

MASSACHUSETTS WILDLIFE

No. 1, 2021

\$3.00



**Black Bear
Trail Cameras
Heart of the Hunt**

MASSACHUSETTS WILDLIFE

Vol. 71

No. 1

FEATURES

MASSACHUSETTS IS BEAR COUNTRY

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— Jim Behnke

In the mid-1970s, the Massachusetts black bear population was estimated at under 100 individuals. As the now-thriving population expands its range eastward, the risk of conflict with people increases as bears explore suburban communities for food. Minimizing this potential conflict will require people to adjust their behavior because bears aren't going to adjust theirs.

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— Sally Naser

The nexus of modern trail camera technology and a well-seasoned understanding of wildlife and their habitat needs enables the author to create striking images of our wild neighbors that inform conservation decisions and educate the public.

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— Greta Phinney

Reining in our wandering thoughts may be the best way to hold tight to the trail and fully experience nature's gifts.

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The transition into a hunting family leads the author down an emotionally challenging path to her first deer and a deeper connection to nature.

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On the Cover: Game biologist Erik Amati prepares to carry a newly collared one-year-old female black bear back to her den in the winter of 2018–2019. This winter, the bear was handled in the den as a three-year-old and biologists documented her first litter of two cubs. Photo by Dave Wattles/MassWildlife

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Eyes in the Wild

by Sally Naser



Photos © Sally Naser

On my first camera check of spring, I'm overjoyed to find footage of a black bear mom with her clumsy, newborn cubs bouncing along close behind. With each passing month, the cubs grow bigger and bolder and soon learn the fine art of trail cam inspection. Black bears are incredibly curious about anything new in their environment and rarely pass by one of my cameras without stopping to pose for a "smellfie." They give it a thorough sniff and quite often make unwanted camera angle adjustments. While some trail cam photographers might be disappointed to discover their trail camera askew and covered in muddy paw prints, I'm delighted because that means bears!

I have always loved wildlife and exploring the woods and wetlands they call home. As a child, fresh tracks in the snow stoked my curiosity. I wondered, which wild animal made the tracks and where might they lead me. While tracks and scat (droppings) can reveal the presence of wildlife, trail cameras (also known as wildlife cameras, camera traps, or game cameras) open a window to the hidden lives of our wild neighbors. Most fascinating to me are the countless ways in which trail cameras have allowed me to see beyond the tracks and other sign, revealing how wild animals move through the landscape and how they communicate with each other. Multiple bears rubbing against one particular tree is much more than satisfying an itch, but rather a system of bruin olfactory "tree mail." Watch long enough through a trail cam and a picture of unique personality

traits and family dynamics emerges, my favorite being the interaction between mothers and their young. Ever watchful, a stern growl from mother bear will send her cubs up the nearest tree in a flash.

I first became interested in trail cameras when I worked for the Appalachian Trail Conservancy (ATC). Beginning in 2007, the Smithsonian Institution undertook a citizen science predator study along a 570-mile stretch of the Appalachian Trail (AT) between southwest Virginia and Maryland. Volunteers from the local trail clubs were trained to set up trail cameras in 350 predetermined locations on the National Park Service corridor lands that buffer the AT footpath, where the cameras were to remain for nine months. As the ATC's Boundary Program Manager at the time, I was given access to the server (FTP site) where the trail camera deployers uploaded images every time they checked their camera's Secure Digital (SD) card. As I pored over thousands of images of deer, bear, porcupine, coyote, bobcat, fox, raccoon and more, I was fascinated to see the diversity of wildlife utilizing this narrow corridor of protected lands. And with that, the trail camera seed was planted.

As Conservation Restriction Director for The Trustees of Reservations, I visit hundreds of privately-owned conservation properties across Massachusetts—although some are open to the public, the majority are not. These lands have been protected by private landowners who have voluntarily placed a conservation restriction (CR) on their property to



Photos © Sally Naser

Beaver Dams

Photo © Sally Naser

ensure their land's conservation values are permanently protected, values that often include wildlife and native habitats. One of the challenges faced by land trusts nationwide is working with successive owners of protected land.

When the original owner who placed their land in conservation moves on, the new owners must still follow the CR's terms, but may not share the same conservation values, perhaps selecting the property primarily for the house and its location. Images and video of wildlife captured by trail cameras has become a very tangible way to show new landowners the wild things that depend on their land. With a grant from the Norcross Wildlife Foundation in 2012, I purchased four trail cameras

and the necessary accessories and began a pilot project to set up cameras on CR properties to share photos of wildlife with the current owners. The landowners were amazed to see the types of wildlife that were living on their property. For some, it was the closest look at *their* wildlife they had ever had. Seeing a photo of a black bear or bobcat is such a tangible

way to connect the land with wildlife and help new owners understand why conservation matters. In one case, my wildlife imagery helped to persuade some North Quabbin landowners to take

a non-lethal approach to controlling beaver flooding by contracting Beaver Solutions, Inc., to install a "beaver deceiver," a flow management device that draws down the water to a level acceptable to the landowner while allowing the beavers to continue living in the pond. Although some may curse the industrious beaver because of the trees they cut down or the flooding caused by their dams, they are the only mammal capable of creating landscape-scale habitat change. For years, the North Quabbin land-

