



Volume (2023), Issue 1

Winter 2023

## Iowa DNR Uses GPS Transmitters to Monitor Wild Turkeys

By Dan Kaminski and Robyn Dausener

Journal records by European pioneers in the 1800s noted the abundance of wild turkeys (*Meleagris gallopavo silvestris*) inhabiting the Iowa landscape and the ease at which they could be shot or trapped (Sherman 1913; The Wilson Bulletin). Inevitably, by the early 1900s, the wild turkey was extirpated in Iowa because of unregulated harvest and habitat loss. In late 1960, the Iowa Conservation Commission (now the Iowa Department of Natural Resources) attempted to reestablish turkeys using wild-trapped birds from around the Midwest and Texas (Klonglan et al. 1970; Proceedings of the Iowa Academy of Science). From these stocking

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Female wild turkey with a GPS backpack transmitter (Ornitela OrniTrack 50g with an ATS A1540 30g radio transmitter). Females were marked in Jackson, Louisa, Washington, Van Buren, and Lucas counties in southeast Iowa.

efforts the modern wild turkey population was established, and by the 1990s, expanded statewide. The restoration of the wild turkey stands as one of the pivotal conservation successes in Iowa during the past 100 years.

Across the Midwest, turkey populations exponentially grew throughout the 1970s and 1980s, and by 1990, harvest seasons were established in each state (Dickson 1992; The Wild Turkey: Biology & Management). Probably because of this fact, wildlife managers reallocated resources away from restoration efforts in recent decades and took a hands-off approach to turkey management, mostly allowing populations to grow and fluctuate in the absence of rigorous monitoring programs. In the ensuing years, however, something changed, not just in the Midwest, but across the eastern USA.

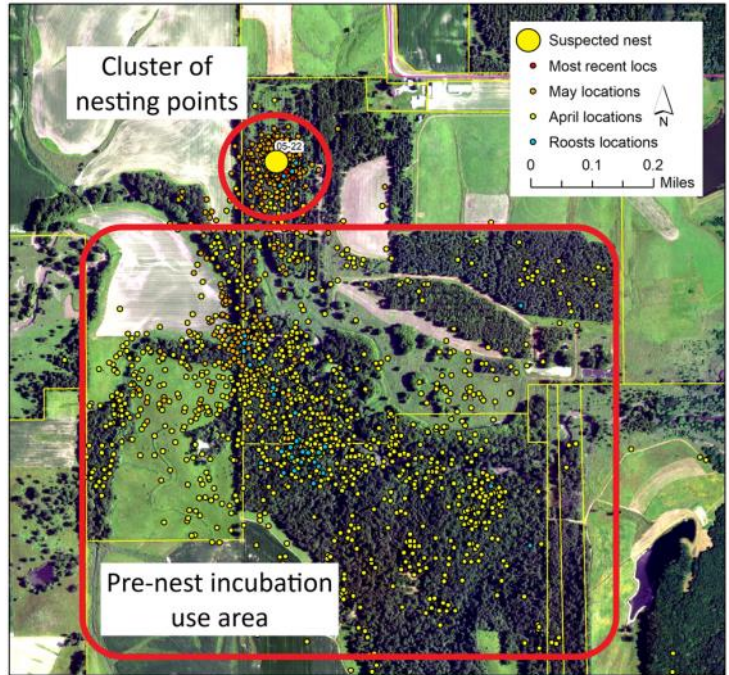
Few states have conducted long-term surveys to monitor poult production for turkeys in the Midwest. The notable exception is Missouri, where wildlife managers

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## Wild Turkeys continued

have estimated poult-to-hen ratios uninterrupted since 1959. Data from Missouri indicates that poult production has declined since the mid- to late-1980s. Where other states began compiling these ratios in the 2000s, their data similarly aligns and suggests a conservation concern for the species. One study in Wisconsin suggested that a ratio of 2.6 poults per hen was necessary to stabilize population growth (Rolley et al. 1998; Journal of Wildlife Management). Today, many states report statewide ratios  $\leq 2.0$ , including Ohio (2.0), North Dakota (1.8), Missouri (0.9), and Iowa (2.0; numbers compiled from 2019 state turkey program reports).

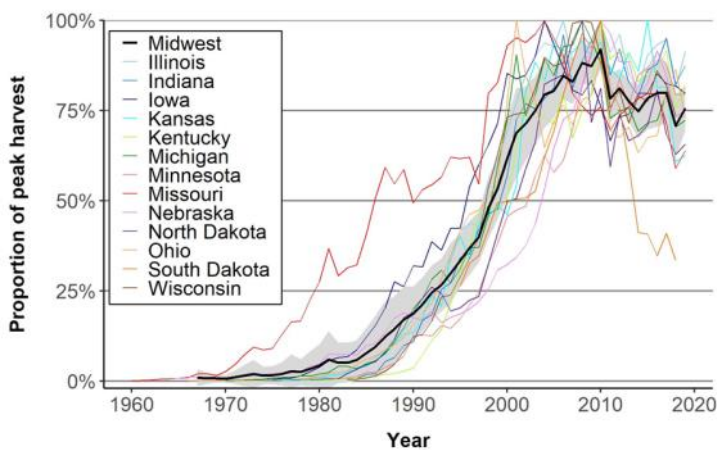
In 2021, in partnership with the Iowa Cooperative Fish and Wildlife Research Unit (ICFWRU) at Iowa State University, the Iowa Department of Natural Resources began a 10-year study aimed at evaluating population parameters for female wild turkeys, including survival rates, nesting and nest success rates, and cause-specific mortality factors. To accomplish study objectives, project



**GPS transmitters compile up to 96 fixes or points from female turkeys per day and are efficient at monitoring incubation behavior.**

staff (including Dan Kaminski, Jim Coffey, Dr. Rachel Ruden, VDM, and Wildlife Management Unit staff with the Iowa DNR, and Dr. Bob Klaver with the ICFWRU) utilized novel Global Positioning System (GPS) technology to track and monitor female movements and nesting behavior. Global Positioning System transmitters provide an improvement over traditional very high frequency (VHF) radio transmitters in that users can collect and remotely download large numbers of animal locations in near real-time with minimal staff resources.

