

# IMAGES

NEWS

PROPERTIES

NATURE

HISTORY

EVENTS



# IMAGES

The mission of the Boulder County Parks & Open Space Department is to conserve natural, cultural and agricultural resources and provide public uses that reflect sound resource management and community values.

## PHOTOGRAPHS & ILLUSTRATIONS

Cover photo: Bison on Strear Conservation

Easement, Sue Cullen

Deer in Forest, Rick Hatfield

Cabin at Heil Valley Ranch, Bevin Carithers

Sign on Lichen Loop Trail, Kevin Grady

Kari Severs in Field, Deborah Price

Students in Field, Kari Severs

Poison Ivy Berries, Ann Cooper

Ron Stewart Preserve at Rabbit Mountain, Rich Koopman

## NATURE DETECTIVES

Katherine Young and Deborah Price

Illustrations, Carol Tuttle

## PRINTING

Boulder County Printing Department

## EDITORS

Rachel Gehr and Pascale Fried

*Suggestions and comments are welcome.*

*Please contact us at 303-678-6201 or*

*pfried@bouldercounty.org. Non-credited articles are by the editors.*

## RECEIVE IMAGES ONLINE OR IN PRINT

In print: Subscriptions are free to Boulder County residents or \$6 annually. Contact us at [rrobles@bouldercounty.org](mailto:rrobles@bouldercounty.org) or 303-678-6222.

Online: Go to [www.BoulderCountyOpenSpace.org/images](http://www.BoulderCountyOpenSpace.org/images) and enter your email address in the space provided. You will receive only four emails per year with the issue of Images.

NOTE: To stop receiving the printed version, send an email to [rrobles@bouldercounty.org](mailto:rrobles@bouldercounty.org).



Volume 42, number 4

# Calwood Fire: Firsthand Account

by Kevin Grady, Heil Valley Ranch Resident Ranger

At approximately 12:30 p.m. on a very windy Saturday, Oct. 17, 2020, dispatch aired a smoke report coming in from the Cal-wood Education Center property. At 12:42 p.m., it was reported as a one-acre fire. By 12:44 it was eight acres in size. At 1:37, evacuations were first ordered; and by 3:34, the head of the fire jumped Highway 36.

I was home at the Heil Valley Ranch residence in Geer Canyon, when my wife pointed out a column of smoke rising above the forested ridge to the west. "Is that something new?" she asked me. I immediately grabbed my pack radio and turned it on to hear that a small wildland fire was active at the Cal-Wood Education Center property, located directly west of Heil Valley Ranch. She then asked, "should we pack up for evacuation?" I responded, "YES!" We left our home at 2:20 p.m., as flames were visibly moving down the hillside. This was a fast moving, wind-driven fire, and we were sure that all would be lost.

The next morning, we were surprised to find our home, alongside an historical barn and cabin, still standing! Defensible space was definitely a big factor in saving the structures but, nonetheless, a miraculous sight to see. Other nearby residents were not so lucky.

## IMPACT ON HEIL VALLEY RANCH

This season's long-term drought, coupled with warm, windy conditions, provided a formula for the perfect storm. Assessing the impacts and damage the fire left in its wake had its ups and downs. Overall, much of the landscape experienced a high-severity burn, with entire forested hillsides and canyons torched. Man-made structures, such as bridges, fences, and signs, were lost; and hazard trees too numerous to count will need to be mitigated. Seven of the eight trails at the property were affected, and two of the three sensitively managed conservation areas were burned severely. These areas will need staff assessment and mitigation.

Restoration will be a must. Staff is presently forming an inter-agency plan to address the environmental and safety concerns. Hillside erosion into the waterways of St. Vrain Creek and Lefthand Canyon Creek is the biggest concern. Invasive weeds, such as thistles and cheatgrass, will also be a management priority. We will look to the experiences of another wind-driven fire, the Overland Fire, which burned October 2003, and affected the south end of Heil Valley Ranch, for guidance in rehabbing the landscape.

There is no timeline for when Heil Valley Ranch will reopen to park visitors. Healing of the landscape affected by the fire will take time, and we ask for patience and cooperation from the public as we start this long process.





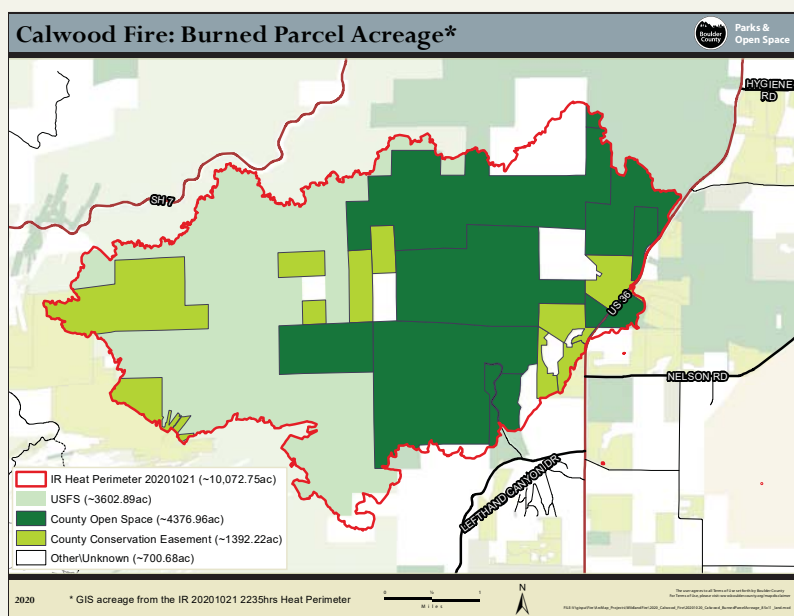
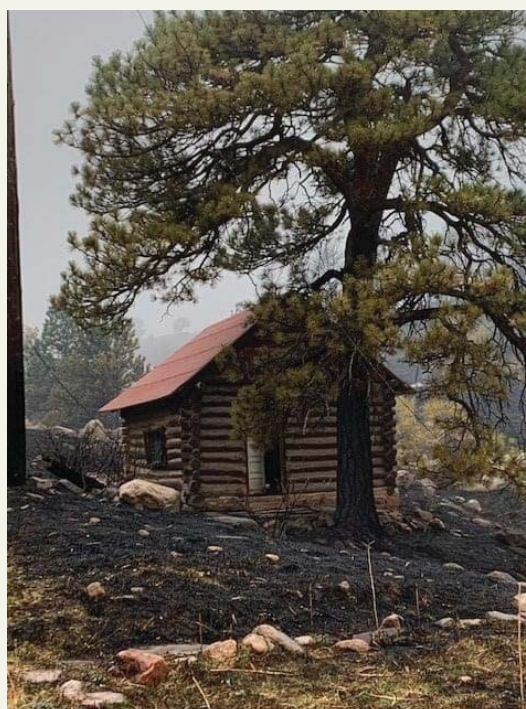
Clockwise from left:

