

# Region 2 Technical Bulletin

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Check out previous editions at <https://fwp.mt.gov/r2-wildlife-quarterlies>



## Cool cats: All about Montana's diverse felids



**Call the fire department:** A mountain lion climbs a tree to escape pursuing hounds. This photo was taken during annual lion monitoring, in which FWP personnel and hired houndsmen tree and collect DNA from as many lions as possible within a survey area. See the FWP Mountain Lion website (<https://fwp.mt.gov/conservation/wildlife-management/mountain-lion>) for details. Photo by Molly Parks.

Montana is home to three species of wild cat, or felid, all of which reside in Region 2. These are the mountain lion, Canada lynx, and bobcat. The only region in the country that has higher felid diversity is the southwest, which has lion, bobcat, and the occasional ocelot and jaguar.

We all know that cats are very cool, and the average wildlife-loving Montanan probably knows more about our wild felids than any of the other abundant critters present in Montana (Montana has at least 528

vertebrate species). While felines do tend to get a fair amount of attention in general (for good reason), I'm still learning interesting new facts about them every year. I wanted to take this opportunity to highlight our wild Montana cats and some of the things that make them so very cool, and make us lucky to share the landscape with them.

### Mountain Lion (*Puma concolor*)

First off, one of the coolest things about mountain lions is that they are the most widespread

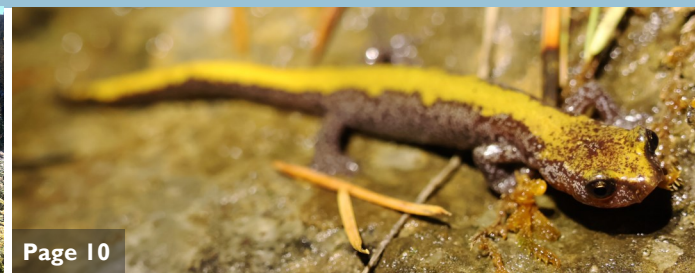
## SNEAK PEEK



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# Cool cats (continued)

large mammal in the western hemisphere. Their historic range spanned coast to coast from the southern provinces of Canada all the way to the southernmost tip of south America. Currently they still span their historic north-south distribution but have been extirpated in some portions of the range including parts of the eastern US. Due in part to this huge geographic distribution, we have a lot of different names for the species. In Montana, we tend to call them mountain lions (or just lions) or cougar, but across the range other common names include panther, puma, catamount, and (my personal favorite) mountain screamer. It's pretty incredible to think that the same species of cat we have living in our forests and canyons in Montana are also successfully living in the swamps of the Florida Everglades, the dense Amazon rainforest, and the wide-open plains on the Patagonian region of South America.

The wide distribution of mountain lions means that their diet varies significantly across the diverse ecosystems they inhabit. Here in Montana, lions mostly hunt deer and elk, but they have also been documented preying on a diversity of smaller critters and are one of the few predators capable of taking down the highly formidable porcupine. In Patagonia, they prey on the guanaco, a fuzzy llama look-alike, and in the Andes and Amazon they will eat anything from deer to rodents of unusual large size (paca and agouti).

One of my favorite lesser-known facts about mountain lions is that unlike most mammals in North America, they do not have set breeding seasons but are capable of breeding year-round. In



*Snowshoe feet: A Canada lynx investigates the lure at a camera trap in the Blackfoot. Because most felids are solitary and elusive, camera traps can be an effective way to monitor them.*

Montana, most litters are born in the spring and summer when food is more abundant, but births have been documented in every month.

