spring. The peak nesting for quail is later than pheasants, which led to concerns about chick survival and nest initiation rates with mid-summer conditions; However, quail have a longer nesting season and can take advantage of quickly-changing conditions. The drought conditions reduced production in the southwest region of the state, but quail increased on brood surveys through much of Northcentral Kansas and eastward. The modest increases across these regions offset the decreases observed in the southwest resulting in statewide densities equivalent to 2021. Kansas maintains one of the strongest quail populations in the country and, given our abundant access, harvest will again be among the highest in the country. Drought conditions will impact huntable cover throughout the range and will likely be more noticeable as hunters travel further west in the state. The best opportunities will be in the Flint Hills and Smoky Hills regions of the state this season, with quality hunting opportunity scattered across the remaining regions.

# **PRAIRIE CHICKEN**

Kansas is home to both greater and lesser prairiechickens. Both species require a landscape of predominately native grass and benefit from a few interspersed grain fields. Greater prairie-chickens are found primarily in the tallgrass and mixed-grass prairies that occur in the eastern third and northern half of the state. Greater prairie-chickens have recently expanded in numbers and range in the Northwestern portion of the state, while declining in the eastern regions. Hunting opportunities will be best in the Smoky Hills Region this fall where populations have been stable, public access is more abundant, and the drought was less intense than further west.

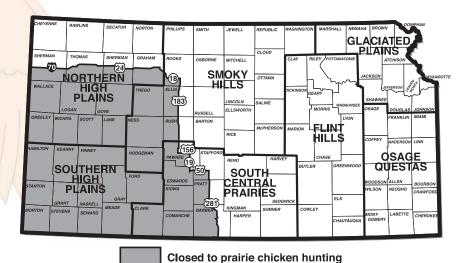
The Southwest Prairie Chicken Unit, where lesser prairie-chickens are found, will remain closed to hunting this year. Greater prairie-chickens may be harvested with a 2-bird daily bag limit in the Greater Prairie-Chicken Unit. All prairie chicken hunters are required to have a Prairie Chicken Permit, which allows KDWP to track hunter activity and harvest to better inform management.



### GREATER PRAIRIE CHICKEN UNIT MAP

Prairie chicken hunters are required to purchase a \$2.50 Prairie Chicken Permit. This permit allows KDWP to better track hunter activity and harvest, which will improve management activities and inform policy decisions.

# REGIONAL SUMMARIES



# **Northern High Plains**

### Public Land: 12,849 acres WIHA: 378,089 acres

**Pheasant** - While this region boasted the highest density during spring surveys, drought conditions reduced production, creating significant declines in the roadside survey this year. In fact, all routes in the region declined from last year. Hunters may find some success in areas where there were good bird numbers in 2021, as there is the potential for more "carry over" birds. Given this, targeting grasslands adjacent to irrigation where there was a higher potential for moisture could also prove successful. The highest densities will be found in the Western counties of the region where densities were greatest last year.

Quail - Quail are limited and typically harvested opportunistically by pheasant hunters. Weather patterns have facilitated a population expansion into the area where appropriate habitat exists, providing hunters with increased opportunity in recent years. While densities on the summer roadside survey decreased this year due to drought conditions, opportunity will still exist, especially in the eastern most counties of the region.

Prairie Chicken - Prairie chicken populations have expanded in both numbers and range within the region. Only portions of this region are open to hunting (see map for unit boundaries). Production in the region was likely poor this year based on other upland bird production. Within the open area, the best hunting opportunities will be found in the northeastern portion of the region in native prairies and adjacent CRP grasslands.

# **Southern High Plains**

### Public Land: 116,821 acres WIHA: 157,426 acres

**Pheasant** – While this region saw a slight increase during spring crowing surveys, the summer brood survey showed significant declines. All routes in this region declined from last year. Carry-over birds may provide the best opportunity for success in areas where there were good bird numbers in 2021. Additionally, targeting undisturbed grasslands adjacent to irrigation may increase the likelihood of encountering birds where moisture may have facilitated some production. The highest densities were found in the Southcentral counties of the region where densities were greatest last year.

**Quail** - The quail population in this region is highly variable and dependent on weather. The roadside estimates were down this year due to poor production conditions. Densities were greatest in the Southcentral portion of the region, with the highest densities found along riparian corridors and/or where adequate woody structure exists. This association with riparian corridors makes surveying the region for an accurate density of quail challenging; therefore, hunting opportunities may be better than the roadside surveys suggest. Scaled quail can also be found in this region but make up a small proportion of total quail.