Signs of life - After the fire, a deer peers out from behind a tree at Heil Valley Ranch.

An historical cabin on the property. Fire mitigation played a large role in preserving several structures.

At time of printing, the perimeter of the fire.

Along the Lichen Loop trail, one of many interpretive signs destroyed by the fire.



## HOW TO HELP

Organizations accepting donations for fire recovery efforts:

**Boulder County Parks & Open Space Foundation**

[www.preservebouldercounty.org](http://www.preservebouldercounty.org)

**Cal-Wood Education Center**

[www.calwood.org/ourmountain](http://www.calwood.org/ourmountain)

**Community Foundation Boulder County**

[www.commfound.org](http://www.commfound.org)

**Left Hand Watershed Center**

[www.watershed.center/donate](http://www.watershed.center/donate)



# 2020 Land Conservation Awards

Boulder County Parks & Open Space typically holds an annual awards ceremony to recognize outstanding contributions by individuals and groups. Because of the pandemic, we were unable to hold an in-person event in 2020, but we hope to recognize these winners along with 2021 recipients at a live awards ceremony in the near future.

Here are highlights about this year's award winners for the conservation, preservation, and protection of land-based environmental resources:

**Land Conservation Award** honors individuals, families, and organizations whose contributions demonstrate notable achievements in preserving Boulder County's agricultural lands. Paul Lev-Ary donated approximately two acres of land to Boulder County to help to increase the number of parking spaces from five to 29 at the Anne U. White trailhead after the area was demolished in the floods of September 2013. His donation greatly increased public access to the area, allowing for a much better park visitor experience.

**Environmental Stewardship Award** recognizes individuals, families, or organizations that make significant contributions in land protection and/or management. After completing construction of their single-family home on their 40-acre property just northwest of Hygiene, Diane and Lowell Dodge restored the land around the construction site and then implemented an ecological enhancement plan. A portion of their property was originally placed under a conservation easement in 1982, and the remainder of the land was conserved in 2013. The goal of the ecological enhancement plan is to preserve the existing ecological wildlife habitats, create new habitats, and improve the overall ecological functions and diversity on their property. They continue to be involved in increasing public awareness about the local and greater-ecosystem benefits of enhancing pollinator habitat on one's own property.

**Outstanding Volunteer Awards** honors individuals whose leadership and support of the Parks & Open Space volunteer programs have enhanced our community partnerships and improved public service. This year, there were two recipients.

Gedeon Lafarge received the Outstanding Volunteer Award for his contributions as a Left Hand Outdoor Challenge (LHOC) mentor. Since 2015, Lafarge has been a teen mentor with the program that aims to inspire the next generation of stewards of Boulder County. Lafarge plays a crucial role in the program by helping to keep the participants focused and engaged, while also having fun. He has mentored more than 100 teen participants over the past five years and has also been a member of the Volunteer Ranger Corps. Lafarge embodies "the giver" in all he does.

Rob Alexander has contributed to Colorado State University Extension for more than 20 years as a member of the Extension Advisory Board, a 4-H volunteer, and contributor to numerous Extension Services workshops and events. He has also served as a presenter and trainer for the Small Acreage Management program, training volunteers on seeding/reseeding pastures, grazing management, and agriculture programs. Alexander recently agreed to be the co-chair of the Extension Advisory Board. His knowledge and experience in Boulder County agriculture is unparalleled, and the county has benefited greatly from his dedication to land conservation, his willingness to lead when called upon, and his consistently agreeable nature.



From top: Anne U. White trailhead parking lot; Diane and Lowell Dodge; Gedeon Lafarge; Rob Alexander at a Boulder County 4-H archery club practice

# The “Dirt” about Soil Mapping

by Deborah Price

You never know what you might find when you dig a hole, but soil scientists have a pretty good idea.

Soil is crucial to everything that grows. If you’ve done any gardening or farming, you know that there are many types of soil, made up of many different ingredients. “Good soil” may be defined by what can grow there or what role it plays in a particular ecosystem.

The Natural Resource Conservation Service (NRCS), a branch of the U.S. Department of Agriculture, creates soil maps and soil surveys to help industries and individuals understand and interpret soils to determine site management plans, erosion control, garden design, ecosystem restoration, water conservation plans, waterway restoration, flood risk management, recreation use planning, and more.

Kari Sever, a soil scientist with NRCS, is currently updating survey maps as part of the National Cooperative Soil Survey. I decided to tag along with her to learn more about what she might discover. She explained that some of the original surveys were created in the 1970s or earlier. The maps need updating because current details and

**“Good soil” may be defined by what can grow there or what role it plays in a particular ecosystem.**

information are often lacking, or were generalized for a specific area rather than looking at smaller plots within a larger region. Sever said that some of the old survey maps lump soils into nondescript categories like “colluvial land” and “terrace” that don’t share a lot of details

about soil type or features and, therefore, cannot be accurately interpreted. Sever is currently conducting detailed soil survey updates at the open spaces of Heil Valley Ranch, Hall Ranch, and Ron Stewart Preserve at Rabbit Mountain. She is also updating maps for properties in Jefferson County, Larimer County, and the City of Boulder.

