



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: Pasque Flowers, Calvin Whitehall Elk on Hillside, Mike Downey Elk Collaring and Training, Dave Hoerath Award Winners, Nik Brockman World Ranger Day, Luke Hayas Hiker at Betasso Preserve, Pascale Fried

NATURE DETECTIVES

Katherine Young and Deborah Price Illustrations, Roger Myers

CALENDAR OF EVENTS

Larry Colbenson, Jim Drew, and Sheryl Kippen

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

Images is a quarterly publication.

In print: Subscriptions are free to Boulder County residents or \$6 annually. Contact us at swilliams@bouldercounty.org or 303-678-6222.

Online: Go to 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 swilliams@bouldercounty.org.



Volume 40, number 2

Elk and Vegetation: the First Year

by Dave Hoerath

You last heard about the department's efforts to reduce the elk population at the Ron Stewart Preserve at Rabbit Mountain in the Fall 2017 issue of *Images*. Our team identified four areas of focus and some other means to achieve this goal:

- 1. Natural vegetation: reducing and repairing negative impacts
- 2. Migration and movements: reestablishing a pattern of migration
- 3. Elk population numbers: reducing the population back down to 30-70 animals
- 4. Human conflicts: reducing the damage and conflicts with agricultural producers, neighbors, and area users

To achieve a reduction in the herd, we are using a combination of hunting, hazing, and fencing. We track elk movements with radio telemetry and track the herd size with coordinated monthly counts. We also monitor vegetative impacts to the natural resources with both grassland and shrub plots.

HUNTING ON OPEN SPACE

The biggest and most difficult decision in the plan was to permit hunting on open space. We closed the park on Mondays, Tuesdays, and Wednesdays from mid-September through January. We had Boulder County Parks and Open Space (BCPOS) and Colorado Parks and Wildlife (CPW) patrol staff to assist with the closure and the hunting. Because of our effective information campaign and cooperation of park visitors respecting the closure, we wrote only four tickets for violations in the four-plus months of the closure.

We worked with the existing license structure established by CPW to address this elk sub-herd. We issued no new licenses, but offered a one-week access pass to hunt three areas. These hunters chose their one-week slots and then attended a mandatory hunter orientation. They also passed a shooting proficiency test in order to gain their access permit. The orientation allowed us to have good communication about all aspects of the program, and also gave the hunters an opportunity to meet the staff and other participating hunters. This cooperation allowed us to be quite effective in the hunting portion of managing the situation; 27 of the 37 hunters were successful.

TRAPPING, HAZING, AND FENCING

Due to some collar failures, we again trapped elk this spring to keep tabs on the herd as well as our impacts on their movements and distribution. We trapped for six weeks in February and March, placing six new collars on cow elk to supplement the four still-functioning collars. The post-hunt distribution has shown a dispersal effect and resulted in an overall decrease in elk "time on the mountain." We have also resumed hazing the elk this spring after the conclusion of our trapping, trying to create an unwelcoming aspect to Rabbit Mountain. We varied the day and timing of our outings, and everyone that has encountered elk has moved them out of the core area.

We also began the first of our planned fencing exclosures on the south end of the mountain aimed at denying some shade for the elk and allowing disturbed areas to be protected and heal. Anyone who has been to Rabbit Mountain in the summer knows the value of shade!

PROGRESS SO FAR

It is too soon for the vegetative data to show much change. Data is being incrementally collected by plant ecology and wildlife staffs and volunteers. But the radio telemetry is showing the dispersal previously mentioned. Our monthly fall-winter counts are less than last year's high total (360 vs. 260 for February 2018 count). This fall will be the second year of hunting on the open space.

In 2018 we will increase our hunting slots from two to three hunters per week, but keep the Monday-Tuesday-Wednesday closure. We hope our multi-pronged approach will slowly get us to that smaller, migratory herd that is in balance with the natural resources and has less of an impact on the adjacent private lands.



At left: Elk at Ron Stewart Preserve at Rabbit Mountain

Bottom left: A wildlife biologist puts a radio collar on an elk. Some radio collars will be on for two years and then drop off. Biologists will then retrieve the collar and collect the data recorded on it.

Bottom right: A district wildlife manager from Colorado Parks & Wildlife speaks to hunters during a mandatory orientation session.