By far, my absolute favorite places to camera trap are around beaver ponds, and when possible, right on a beaver dam itself as these often serve as wildlife superhighways.

owners had delighted in seeing the vast array of wildlife captured by my cameras set up along the wetland edges, including during the summer 2016 drought. Two years later, when the beavers flooded the woodland road yet again, between the pond and the forest edge, my trail cam footage was directly responsible for helping these landowners make a land

Vernal Pools



Photo © Sally Nesher

management decision that allowed the beavers to remain in the pond, securing the wetland habitat while simultaneously mitigating the flooding.

Where to Set Up

The questions most people ask are where do I set up my trail cameras and how do I know what wildlife will be in the area. Some of this comes with experience, but I also credit an eight-week winter tracking program I took in 2013 that taught me more about New England wildlife, especially interpreting the clues they leave behind. Sponsored by the Berkshire Environmental Action Team, the program was taught by legendary tracker and naturalist Sue Morse. Sue runs *Keeping Track*, a non-profit based in Richmond, Vermont, that trains professional biologists, citizen scientist volunteers, land trust leaders, and conservation planners to detect, record, and monitor the status of wildlife and habitat in their communities. While the training does include looking at tracks in snow or mud, Sue also explains the broader signs of wildlife and their behavior, including identifying habitat types and understanding how wildlife use them. For anyone who has ever gone on a hike with Sue, you might remember one of her many tracking mantras, but the one that

has helped me most with my trail camera work is, "Half of tracking is knowing where to look. The other half is looking." While followers of my CR Wildlife Cams Facebook page sometimes jokingly ask how I *train* the bobcats and bears to pose for my trail cameras, the key is knowing the habitat they prefer.

Some habitat types are great locations for trail cameras due to the variety of wildlife that use these areas at some point during the year. Key features of these habitats include water, food, cover, and ease of access. Being a wild creature is hard work and they all need to drink, eat, find shelter, and most importantly, conserve energy. Beaver ponds, vernal pools, dense thickets, stone walls, and log crossings are generally great habitats or habitat features for a variety of species, and thus, great places to set up a trail camera. By far, my absolute favorite places to camera trap are around beaver ponds, and when possible, right on a beaver dam itself as these often serve as wildlife superhighways.

Wetlands, in general, are magnets for wildlife, both as a water and food source and especially in early spring after a long New England winter. Beavers create pond habitat to shelter themselves, but these areas also serve many other species.

Stone Walls

Photo © Sally Naser



These include plants that grow in the new-found light that hits the forest floor after beavers fell trees, moose browsing the tender resprouts of trees and shrubs, woodpeckers feasting on insect-laden trees killed by the flooding, bobcats daintily drinking from felled trees, and great blue herons snatching up unsuspecting frogs.

Along with beaver ponds, vernal pools are great sources of water and food. I've captured images of owls and hawks in the shallow water dining on amphibians, especially in spring when pools are churning with breeding frogs and salamanders. Eight years of setting up cameras year-round along the edge of a large, upland vernal pool has not only revealed the widest variety of wildlife visitors to a single habitat feature I've experienced, but has also enlightened me to behaviors I would never have seen otherwise. These include barred owls going into the water to hunt and black bears wallowing in the

pool on hot summer days. I've learned about the curiosity of bears, deer, and even moose. They rarely pass up the opportunity to get up close to my cameras, where they linger and sniff. Other species seem more camera shy, wary of both the presence and scent of the foreign object in their environment.

Another great trail camera set-up opportunity is stone walls, which provide fine dining opportunities for weasels, fisher, bobcats, and fox due to the abundance of rodents that use the walls for shelter.

Another great trail camera set-up opportunity is stone walls, which provide fine dining opportunities for weasels, fisher, bobcats, and fox due to the abundance of rodents that use the walls for shelter. Setting a camera up either on a wall or facing a wall is a great way to capture images of these opportunistic predators.

When scouting locations and deploying cameras, we all need to be thoughtful and respectful of the habitats these creatures call home and consider how our actions might effect their environment.

Game Trails



Photos © Sally Naser

Trail Cam Considerations

When people reach out to me looking for recommendations to get started with camera trapping, I usually start with the same three questions: What is your budget, what is your target species, and are there black bears where you plan on setting up your camera. With literally hundreds of makes and models of trail cameras on the market, and new ones appearing all the time, picking out your first camera can feel overwhelming. I use a variety of cameras, including models made by Browning, Bushnell, and Stealth-Cam. All commercial trail cameras will give you the option to take either photos or videos, and a few models also feature a hybrid mode, allowing both photos and videos to be captured with each trigger.