## DIGGING DEEP: HOW TO SURVEY

When you survey for plants or wildlife, you look around to see where they grow or live. To survey soil, you have to dig deep. Sever starts by digging a hole that can go as deep as five feet with her three-inch auger, unless she hits bedrock. Once the hole is open, she looks for color, texture, structure, and depth to determine properties of the soil that give clues to taxonomic classification. She records the GPS location, local plants, and tests for pH and salts. She even gets the soil wet and squishes it around in her fingers. It’s a dirty job, but someone has to do it.

On one section of Hall Ranch, she hit rock at 16 inches. It had rained the day before, and the first few inches of soil looked dark and still retained a bit of moisture. Below that, the soil was light colored and powdery. A color chart helps her classify the soil. “It’s like using paint samples from Sherwin Williams,” she explains. She determined that the soil here is sandy loam with a calcic horizon.

Once all the data is collected, Sever makes sure she has recorded all her data, takes photographs for reference, and then backfills the hole with its original contents. “Everything goes back into the hole,” Sever emphasizes, and nothing is removed from the site. Within moments the spot looks the way we found it, and we walk on to the next survey location.

Soil information is updated yearly on the Web Soil Survey. New data that Sever and other scientists compile is posted to the national database, where it is merged with digital maps and is available free to the public at [websoilsurvey.sc.egov.usda.gov](http://websoilsurvey.sc.egov.usda.gov). “In addition to updating soil map unit concepts,” Sever says, “the survey will capture changes in land use and land cover and provide more accurate interpretations for the public.” Amazing what a little digging will uncover.



The soil survey update at Heil Valley Ranch provided students from the Colorado State University Pedology class an opportunity for soils training as an outdoor lab exercise.

Kari Sever records data to include in the National Cooperative Soil Survey.



# Poison Ivy: Leaves of Three, Let it Be

by Ann Cooper

Children and adults alike often know the short, catchy phrase, “leaves of three, let it be,” by the time they attend a naturalist-led program. Great! Less certain, however, is their detailed knowledge of the plant described by the saying. What exactly is poison ivy? Where might I find it? What makes it poisonous? How might it hurt me? What use is it anyway?

Poison ivy is a glossy-leaved, woody plant in the sumac/cashew plant family. It grows in inches-tall patches to shoulder high thickets. Botanically, our version is *Toxicodendron rydbergii*. “*Toxicodendron*” (toxic-tree) is in the first part of the name (the genus tells it like it is). That same genus contains poison oak and poison sumac.

Poison ivy is relatively common in Boulder County. It thrives in various habitats, from weedy ditch banks and shady riparian areas, to leafy tangles among rock piles and the edges of trails in the foothills. The flowers are small—not showy or eye-catching. Although leaves may be attractively bronze-colored when they first appear in spring, and turn brilliant red in fall, for most of the year they are mere patches of plain green leaves—all too easy to step into inadvertently.

Botanists call the “leaves of three” ternate, with three leaflets coming from a single stem. But this is not especially helpful. Other common plants are also ternate—think clover (even if you hope to find a lucky four-leaved one). Think skunkbush or lemonade bush, a shrubby plant of the foothills, with blunt ternate leaves that grows in a rounded mound, not a sprawl. It is poison ivy’s glossiness and slightly drooping leaves that are the best giveaway.

## WHAT IS THE POISON?

An oil called urushiol (u-ROO-she-ol) causes a contact dermatitis—a blistering rash—in sensitive people who brush against the plant’s leaves, roots, stems, flowers, or fruit. It does not take much. One online page claimed that an amount of urushiol oil, as small as would coat a pinhead, is enough to affect 500 people. Take that factoid with a grain of salt!

If you do encounter poison ivy, the best response is to quickly wash off the oils. Use soap and water, if available. Use alcohol wipes if that is what is handy. Much better is to be prepared. Know how to recognize the plant. Wear long sleeves and long pants. Tuck your pants into your socks if you need be in poison ivy territory. And if you must eradicate a patch of poison ivy on your property, dress for the occasion. Cover up and wear gloves. Dispose of the plant material with care. Do not compost it, the bits will resprout too readily. Do not burn it, the smoke contains urushiol and harms your breathing.



Most of the year, poison ivy grows in, “mere patches of plain green leaves—all too easy to step into inadvertently.”

Poison ivy berries appear in late summer or early fall. They are as poisonous to humans as the rest of the plant.

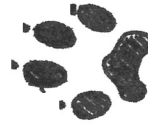


So, are you spooked yet, wondering what possible value poison ivy has?

Like most things in nature, there are offsetting pluses. Unlike humans and apes, other animals show no ill effects from touching or eating poison ivy. Even your pets do not react, although they may carry the oils in on their fur and spread to you as you fondly stroke them. Some birds, such as woodpeckers, warblers, and vireos relish poison ivy berries. They may be a favorite winter food when alternatives are few. Deer, bears, and rabbits are known to eat the berries, stems, and leaves. Animals even use the thickets as shelter from enemies and/or the weather! So they are definitely not worthless plants!

One acquaintance of mine saw a gorgeous patch of attractive red leaves and thought the vegetation would make an eye-catching wreath for his front door during the holidays. You guessed? Now you know why to heed that famous warning, “Leaves of three, let it be!”

# NATURE DETECTIVES



Winter 2020

## A Gray Fox in a Tree

The two young friends shed their backpacks and plopped down on opposite sides of a flat rock. Jamie gazed up at a gnarled, old aspen tree next to the trail. "I'd really like to see a gray fox in that tree...or any tree."

Kelly snorted. "Yeah, like that's ever going to happen. Foxes don't climb trees. And, you mean a *red* fox, Jamie. Some red foxes are mostly gray or black."

"I mean *gray* fox," Jamie emphasized. "Gray foxes do climb trees. They're a whole different kind of fox than a red fox. Both kinds live in Boulder County. My tía showed me a photo of a gray fox in a tree and told me all about them."