Land Conservation Awards

On April 18, the Boulder County Parks and Open Space Department (BCPOS) held the annual Land Conservation Awards ceremony. Here are highlights from the special gathering:

LAND CONSERVATION AWARD

This award honors individuals, families, and organizations whose contributions demonstrate notable achievements in preserving Boulder County's agricultural lands. Helen McCarty wanted to see her 126-acre agricultural property preserved through a Boulder County conservation easement. She made arrangements for the easement to be donated to the county after her death. The McCarty farm, which lies just northwest of the intersection of Highways 52 and 287, is recognized as a Centennial Farm for having been in the same family for more than 100 years. After her death in 2016, McCarty's wish to donate a conservation easement to include 100 acres of the 126-acre farm to the county began to take shape. In 2017, her trust granted the easement to Boulder County, which also tied 64 shares of Boulder and White Rock Ditch water to the property to ensure that it will remain irrigated farmland. The family retained two home sites on the property.

PARTNERSHIP AWARD

This award recognizes alliances with businesses and organizations around the county to foster a community-based stewardship ethic for the preservation and care of open space. The Defenders of Wildlife organization has been volunteering with BCPOS since 2011, working on two or three projects each year. They have done many wildlife-related projects, including removing fencing that could be problematic for wildlife, and constructing other fencing to keep wildlife from entering fragile wetland areas.

OUTSTANDING VOLUNTEER AWARD

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

Melanie Bohren has been a volunteer for the Colorado State University Extension Office and the Boulder County 4-H Program for over 10 years in the roles of project leader, club organizational leader, county leaders' advisory member and president, 4-H parent, 4-H livestock superintendent, and many more. She leads one of the most active 4-H clubs in Boulder County—it reaches

its enrollment maximum of 50 members within 24 hours each enrollment year! Bohren also volunteers with the Boulder County Fair and Rodeo recruiting volunteers, organizing goat yoga, and welcoming fairgoers.

Roger Myers has been a volunteer naturalist since 2009 and has led more than 100 programs. He has a wonderful ability to connect with people and communicate complex geological processes with those who are not geologists (see page 11 for an upcoming program). Myers is a knowledgeable amateur herpetologist and frequently helps lead rattlesnake and bull snake hikes, sometimes accompanied on the trail by his pet bull snake, Bobby. Myers also volunteers his artistic skills with beautiful illustrations for the kid's insert, Nature Detectives, in this quarterly publication!



Helen McCarty arranged for the donation of 100 acres of her farmland for a conservation easement. She passed away in 2016, but her legacy lives on through her donation.



Commissioners Elise Jones (far left) and Deb Gardner (far right) presented the following awards (recipients standing left to right): Caitlin Cattelino, of Defenders of Wildlife, Melanie Bohren, and Roger Myers.

Honoring World Ranger Day

by Bevin Carithers



Rangers from agencies throughout Boulder County celebrating World Ranger Day.

Boulder County is rich in parks, open space, national forests, and wilderness. Our quality of life is deeply connected to the outdoors, and our local culture and traditions are rooted in wild spaces. Nearly 65 percent of the county is public land. Thankfully, Boulder County is also rich in park rangers, park deputies, and wildlife officers who work 365 days a year to protect the public lands that make this a special place to live, work, and visit. I would venture to say that there are more park rangers working in Boulder County than almost any other place in the world!

July 31, 2018 marks the 12th worldwide celebration of annual World Ranger Day. Founded by the International Ranger Federation in 2007, this day celebrates the work of park rangers and wildlife officers who, often at great personal risk, safeguard the world's wildlife, protected landscapes, and cherished natural and cultural resources. Sadly, it is also a time to commemorate rangers killed or injured in the line of duty. According to the Thin Green Line Foundation, 1,000 rangers were killed in the line of duty in the last 10 years.

Internationally, the role of a park ranger varies greatly. Throughout much of Africa and Asia, rangers work to protect thousands of endangered and threatened plant and animal species from poachers and wildlife traffickers. In many developing regions of the world, the role of the ranger has become increasingly militarized as they defend wildlife from highly organized crime syndicates and terrorist organizations seeking to fund illegal operations using monies gained from the illegal trade in rhino horn, elephant ivory, and other rare, natural commodities. In these places, governments often lack resources to equip and train rangers, and many rangers go months without receiving a salary or seeing their families. Consequently, the job of park ranger in the developing world is physically grueling, consistently dangerous, and often deadly.