Trail camera technology has made incredible strides since I purchased my first

cameras in 2013. Two of the main camera features to consider are trigger speed and recovery time. Trigger speed is the time it takes between the camera's sensor being triggered and the camera capturing a picture or video. Recovery speed is the time it takes for the camera to be ready to be triggered again. Since the species I am most interested in photographing don't tend to stick around long after the camera detects the animal's movement, I use the fastest possible settings. This is especially important when camera trapping predators like bobcat, coyote, and fox, and zippy mustelids like otter, fisher, and weasels. A hunter using a trail camera for scouting purposes may be fine with a longer recovery time, so their SD card doesn't get filled up with hundreds of photos of a herd of deer pausing in front of the camera. Getting a camera with a color viewing screen is another plus.

Hiding Places

While checking cameras in late February 2020, my friend and I inspected a huge, old sugar maple and noticed black fur inside the rotted out hollow about 20 feet up. Thinking it was a den tree and/or a "babysitter tree," I set up a cellular trail cam pointed right at the hollow and then waited. A single bear exited the tree a few days later. On a snowy day in mid-April, the mother bear and her two yearling cubs returned to the tree for two days until the snow melted. They also returned several more times throughout the summer and fall.



Photo © Allison Bell



Photos © Sally Naser



Types of Trail Cams

When choosing a trail camera, there are several flash options, including “red glow infrared”; “low glow”; and “no glow,” which emits no visible light when triggered at night. All of these flashes will produce color photos and videos in the daytime and black and white at night. If your goal is to get clearer, brighter photos and videos of wildlife that are more active at night, a “red glow” flash is the best option. Some camera manufacturers such as Reconyx, Spartan, and Suspect also offer white flash models. The white flash is definitely more disruptive to wildlife behavior, but offers the benefit of capturing color nighttime photos and videos. In addition to the flash, another option to consider is a cellular trail cam capable of sending photos directly to your smartphone. The major benefit here is gratification in real time, but there is the added expense of purchasing a data plan and you need to be sure there is a

strong enough cell signal in the location where you plan to set up your camera. A cellular camera is a good option when you want to minimize human scent near your camera.

Trail Cam Accessories

For anyone setting up a trail camera in black bear territory, I highly recommend protecting your trail camera investment with a stainless-steel bear box such as those made by CamlockBox. Even if you don't have bears, a box provides protection from gnawing rodents and from the elements (including falling trees and tree limbs). The addition of a cable lock can help to deter theft and/or vandalism, which, unfortunately, is a reality for a lot of trail cam enthusiasts. And don't skimp on SD cards! I recommend using either a 16 or 32GB SanDisk Class 10 card and buy an extra so you can switch out the cards when you check your camera.

Set-up Tips

Orient your trail camera to face north or south to reduce the chance of false triggers caused by the sun.

Position the camera at 45-degree angle to wildlife trails.

Set up the camera at least 6 feet away from where you think wildlife might pass by or pause. Trail cameras do not have adjustable depth of field.

Strap your camera to sturdy tree and position it 12 to 24 inches high. If your target animal is moose, set the camera 5 to 6 feet high to avoid getting only photos of knee caps.

Clip vegetation and swaying branches from the detection zone to prevent false wind triggers.

Aim the camera parallel to the ground, using a stick, if necessary, as a shim.

Use the camera's test mode to verify the motion sensor's detection zone.

Before you walk away, make sure the camera has an SD card, the date and time are correct, and the camera is set to ON.



Photo © Sally Naser



Up Close!

Trail cameras provide unprecedented access to the hidden lives of our wild neighbors. Whether it's a porcupine scratching a stubborn itch, looking into the eye of a bull moose, or standing in the middle of a black bear family, trail cams will get you there.



Trust Your Instincts

In addition to the general selection of camera locations and habitats, I look at the area from the trail cam's viewpoint and frame my field of view to include a photogenic background whenever possible. A helpful tip a naturalist friend gave me many years ago, was to trust my instincts. If I feel drawn to a particular spot, chances are good that other mammals might be drawn there too. This was proven true when I aimed my camera at a large glacial erratic next to the water's edge overlooking a beaver dam in the Berkshires. In 2020, a young bobcat sat perched upon the boulder while my camera captured over six minutes of video as it surveyed its kingdom.

Parting Shot

Every deployment of a trail camera holds the potential to capture a glimpse of the hidden lives of our wild neighbors, and in doing so, enhance our understanding of their behavior and habitat needs. As we begin to see as wildlife sees; slowly shifting our perspective from what appeals to our eyes to how a bobcat or bear might see and use the landscape, a clearer picture of the need for greater stewardship of our lands will appear. So, set up a camera and let wildlife tell their stories. You may be surprised by what you see and hear.