## Canada Lynx (*Lynx canadensis*)

Where the mountain lion and bobcat range across a great variety of habitats, the Canada lynx are incredibly specialized to live only in places that receive lots of deep, powdery snow in winter where there is an abundance of their main prey, snowshoe hare. To blatantly anthropomorphize, mountain lions and bobcat are comparable to a general jack of all trades who can find a job most places, whereas lynx would have like two PhD's in an obscure esoteric field and are incapable of talking about anything else. Their specialization in deep snow environments is evident by specially evolved huge feet in comparison to their body size, which act as snowshoes allowing them to float on the surface of powdery snow where other predators their size would flounder. They are similar in weight to a bobcat, but their paws are similar in size to those of a mountain lion. If you have ever tried to follow lynx tracks that leave the shallowest dimple, you will understand how incredible their flotation is and be very jealous as you flounder thigh deep (even in snowshoes) after them. My biggest pet peeve mistake that people make about lynx is calling



*Photo by Eli Hampson.*

Here, kitty: A mother lynx watches over her two kittens in the Purcell Mountains. Photo courtesy of the Rocky Mountain Research Station, Canada Lynx of the Rockies Research Program.



and hind legs of the same length, whereas lynx are more uniform in coloration, have dramatically longer hind legs than front, and those big dopey feet. If it looks like a bigger, badder version of a tabby house cat, it's probably a bobcat. (Fun fact: 95.6% of a domestic cat's genes are identical to those of a tiger.)

You might be thinking, after big mountain lions and weird specialized lynx, how could bobcat even compete for coolest cat in Montana? Well, firstly it's not a competition, every wild felid is a winner in our state and don't you forget it. What is most incredible to me about bobcats is their tenacity. They can live in huge cities in Texas and southern Cali-

fornia, making use of slim greenways and parks, and they can also live in the northern Rockies, alongside a great diversity of larger, dominant predators such as lions, wolves, grizzly bears, and wolverine.

Bobcats' tenacity in eking out a living in varied habitats is not to be outdone by their tenacity as a predator. While they mostly prey on small game species like rabbits, hares, and rodents, they have been documented win-

them a *Canadian* lynx instead of their proper name, *Canada* lynx. While many are indeed Canadian, some lynx hold US citizenship and those that live along the border are often dual citizens.

One of my favorite little-know facts about lynx is that they are not silent as some may suspect but have quite a unique vocal repertoire. During breeding season, males have a distinctive gruff barking call. Apparent disagreements between lynx have been filmed showcasing a lovely range of screams and howls. It is very difficult to do justice to these bizarre noises, you'll really just have to check out the internet for yourself. I once witnessed this firsthand after a lynx live-trapped for research purposes began vocalizing when another lynx approached. If I had recorded those sounds, I think I may have been able to mix a one-hit wonder in the death metal music genre.

### Bobcat (*Lynx rufus*)

The bobcat is related to the Canada lynx (as you may have guessed based on their scientific name), and the two are often confused with each other. While there are several physical differences, the best identifier is the tail. Bobcat tails look like a finger with just the nail painted black, whereas lynx tails are shorter and look like a pen dipped in ink with black all around the whole tip. If you can't see the tail, bobcat are more heavily spotted and have front

Which is which? Both the cats below were photographed at camera trap sites. One is a lynx and one is a bobcat. Can you tell them apart? Look at the ear tufts, coat markings, and foot size.

Which is which? Both the cats below were photographed at camera trap sites. One is a lynx and one is a bobcat. Can you tell them apart? Look at the ear tufts, coat markings, and foot size.



*Eat my powder: A lynx bounds away through deep snow. Photo courtesy RMRS, Canada Lynx of the Rockies Research Program.*



ning some extraordinary battles. They are not large animals but are known to take down fawns and even the occasional adult white-tailed deer. If a male bobcat (roughly 25 pounds) goes after a smallish adult white-tailed deer (100 pounds), it is heading into the ring at a 300% weight disadvantage.

Beyond size difference in prey, there are some critters that I just would not want to tangle with, such as snakes. I don't just mean the cute little garter snakes or friendly rubber boas we mostly have here in Region 2, I mean rattlesnakes and Burmese pythons. Bobcats have been documented battling and killing rattlesnakes, which of course could kill a bobcat with one solid bite. The internet has some excellent footage of this I highly recommend. A team in Florida researching invasive Burmese pythons recorded a bobcat not only scavenging eggs from a python nest while it was unattended, but also approaching the nest while it was attended by a 120-pound, 14-foot long adult python female and going in for some swipes! Lucky for the bobcat, female pythons do not typically feed while attending a nest. Had the encounter escalated, who knows what would have been the outcome!