Fortunately, the life of a ranger in the developed world is very different. In Europe and North America, park rangers typically manage people visiting parks and protected areas, provide educational experiences such as the beloved campfire program, and serve as local law enforcement officials. Rangers are well paid, equipped with modern gear, highly trained, and play an active role in the communities where they work. In Boulder County, rangers are blessed with an amazing amount of support and are confronted daily with the question, "how do I get your job?"

World Ranger Day was first celebrated in Boulder County in 2016 at an interagency gathering of park rangers, deputies, and wildlife officers on Flagstaff Mountain. Since that initial gathering, rangers and wildlife officers throughout the county have helped provide rangers in Kenya with body armor, uniform supplies, first aid kits, warm clothing, boots, cell phones, and binoculars through generous donations of money and new and used equipment. Last summer, staff from Boulder County Parks and Open Space, Colorado Parks and Wildlife, and local volunteers provided Kenya Wildlife Service game wardens and rangers with lifesaving first aid instruction on Mount Kenya!

In the years to come, we hope to expand our World Ranger Day celebration and commemoration efforts throughout the county. Until then, there are a number of fun things you can do to celebrate World Ranger Day on July 31:

- Take a hike with your family or friends
- Participate in a junior ranger program
- Buy a fishing license, hunting license or a park pass
- Volunteer outdoors
- Thank a ranger, park deputy, or wildlife officer the next time you see one!

If you would like to learn more about World Ranger Day, visit www.internationalrangers.org/world-ranger-day.

Hiking with Mike: Autism on the Trail

by Rachel Gehr





Top: The view we enjoyed at the end of the Meyers Homestead Trail. Below: Mike's dad, Mike, and me finishing one of our more challenging hikes at Walker Ranch Open Space.

It was 2009 when I first wrote in *Images* about hiking with my son, Mike, who has a developmental disability. He was then 10 years old.

Now he is 19, and rather than four and a half feet tall, he is six feet tall. And while faster on the trail than he used to be, Mike can still slow to a crawl while reciting lines of movies, idly touching plants, enjoying a patch of shade, or closely examining a needle from a pine tree.

One summer day as we hiked on a beautiful trail, someone stopped and asked us, "Does this trail lead anywhere?" Stumped, I said I didn't know. I was thinking that the trail leads right to where you are.

And that is still the lesson with Mike: the walk *is* the destination. He can't be rushed along from his ruminating and pausing on the trail. Mike is largely non-verbal, and while I would give anything for him to talk, his quiet companionship can be a good match for some peaceful time in the woods.

WHERE WE HIKE: THREE FAVORITE TRAILS

Mike doesn't have mobility issues, but he isn't the most coordinated guy either. When we come across a big boulder, he looks to me for help stepping around it. Well my &# *\$ pounds are no match for his 220, so we stay to trails he can cruise through.

- 1. One "go to" hike is Meyers Homestead Trail. I am always a little surprised by the slow rise in elevation, but the trail itself is smooth. Last summer we finally made it to the end. Mike was in good spirits and we enjoyed that end-of-the-hike view for the first time of many hikes on this trail.
- 2. Another "smooth" hike is the Eagle Wind Trail at Ron Stewart Preserve at Rabbit Mountain. This hike is walkable almost year-round and is just challenging enough for us.
- 3. Walden Ponds Wildlife Habitat is one of our frequent destinations. Mike's caregivers often take him there for leisurely strolls by the water. It's also a reliable year-round option.

STRATEGIES: HIKING WITH THOSE WHO HAVE DEVELOPMENTAL DISABILITIES

Like everyone, people with disabilities have different strengths, challenges, likes, and dislikes. So these tips certainly don't cover all people with disabilities, but may apply across a lot of situations.

Respect limits. We can tell early on if Mike won't be convinced to hike any real distance. Like many people with significant disabilities, his life is very much directed by other people, so we like for him to control things as is possible. With that in mind, we listen to him and head back to the car.

Communicate an end time. Mike has no sense of time. To say, "we're going to hike for two hours" offers no usable frame of reference. So on occasion we set a timer on our phone. He will carry the phone and hike until it goes off. It's a strategy we use at home, too. If I promise dessert in 15 minutes, he knows to bring me a timer to set.