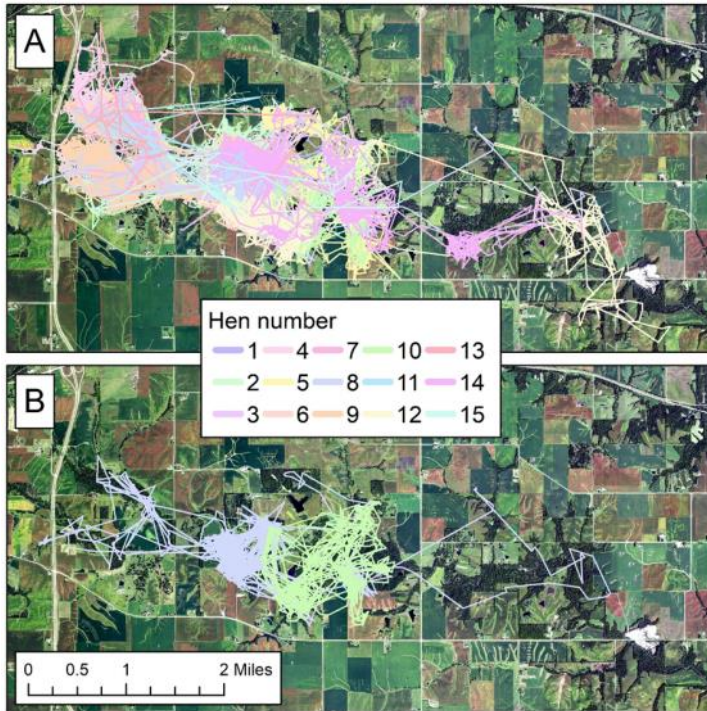
One key question going into this study was whether GPS transmitters were capable of uploading GPS data to a satellite or cellular network on a reliable enough time frame to



**Proportion of peak wild turkey harvest for 13 Midwest states and the regional trend (black line) and 95% confidence interval (gray ribbon), 1960–2019.**

CONTINUED ON PAGE 3

## Wild Turkeys continued



**Movement patterns for all GPS-marked females (A) and females 8 and 10 (B) in Washington County, Iowa, in 2022. Movements vary between adult hens with some remaining near captures sites and others undertaking multi-mile explorations.**

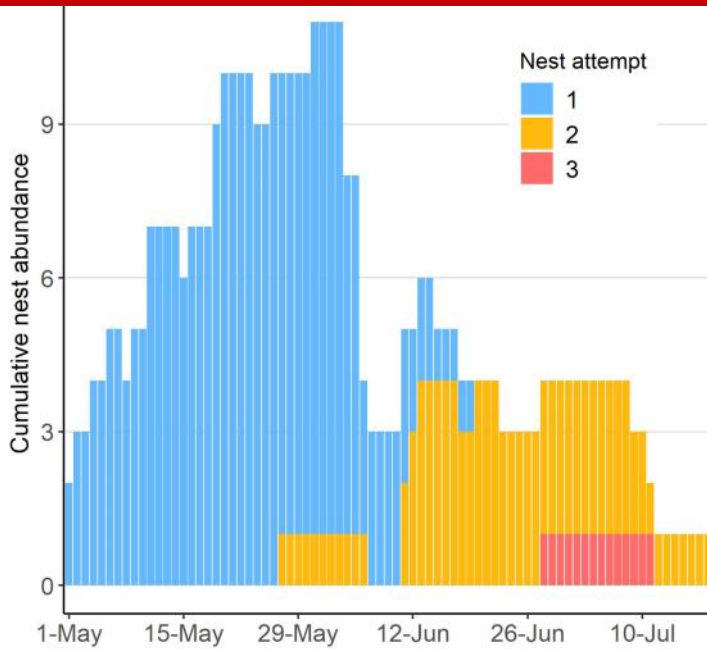
effectively monitor turkey nest incubation in real-time in varying landscapes of rural Iowa. Thus, four distinct study areas were selected across southeastern Iowa that seemingly comprised quality turkey habitat, yet yielded low poult production ratios annually. Two styles of GPS transmitters, one that remotely uploaded data via the Iridium satellite and one that uploaded via the GSM (Global System for Mobile Communication) cellular network, were selected for testing.

During the first two years of the study, 62 female turkeys were marked with GPS transmitters (plus an additional 36 with VHF radio transmitters). Both GPS systems performed well in the southeastern Iowa landscape, indicating

that turkeys could be effectively monitored in rural Iowa using these passive technologies. Overall, given the current state of technology, cellular transmitters (i.e., Ornitela OrniTrack 50g) provided the greatest benefits for the study given their lower cost (\$950–\$1,200 per unit), ability to collect larger numbers of GPS points ( $\geq 96$  points per day), and most notably, their extended life span ( $\geq 3$  years) resulting from their capacity to solar recharge compared with fixed-life satellite units (1 year). The one negative observed in testing was that for nesting turkeys, connectivity to the cellular network may be low in some remote areas, as the likelihood of encountering a cellular signal is reduced when birds remain stationary on the landscape. As a result, project staff will continue to evaluate new Iridium satellite units as they come onto the market (i.e., the ATS Turkey Tracker).