I hope you learned at least one new thing about our fabulous felines, and that you enjoy the bounty of wildlife our part of the state has to offer!

*-Alissa Anderson, mountain lion monitoring biologist*

## A Telltale Tail Tale

Wildlife manager Liz Bradley was backpacking this past summer in the Scapegoat wilderness when her two dogs suddenly got excited and darted around searching for some enticing smell undetectable to the human nose. She watched them closely until they pinpointed a small piece of fur off the side of the trail.

To her disbelief, it appeared to be the tail of...a lynx? Although certainly possible based on the location, it seemed an unlikely find. Both bobcats and lynx have a short, bobbed tail but the lynx has a black tip around the whole base of the tail (which this had) while a bobcat has a black tip on top but white on the underside of the tail.

She searched widely for any further remnants but was unable to turn anything else up. She packed it out and gave it to John Squires, a lynx researcher at the Rocky Mountain Research Station in Missoula. They ran it through the genetics lab and confirmed it was a lynx and a "new individual" to add to their database. You just never know what you might find out there in the woods!



# Reports from “the office”

REBECCA MOWRY

**Battle of the uncomfortable.** Big game check stations are a time-honored tradition in Region 2. We operate four of them every rifle season: Anaconda, Fish Creek, Bonner, and Darby.

Every weekend, Ryan Klimstra and Kirstie Yeager show up to their stations bright-eyed and bushy-tailed and ready to greet the orange-clad hunters heading home after their carnivorous exploits. Ryan at Fish Creek gets his Solo stove set up and hunkers down with some reading material; Kirstie at Anaconda turns on the power in her cozy little wooden structure and watches bighorn sheep graze on the hillside of Blue-Eyed Nellie. Once every hour or so, a hunter might show up. If they're lucky, they will have a deer or elk to check.

Meanwhile, Mike Ebinger at Bonner and myself at Darby roll up our sleeves, grit our teeth, and prepare for the onslaught.

Don't get me wrong; I appreciate the utility of the check stations. Even though we only operate them on the weekends, they give us as a chance to collect harvest trend data over time, get some face time with the hunters we serve, clear up regulations confusion, and assess the body condition and age of the animals in our herds. It's also a little bit exciting when the game wardens park their rigs beside us and chase down hunters who fail to stop. (Reminder: if you were hunting, you must stop, even if you were unsuccessful!)

But Darby and Bonner get an immensely higher flow of hunters than the other two. We log an average of 3,757 and 4,938 hunter trips per year, respectively, compared with 840 for Anaconda and 1,251 for Fish Creek. I see the bulk of my traffic on opening weekend (Darby's main game animal is elk), while Bonner gets busier as the season progresses with the deer rut (Bonner takes the cake for deer harvest).

The days are long. And cold. And windy/rainy/snowy.

And loud, with traffic speeding past all day, grown much worse in recent years with all the new humans who live in Missoula and the Bitterroot. If we're not quick with our examination, we can back up traffic on the highway and cause a safety hazard for drivers. Heaven forbid someone pull in from the wrong direction and turn us biologists into traffic cops.

Then there are the physical dangers. I have sliced my fingers

cutting off tags or examining teeth to age. I have strained my back shoveling snow off the pavement so vehicles don't slip and slide as they pull in to be checked. I've whacked myself in the face with our steel jaw spreaders, once in the cheekbone and just last week on my own jaw (is that ironic?).

The Darby station has operated out of the same travel trailer for about 40 years. The built-in heating system died years ago. All the cabinets inside are broken, the main door can't close from the inside, I've already replaced the deadbolt once, and at this point probably need to replace the whole door. Last year, running the space heater and coffee pot at the same time kept tripping the breaker, so we don't do that anymore. There's a propane tank with an old tank-top Mr. Heater, but you can't run that for more than 10 minutes or you'll get carbon monoxide poisoning. A wily mouse has taken up residence. Apparently people used to sleep in here. Those days are long gone.

How are you liking your brand new trailer, Mike? Well, with the constant Hellgate winds and twenty minutes of sunshine you get per day in that canyon, I don't begrudge you a little creature comfort.