Throw your goal out the window. Ignore your impulse to reach the summit or end of the trail. Mike truly lives in the moment, untethered by a need to hit a goal. So some days we only get out a half-mile. If his pace is extremely slow, we match his speed, even if we'd really like to see what's around the next bend. Although, when he comes to a *complete* stop, we may urge him on a bit, asking him to catch up for a "high-five."

I think these little tips work across many populations: kids, older hikers, and those who have trouble managing longer walks.

Respect limits, listen and encourage—three strategies that can help anyone on the trail.



Water striders are insects at home on a pond, and they skitter easily across the surface of the water. When you watch them skating around, they seem to be having fun. It is hard to view a water strider as a predator seriously on the hunt – until a small insect crashes onto the water and abruptly becomes the hunted.

As a crashed bug struggles not to drown, tiny waves ripple outward in concentric circles. Sensitive hairs on a water strider's legs feel those watery vibrations. With its two middle legs paddling hard, the six-legged hunter rushes toward the center of the ripples.

Before its wriggling prey can escape, the water strider's two front legs grab hold. With its sharp mouth, the water strider pierces its captive's exoskeleton and spits in paralyzing saliva. The saliva also starts dissolving the immobile prey's insides.



The water strider sucks down its soupy, juicy meal then skitters into hiding when a red-winged blackbird lands on a branch over the water. The hunter is now the hunted, and the pond drama continues.

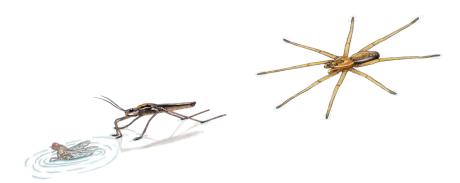
Predators, prey, plants and water each play a vital role in a lively and healthy pond habitat.

Water Strider Bragging

Don't you wish You could be A water strider Just like me?

I stride left Then go right. Life on the water... Sheer delight!

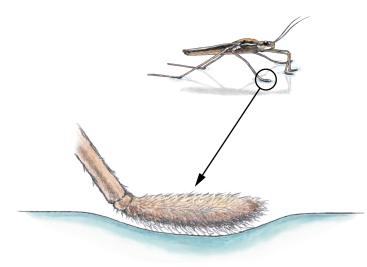
With each step I hunt prey. Slurping insect parts Every day.



Uh-oh, here comes a spider. Excuse me...must go. Aaaa!

How Do Water Striders Walk on Water?

The water strider's body is perfectly adapted to home atop a pond, river, stream, lake or marsh. Its narrow body is lightweight, plus the insect's jointed legs spread its weight over a large area of water. Their long back legs are used to steer, stop and balance. The middle two legs work like paddles and can propel them forwards or backwards rapidly. The shorter front legs are the grabbers and grippers, but they also provide some balance.



A water-soaked bug would get heavy and sink so water striders have an oily film on their legs and body to repel water. Oily hairs on their feet have grooves that hold air bubbles. A water strider that gets dunked below the water will bob back to the top thanks to those trapped air bubbles.

Because of the teeny hairs and trapped bubbles, the water strider's six feet can support 15 times the weight of the bug without it sinking. That's a good thing; otherwise, water striders might sink in a heavy rainstorm.

Magnified photos show that the water strider's feet dimple the surface of the water much like your feet press big dimples on a bed if you stand on it. It looks like there is a film or skin on top of the water, but there isn't. It is just water. Water holds together, especially on the surface. But the water bond isn't strong so the hold is broken easily by weight and easily pierced with pointed objects.

The claws of many insects are on the tips of their feet. Can you guess why the water strider's claws are not on the very ends of its feet?



Surviving Life on the Pond

When you are hunting for water striders in a shallow pond, it is sometimes easiest to look first for their shadows moving around on the pond floor. The dark gray or brown/black camouflage coloring of the bugs allows them to hide among the leaves and bits floating on the surface.

Water striders feast on recently dead insects or live insects caught on or near the top of the water. Insects living in the water can become dinner also. Water striders seize mosquito larvae by grabbing a larva's breathing tube at the water surface. Sometimes striders can even grab an insect out of the air just above the water. If prey is scarce, water striders will eat each other.