**Prairie Chicken** – Prairie chicken hunting is closed in this area.

# REGIONAL SUMMARIES

# **Smoky Hills**

### Public Land: 106,558 acres WIHA: 298,283 acres

Pheasant - This region showed an increase on the roadside survey index, boasting the highest roadside density this year. The region maintained the highest regional harvest last year, as well. Given the observed increase, this region will again be a major contributor to overall harvest this season. Despite early rains contributing to production, habitat conditions have continued to deteriorate and will likely mean areas may be better than they initially appear. Hunters should target remaining cover in areas where good spring cover would have been present, especially in the western and southern portions of the region where the highest roadside densities were this

Quail – This region has enjoyed several years of well above average quail densities. The spring whistle survey increased this year, maintaining above average spring densities. Brood survey estimates also increased across most of the region. Given increases in both spring and summer surveys, hunter success rates are expected to improve compared to 2021. However, drought conditions will impact cover across all land types. Densities appear best in the west half of the region but several other areas across the region maintained good estimates, as well.

Prairie Chicken - Prairie Chicken hunting opportunities in the region should remain good. Production was likely improved as other upland birds supported greater production in the region. This region has maintained relatively stable densities, paired with the greatest access in the state to appropriate habitat. Greater prairie-chickens occur throughout the Smoky Hills where large areas of native rangeland are intermixed with cropland. The best hunting opportunities will be found in the central portion of the region, with several other areas supporting huntable densities of birds in appropriate habitat, as well. The southwestern portion of the region is within the closed zone (see map for unit boundaries).

### **Glaciated Plains**

### Public Land: 51,469 acres WIHA: 67,430 acres

Pheasant - Opportunities will remain poor with pheasants occurring only in pockets of habitat, primarily in the northwestern portion of the region or areas managed specifically for upland birds. Roadside densities decreased with pheasants only being recorded on two routes this year. Pheasant densities across the region are typically low, especially relative to other areas in central and western Kansas.

**Quail** - Summer roadside surveys showed good improvements with densities approaching those typical for the central regions of the state. Like many regions, the last five years have provided aboveaverage opportunity for quail. While densities will still be lower than many regions to the west, the increased densities will provide better opportunities for hunters spending time in northeast Kansas this winter. With limited nesting and roosting cover throughout much of this region, targeting areas with or near native grass will be key for hunter success. Roadside counts were highest in the northeastern portion of the region.

Prairie Chicken - Very little prairie chicken range occurs in this region and opportunities are limited. Opportunities for encounters will be highest in the western edges of the region along the Flint Hills, where some large areas of native rangeland still exist.

# Osage Cuestas

### Public Land: 109,833 acres WIHA: 31,905 acres

**Pheasant** - This region is outside the primary pheasant range, therefore hunting opportunity is very limited. Pheasants are occasionally found in the northwestern portion of the region at very low densities.

**Quail** - Opportunities will be poor this year. While roadside estimates trended upward again this year, the modest improvements have still not mitigated several years of consecutively poor production. Roadside surveys remained depressed within this region, having the lowest regional density for quail. While overall hunting opportunities will be slightly improved, the best opportunities will be on areas specifically managed for upland birds and/or the western counties in grasslands extending east off of the Flint Hills.

**Prairie Chicken** – Greater prairie chicken populations have consistently declined over the long term in this region. Fire suppression and loss of native grassland has gradually reduced the amount of suitable habitat. Hunting opportunities are limited, but chickens can occasionally be found in large blocks of native rangeland, primarily along the edge of the Flint Hills.

# REGIONAL SUMMARIES

### **Flint Hills**

### Public Land: 196,901 acres WIHA: 77,353 acres

Pheasant – This region is on the eastern edge of the primary pheasant range in Kansas and offers limited opportunities. While pheasant densities have always been low in the Flint Hills, the highest densities will be found on the western edge of the region. There were no roadside routes where pheasants declined this year and routes on the western portion of the region saw some large increases. Therefore, the best hunting opportunities will be in the northwest portion of the region along the Smoky Hills.

Quail - This region had the highest regional roadside survey index this year after a slight regional increase. In fact, estimates on the quail whistle survey have steadily increased over the last two decades. Increases in this region should produce above-average quail densities and the highest regional density heading into fall. Quail production can be impacted in the core of the Flint Hills with annual burning practices limiting nesting cover. Therefore, hunters will find the best success in areas that maintained nearby nesting cover and have retained shrub cover that has otherwise been removed from large areas of the region during invasive species control efforts. The highest densities will be found in the southern half of the region this year.