Still, by the end of the day, our feet are numb, our throats are sore, and our fingers are stained with a patina of dried blood. I come home each day utterly exhausted and often fall right into bed (after taking a long shower, of course). Even my dog, who has accompanied me for the last five seasons, is totally over it.

So next time you stop at Bonner or Darby (and remember, if you're hunting, IT'S THE LAW!), cut us some slack—and maybe orient the game in your vehicle in a not-so-onerous position?

*Rebecca Mowry is the Bitterroot-area wildlife biologist.*



# Species Report: Sandhill Cranes

Recently, Region 2 decided to distribute Species Lead responsibilities among the four area wildlife biologists. While each biologist manages all huntable species within their geographic areas of responsibility, Species Leads will compile regional harvest and survey data for reports, serve on statewide working groups and coordinate with other state species-specific efforts, and stay up to date on current research and management on a broader scale. We hope to include summaries of such activities in these Technical Bulletins. (FWP photo)



*Crane dance: A pair of sandhill cranes jump and dance in a courtship display in May 2022 in the Blackfoot Valley. Photo by Mike Thompson.*

Each year, the U.S. Fish and Wildlife Service (USFWS), along with its partners, assesses the population status and harvest of four populations of sandhill cranes: the Mid-continent, Rocky Mountain, Lower Colorado River Valley, and Eastern populations. These populations span all four of the primary flyways in North America (Pacific, Central, Mississippi, and Atlantic) and include two subspecies: greater (*Antigone canadensis tabida*) and lesser (*Antigone canadensis canadensis*). Sandhill cranes in Montana are part of the Rocky Mountain population and are exclusively greater sandhills. They occur along the Pacific flyway in western Montana,

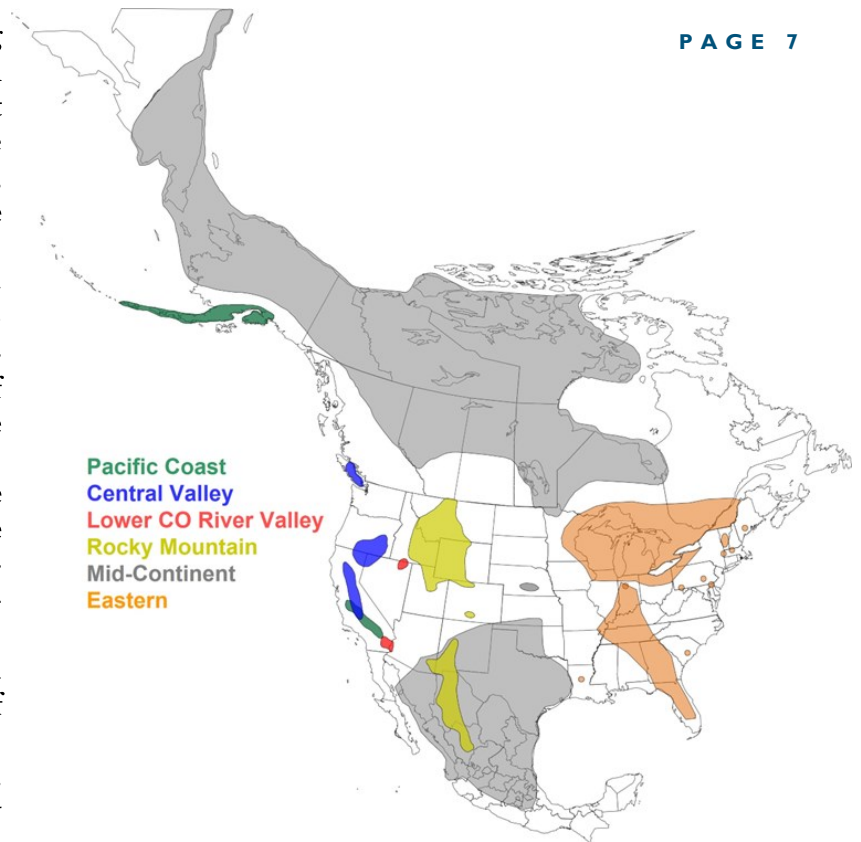
where high nesting concentrations are observed, and along the Central flyway in the middle of the State.