One of the challenges to identifying nest incubation by turkeys was the rapid rate at which nests were predated or abandoned in 2022. The median day of nest failure was day 8 (of  $\sim 30$  days) with estimated nest survival of only 50% at day 10. With GPS transmitters, staff were able to quickly identify nest incubation, locate abandoned nests and evaluate the cause of failure, and collect unhatched eggs for necropsy and eggshells for genetic analysis. Of the 35 GPS-marked females alive and available to nest starting 1 May, 4 birds did not incubate a nest, whereas 22, 8, and 1 female attempted to incubated 1, 2, and 3 nests, respectively; a level of data precision not possible using radio tracking methods. For one Jackson County adult female, nest predation was even detected just 24 hours after she began incubating.

Wild Turkeys continued



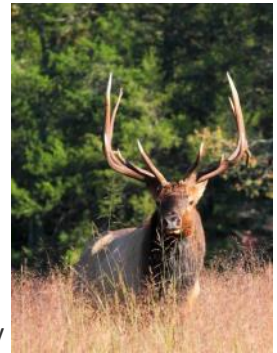
Number of active nests by incubation attempt (1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> nest attempt) by date for GPS-marked females in southeast Iowa in 2022. The observed nest-  
ing rate for females available on 1 May was 73%.

The last demographic studies conducted on wild turkey in Iowa were conducted >25 years ago. During the next 9 years of this study, we aim to maintain a pre-nesting population of 100 GPS-marked females each winter. From these birds we will be able to modernize information on turkey demographics in Iowa (e.g., survival, mortality and fecundity rates; home range estimates, resource selection) and further our understanding of factors influencing population declines.

**Dan Kaminski** is a Wildlife Research Biologist with the Iowa DNR.  
**Robyn Dausener** is a Wildlife Research Specialist with the Iowa DNR.

Iowa DNR Press Release: Elk Appearing on Trail Cameras in Central and Western Iowa

Elk seem to be visiting Iowa more frequently each fall, and thanks to social media, their visits are now shared at the speed of downloads among tens of thousands of people among the various social networks.



Most of these sightings are in western Iowa due to the proximity of the larger wild elk herd found in the Black Hills of South Dakota and in central and western Nebraska. These visitors tend to be young males conceivably searching for new territory. This fall was no different.

“I had reports coming in weekly to my office all fall,” said Josh Gansen, wildlife biologist with the Iowa Department of Natural Resources Saylorville Wildlife Unit covering nine counties in central and west central Iowa.

The number of individual elk visiting the state is likely very low, state experts say, and the frequency of reports in the fall are based on these elk covering a lot of distance and appearing on different trail cameras.

The elk rut (breeding season) out west is in September and October, which is around the same time as the juvenile elk have been showing up in Iowa. The Iowa DNR is collecting scat and muscle tissue for DNA analysis to learn more about these animals, including where they are coming from, said Doug Chafa, wildlife biologist with the Iowa DNR’s Missouri River Wildlife Unit in western Iowa.

Most elk wander in and out of Iowa with no issues. But not all. This fall, an elk was hit and killed on I-80 and another was found dead within sight of Hwy. 20, east of Sioux City. The Woodbury County elk was a 1 to 1-1/2-year-old adolescent animal weighing approximately 450-500 pounds which is significantly larger than a white-tailed deer.

“Take a moment to enjoy seeing a wild elk in Iowa. As long as these animals are not causing any problems, our position is we are going to leave them be.”

## An Update on Mountain Lions in Iowa



Fall 2022 was fairly active for mountain lions! Historically, the last known wild mountain lion was shot in Appanoose County in 1867. After that, they were considered pretty well extirpated from the state like a lot of other larger species of wildlife. Habitat loss and unregulated hunting/shooting led to their demise in Iowa and the rest of the Midwest. However, one has to wonder if a new chapter with large carnivores is possibly unfolding? Beginning in the mid-1990s and early 2000s, a few confirmed reports of mountain lions began to trickle into Iowa again. Since 2001, there have been 41 confirmed or highly probable mountain lions in Iowa. Averaging about 2 mountain lions per year, some years might have more (3 – 6 cats) or less (0 – 2 cats).

In 2022, we had at least 5 – 7 confirmed mountain lions in Iowa. Most of the activity occurred during the fall period. Why is that? It is likely attributed to a combination of factors, such as higher detectability - that's when more hunters and trail cameras were in the field, crops are being harvested, and mountain lion dispersal. Fall is a natural time of year for mountain lions to disperse, and its possible more dispersal occurred because of the dry weather that led to lower water levels in our major rivers. Multiple rivers are often encountered during dispersal events. In addition to this, our neighboring states to the west

have established breeding populations of mountain lions that are either stable or increasing. We know from past DNA samples that many of our mountain lions originate from South Dakota's Black Hills Region, Nebraska, and Wyoming.

An interesting case in point occurred this fall. Nebraska has a small, but slightly increasing population of mt lions. The Nebraska Game, Fish, & Parks has undertaken extensive efforts to capture and mark mountain lions with either a neck collar or ear tags, and have conducted scat surveys for isotope and DNA analyses. From that work, they've gotten a pretty good idea of how many cats they have and where they are in Nebraska. Currently, there are three well-established populations of mountain lions in Nebraska (Figure 1: orange shading), with a smaller and newer resident population along the Missouri River in the northeast part of the state (Figure 1: pink shading). Nebraska Game, Fish and Parks estimates there are 35 – 40 mountain lions within those known areas. However, 98% of Nebraska is in private ownership, so there's likely a few additional cats spending time throughout other areas of Nebraska.