"How do you know whether it's a gray fox or a gray-furred red fox?" Kelly asked.

Jamie grinned. "The two species look different, but it's easy if you check out the tail. Red foxes always have a white-tipped tail. Gray foxes have a black-tipped tail. Gray foxes have a wild-looking black stripe down their back too. And, remember, gray foxes can climb trees! A red fox can't do that!"

"Seriously?" Kelly was still skeptical. "How can they climb trees?"

"Like a cat. Gray foxes have retractable claws." Jamie's fingers curled into pretend cat claws. "You know, they can extend them from their paws like a cat, and pull them back when they don't need them. Long claws make it easy to scramble up leaning trees, but they can climb straight up a tree by hugging it with their front legs, and pushing with their back legs. They are also good at leaping from one tree branch to another."

Kelly wasn't quite convinced. "How do they get down from a tree?"

"They back down, clinging to the trunk with their claws," Jamie said. "Or if the tree is leaning sideways, they just run down the trunk. They are mostly out at night, but maybe we'll see one some time. You ready? Let's go. We can talk more about gray foxes later."





## Gray Foxes Look Different From Red Foxes



Gray Fox

Compared to red foxes, gray foxes have shorter legs and a stouter body. Adults measure about three feet long and weigh about ten pounds. Their shorter muzzle and smaller paws give them a more cat-like appearance to go along with their cat-like climbing ability.

### Secretive Foxes

Home for gray foxes is in brushy, rocky, hilly areas with some trees and a stream or pond. They inhabit foothills and canyons where shrubs and other plants provide safe hiding places. They are sometimes seen where houses border wild areas, but mostly they steer clear of towns and farms and avoid people.

Gray foxes are generally active in the dark. Most activity begins at dusk and ends at dawn. During daylight, they rest in various, well-hidden spots in thick vegetation.

### The Omnivore's Diet

On the hunt for a meal, gray foxes cover ground at a steady trot, only stopping to look, listen, and sniff for prey and danger. True omnivores, they are looking for almost anything edible. If they find more than they can eat, they sometimes bury the extra and mark the spot with urine or scat (feces).

Depending on the season, food may be meat, insects, eggs, or fruits and vegetables. They hunt rabbits, mice, voles, and chipmunks. They capture grasshoppers, crickets, beetles, moths, and butterflies. They dine on birds and bird eggs. They gobble a variety of berries, prickly pears, grasses, grains, and other fruits and plants. Carrion (dead animal) is on the menu too, if it's fresh.

Jamie was right about the tail color of the two fox species, a black tail tip on gray foxes and a white tail tip on red foxes. The black color on a gray fox's tail starts in a mane of stiff, black hairs on top of its back. The stiff hairs continue in a stripe down to the tip of its tail.

Much of the gray fox's coat is grizzled, gray fur and white fur like a mix of salt and pepper. Accents of white, black, brown, and reddish fur cover other parts of its body. Gray foxes grow a shorter, rougher coat than red foxes, but both are thickly furred, including their tail. Their thick coat makes foxes look bigger than they are.



Red Fox



## Gray Fox Family Year

Near the end of winter, gray fox adults search for a mate, and often they pair up with the same mate they had the previous year. While the male hunts up meals to share, the female looks for a secure den. She might find an abandoned burrow and dig it to be the right size. An ideal location might be under a rock or brush pile, or in a gap between rocks. A hollow log or a hollow area in a tree could be her choice.

By April or May, the female will give birth to about four furry pups. They are dependent on her milk for at least three months. The male will do most of the hunting for the pair while the pups are tiny.

In about ten days, the pups' eyes open. In a month, the youngsters will start to wander outside the den. They spend much of their time pretend hunting each other. They play chase and attack games. They pounce, nip, bat, and paw each other. A brother's or a sister's tail is a favorite imaginary mouse.

The young foxes eat a regular diet by the time they are three months old. They are taught stalking and pouncing lessons, mostly by their dad. They use those skills to hunt on their own when they are about four months old.



Each parent and pup go their separate ways by fall. They may see each other in winter because family members' territories often overlap. Late winter will find the male and female pairing up once again to begin a new cycle of raising pups.

## Can You Hear Me Now?

Short, gruff-sounding barks, growls, yips, and whines are sounds gray foxes use to communicate with each other. Scent glands on their face, under their tail, and on the pads of their paws prove that smells relay important messages too. The information is left on everything foxes rub against.

Pet dogs look for canine news by sniffing places where other dogs have urinated or left feces. Likewise, gray foxes pass on information to other foxes in their urine and scat. Gray foxes tend to hunt and roam alone, but they keep in touch with their relatives and neighbors through their voice and by their scent marking.

## Watch Out, Foxes!

Gray foxes can live about ten years. Some foxes suffer worms and other parasites, or they can die from canine diseases, such as distemper.

Adult foxes don't have many predators, but coyotes, bobcats, and golden eagles are a danger. Great horned owls can snatch pups. People hunt, trap, and sometimes poison foxes.



## Sherlock Fox asks, “So why DO gray foxes climb trees?”

You could tell Sherlock that gray foxes climb trees to escape coyotes and people. Hungry foxes climb trees to gobble nestling birds and insects. Trees can be a safe place to take a nap or find a hollow den for raising pups. Maybe they sometimes just enjoy the view!

## The Nose Knows

Foxes and other animals use their sense of smell much more than we do. See what your nose tells you by trying this experiment:

- Gather a few jars or containers and fill each one with something that has a particular smell. Try foods like garlic or onions, herbs, fruit, meat, or vegetables. Try spices like cinnamon, ginger, cloves or cumin.
- Cover your containers with a cloth or towel so you can’t see what is inside.
- Get a family member or friend to join you in the room where you have your containers set up.
- Once you are safely seated, turn off the lights (it needs to be dark enough where you can’t see anything in the room). Hold up each container to the other person and see if they can identify what the smell is.

That’s how you use your nose in the dark!