Because sandhill crane populations are migratory and often span several states and sometimes multiple nations, a coordinated effort conducted over a relatively short time frame is necessary to accurately assess population status. Beginning in 1995, the Rocky Mountain population has been surveyed in the fall prior to migration. In late-September, representatives covering five states, including local FWP staff, collaborate to conduct a pre-migration, staging-area survey. Warm Springs WMA in Region 2 is included in this effort.

This year, the survey occurred during the week of September 25th. At Warm Springs WMA, 707 birds were counted at first light as they left the roost to head out to the neighboring fields. Over the next few months, USFWS biologists will work to consolidate and analyze the 2023 count data for the entire Rocky Mountain population. The 2022 report states that the three-year average population count is 22,744, which is over the established population objective range of 17,000 to 21,000. Last year, 6,844 cranes were counted in Montana (Seamans 2023).

Hunting opportunities exist in both the Pacific and Central flyways in Montana (see current FWP Migratory Birds Hunting Regulations). According to the USFWS 2022 report, special limited hunting seasons in 2022-23 resulted in 1,586 sandhill cranes harvested from the Rocky Mountain population of which, 138 were harvested in Montana.

-Kirstie Yeager,  
Anaconda area wildlife biologist



Sandhill cranes feed in a field during the day, after roosting at Warm Springs WMA. During the 2023 survey, we flew throughout the entire Deer Lodge Valley to ensure the roost counts at the WMA weren't missing any birds. Photo by Kirstie Yeager. Map credit: Dave Fronczak/USFWS (<https://www.fws.gov/media/sandhill-crane-populations-north-america>).

# Spotlight

## The Larch Appreciation Society

Okay, there's not really a Larch Appreciation Society (that I know of—perhaps there should be!) but when I solicited photos from our regional staff for this season's bulletin, I was, unsurprisingly, bombarded with pictures of glowing yellow conifers.

That's right, yellow conifers! Montana's two larch species (western larch, *Larix occidentalis* and alpine larch, *Larix lyallii*) are some of the only coniferous trees in the world on which the needles turn yellow and fall off, much like the colorful deciduous trees we know and love. There are a handful of other deciduous conifers in the U.S., namely the American larch or tamarack (*Larix laricina*) in the Upper Midwest/New England/Alaska, and bald cypresses in the genus *Taxodium*, native to the southeastern states.

Alpine larch, which can be found in the high mountains across western Montana, are the first to go. I usually try to plan at least one backpacking trip into the Bitterroot or Pintler high country to take in the golden wave, usually in mid- to late-September.

Then come the western larches, found at lower elevations. If you've ever driven I-90 west of Missoula or Highway 200 up the Blackfoot in October, you've most likely noticed the glorious stands of yellow larch marching up the hillsides.

Then, alas, the needles fall and the trees look dead for the cold winter months. If you're unfamiliar with larches, you may see such a winter forest and think some horrible blight has befallen it. But come spring, their limbs take on a bright green hue as they sprout their new needles, and soon the forest is lush and alive again. Even needleless, larches are readily identifiable by their knobby needle bases. In full foliage, their needles are delightfully soft (in both touch and visual appearance) and usually a lighter shade of green than the surrounding pines, firs, and spruces.

Larches are also quite adapted to wildfire. On a recent backpacking trip in the burn scar of the 2017 Lolo Peak Fire (west of Florence), we noticed that most of the trees still alive near the trailhead were



Alpine larches in the Bitterroot Mountains near the Idaho border. Note the variation in yellowing; some trees are already golden, while others are a neon-green as they transition to gold. Photo by Torrey Ritter, starring Basil the Dog.



# Spotlight

## The Larch Appreciation Society

*Right: Alpine larch predominates the hillside around Hidden Lake in the Pintler Mountains. Photo by Alissa Anderson.*



*Above and below: Alpine larch in the south Bitterroot Mountains in various shades of yellow, orange, and green. Photos by Rebecca Mowry.*



western larches. According to FWP forester Jason Parke, not only can mature trees withstand fire better than other conifers, they are often among the first species to recolonize bare soil following a stand-replacing fire. Larches have a “boom” cone production every 5-7 years, producing a massive amount of seeds to quickly take over barren hillsides.