**Figure 1: Resident populations of mountain lions within Nebraska, courtesy NE GF&P. Orange shading represents 3 well-established populations, while pink shading represents the smaller, newer resident population.**

# An Update on Mountain Lions in Iowa

In mid-August, a 1.8-year-old male mountain lion entered Mills County, Iowa from Nebraska. This cat was wearing a GPS neck collar that Nebraska GF&P had put on it the previous November (2021) near the Niobrara River in north central Nebraska. However, the collar was only providing occasional location points while it traveled eastward through Nebraska and during its time in Iowa. This cat traveled eastward across the entire stretch of southern Iowa over the next two months and crossed the Mississippi River into Illinois in mid-October. We were able to monitor this cat while it was in Iowa reasonably well from those occasional location points from the collar (working with Nebraska GF&P) (Figure 2), and additional helpful trail camera photos submitted to DNR staff by private landowners in southern Iowa. Unfortunately, this cat continued to travel east and south through Illinois until it ended up in the city limits of the state capital, Springfield. At which time,

the Governor’s Office mandated that it be tranquilized and moved to a large cat sanctuary in Indiana for human safety reasons. During its time in Iowa, this cat traveled an average of 10 – 12 miles a night, and was never seen by a human that we know of. Nor did it cause any problems with livestock. Also of interest, this cat does appear to have taken a route that roughly paralleled Highway 34 as it traveled east across Iowa. Figure 2 shows the known points and dates of this cat’s location, however the route between the points is not the actual known travel route.

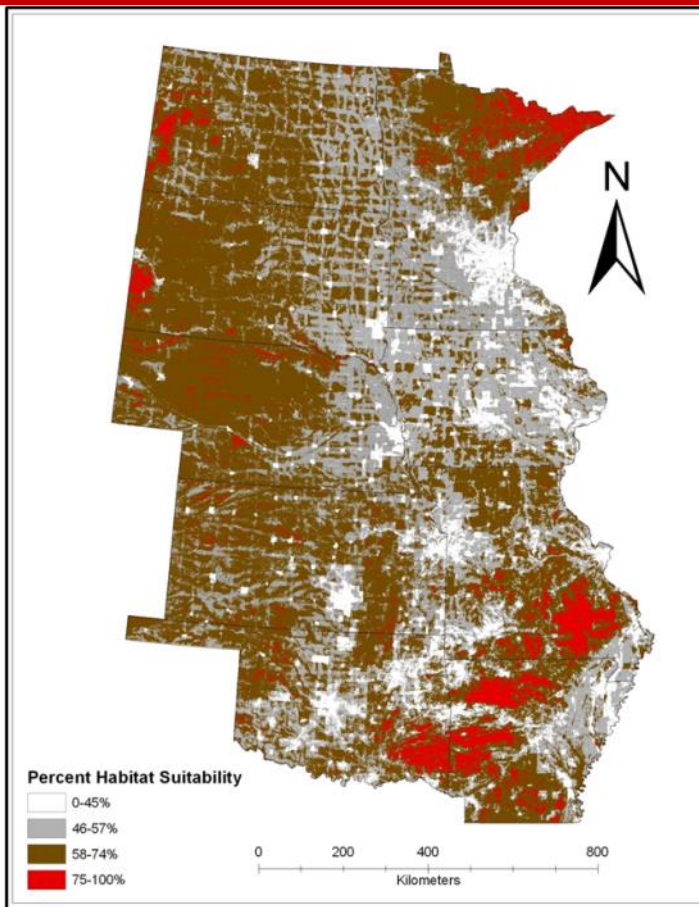
In a separate story that occurred this past year, a large male mountain lion frequented the Des Moines River valley for close to a year. His presence was known primarily from trail camera photos submitted by private individuals to our staff in Webster, Dallas, and Boone Counties. However, in early December 2022, a large male mountain lion was shot by a coon hunter in Webster County. It weighed 165 – 170 lbs! We suspect this is the same large male mountain lion that had been captured on trail cams over the past year. We have submitted a tooth from this cat to a lab in Montana to get its age. For now, it’s safe to say it’s an adult male. Typically, the mountain lions that disperse in or through Iowa are 2 – 3 year old sub-adult males that weigh 95 – 110 lbs. Some of the things of interest with this big cat is that it was an older male, and actually resided for close to a year in Iowa. Also, of note, is that during that time it wasn’t even seen by a human nor did it cause any problems with livestock.



**Figure 2: Location points and dates for the collared mountain lion from Nebraska. Map courtesy of Taylor Shirley, Iowa DNR Wildlife.**

Due to the mountain lion activity Iowa experienced this past fall, some folks ask about the future of mountain lions in Iowa and the Midwest. Will we

## An Update on Mountain Lions in Iowa



**Figure 3. Potential suitable habitat for mountain lions in the Midwest Region. Source: LaRue and Nielsen 2011.**

ever have a breeding population? A big question mark in answering this is to look at whether the modern landscape can really support mountain lions. Studies have shown the Midwest lacks the higher-quality contiguous habitat of the western U.S. One study that mapped the potential of suitable habitat estimated the Midwest does provide a small portion (~8%) of suitable habitat (Figure 3, LaRue and Nielsen 2011) that may serve as possible stepping stones for dispersal and re-colonialization. Other studies have shown there is a growing amount of evidence, from

Midwest states, that indicates mountain lions may be in the process of trying to recolonize the Midwest (LaRue et al 2012, and Thompson and Jenks 2010). Mountain lions typically have large home ranges. Home range size is often 50 – 160 square miles, but this can vary depending upon prey availability, the quality, shape, and size of available habitat as well as the age and sex of the animal. In conclusion, Iowa doesn't offer very much suitable habitat for mountain lions, but there are some areas in Minnesota and Missouri that mountain lions may be able to establish a small breeding population over time. However, the neat thing about wildlife is that they can surprise us at times. Who would've guessed the wild turkey would thrive in row crop ag country with only small woodlots and farm groves for woodland habitat? Perhaps the mountain lion will adapt to the modern Midwest landscape better than expected. Unlikely, but time will tell!