Prairie Chicken – The Flint Hills is the largest in-tact tallgrass prairie in North America and has been a core habitat for greater prairie-chickens for many years. Management changes resulting in both areas of too little and too much prescribed fire have gradually degraded habitat quality, and prairie chicken numbers have declined as a result. Burning was near average in 2022, limiting nesting cover in the core of the Flint Hills. Hunting opportunities will likely be similar to last year throughout this region.

### **South Central Prairies**

### Public Land: 41,125 acres WIHA: 59,705 acres

**Pheasant** - Roadside survey estimates were slightly lower than last year. There were a few routes that maintained relatively good densities within the region. While roadside estimates are lower than the other major pheasant regions, last year this region boasted the highest hunter success rates. The highest pheasant densities will be found in the west-central portion of the region this year, with good opportunities in the northern part of the region as well, near higher densities to the north.

**Quail** - The spring whistle survey and summer brood survey both trended downward, however neither saw significant declines. Because harvest rates for quail were also highest in the region last year, opportunities should remain strong this year with marked improvements in key areas. The intermixing of quality cover types in the region provides more consistent opportunities across the South-Central Prairies compared to other regions. Roadside counts were highest in central portion of the region.

**Prairie Chicken** – The large rangeland areas in this region are almost entirely closed to prairie chicken hunting (see map for unit boundaries). Chickens occur in very limited areas in the remainder of this region at very lów densities. Encounters are possible in the few remaining large tracts of rangeland in the northeastern portion of the region.

# CRP & WIHA

Under the 2018 Farm Bill, the Conservation Reserve Program (CRP) acreage cap will gradually increase each year.

Kansas currently has 1.7 million acres of CRP statewide. During the 2022 signup, however - with 294,815 acres expired and only 218,974 acres enrolled - there will be a net decrease in CRP acres again this year.

Decreased interest in enrollment is currently attributed to reduced rental rates combined with high commodity prices. In addition to loss of CRP acres, the quality of habitat on remaining CRP acres will be reduced.

A total of 86 counties in Kansas were released for emergency Haying and Grazing of CRP. A large portion of properties in the WIHA program include CRP, and expirations/haying can reduce habitat quality or exclude properties from the program altogether.

Given this, Kansas' WIHA program still has nearly 1.09 million acres enrolled for 2022.

To enroll your land in WIHA, contact the Pratt **Operations Office at (620) 672-5911.** 









# Sconling

Both biologists say many waterfowl hunters aren't as successful as they could be simply because they're hunting where there

are few, if any, ducks. Factors like hunting pressure and habitat often mean a large percentage of ducks are concentrated on a small portion of public lands.

Farmer, especially, recommends hunters arrive at a public marsh the afternoon before a planned morning hunt, as scouting can dramatically raise the chances for suc-

cess the next morning.

"It's always best to get to a place at least part of a day early so you can put in some time looking through the windshield and binoculars," said Farmer. "If you have a boat, spend the first afternoon just getting out and seeing where the birds are. If nothing else, get to a good spot and use binoculars to watch and see what areas the birds are using."

While scouting and hunting, the biologists

encourage hunters to take a close look at the vegetation growing throughout the wetlands. It can be extremely beneficial to recognize

waterfowl food sources such as smartweed, barnyard grass, and others. If ducks are feeding on a certain plant in one area of a marsh, they may also be feeding on the same plant in other parts. Hunters should also check with other hunters to see what the birds they've harvested have been eating.

public waterfowl

Scouting should also include investigating hunting

pressure within an area. Places with lots of hunters generally have fewer birds. Often that can be done by checking parking areas and/or listening for gunshots. Sadly, litter, like empty shotgun hulls along a shoreline, ripped-up ammo boxes, and assorted trash are also good indications of where people have been hunting recently.

Concealment

Wagner said it's easy for him to see why many public land waterfowl hunters struggle.

"Hunters could be hiding better. Just driving around, I can see most hunters before I even see their decoys," said Wagner. "I can see them, their dog, all their hunting buddies, their boat... If I can see that with my naked eye from 500 yards, you know any duck flying overhead will see them, too."

Farmer and Wagner highly recommend facemasks and using some natural vegetation to improve any hiding spot, and that's for hunters, their dogs, and even an already cam-

ouflaged boat.

"Try hiding in something like a clump of cattails so thick you can hardly see the sky," said Wagner. "Because these birds see it all and become wary.

Farmer agreed.