Some kinds of water strider adults have wings and can fly to new homes if their old home dries up. Water striders are more resistant to water pollution than many other critters because water striders live on top of the water rather than in it.

You'll not often find water striders on land. Their long legs work best on water.

Water Striders in Winter

Adult water striders can live for many months. You won't see them in winter when there is not enough food or warmth. When cold weather comes they survive under leaves, logs and rocks until spring. They may winter inside plant stems.

Simple Life Cycle

Male water striders are unshakable suitors once they find a mate. They will ride around on the female's back until she is ready to lay her eggs. She sticks her eggs to vegetation or rocks just under the surface of the water. In about twelve days the eggs hatch into nymphs that look like a tiny copy of adult water striders.

Like other young insects, the nymph's outer exoskeleton doesn't grow and soon becomes tight. To grow bigger the baby water striders must molt. During a molt, their old exoskeleton splits off and the layer that was underneath hardens into a new and bigger exoskeleton. The nymphs molt several times as they grow. It takes about a month for the babies to become adult water striders.

Bug Sense

Water striders are good at seeing movement with their insect eyes, and they also have bug antennae for sensing the world around them. Perhaps most important is their ability to feel vibrations on the water surface.

Vibrations mean food when they come from the little waves made by a struggling insect. Big vibrations can mean danger, a time for water striders to hide or flee! Some vibrations are made by male water striders drumming up little waves with their feet.

Drumming is Communicating

Male water striders make waves with their feet to communicate with other water striders. The water is their drum. Neighboring striders sharing a male bug's habitat pick up his vibrations and understand the meaning. He taps different size waves with different timing between the taps to communicate specific messages. He sends one message to attract a female and another message to tell other males to stay away from his territory.

Sherlock Fox says:

Water striders are fun to watch. They are terrific to have around because they eat mosquitoes.

And they don't bite people!



Ancient Insects

Water striders have been around a lot longer than humans. Fossils have been found of water striders from 50 million years ago! Look at the drawings of water strides below – count the legs (remember that two of their legs are very short!).

Water striders belong to the huge Insect Class.

All insects have six legs and three body parts (head, thorax, and abdomen).

Name Game

People in different places have lots of different names for water striders: water skaters (Canada), water boatmen, water oarsmen, pond skaters, pond skippers, water skippers, water skimmers.

Maybe we should add water rowers or water dancers to the names! What would you name water striders?

Explore How Water Holds Together at the Surface

The surface of water holds together a bit so it sometimes seems to have a skin or film on top. This effect of water is called surface tension.

- Slowly fill a bowl or glass with water and see if you can "overfill it" by adding water really slowly. Stop when the water is slightly above the rim of the bowl or glass.
- If you touch the water, the weight of your finger will break the hold and water will spill out
 of the bowl. Or touch the top lightly with the pointed tip of a pencil or pen.
 What happens? Why does adding more water break the hold?

Staying Afloat

Water striders have oily film on their legs and body and grooves that hold air bubbles. See how this helps them walk on water:

• Get a small bowl of water. Use a dropper or small spoon to drop a little bit of oil on top of the water. What happens?

 Cut a plastic drinking straw into several small pieces. Drop one or two small straw pieces in the water.

What happens if water gets inside the straw?

Now seal the ends of a couple more pieces with tape, and drop them in the water.

How does trapped air help the straw pieces float?

Text by Katherine Young and Deborah Price Illustrations by Roger Myers

Woof, Woof—Please Bring My Leash

by Adam Auerbach

Summer is a great time to take furry friends out on the trail. Dogs are welcome at most Boulder County Parks and Open Space properties, and a canine companion can certainly increase your enjoyment of the outdoors.

At most parks, dogs are required to be on leash. Have you ever wondered why this is? The on-leash rule is not just a needless regulation; keeping your dog leashed is actually essential to keeping yourself, your dog, wildlife, and fellow park visitors safe and happy.