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Thompson, D. J., and J. A. Jenks. (2010). Dispersal movements of subadult cougars from the Black Hills: the notions of range expansion and recolonization. *Ecosphere* 1(4):art8. doi:10.1890/ES10-00028.1

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# THE WILDLIFE SOCIETY

Leaders in Wildlife Science, Management and Conservation

## Top 10 Wildlife Stories of 2022

The past year has seen plenty of important developments and groundbreaking research for wildlife, plus a few strange tales along the way. Here are the most read stories on wildlife.org in 2022.

### 10. Recovering America's Wildlife Act heads to Senate floor

The Recovering America's Wildlife Act seemed poised for passage in 2022, as wildlifers called their legislators and watched the process. It made it through in the House of Representatives with bipartisan support, then met similar success in the Senate. It seemed bound for passage down to the last minutes of Congress, only to be dropped from an omnibus spending bill in the end. If passed, it would have provided permanent, dedicated funding to state and Tribal agencies to conserve at-risk species. Now, supporters are considering plans for the next Congress.

### 9. Manatees have crossed over to the Pacific

Manatees are an Atlantic mammal, but some that were introduced into the Panama Canal have made their way to the Pacific Ocean, raising questions among researchers. Dating back to 1964, a mix of Amazonian and West Indian manatees were brought in to control water hyacinths in hopes of giving mosquitoes fewer places to breed in the canal zone. The manatees interbred, and today researchers believe some 30 are swimming in the system, creating the risk that other manatees will pass through the locks and reach the Pacific.

### 8. Red wolf 'ghost' genes linger in coyote descendants

After trapping, collaring and sampling Louisiana coyotes for their DNA, researchers found many of them retained genetics of red wolf ancestors some 40 years after the last known one was removed. In some areas, almost two-thirds of the coyotes had red wolf DNA. Scientists believe those genetics could help bring the wolves back from the brink of extinction, and the region could prove an ideal site to return them to the wild.

### 7. WSB: For accurate fisher kit counts, trail cameras do the trick

Fishers can be hard to catch on camera. Often, they vanish from view before the shutter snaps. But when female fishers are carrying their young, they move a bit slower, sometimes stopping to readjust. "Carrying kits can be a little bit awkward for her," researcher Stephanie Cunningham said. That made cameras a great way to count kits.





## Top 10 Wildlife Stories of 2022



### **6. The impacts of snowshoe hare extirpation cascade through ecosystem**

Researchers in Wisconsin knew climate change had caused snowshoe hares to die out, but they wondered about other species that had disappeared. Maybe predators were changing their diets as snowshoe hares became scarce. To try to find out, researchers took an unusual approach. They reintroduced snowshoe hares to see if they would disappear again and watched what that meant for ruffed grouse and porcupines. “The loss of a single species can have ripple effects throughout the community,” said researcher Evan Wilson.

### **5. JWM: Vulture predation on cattle increases in Midwest**

A warmer climate seems to be ushering black vultures into new regions. Bigger and more aggressive than turkey vultures, these scavengers have raised concerns among farmers, who have complained about them becoming predators of newborn cattle. “They definitely will attack the young and helpless,” said researcher Brandon Quinby. Researchers say the risk of conflicts from growing midwestern black vultures populations is on the rise—up to 63% in some areas.

### **4. Densely packed invasive anoles outcompete natives**

Since brown anoles hitched a ride on cargo ships to Florida in the 1800s, they have been muscling out native green anoles. “There is a sense the brown anoles are kind of bullies,” said researcher Jordan Bush. Using an outdoor laboratory, his team found “bully” wasn’t quite the right metaphor. Instead, brown anoles seem to outcompete natives by their sheer numbers. The newcomers seem to tolerate denser living conditions, allowing them to take over more territory.

### **3. Bobcat preys on Burmese python eggs in Everglades**

First-of-its kind footage revealed that bobcats may prey on invasive Burmese python eggs in southern Florida. While the video showed a one-off case, the discovery revealed that some native wildlife may be able to fight the spread of the disruptive predators. “The more of those types of things that we can see, the stronger the case that maybe the Everglades is fighting back,” said researcher Andrea Currylow.



# Top 10 Wildlife Stories of 2022

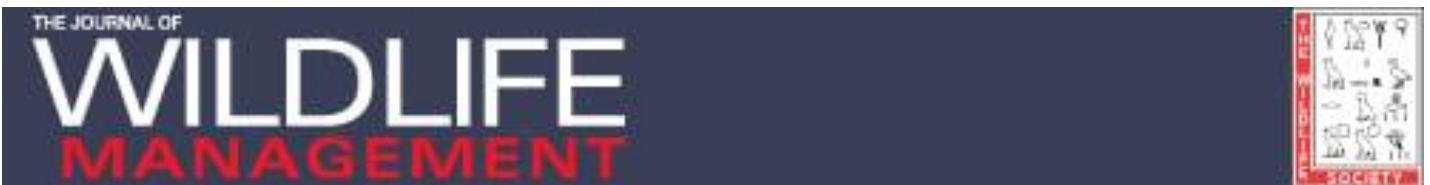


## 2. JWM: Size contributes most to wild pig reproduction success

To get a grasp of wild pig reproduction in South Carolina, researchers conducted necropsies of pigs culled in management efforts. “That is no small feat to do in the heat of South Carolina,” said researcher Sarah Chinn. “We don’t have a laboratory—everything is done in the field.” Her team found that while the pigs give birth all year—helping make them such successful invaders—their pregnancies peak at certain times of year, which seem to track with acorn abundance. Researchers hope their findings can help wildlife managers improve population models for the spread of these invasive pigs.