"You can't just kneel in whatever cover is there and fool many birds," added Farmer. "You've got to give these birds more credit than that."



have Wagner noticed too many hunters employ tactics and equipment largely unnatural to they're the birds hunting, too. For instance, Wagner said many who hunt Cheyenne Bottoms rely too heavily on large spreads of mallard decoys, which is often two or

three dozen or more. "Out here we don't see that many mallards, and when we do, they're not in big groups," said Wagner. "If I have mallard decoys in my spread, they're a pair off to

the side."

Wagner firmly believes in matching decoys to the kinds of ducks currently in the area. That's often teal, widgeon, gadwall, or redheads. But even then, don't put them out in big numbers.

Wagner also noted that when hunting pressure is high, like it almost always is, ducks sometimes seem to avoid real ducks for fear they're decoys. So use

them sparingly.

"There's no doubt we've seen ducks avoid other ducks," said Wagner. "Those same ducks may land with a bunch of coots. They haven't encountered coot decoys so they may see coots as a sign of safety. Because of that, hunters may want to try mixing things up a bit, too."

Buck the Trends

Finding an area away from other hunters always helps. The current trend in specialized hunting boats makes it tougher than ever, especially for those who wade or paddle into hunting spots. Sometimes, though, those out-of-the-way places aren't actually that far away.

Wagner mentioned an elderly local sportsman who often hunts close to the roads while most hunters go much further into the wetland. He also sets himself apart from other hunting parties by using just a singledigit number of decoys instead of vast spreads. Solo hunting also makes it far easier for him to hide.

Avoiding tactics the majority of other hunters are using can also up the odds that a

public land hunter will enjoy a good hunt. Wagner mentioned the use of spinning-wing decoys and aggressive calling as prime

"It seems everybody has a spinningwing decoy and calls a lot. They'd get more ducks on Cheyenne Bottoms if they'd quit using that kind of stuff," Wagner said. "These ducks are pressured, and they've come to equate those items with danger. Interestingly, you can still use those things on some private lands and get ducks, but on most public lands they just don't work."





### PURCHASE THE HIP STAMP

The stamp, \$2.50, is required to hunt migratory game birds\* in Kansas.

Buy it online at gooutdoorskansas.com.

# COMPLETE THE SHORT SURVEY

Did you hunt dove, or ducks last year? If so, how many did you bag?

A short survey is administered at time of purchase.

# THANK YOU FOR YOUR HELP!

Completing the HIP survey provides biologists at KDWP valuable information to help manage Kansas' incredible migratory game bird populations!

\*Ducks, coots, geese, brant, swans, doves, woodcock, rails, snipe, sandhill cranes, band-tailed pigeons, and gallinules.



# MR. FORT RILEY

by Michael Pearce, Outdoor Writer

Southern-born, David McNeal wasn't thrilled when the military shipped him to Kansas' Fort Riley in the 1970s. He and his wife, Kate, planned to hustle along as soon as the Army allowed. But those thoughts were short-lived.

"Kate and I knew right away it had everything we'd ever need," said McNeal. "For me, it was all the hunting and fishing. This place was like heaven, especially with quail hunting." McNeal's love of birds and the 101,000-acre Army base hasn't waned since.





Known locally as "Mr. Fort Riley," McNeal has shared his beloved hunting grounds with thousands of others in many ways, including through his website, huntfortriley.com.

McNeal has logged literally thousands of days afield since his retirement from the Army in 1988. Known locally as "Mr. Fort Riley," McNeal has shared his beloved hunting grounds with thousands of others in many ways. He started and managed his website, huntfortriley.com, for 20 years. And every season he receives scores of calls, e-mails and text messages from people he's never met, seeking information.

In fact, his efforts to share in the enjoyment of hunting made him a recipient of a Field and Stream Heroes of Conservation Award in 2013.

"I haven't counted, but I know I've hosted people on quail hunts from about every state except Alaska and Hawaii," said McNeal. "I've even had people from Canada and Mexico come hunt with me."

Many have been serious bird hunters, with whom lasting friendships have bloomed. And McNeal has received invitations to great sporting destinations from such hunters as a result.

Still, his favorite type of hunting buddy is at the opposite end of the sporting spectrum.

"I love taking out a young soldier, or civilian, who's really new to hunting to help them get off to a good start," said McNeal.

### Sixty-year addiction to bird dogs and bobwhites

McNeal describes himself as "an accidental quail hunter." Raised in Alabama and Florida, he primarily hunted squirrels until a wayward Irish setter wandered into his life as a mid-teen.

"One day that dog and I were running across a field, and it slammed to a halt," said McNeal, a tinge of a Southern accent still in his voice. "You can figure out what happened next. He was pointing at a covey of quail, and they flushed like they do. I've been addicted since."