DOGS ON LEASH = SAFER DOGS

While letting your dog off leash may feel like doing your dog a favor, it actually exposes them to many dangers. Several dogs have drowned in Boulder County parks in recent years. Moreover,

rattlesnakes, coyotes, and mountain lions

Letting your dog off leash may feel like doing your dog a favor, but it actually exposes them to many dangers.

all frequent area parks and can be
lethal for dogs. Less deadly natural
hazards include ticks, poison ivy,
thorns, and water-born pathogens
like giardia (dogs can get it too).
A lesser known, but potentially
serious or even deadly threat to
dogs off leash is foxtail grass. The
seeds of this plant are barbed and can
work their way into any part of your dog:

skin, paws, nose, etc. They do not break down inside the body and can cause serious infection and even death if left untreated. Foxtails are present in the area, and treatment for this painful condition often requires expensive surgery.

CONSIDER THE MOOSE

Hiking with dogs off leash can also lead to danger for humans. Wolves are the historical predators for moose, and moose therefore have a deeply ingrained hatred and fear of all things canine. A moose's instinct is to charge when it feels threatened, and they have even been known to go out of their way to attack dogs. This of course is potentially deadly for Fido, but can also be extremely dangerous for the dog owner. Moose can run up to 35 miles per hour. These 1,000+ pound animals kill more people than bears or mountain lions in Colorado. Hiking with a dog off leash is often the common denominator in moose attacks on people.

CANINE CHAOS

Hiking with dogs off leash can be dangerous for your fellow park visitors, too. Dogs running off leash can contribute to biking accidents, and horses can be spooked by roaming dogs, increasing the danger for the rider. Further, aside from endangering fellow park visitors, having your dog on leash is a courtesy to other outdoor enthusiasts. While it may be hard to imagine anyone not loving Buster, many park users don't like dogs or are even afraid of them. Some people may be happy to greet or pet your leash-less friend, but rangers also get countless complaints from park visitors about dogs off leash. Many visitors come to our parks to view wildlife or birds, and dogs off leash can diminish their chances of seeing these critters.

Speaking of wildlife, dogs off leash can make life difficult for animals. Prey species like deer or elk register dogs as predators, and a dog's presence off leash can be traumatic for these animals. On the other hand, dogs off leash can also be detrimental for predators, particularly other canines like coyotes or foxes. These species are highly territorial, and a dog off leash can be viewed as a territorial threat. Coyotes in particular have been known to consider dogs competitors or even potential mates. Remember that while open space is a great retreat for you and your dog, it also functions as a refuge for wildlife.

Please enjoy Boulder County Parks and Open Space with your four-legged friend this summer, but remember your leash!



A visitor to Betasso Preserve hiking with her canine companion.

DISCOVER BOULDER COUNTY

Calendar of Events



JUNIOR RANGER ADVENTURE PROGRAM

Saturday June 2, 11 a.m.-1 p.m.
Walden Ponds Wildlife Habitat, 75th Street between
Valmont Road and Jay Road
Space is limited. Registration required.

Do you love animals as much as the Boulder County Park Rangers? You'll participate in a nature scavenger hunt, learn how to track and rescue an injured animal, and make a piece of nature art. For kids ages 5-12, but all family members are welcome. Children must be accompanied by an adult. Bring water, snacks, sunscreen, and hiking shoes. Visit www.bouldercountyopenspace.org/jr to register.



ISPY BONES!

Thursday June 7, 10-11:30 a.m.

Betasso Preserve, Boulder Canyon to Sugarloaf Road, follow signs to Betasso Preserve. Meet at the shelter.

The bone detectives are on the prowl! Help volunteer naturalists search for evidence, including the skulls, bones, and antlers of some of the animals that live here. For ages 4-10 with accompanying adult.

ASTRONOMY: TELESCOPES 101

Saturday June 9, 8-10 p.m.

Space is limited. Meeting location provided to those registered.

Learn how telescopes help us peer into deep space with interactive demonstrations and activities. If you have a telescope, bring it along! We'll sky gaze afterwards. For ages 5 and up with accompanying adult. Register at www.bouldercountyopenspace.org/register.



Fun on the Farm

The first and third Fridays of each month 9:30 a.m. and 10:30 a.m. Each session is identical. Agricultural Heritage Center, 8348 Highway 66

Bring your 3-6 year olds to the farm to learn about animals, plants, and agricultural life. Programs include

a short story time, hands-on activities, and a take-home craft. Afterwards, explore the farm. Children must be accompanied by an adult.