## 1. Suburban cats pay the price for slinking into coyote territory

When a Southern California community saw an uptick in domestic cat deaths due to coyotes, officials suspected the canids were venturing into residential neighborhoods in search of feline prey. Instead, researchers found, it was the cats that were roaming into areas coyotes prefer. Biologists suspect Culver City’s cats are so abundant that they’re occupying a wider range of niches. “Not only were they present in residential spaces, but they were also present in green spaces that coyotes were primarily using as habitat,” said researcher Rebecca Davenport.



*The Journal of Wildlife Management*, published continuously since 1937, is one of the world’s leading scientific journals covering biodiversity, climate change, competition, conservation, diseases that influence populations, ecology, economics, genetics, habitats, habitat restoration, human-dimensions, human-wildlife interactions, hunting, landscape ecology, management, sustainable use, quantitative approaches to ecology, and models, among others.

## Statewide Wildlife Updates

### Central Iowa

#### Jennifer Fredrickson, Diversity Technician II Boone Wildlife Research Station

We are building models using bobcat harvest and bowhunter observation data to inform trapping regulations.

Currently, we are trying to determine if we can use occupancy estimates to set thresholds for considering when new counties might be opened to bobcat harvest.



We've been working on a publication that analyzes trends in Iowa frog and toad populations from volunteer surveys over 3 decades. We wanted to test whether changing habitat, precipitation, and temperature had effects on population dynamics over time.



We've also been searching for and swabbing timber rattlesnakes for snake fungal disease.

Captured snakes also get PIT tags. We're swabbing all

other snakes species in areas where the timber rattlesnakes have their hibernaculum.



### North Central Iowa

#### TJ Herrick, Wildlife Biologist Clear Lake Management Unit

We're working with the Boone Research Station and the University of Northern Iowa to monitor Blanding's turtles at a wetland complex in Hancock county. They want to assess turtle habitat use (especially overwintering and nesting) and assess risks to the turtles. We're considering management actions that may improve their survival and recruitment. We have adults, juveniles, and hatchling turtles "on-air" right now at the site.



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## Statewide Wildlife Updates

### South Central Iowa

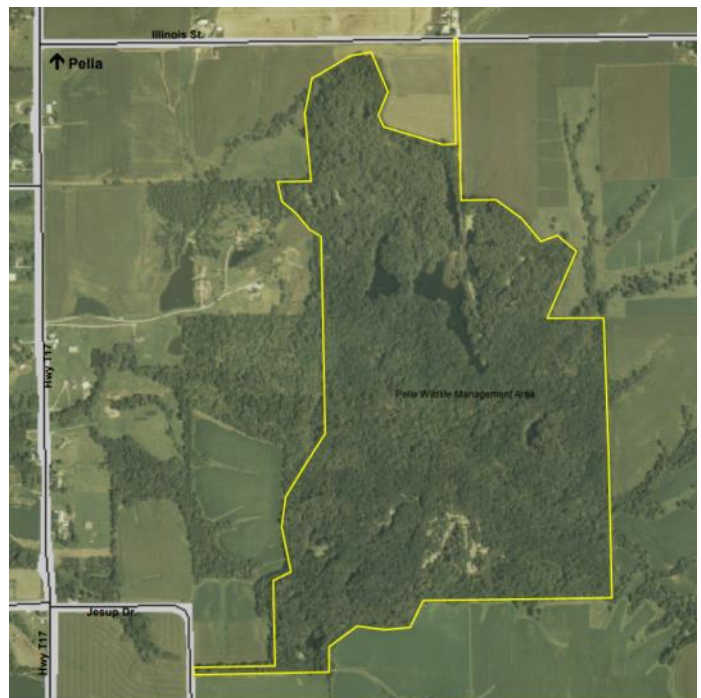
Todd Gosselink, Wildlife Biologist

Red Rock Management Unit



The Iowa Department of Natural Resources and the Iowa Department of Agriculture and Land Stewardship will begin a project to restore a 165-acre portion (about 60%) of the Pella Wildlife Management Area that was previously used as a strip mine. The project will restore all the previously mined areas at the WMA in Marion County. These areas are currently dominated and choked with invasive plant species, such as bush honeysuckle, Japanese raspberry, oriental bittersweet, *Sericea lespedeza* (Chinese bush clover), and black locust. As part of the reclamation process, the areas would be cleared of all trees and

vegetation, regraded to remove the mine slag piles, and restored to a native tallgrass prairie and oak woodlands along with wildlife food plots. The goal of this project is to improve the wildlife habitat and provide a more usable public wildlife area. Restoring the native prairie will provide a more diverse wildlife habitat that will benefit grassland birds, quail and pheasants. All of the wetlands will be restored to the current acreage (25 acres), providing shallow habitat for amphibians and waterfowl, with improved water quality in the new wetlands. Prior to the reclamation beginning, the Iowa DNR is conducting a salvage timber harvest on the mined areas to allow the wood resource to be used and not wasted. The remaining trees and brush will be burned/buried as part of the reclamation process. These funds acquired from the harvest will be used in the DNR Forest Stewardship Initiative Funding, which provides funding for forest management projects across the state. The timber salvage has begun, and the mine reclamation work is expected to begin in fall of 2024.