McNeal had to leave the dog with his father when he went into the Marines after high school. After his tour, McNeal enlisted in the Army in 1971. Fort Riley was his first duty assignment as an aviation mechanic. But quickly soon after, Bobwhites became a priority no matter if McNeal was at work or at play.

"Whenever we'd be out in the field, we'd run into some really nice coveys of birds and I marked them on a map," said McNeal. "When I had some time off, I went back with my dogs. The hunting was so good back then."

McNeal remembers when 15-covey days were

common through the 1980s. It was also a time when prairie chicken flocks could number a hundred or more birds. Most trips afield with his dogs included a bonus rooster pheasant or two, as well.

While times have changed, McNeal insists Fort Riley is still one of the top public hunting areas in the nation to find bobwhites. It's not uncommon for

him to find four coveys in a half-day.

Of course, McNeal benefits from his knowledge of the landscape, as well as the efforts of the Fort's

team of wildlife professionals.

"So much of the great wildlife populations are because of how the place is managed," said McNeal. "The natural resources division has always done a very, very good job. They do their best to provide good habitat. They do the food plots, prescribed burns at the right times, and hinge cutting to make a better cover for the birds."

# **More than just quail**

McNeal is quick to brag about the other game populations that thrive on Fort Riley. Whitetails can be found in quantity and quality, and he's helped many new deer hunters locate productive hunting grounds. The area has a thriving elk herd, some of which are the heaviest in the nation, thanks to the many food plots and lush, private crop fields that grow outside the post.

While quail will always be his main outdoor pursuit, McNeal is always eager to hunt when

spring turkey season opens, too.

"I hear most of Kansas is really hurting for wild turkeys, numbers are way down," said McNeal. "I can assure you their population isn't hurting that bad on Fort Riley."

In fact, McNeal has just volunteered to organize, and be a guide, on a special youth turkey hunt next

spring.

In addition to hunting, McNeal has also spent time at all 29 established ponds on the military post. They offer good fishing and some offer good waterfowl hunting opportunities; and, two offer him a chance to enjoy another sport.

"I've gotten into fly-fishing the last ten years and really enjoy it," said McNeal. "Every fall and winter, they stock Cameron Springs Lake and Moon Lake with some nice rainbow trout. Last year, I caught a six-pound rainbow on my fly rod. That's a lot of fun."

McNeal is always ready to share some of his favorite memories of being afield on Fort Riley. He laughs as he describes the extreme surprise when a tom turkey snuck in behind him and gobbled



Civilians are welcome to enjoy the outdoors on Fort Riley if they follow state and strictly-enforced military requirements, including:

- A special Fort Riley hunting license must be purchased, as well as any state-mandated license or permit. A REAL ID is required; therefore, some state driver's licenses won't qualify.
- An annual security pass is required; it is easily obtained at the security building, just off I-70 Exit 301.
- Daily check-in is required, in person or online.
- Before the first hunt, all firearms must be registered and inspected at the security building.
- Anyone afield in training areas from Sept. 1 - May 31 must wear blaze orange.
- Fort Riley is divided into training areas which are open and closed as per military need. Some have special weapons restrictions.
- Deer seasons are different from regular state seasons and are scheduled around military use. Civilian bowhunters are limited to 200 special permits, which are quickly given out first-come, first-serve in the summer.

Visit ksoutdoors.com for a complete list of requirements and regulations.



inches from his ears. He's had many close encounters of the "oh my gosh" kind with covotes, bobcats and monstrous elk, too. McNeal said he can even describe what it's like to feel a deer breathing down the back of his neck.

But McNeal talks most often of the beginners he's taken out over the years rather than his many limits through the decades.

# **Putting others first**

"Nothing makes me happier than to take a young soldier out and watch him shoot his first quail over a good dog," said McNeal. "It's all about sharing times like that, that keeps me going."

To date, McNeal has never turned down a request to help another hunter do better on Fort Riley. Probably because he's not worried about too much direct competition.

"We have 101,000 acres, and I'm not giving away spots. I'm telling or showing them opportunities," said McNeal. "It's the habitat that determines the number of birds out there, not the hunters. If we lose a covey, it's because the habitat changed... There's plenty of room. If I pull up to a spot and someone is already there, I've always been able to go find another spot where there's not."

Many times, McNeal has turned bad experiences into beneficial ones for the problematic hunter.

He tells of a springtime hunt when he'd invested hours in scouting out an old gobbler and was in the perfect place to call it in way before daylight the next morning. All was going as planned, and the turkey was only a few yards from stepping into the starring role at a Thanksgiving dinner, when a young hunter bumbled onto the scene and spooked the bird away.