## Fox Claw Challenge

Think of all the jobs your fingernails do. Fox claws do lot of work too. A gray fox’s claws let it climb like a cat, and the thick claws on a red fox are tough digging tools. Each claw type is handy for certain activities, but not as useful for doing other tasks.

Head outdoors with a friend or family member, and make it a game to spot places where dog-type claws or cat-style claws would work best. If both gray foxes and red foxes lived in your area, what would their claws help the different foxes do? What jobs can sharp, curved, retractable cat claws do, and what jobs can immovable, thick, tough dog claws do?



Cat paw prints



Dog paw prints



# Lights, Camera, History!

by Sheryl Kippen

Boulder County Parks & Open Space museums may be closed, but that doesn't stop the department's cultural history team from sharing local history.

The COVID-19 pandemic meant that the Agricultural Heritage Center, Nederland Mining Museum, Assay Office Museum, Altona School, Cardinal Mill, and Walker Ranch Homestead didn't open, or host programs and events for the 2020 season.

In April 2020, we requested help from volunteers to star in videos about those buildings and participate in living history demonstrations typically done at programs and events.

We quickly learned to film videos using iPads as our cameras, and experimented with a variety of video editing software. We shared tips and tricks with the department's natural history education colleagues. Everyone became movie stars, directors, and editors.

For example, Carol and Vanessa Haggans (a mother and daughter volunteer team) offer a video tour of the log house at Walker Ranch Homestead; Marv Van Peurseem shares information about silos and the Agricultural Heritage Center; and Linda Batlin brings to life what a one-room school was like in the 1880s.

This fall, we ventured into the world of virtual programs, featuring live participation by the public. The first program was called, "Walker Ranch—Virtually Cross Stitch 'n' History." Seven participants joined us for this Zoom program. Volunteer Laura Skladzinski taught the basics of cross stitch. (A list of materials was sent when participants registered.) The program also included a slide show about Walker Ranch history and needlework fun facts while participants worked on their stitching. At the program's end, everyone used their computer camera to show their cross stitch projects, ask questions, and make comments. This program will be offered again during winter break, and a new program on the evolution of farming is coming in December. A collaborative virtual program with two other museums on Isabella Bird is in the works.

## REMOTE LEARNING FOR STUDENTS

With the 2020-21 school year already halfway over, we miss our in-person school programs, but that doesn't mean learning about cultural history has to stop!

Virtual field trips for teachers and homeschool parents are available for Altona School, Walker Ranch Homestead, and the Agricultural Heritage Center. Field trips are flexible and can be used as the teacher/parent/group leader wishes. They were created for 3rd-4th grade students, but can be adjusted for other age groups.

During the Altona School field trip, you will learn about a World War II-era schoolhouse (best for older students). In the

Walker Ranch Homestead field, you will tour the blacksmith shop. The Agricultural Heritage Center field trip covers kids' chores and shelling corn.

Each virtual field trip includes an introduction to the site and its history which can be read aloud or silently by students/teachers. Then students can watch several videos related to the site and what visitors might experience there. Videos are a few minutes to about 25 minutes long. After the video, students can reflect on, write about, or draw responses to questions.

There are also at-home or at-school activities for each virtual field trip. Depending on which site is visited, students can make butter at home or examine rocks, research popular music of historic timeframes and then learn a song to share with friends and family.

We hope you have fun learning history even if you can't visit cultural history sites in person. Contact Sheryl Kippen ([skippen@bouldercounty.org](mailto:skippen@bouldercounty.org) or 303-776-8848) to have virtual field trips emailed to you.

## EXPLORE OUR CULTURAL HISTORY VIDEOS

There's now a library of more than 20 Cultural History Corner videos at [boco.org/chc](http://boco.org/chc).

We invite you to take a look and a listen. At just two to 10 minutes long, these videos offer a quick glimpse of history!



Images from the carding wool and log house tour videos.



# Partnerships Through the Pandemic

by Karen Imbierowicz

Stewardship of open space lands has been deemed an “essential service” during the pandemic. Volunteer groups may participate in projects, with some adaptations, which include: allowing only groups of nine or less, requiring volunteers to drive to the project site in separate vehicles if not part of the same household, and requiring volunteers to wear masks. We understand that because of the constraints of COVID-19, many of our partner businesses and organizations are not able to participate in projects.

Impressively though, some partners still managed to organize small groups to participate in stewardship projects caring for our county trails and historic buildings, constructing fence, collecting seed, and monitoring wildlife cameras. Groups include Altona Middle School, Longs Peak Middle School, Boulder Mountainbike Alliance (BMA), Boulder High School Mountain Bike Team, CEMEX, Community United Church of Christ, Corden Pharma, KBI Bio Pharma, and Tetra Tech.

Thanks to our partner teachers from Longs Peak Middle School and Altona Middle School for continuing to monitor wildlife cameras and share photos and observations with students. We look forward to when we can re-engage students in a more active way.

BMA has volunteered with the county since pre-Partnership Program days, circa 2009. In 2020, it hosted seven volunteer days at Heil Valley Ranch (HVR), contributing nearly 200 volunteer hours. A fall project completed a new trail near Eldora. The Boulder High School Mountain Bike Team, a partner since 2018, participated in five projects at HVR throughout the summer, contributing more than 100 volunteer hours. Both organizations accomplished important maintenance and rock restoration trail work.

## WELCOME NEW PARTNERS

We are excited to welcome CEMEX as a new partner in 2020! CEMEX employees participated in their first volunteer project this summer, removing vegetation and clearing drainage ditches to prevent erosion from heavy rainfall.

In August, our long-time partner since 2009, Corden Pharma, graciously applied stain to restrooms at Caribou Ranch Open Space—mundane, yet important work.

Members from the Community United Church of Christ, a partner since 2016, spent a peaceful spring morning in the outdoors collecting annual blue flax seed at the Beech property, and enjoyed another seed collection experience in the fall. Native seed collected from county properties is used to restore other county lands.