The Herd Below Ground: Worms and Tiny Soil Helpers

Friday June 8 and Friday June 22

Pioneer Life

Friday July 13 and Friday July 27

Cow-a-Palooza

Friday August 10 and Friday August 24



Walker Ranch Homestead, 8999 Flagstaff Mountain Road, approximately 7 miles west of Boulder

At both events visitors can participate in chores and games. For more information, please call 303-776-8848 or email skippen@bouldercounty.org. Free and fun for all ages. If you like, bring a picnic supper (please bring a blanket if you plan to picnic – there are no tables at the homestead).

Summer Heritage Day: Old Fashioned Jobs Sunday June 10, 10 a.m.-3 p.m.

Visit with costumed volunteers as they demonstrate late 1800s chores and jobs such as woodworking, meal preparation, and blacksmithing. Go back to school in a one room school session or race in a bucket brigade.

Summer Heritage Evening: Flora and Fauna Saturday July 21, 4-7 p.m.

Meet animals up close at the petting zoo and learn about the language of flowers. Visit with costumed volunteers as they demonstrate late 1800s rural games and chores such as doing laundry the old-fashioned way, woodworking, meal preparation, and blacksmithing.

FISH HAWKS OF BOULDER COUNTY



Sunday June 10, 10:30 a.m.-noon Cattail Pond, Boulder County Fairgrounds, north entrance off Boston Avenue, Longmont

Join volunteer naturalists to learn about this remarkable bird of prey. An osprey pair has nested at Cattail Pond for several years, and we may see adults and

young looking for food and trying out new wings. Bring a bird guide and binoculars if you have them.

DRAGONS & DAMSELS SLIDE PROGRAM

Wednesday June 13, 7-8:30 p.m.

Longmont Public Library, meeting Rooms A & B, 409 Fourth Ave.

Join volunteer naturalist Leslie Larson and learn about the amazing life of dragonflies and their damselfly cousins, including their flying, multifaceted eyes, convoluted mating schemes, and behavioral quirks.

Calendar of Events

Old Fashioned Playdates

Sunday June 3 10 a.m.-noon Sunday July 29, 10 a.m.-noon Sunday August 12, 10 a.m.-noon Walker Ranch Homestead, 8999 Flagstaff Mountain Road, approximately 7 miles west of Boulder

Do you like to play outside and meet new friends? What about trying graces and lawn bowling—games that your great-grandparents might have played? Join us for a morning of fun, especially for ages 6-12, accompanied by an adult.

Arrive at 10 a.m. because games will begin promptly.

DRAGONS & DAMSELS IN THE FIELD

Saturday June 16, 10 a.m.-noon

Pella Crossing Open Space, about 1 mile south of Hygiene on the east side of North 75th St.

Join volunteer naturalist Leslie Larson and others to learn about the amazing life of dragonflies and their damselfly cousins. We'll talk about their acrobatic flying, huge multi-faceted eyes, mating schemes, behavioral quirks, and learn about field identification.

CELEBRATE SUMMER HIKE

Sunday June 17, 10 a.m.-noon

Mud Lake Open Space, 2 miles north of Nederland on County Road 126. Meet at the parking lot kiosk.

Join volunteer naturalists to celebrate the coming of summer! On this easy 1.5 mile hike we will explore the natural history of the area including wildflowers, wildlife, and forest ecology. We will also talk about summer weather and safety in the mountains.



WILDFLOWERS OF BOULDER COUNTY SLIDE PROGRAM

Monday June 18, 6-7:30 p.m.

George Reynolds Branch, Boulder Public Library, 3595 Table Mesa Drive, Boulder

Join volunteer naturalists for a slide program to kick off the summer wildflower season! You'll learn about the variety of wildflowers found from the plains to the alpine tundra, where and when to look for them, and some interesting facts about our native plants.

FOOTHILLS NIGHT HIKE

Tuesday June 19, 8:30-10:30 p.m.

Space is limited. Meeting location provided to those registered.

Enjoy starlight and listen for night sounds while volunteer naturalists talk about the nocturnal habits of the critters that live here. Bring water, closed-toed hiking shoes, and a flashlight. Hikes are about one mile round-trip on an easy trail.

Register at www.bouldercountyopenspace.org/register.



inursuay June 21, 2-3 p.m.

Louisville Public Library, 951 Spruce Street, Louisville
All kinds of natural forces help to move mountains! This program

provides hands-on learning about the three different types of rocks, the moving power of uplift, and how erosion shapes the landscape. For ages 5-12 with an accompanying adult.