Rather than get angry, verbally attack the other hunter, or storm off, McNeal took some time and talked to the young hunter who admitted he was still new to turkey hunting. McNeal showed him the ropes and is confident that young man will develop into an accomplished hunter.

"A lot of them just need a little coaching," said





McNeal. "Most want to hunt the right ways, they just need someone to show them how."

# A bright future

McNeal didn't hunt nearly as much as he'd liked last season.

"It was just some old-age things. I had neck and back surgery," said McNeal. "Only shot once at a quail, (which he got) and probably shouldn't have done that, according to the doctors. But I feel a lot better now.

"I'll be ready as I can be when the season opens."

McNeal will go as often as he can and has good expectations.

On a mid-September prairie chicken hunt on the Fort, McNeal saw two nice coveys of quail of assorted sizes. He expects he'll find even more birds as he continues to search out the best bobwhite habitats on the post.

"In the end, memories are all a lot of us have and I plan to keep making more," said McNeal. "Years from now, when somebody sees an old, crippled-up me in a rocking chair, they'll at least see me smiling. I'll be remembering one of the so many great hunts."

As for the rest of us, we can bet that memory will be based on a hunt on Fort Riley.



David McNeal plans to keep making more memories hunting on Fort Riley for years to come.





# TERILES DE LE STATE DE LA COMPANION DE LA COMP

by Brent Frazee, Outdoor Writer

'Il never forget the frigid January day several years ago when I witnessed the equivalent of a nature documentary on bald eagles at Milford Reservoir.

A cold front had pushed thousands of waterfowl south to the first open water they could find. And bald eagles brought up the rear of that migration, feeding on weak geese and shad struggling in the cold water.

In the midst of the season's first real blast of winter, other reservoirs were frozen tight. But Milford, the largest reservoir in Kansas, stubbornly resisted and still had open water.

That concentrated the last stragglers of the waterfowl migration and a large concentration of bald eagles. My friend Rick Dykstra, a longtime tourism official, was my guide for the day. He had been taking photos of the majestic birds for days and was eager to share in his enjoyment.

At our first stop, we saw several eagles perched on the ice, peering into the cold water in hopes of nabbing a sluggish baitfish swimming by. We watched one bird grab a larger fish and fly off to enjoy its meal from its perch in a tree at the water's edge.

At our next stop, we witnessed a tall tree with 10 eagles, many of them adults but several juveniles, perched on the branches. Later, we were thrilled at the sight of an eagle soaring overhead and suddenly dive straight down to the frigid water to pounce on a fish.

It was a true spectacle—one that wasn't lost on Dykstra and me.

"I can sit for hours and watch eagles," Dykstra said. "To watch them spar in the air, dive down on baitfish, soar over the water—that's something I never get tired of.

"They're such majestic birds."

That majesty occurs in Kansas each winter as the birds of prey follow the freeze line south. They are the cleanup crew for the waterfowl migration, feeding on wounded or struggling geese and ducks. But wildlife biologists stop short of calling them scavengers.

"I like to look at bald eagles as extremely intelligent creatures," said Mike Watkins, a former wildlife biologist for the U.S. Army Corps of Engineers and one of the leading authorities on bald eagles in Kansas.

"They're great and efficient hunters. They'll eat carrion if it is fresh and readily available. They're opportunistic. But they'll also hunt efficiently if they have to.

"I've seen them take everything from snakes to turtles back to their nests," added Watkins.

Such sights are becoming increasingly common in Kansas. Bald eagles once were on the brink of extinction, when numbers dropped dangerously low due to the effects of the pesticide DDT, among other factors.

But the numbers have climbed steadily since DDT was banned in the 1970s, to the point where they are no longer on the federal Endangered Species List.

That means more winter viewing opportunities for Kansas residents today.

Wildlife biologists estimate as many as 4,000 bald eagles stop or stay in Kansas during the winter. And the U.S. Fish and Wildlife Service estimates there are now 200 active bald eagle nests in Kansas, a remarkable number considering the first one in modern times wasn't documented until 1989.

"It still amazes me the number of people who have never seen a bald eagle and didn't think they would ever see one in Kansas," Watkins said. "As their population has increased, I would have thought the interest in eagles would wane.

"But that's not the case. When we were doing our Eagle Days programs before COVID, attendance would increase every year."