Employees from KBI-Bio Pharma, a partner since 2017, participated in an impressive three trail projects at Hall Ranch.

Tetra Tech, a partner since 2014, built a fence at the Picture Rock trailhead at HVR to prevent trespassing onto an area of the property that is closed to the public.

Typically, our partners play an instrumental role in helping to achieve the important goals of our forestry operations. However, because forestry work sites are in remote locations and projects involve shuttling volunteers in vans, the county’s COVID-19 safety guidelines did not allow these projects. We look forward to resuming forestry work once it is safe to do so.

The department’s talented volunteer coordinators are responsible for organizing this work. The team includes Carrie Cimo, Amanda Hatfield, Ari Addes, and Shane Milne, along with seasonal employees. Even during this incredibly demanding time, our coordinators provided positive experiences for volunteers. Sadly, after four excellent years of service, Ari Addes has moved on to new ventures.

We look forward to projects that will again involve our 50 partner organizations in gratifying and crucial stewardship work!



Top: Volunteers from Tetra Tech work on a fence-building project. Below: Volunteers from KBI work at Hall Ranch.



# RESEARCH ON OPEN SPACE

*The Boulder County Parks & Open Space Department offers grants for research on county open space lands each year. All proposals are reviewed by a team of resource specialists, and awarded research projects are monitored during their activities on open space. The following is a summary of a 2019 study conducted by Julianne Scamardo and Ellen Wohl at Colorado State University in Fort Collins. Their project assessed the potential for beaver restoration and likely environmental benefits.*

**Abstract:** In 2017, Boulder County Parks and Open Spaces (BCPOS) and the City of Boulder Open Spaces and Mountain Parks (OSMP) jointly funded an inquiry into the potential for Boulder County streams to support North American beavers. The resulting study includes a literature review into the benefits and habitat requirements of beaver as well as original research on the potential for streams to support beaver dams in Boulder County. Research included site visits to BCPOS and OSMP properties and remote characterization of potential habitat. The field study utilized a checklist approach to assess suitability for either beaver reintroduction or construction of beaver dam analogs. The remote characterization, which was conducted for the entire St. Vrain watershed stream network, uses the beaver restoration assessment tool (BRAT) model based on physical and vegetative characteristics of stream segments to predict potential habitat suitability. From both modeling and site visits, the BCPOS streams with the highest potential for successful beaver reintroduction are Delonde and Sherwood Creeks, and the OSMP streams with the high potential are Coal and South Boulder Creeks. According to hydrologic models created for segments of Delonde and Sherwood Creeks, the addition of a couple of beaver dams could increase inundated area by up to 537% at baseflow, thus increasing potential carbon storage in the valley bottom by up to 562%. Preliminary investigation into beaver restoration in Boulder County thus suggests that beaver reintroductions or beaver dam analogs are viable at multiple sites and could have a significant ecologic, hydrologic, and geomorphic effect on valley bottoms.

**Recommendations for Restoration:** Based on preliminary analysis and modeling, the best sites for further consideration of beaver-related restoration on Boulder County Parks and Open Space land are Delonde Creek at Caribou Ranch Open Space and Sherwood Creek at Mud Lake Open Space. At both sites, historic beaver activity is evident and suitable vegetation is abundant. Additionally, dam building is unlikely to cause damage to major infrastructure. However, grazing of aspens and willows by elk

and moose at these sites could limit beaver foraging. Therefore, if beaver reintroductions are considered, grazing exclosures for moose and elk should be included in the restoration design.

Within City of Boulder Open Space and Mountain Parks land further consideration of beaver-related restoration should concentrate on South Boulder Creek from Marshall Road to South Boulder Road and Coal Creek in the Tracy-Collins and Greenbelt Plateau properties. Narrow bankfull widths on South Boulder Creek upstream of Highway 36 could make beaver dam analogs (BDAs) a suitable restoration approach.

*If you want to read the full report, or other open space research, visit the department's website at [www.bouldercounty.org/open-space/education/research/](http://www.bouldercounty.org/open-space/education/research/)*

## ACCEPTING 2021 SMALL GRANT PROPOSALS

Each year, the Boulder County Parks & Open Space Department awards small grants (up to \$10,000 each) for research and biological inventories on Boulder County open space lands. These research projects and inventories provide valuable data to monitor management practices and improve resources and park visitor experiences. The department has identified 16 priority needs; the following are five of them.

- Advance our ability to adapt and mitigate the effects of climate change on the department's natural systems and agricultural production.
- Evaluate the previously recorded multiple stone circle clusters at Ron Stewart Preserve at Rabbit Mountain Open Space and how their presence indicates the area's possible use by indigenous peoples.
- Examine post-fire recovery at Heil Valley Ranch, such as determining the response of fire to treatments or pre-fire vegetation cover.
- Comparatively assess field methods to accurately determine prairie dog densities.
- Determine the response of bat communities to fire and disturbance at Heil Valley Ranch.

The deadline for proposals is Monday, Jan. 11, 2021. Research proposal requirements, priority research topics, and past research project reports can be found on the department's webpage at [www.BoulderCountyOpenSpace.org/research](http://www.BoulderCountyOpenSpace.org/research).

# Notes from the Field: Park Ambassador

by Andrea Van Sambeek

Beep, beep, beep—the alarm goes off in the morning and I resist the temptation to hit snooze. Forecasts show a beautiful summer Saturday in Boulder County, and trailheads will fill up early. My job is to get out there to greet parkgoers and help them make informed decisions about parking, face coverings, and enjoying their open spaces.

As a park ambassador (PA), my workspace from April through September included the most scenic parking lots in Boulder County. Early in the pandemic, our parks and open spaces were the only places county residents could get outside, exercise, and connect with nature. Our parks saw a visitation increase of 36 percent in April, with several parks experiencing an increase of nearly 100 percent. Many who had never taken advantage of this amazing natural resource visited our properties for the first time in 2020. Rangers were dealing with an overwhelming influx of people. It was clear they needed a little help. Other counties and municipalities were closing parks in response to the demands. Boulder County Parks & Open Space did not want to do that, so the county hired a small crew of folks dedicated to helping with crowds on the busiest days. I was lucky enough to be part of this original group. Our group was already invested in parks and open spaces, having worked for the department in different roles in the past. Extending our stewardship as PAs was a natural fit. It was also such a relief during quarantine to get out of the house and interact with the public! In mid-summer, the crew expanded so we could provide services at more parks and aid the county with projects because volunteer groups and the Youth Corps were unable to operate, and there was still much work to be done.