## Highlights from the Iowa TWS Fall Workshop September 8-9, 2022

On September 8th and 9th, 2022 wildlife professionals and students from across Iowa gathered at Central College in Pella for the annual Iowa TWS Fall Workshop. Discussion topics focused on the bats of Iowa.

Dr. Russ Benedict, Professor of Biology at Central College gave an overview of the natural history of Iowa's nine species of bats. Dr. Rachel Ruden, with the Iowa DNR talked about threats to Iowa's bats from white nose syndrome. Amber Schorg, Biologist with the USFWS spoke about mitigating

conflicts between bats and wind energy infrastructure across the Iowa landscape. Paul Frese with the Iowa DNR rounded out the first day's talks with a discussion of bat habitat management recommendations.



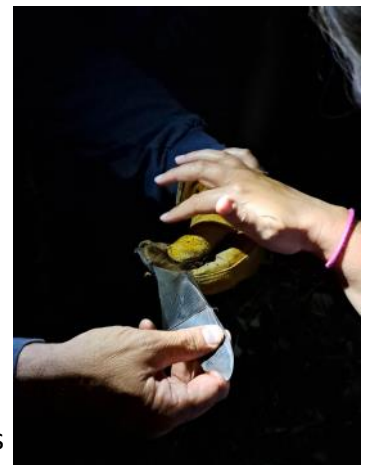
**Mist netting preparations.**



**Removing a captured bat from the mist net.**

Later that evening a large crowd of participants joined Russ Benedict and his students for some hands-on science, mist netting bats along a creek in a nearby forest.

On day two Stephanie Shepherd, with the Iowa DNR gave an overview of the North American Bat Monitoring Program and Amber Schorg (USFWS) spoke about partnerships and progress for bat species of conservation concern.



**Big Brown Bat (*Eptesicus fuscus*) in hand.**

## Minutes of the Iowa TWS Business Meeting September 9, 2022 Pella Iowa

**Call to Order:** 10:48 AM

**Welcome** (Nathan Schmitz)

**Fall 2021 Meeting Minutes** (Nathan Schmitz)

Motion to accept made by Stephanie Shepherd, second by Greg Schmitt

**Treasurer's Report (Nathan Schmitz)**

Motion to accept by Greg Schmitt, second by Drew DiAllesandro

**Committee Reports**

**Audit Committee** (Travis Russel): Not present; Sarah Nizzi will send out this spring

**Awards Committee** (Stephanie Shepherd): Kelsey Fleming will be the new chair beginning winter 2023; many thanks to Stephanie for a job well done. Open Nominations for "new blood" in this group, has been the same for quite some time.

**Conservation Review** (Katy Reeder): Not present

**Education and Information** (Pete Eyheralde): Pete is looking at January for the next newsletter, please send ideas as articles are needed.

**Membership** (Ryan Kurtz): Not present

**Resolutions and Public Statements** (Brian Sauer): N/A; conversation came back to Recovering America's Wildlife Act (RAWA) and re-issuing a position/support statement. Matt Dollison made motion to support re-sending Senate letter, second by Stephanie Shepherd (who will draft statement).

**Elections** – (Matt Dollison): President-Elect, Secretary/Treasurer, At-Large will be open in winter 2023, keep an eye out for announcement and please forward any names of potential candidates.

**Old Business**

TWS Board Handbook (Nathan Schmitz) – goal for 2022 to complete for board duties and streamline our processes.

**New Business**

Incorporation (Nathan Schmitz): This is voluntary right now, but that may change. Conversation revolved around mitigating risk to officers of the chapter. Nationally, several chapters are exploring this and/or have gotten officers liability insurance via a private insurer. Members discussed bringing in a lawyer to get outside counsel/advice on any vulnerabilities.

**Announcements**

Iowa Native Plant Society Annual Meeting September 10<sup>th</sup>, 9 AM – 1:00 PM, Chichaqua Bottoms Greenbelt

Joint -Iowa TWS/ AFS Winter Meeting March 1<sup>st</sup> – 2<sup>nd</sup>, 2023 at Quality Inn & Suites in Ames, IA

**Adjourn:**

Motion made to adjourn by Greg Schmitt, second by Drew DiAllesandro

## Species Spotlight: Northern Harrier

Looking out over the red and gold of a winter prairie, I watched a gray feathered raptor gliding and tilting just over the top of the grass. His long tail with a white patch at the base and butterfly-like wings, almost too big for his body, gave him away – a male Northern Harrier. “Saw a state endangered species”, I thought. “That counts as a good day”. Except, that I’d seen a Harrier a couple days before on another expanse of grassland, and few more skirting over the tops of a marsh while duck hunting this fall. For a T&E listed species they don’t seem that rare. Or maybe I’m just fortunate to be able to spend a lot of time in the grasslands and marshes of southern Iowa where these birds like to hang out.

The Northern Harrier (*Circus hudsonius*), which used to be known as the Marsh Hawk before 1982, comes in two colors, gray for adult males, and brown for females and juveniles. It looks a lot like a Short-Eared Owl and is basically it’s diurnal equivalent, hunting for small rodents and birds in the same open grassland habitats. The disk-shaped facial feathers even function much like an owl’s, directing sound to the ears, as these hawks rely on hearing as well as vision to capture prey.