You may have heard the phrase “Friendly Fir, Spiky Spruce” as a way to differentiate those two genera by touch. Well, I hereby coin the term Luxurious Larch.

*Rebecca Mowry*

*Right: Newly-developed shoots and young cones on a western larch. Photo from Oregon State University's College of Agricultural Sciences.*



# Reports from “the office”



TORREY RITTER

**Amphibious Adventures.** Coeur d’Alene salamanders are quite the unique Montana amphibian. They are Montana’s only lungless salamander, meaning they breath entirely through pores on their skin. They need to keep their skin moist at all times or else they will suffocate. Not surprisingly, these salamanders are only found in springs, seeps, waterfalls, and along splashy streams where it is easy to stay wet. Coeur d’Alene salamanders are almost never seen during the day. They spend most of their time under moss or deep within the nooks and crannies of fractured bedrock. At night, they emerge to hunt insects and other invertebrates that also favor moist sites. Because of these special behaviors, in order to survey for this species biologists have to go out at night and search for the salamanders with flashlights, which is very fun but sometimes dangerous work.

Myself and my counterpart in Region 1 recently finished collecting a bunch of samples in an attempt to improve our methods for finding this elusive species. We collected water samples from springs and seeps throughout western Montana so see if we can detect these salamanders from little bits of DNA they shed into the water as they move around. If this method works, we can then go out during the day and collect water samples from sites all over the salamanders’ range and greatly expand our understanding of where they live. Unfortunately, if this method works that may mean fewer days in the field crawling around on waterfalls at night looking for individuals that have emerged from their watery underworld.

*Torrey Ritter is the Region 2 nongame wildlife biologist.*



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**Montana Fish, Wildlife & Parks, through its employees and citizen commission and board, provides for the stewardship of the fish, wildlife, parks, and recreational resources of Montana, while contributing to the quality of life for present and future generations.**

## THE **OUTSIDE** IS IN US ALL.



For the last couple of years, I have struggled to explain to family, friends, and strangers what I do for work. They don't get it when I tell them I tag bull trout, collect black bear hair for DNA testing, and now, extract lymph nodes from hunter harvests in order to research disease ecology. It might be difficult to explain fully, but I have found this to be one of the most exciting parts of working for Fish, Wildlife, and Parks. Our careers are not normal through the public eye, making what we do exotic to the world outside of our agency.

While this is exciting, it has also proven to be one of the most difficult parts of our jobs as well. The gap between scientific knowledge and the general public is one we have been working years to fill. As an individual of the younger generation in our field, I have been striving to increase the communication and education between FWP and the rest of

our community. My initial passion for wildlife biology and management transitioned into my goals of wanting others to see why our efforts are so important. This motive is exactly why I got into this field. With more education, awareness, and understanding of the science behind our work, comes more desire to protect the land, water, and animals we all rely on. Every position I have held whether as a fisheries technician or project coordinator, I continue to enjoy being able to work in the field while also collaborating with the public. FWP has provided me this opportunity, and I am grateful to represent this agency.

As the CWD Regional Coordinator at the Missoula headquarters, I believe it is important to emphasize everything I have said above, but also explain and get excited about the science and project plans behind it. With our knowledge of CWD and the willingness of sportsmen to participate in our efforts, we as a state can keep our cervid herds healthy, while also preserving the opportunity to recreate across Montana's landscape.

Our goal is not to completely eradicate the disease, but understand its distribution and keep prevalence as low as possible. As an agency, we have accomplished this by establishing sampling stations across Region 2, providing free CWD testing, creating educational clinics on removing lymph nodes yourself, and adapting the plan as the need arises. Throughout the rest of the hunting season, I look forward to collaborating with the sportsmen and women in our community to tackle this issue. It is my goal to ensure that hunters can still enjoy the season and feed their families even with a disease like CWD showing up in herds across the state. With all our efforts within and outside the agency, the gap between science and the public can be erased and our wildlife heritage in Montana protected.

*-Adalyn Vergara, Region 2 CWD Coordinator*