Editor's Note: Share your best trail cam image with us at mass.wildlife@mass.gov.

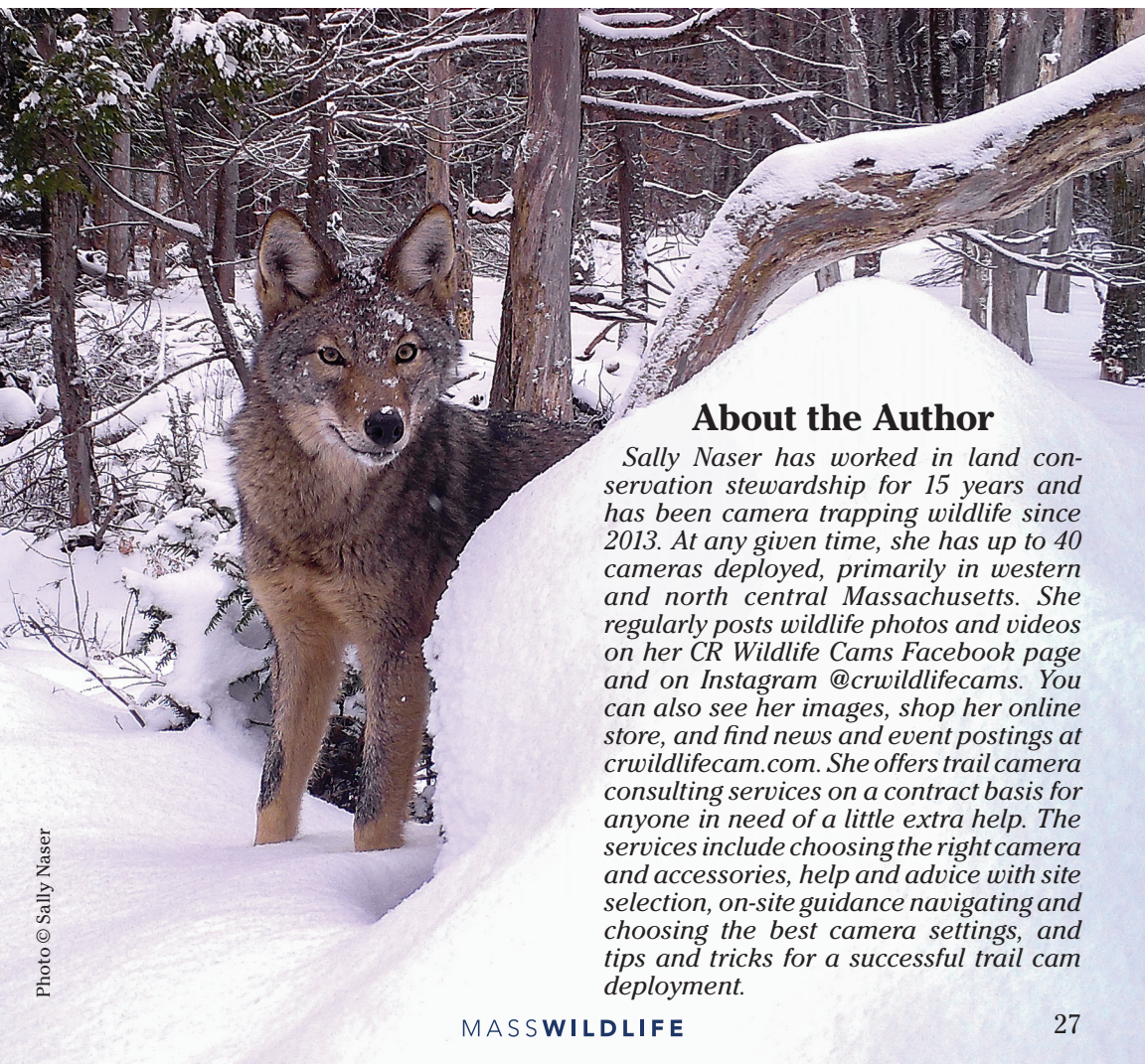


Photo © Sally Naser

About the Author

Sally Naser has worked in land conservation stewardship for 15 years and has been camera trapping wildlife since 2013. At any given time, she has up to 40 cameras deployed, primarily in western and north central Massachusetts. She regularly posts wildlife photos and videos on her CR Wildlife Cams Facebook page and on Instagram @crwildlifecams. You can also see her images, shop her online store, and find news and event postings at crwildlifecam.com. She offers trail camera consulting services on a contract basis for anyone in need of a little extra help. The services include choosing the right camera and accessories, help and advice with site selection, on-site guidance navigating and choosing the best camera settings, and tips and tricks for a successful trail cam deployment.

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