Back in the day (early 1800’s) when birdwatching was done with a shotgun instead of binoculars, John James Audubon described how easy it was to collect Marsh Hawks after they had dropped from their hovering flight onto a frog or vole and were busy tearing into their meal... “Whilst engaged in feeding,



**Male Northern Harrier**

*it may very easily be approached, surprised, and shot, by an experienced sportsman, for it rises in a flurried manner, and generally cuts a few curious zig-zags at the outset. To obtain it, one has only to mark the spot with accuracy, keep his eye upon it, and advance with his gun in readiness, for he will probably get within a few yards before the bird rises. I have frequently seen it shot in this manner.” Ouch John!*

Late spring is nesting season for Northern Harriers. Males often have two mates at a time, and some have been documented with up to five mates in areas of high food abundance. Nests are built on the ground from cattails, willow branches and coarse grasses, lined with finer grasses and sedges. The female incubates their four or five eggs for about a

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## Species Spotlight

month, while the male hunts and brings back food for the female and young at the nests.

The Northern Harrier is still listed as endangered in Iowa, largely because of its dependence on big blocks of undisturbed grassland and wetland habitat. It's also protected as a non-game species under the Migratory Bird Treaty Act of 1972. Conversion of prairie remnants, cool season pastures, and wetlands to row-crop fields has been a direct cause of population declines in the last 50 years. The ethanol boom of the early 2000's struck a heavy blow when about 376,000 acres of Iowa grasslands were plowed under for more cornfields from 2006 to 2011. Across the Midwest, that number tallied even higher in the same time period, as 1.3 million acres of remnant tallgrass prairie, pastures, and wetlands in North Dakota, South Dakota, Minnesota, Iowa, and Nebraska were converted to row crop agriculture. Disturbance to existing grasslands by cutting hay and overgrazing can also reduce nest success for these ground nesting birds.

Northern Harriers seem to be more plentiful around Iowa in the dark months of the year. If you're doing some late season goose hunting in the marsh, chasing rabbits in the CRP, or even birdwatching without a shotgun this winter, keep an eye out for this low flying raptor.

**Pete Eyheralde** is an Associate Professor of Biology at William Penn University.

## DNR to Discuss Bobcat Recovery and Management



The Iowa Department of Natural Resources will be discussing bobcat management at 7 p.m., Jan. 18, at the EB Lyons Nature Center, in Dubuque. The meeting is open to the public.

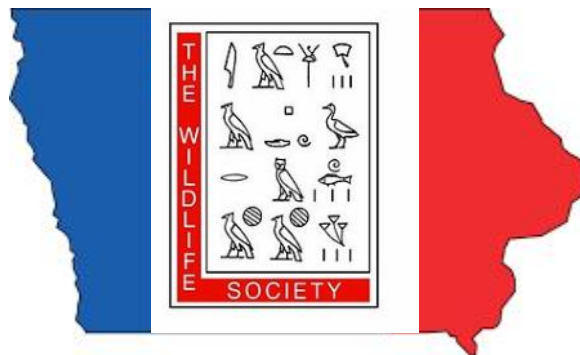
The Iowa DNR removed Dubuque County from its proposed bobcat season expansion in 2021 after receiving feedback from county residents who were concerned about including Dubuque County within the harvest zone. The DNR will be discussing bobcat management at the state level and how counties fit within that model, as well as the local field reports and a landowner survey from Dubuque County during the meeting.

"Our bobcat population is growing and expanding into more regions of the state with the right habitat. That expansion has been reflected in our annual surveys, staff field reports, trail camera photos from private landowners, and road kills. Bobcats have been expanding the most in several counties of east central and northeast Iowa over the past five to eight years. This is a wildlife success story and all of us are pleased about this," said Vince Evelsizer, furbearer and wetland biologist with the Iowa DNR.



## Upcoming Events

- **Iowa Association of County Conservation Board Employees (IACCBE) Winterfest**  
24 –26 January 2023.  
Hyatt Regency, Coralville Iowa.  
Info: [www.mycountyparks.com](http://www.mycountyparks.com)
- **Iowa Women in Natural Resources Annual Conference**  
10 February 2023  
Wa-No-Ki Camp Lodge, Fort Dodge  
Info: [www.iwinr.com/](http://www.iwinr.com/)
- **Midwest Fish & Wildlife Conference**  
12-15 February 2023 “Changing Conservation”  
Overland Park, Kansas.  
Info: [www.midwestfw.org](http://www.midwestfw.org)
- **National Pheasant Fest and Quail Classic**  
17–19 February 2023 Minneapolis, MN  
[www.pheasantsforever.org/Pheasant-Fest.aspx](http://www.pheasantsforever.org/Pheasant-Fest.aspx)
- **Iowa Prairie Network Winter Seminar**  
18 February 2023. Drake University  
Des Moines , Iowa  
Info: [www.iowaprairienetwork.org](http://www.iowaprairienetwork.org)



## Iowa Chapter of The Wildlife Society Annual Meeting

*Held jointly with the Iowa chapter of the  
American Fisheries Society*

**1-2 March 2023**

**Quality Inn and Suites  
Ames, Iowa**

### 2023 Iowa Chapter The Wildlife Society Committee Chairs

Audit: Travis Russell  
Awards: Kelsey Fleming  
Conservation Review: Katy Reeder  
Education and Information: Pete Eyheralde  
Membership: Ryan Kurtz  
Resolutions and Public Statements: Brain Sauer  
Nominations and Elections: Matt Dollison

### 2023 Iowa Chapter The Wildlife Society Executive Committee

President: Nathan Schmitz  
President Elect: Andrew DiAllesandro  
Past President: Matt Dollison  
Secretary-Treasurer: Sarah Nizzi  
Member at Large: Dan Kaminski