Through the months, it was a delight to interact with visitors at our trailheads. Each week I met a new group of fascinating people from diverse backgrounds who all had one thing in common—a love of the outdoors. There are so many ways to appreciate our parks—

hiking, biking, horseback riding, fishing, birding, painting, and just viewing nature from a car. I gained a new appreciation of how essential our public lands are in maintaining our collective mental health.

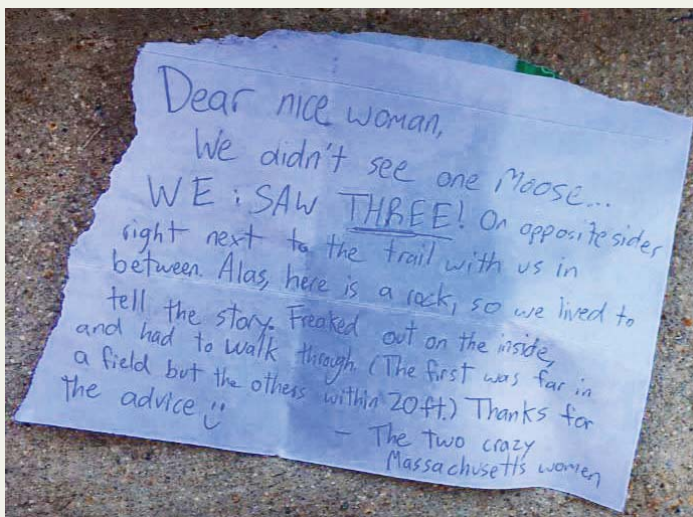
People often asked if I got discouraged educating the public about face coverings and park regulations. I found that most people were appreciative of my work and willing to follow policies when gently reminded of the “why” behind them and when presented with simple solutions. Passing out bandanas to folks who were unaware of the face covering mandate or had simply forgotten their own was a huge help. Many people were gracious once they understood they were welcome in these spaces and that PAs were here to help rather than only enforce rules. We were all operating under the stresses of the pandemic, and keeping that in mind helped me stay mindful of how essential it was for each person to be in our parks. Each week my work strengthened my faith in our community.

Thankfully, my job extended beyond offering parking and face covering solutions. Before becoming a PA, I worked with the Boulder County Youth Corps for many seasons, and I’ve been a Volunteer Naturalist with the department since 2008. All of that experience enabled me to answer questions about our parks and their ecosystems. I also enjoyed reuniting guests with lost car keys, advising people on trail routes, calling medical help when needed, and introducing some of our youngest citizens to their parks. I was welcomed by our regular visitors, who quickly incorporated the ambassadors into their communities.

Working as a PA aided me during a time of great uncertainty. It allowed me to be of service when isolation was a part of life. It also forced me to spend hours revitalizing in beautiful natural environments. I am forever grateful for the opportunity.

Left: A note left for Andrea by two out-of-state visitors.

Andrea during a Park Ambassador shift at Walden Ponds Wildlife Habitat.





## Artist-in-Residence at Caribou Ranch



The Boulder County Parks & Open Space Department is accepting applications for the 2021 Artist-in-Residence Program.

Spend a week focusing on your art while surrounded by streams, forests, and vistas. Enjoy watching for wildlife such as moose, elk, black bears, beavers, bats, and birds. Discover rich history, including the Blue Bird Mine.

Open to musicians, painters, illustrators, photographers, visual/film artists, sculptors, performers, poets, writers, composers, and crafts/artisans.

All artists are required to donate a piece of work to Boulder County that is representative of their stay at the open space property.

Artists should be comfortable in a backcountry setting with rustic accommodations. The residence is in the center of the property with no nearby neighbors. One adult may accompany an artist during stay.

**Application deadline is Feb. 1 2021.**

## Where Is the Calendar?

Because of the COVID-19 situation, we decided to not include a calendar of events, museum hours, or volunteer opportunities in this issue. In doing so, we will avoid publishing information that would be incorrect as things change in the following months. We want to adjust programs to remain in step with health and safety guidelines.

**Where to find up-to-date information:**

- Outdoor and indoor programs and special events:  
[www.BoulderCountyOpenSpace.org/events](http://www.BoulderCountyOpenSpace.org/events)
- Museums: [www.BoulderCountyOpenSpace.org/museums](http://www.BoulderCountyOpenSpace.org/museums)
- Volunteer Opportunities:  
[www.BoulderCountyOpenSpace.org/volunteer](http://www.BoulderCountyOpenSpace.org/volunteer)
- Boulder County's response to COVID-19:  
[www.BoulderCounty.org](http://www.BoulderCounty.org)

We are continually monitoring the COVID-19 guidelines and will begin adding activities as we can. We look forward to again offering a wide range of opportunities. We've missed you!

## Sharing Snowy Trails

The air is cold and crisp, and trails are blanketed with snow. We know you are eager to head out to your local trail and enjoy the crunch of snow beneath your feet. Follow these simple guidelines, communicate with your fellow visitors, and help reduce conflict on the trails in winter.

### ETIQUETTE ON SNOWY TRAILS:

- Snowshoers yield to cross-country skiers.
- When possible, snowshoe along the edge of the trail and avoid walking on ski tracks. This may require you to travel single file.
- Before passing another visitor slow down, politely call out, and pass with care.
- Similarly, if you need a break, step off to the side so as not to block the trail.
- Where to go: consider visiting the Walker Ranch Meyers Homestead Trail, or Mud Lake and Caribou Ranch Open Space—all are great destinations for winter recreation.