# A winter attraction

So, what is it that drives our fascination with eagles? Maybe it's the fact that these regal birds are our national symbol. Maybe it's that they are the beneficiaries of one of America's greatest conservation programs. Maybe it's their unmistakable wingspans the second longest to California condors—that allow them to glide gracefully over reservoirs and rivers. Maybe it's their giant nests, which can weigh up to a ton. Whatever the case, bald eagles are unique. And Kansas is vital to their existence, with its large manmade reservoirs and its river systems.

Bald eagles start arriving in November, following the waterfowl migration. But their numbers don't peak until January when smaller bodies of water freeze and





attract multiple eagles during the winter.





Kansas, preying on everything from fresh carrion of deer (above) to waterfowl and baitfish.

waterfowl concentrate on larger bodies of water, such as Milford.

"As bodies of water in the northern states freeze. the waterfowl and eagles fly south until they find open water," Watkins said. "That's why we will have large numbers of eagles that will winter here."

# Timina is everythina

For as fascinating as the winter arrival of bald eagles can be in Kansas, it's no guarantee.

Look at the last few vears. Warmer-than-usual weather to the north of Kansas kept eagles from migrating here in great numbers.

"We just haven't had the numbers that we did six or seven years ago," said Pat Silovsky, manager KDWP's Milford Nature "With warm Center. weather to the north of us. water stayed open and there was no need for eagles to fly as far south as Kansas."

Silovsky and others hope this isn't a trend. Milford, Perry, Tuttle Creek, and Clinton reservoirs, and the Kansas River. have attracted spectacular concentrations of bald eagles in cold winters.

There is no all-encompassing database on wintering bald eagles in Kansas. But rough estimates by the Fort Riley Conservation Office indicate the Kansas River near the military base and Milford have attracted 400plus eagles some winters.

Eagle Day presentations—a collaborative effort between KDWP and other natural resource conservation agencies—give the public a chance to view bald eagles in the wild, as well as learn about the birds during inside talks.

But many people take a less structured approach, using binoculars, spotting scopes and cameras to spot the eagles on their own by driving to public access points on the reservoirs.

The outlets can be a great place to start because of their open water, large baitfish concentrations and tall trees along the banks.

But main-lake accesses provide up-close viewing, too, as long as there is open water nearby.

"On some really cold days, I haven't had to even get out of my vehicle to get photos of eagles," Dykstra said. "They're that close."

# **Nesting success**

Kansas residents don't always have to wait until winter to view eagles, though.

The Sunflower State now has 200 known active baldeagle nests, according to the U.S. Fish and Wildlife Service. And, wildlife biologists are documenting an additional 20 to 30 nests each vear.

That follows a national trend. The lower 48 states now have an estimated 71,000 nesting pairs of bald eagles, a spokesperson for USFWS said.

# BALD EAGLES

REMARKABLE BIRDS OF PREY

5.9 - 7.5 FT



Bald Eagles have the widest wingspan of any raptor. The California Condor has a longer wingspan, but isn't officially recognized as a bird of prey.

Bald Eagles can use thermal winds to reach heights of up to

10,000 FT



Bald Eagles can dive on prey at speeds approaching

100 MPH

Bald Eagles have an eyesight up to

# 4 TIMES

stronger than that of humans. They can focus on objects from great distances and can also determine colors much better than we can, hence the term "Eagle Eye!"

No, Bald Eagles aren't really bald. They picked up the name because of their white cap, which develops when they are usually

> 4 TO 5 YEARS OLD



Bald Eagles often pester other birds. such as ospreys. until they drop the food they're carrying, and swoop in for an easy meal.

Watkins recalls the excitement that the first nest discovery, made at Clinton Lake, created.

"The idea that a nesting pair of eagles had come back to Kansas was really exciting," he said. "That area was off-limits to the public so that the nesting birds wouldn't be disturbed.

"But the Corps set up a viewing platform, and people from all over the state came to view the nesting pair. People wanted to be a part of it; to say they had seen a nesting pair of eagles in Kansas."

The eagles must have liked that site. In 1991, the USFWS banded the male with an ID tag. That eagle returned to nest every year until

2018, Watkins said.

"At that point, I'm sure he either perished or got to the point where he no longer was productive," Watkins said.

But the site remains active, with other eagles now nesting there.

The Milford Lake region is similarly popular with nesting eagles. Silovsky says there are six to 10 active nests in the area. And it shows.

Anglers such as Dykstra say it isn't unusual to see eagles circling overhead when they are on the water.

Such progress encourages biologists like Watkins.

"We still have a lot of quality nesting habitat that isn't being used," he said. "So, I anticipate the numbers will only continue to increase.

"That's something we never dreamed possible not too long ago."





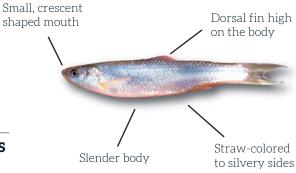
# **Plains Minnow**

# Hybognathus placitus

nce abundant, the Plains Minnow was classified as state threatened in 2003 under the Kansas Nongame and Endangered Species Conservation Act. The native species calls all large Kansas streams with shallow, braided channels and shallow backwaters "home." The common length of an adult Plains Minnow is just 3 to 4 inches, with a maximum length of just 6 inches.

# Did you know?

On Nov. 7, KDWP biologists stocked 3,500 captive-bred Plains Minnows in native waters! Read more on Page 3.



**Length** 3-4 inches

**Diet** 

Microscopic plants and animals

**Conservation Status** 

Threatened



# Where Do They All Go?

"All is calm, all is bright" isn't just a popular Christmas carol - it's true of nature during wintertime. When snow has inched up on our lawns, our house windows have all fogged, and the sun begins to melt that thin layer of ice that encapsulated tree branches the night before, it seems as if the whole world has stopped for the season. It often makes me wonder: Where have all the wildlife gone? Sure, intermittent tracks and scat on sidewalks and roadways are evidence they're certainly still around, but where? That's what I aimed to investigate, honing in on one of my favorite animals - aquatic turtles - and the results were fascinating.

Here are the ingenious strategies that aquatic turtles deploy to weather the winter season in Kansas.

### **Background**

Kansas is home to about 11 species of aquatic turtles: Alligator Snapping, Common Map, Eastern Musk, False Map, Painted, Red-eared Slider, River Cooter, Smooth Softshell, Snapping, Spiny Softshell and Yellow Mud turtles.

With the exception of Alligator Snapping and Common Map turtles, most Kansas counties are home to a variety of aquatic turtle species.

Now, turtles are ectotherms, or "cold-blooded" animals. meaning they rely on external sources for body heat. That means a turtle's internal temperature will closely match that of its surroundings. This is crucial for understanding why turtles "do what they do" when winter temps come. I'll explain.

### Water as a Buffer

To protect themselves from the harsh winter weather above ground, aquatic turtles will submerge themselves deep in pond water where their body temperature can remain relatively stable. A good analogy for this concept is cooking pasta: If you've ever stood over a pot of water waiting for it to boil, you understand how much energy is needed to raise the water's temperature from cold or "room temperature" to boiling - the wait seems to take forever! The same applies to larger "pots" of water, like ponds. Because water has a high specific heat, it's a relatively safe environment for turtles to park in winter (as opposed to being above ground, fully exposed to air, which has a low specific heat).

So, what about breathing? I mean, after all, turtles don't live underwater full time. This is where things get interesting!

### **Breathing?**

A story from PBS's News Hour put it best - turtles essentially survive long stints underwater, in winter, by "butt breathing." Yep, you read that right. Jacqueline Litzgus (The Conversation) wrote her in 2017 article titled, The secret to turtle hibernation: Butt-breathing:

"When turtles hibernate, they rely on stored energy and uptake oxygen from the pond water by moving it across body surfaces that are flush with blood vessels. In this way, they can get enough oxygen to support their minimal needs without using their lungs. Turtles have one area that is especially well vascularized - their butts."

The scientific term for this process is cloacal respiration, and for all intents and purposes, it isn't so much "breathing" as it is the animal uptaking water through this orifice, extracting oxygen, and pushing the water back out.

So, by this point in the article, a turtle's internal temperature has been stabilized. It has a proven process for obtaining oxygen. All that leaves us with is a question about food. How do turtles eat if they're fully submerged in water all winter?

### Eating - Not so Much

It's important to understand the effects of temperature on a turtle's metabolism (or any ectothermic species, for that matter). Theoretically, if a turtle has submerged itself in cold water, it's internal temperature should be relatively cold. If a turtle's internal temperature is low, their metabolism will slow down accordingly. Why? Because their body now has lower energy and oxygen demands.

Also, during this time, the turtle will rely on its "stored" energy. So, really, "eating" in the traditional sense it's so much of a concern.

But just like us, those energy stores are bound to run out eventually. Thank goodness for a change in seasons then, right?

Come spring, when winter releases her grip a bit, expect to see aquatic turtles climbing over one another to get a spot on a log. After a long winter hiatus, nothing probably feels better to them than drying off, outstretching their legs, and soaking up as much warmth from the sun as possible.

Now that's a strategy I can get behind. 

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