## Special Hours at Ron Stewart Preserve at Rabbit Mountain

The park will be closed Monday through Wednesday, from Sept. 21 through Jan. 31, for elk management through limited hunting. The park is open Thursday through Sunday sunrise to sunset.

The park is also open on the following days:

Dec. 21-23

Jan. 18

Note that recreational hunting at Ron Stewart Preserve at Rabbit Mountain or any other open space property is strictly prohibited.

For more information visit: [www.bouldercounty.org/open-space/management/rabbit-mountain-elk-management-plan](http://www.bouldercounty.org/open-space/management/rabbit-mountain-elk-management-plan)

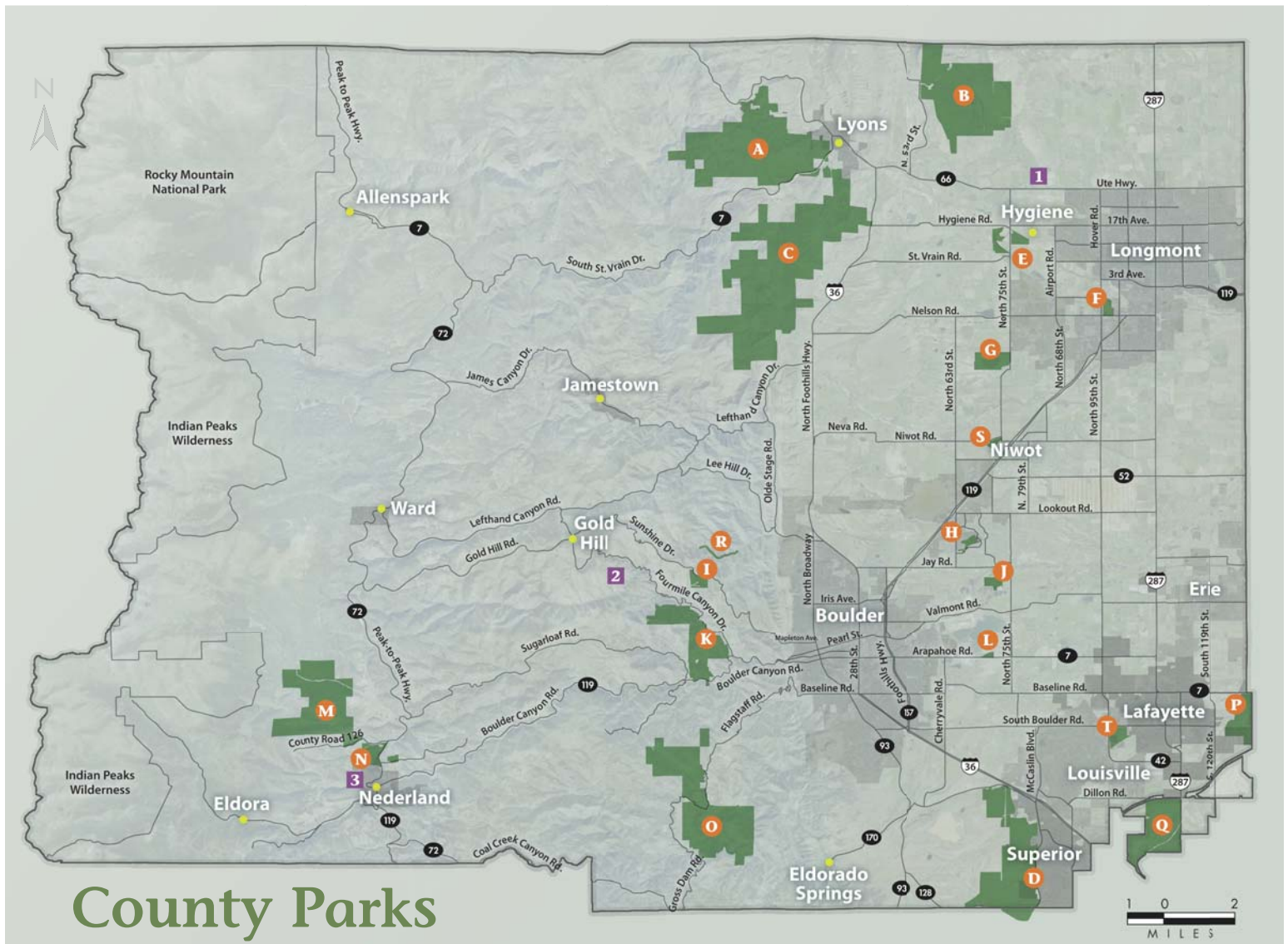




## Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503

[www.BoulderCountyOpenSpace.org](http://www.BoulderCountyOpenSpace.org)



- |                                                  |                                        |                                                       |                                              |
|--------------------------------------------------|----------------------------------------|-------------------------------------------------------|----------------------------------------------|
| <b>A</b> Hall Ranch                              | <b>F</b> Boulder County Fairgrounds    | <b>L</b> Legion Park                                  | <b>R</b> Anne U. White                       |
| <b>B</b> Ron Stewart Preserve at Rabbit Mountain | <b>G</b> Lagerman Reservoir            | <b>M</b> Caribou Ranch                                | <b>S</b> Dodd Lake                           |
| <b>C</b> Heil Valley Ranch (Closed due to fire)  | <b>H</b> Twin Lakes                    | <b>N</b> Mud Lake                                     | <b>T</b> Harney Lastoka                      |
| <b>D</b> Coalton Trailhead                       | <b>I</b> Bald Mountain Scenic Area     | <b>O</b> Walker Ranch                                 | <b>1</b> Agricultural Heritage Center        |
| <b>E</b> Pella Crossing                          | <b>J</b> Walden Ponds Wildlife Habitat | <b>P</b> Flagg Park                                   | <b>2</b> James F. Bailey Assay Office Museum |
|                                                  | <b>K</b> Betasso Preserve              | <b>Q</b> Carolyn Holmberg Preserve at Rock Creek Farm | <b>3</b> Nederland Mining Museum             |