SEEING OURSELVES THROUGH THE EYES OF NATURE

Saturday June 23, 9:30 a.m.-noon

Space is limited. Meeting location provided to those registered.

Join volunteer naturalist Linda Weber for a contemplative walk. Learn to slow down, focus inward, and experience nature's rhythms. Wear comfortable clothing and bring a notebook and pen. For ages 16 and up. Register at www.bouldercountyopenspace.org/register.



Barnyard Critter Day

Sunday June 24, 10 a.m.-3 p.m. Agricultural Heritage Center 8348 Highway 66, between Lyons and Longmont

Learn about the roles of chickens, pigs, horses, and other animals on a farm. See demonstrations of sheep herding and horseshoeing, visit with chickens and pigs, and ride on a horse-drawn wagon. Please leave pets at home so working animals will not be disturbed.

For more information, call 303-776-8688 or email jdrew@bouldercounty.org.

WHEELCHAIR ACCESSIBLE HIKE AT PELLA CROSSING

Saturday June 30, 9-11 a.m.

Registration required.

Please join Ranger Fowler for a wheelchair accessible hike. The trail is crusher fines and level. We will hopefully view some waterfowl while making our way around the ponds. Register at www. bouldercountyopenspace.org/register.

Calendar of Events

MUSEUM MORNING: LIVE LIKE A MINER

Friday July 6, 10:30 a.m.-11:15 a.m.

Nederland Mining Museum, 200 N. Bridge Street, Nederland

Enjoy a morning of stories and fun focusing on life long ago in a mining town. For children ages 3-7 with an accompanying adult.



ASTRONOMY: A STAR IS BORN!

Saturday July 7, 8-10 p.m.

Space is limited. Meeting location provided to those registered.

Find out how stars are born, why stars are different colors, and why not all stars have the same lifespan. Afterwards we'll view the sky with telescopes. For ages 5 and up with an accompanying adult. Register at www.bouldercountyopenspace.org/register.

HIGH COUNTRY NIGHT HIKE

Wednesday July 11, 8-10 p.m.

Space is limited. Meeting location provided to those registered.

Enjoy starlight and listen for night sounds while volunteer naturalists talk about the nocturnal habits of the critters that live here and other topics. Bring water, closed-toed hiking shoes, and a flashlight. Hikes will be about one mile round-trip on an easy trail. Register at www.bouldercountyopenspace.org/register.

HISTORY AND HABITAT OF CARIBOU RANCH

Saturday July 14, 9 a.m.-noon

Caribou Ranch, 2 miles north of Nederland on County Road 126

Escape the summer heat in the high country! Volunteer naturalists will be stationed along the trails to answer questions about the wildflowers, wildlife, and colorful history of this diverse landscape.







A BUTTERFLY'S LIFE

Monday July 16, 7-8:30 p.m.

Louisville Public Library, 951 Spruce Street, Louisville

Join volunteer naturalists for a beginner's guide to our colorful local butterflies. This slide program will review the amazing life cycle of butterflies, and will cover behavior, identification tips, and more.

BUTTERFLIES AND OTHER FLYING CREATURES

Saturday July 21, 9:30 a.m.-noon

Caribou Ranch, 2 miles north of Nederland on County Road 126

Volunteer naturalist Jan Chu and others will lead this slow-paced 2-mile hike in search of mid-summer butterflies, birds, and other flying insects. We'll talk about butterfly behavior and life cycles and learn some tips on identification.



Catfish Nights



June 29 & July 27 7:30 -11 p.m.

Stearns Lake at Carolyn Holmberg Preserve (access trailhead from Dillon Road on South 104th Street)

Bring your family and friends and enjoy a summer night fishing at the lake! Anglers must have a current Colorado fishing license. (Kids under 16 don't need a license.)

- Open to shore fishing only
- Artificial and live bait permitted
- · Check-in required at trailhead on South 104th Street

For more information, please call 303-678-6204.

NOTE: Event will not be canceled due to weather.

WOODPECKERS DRUM TO THE BEAT!

Monday July 23, 2-3 p.m.

Louisville Public Library, 951 Spruce Street, Louisville

Nobody drums like a woodpecker! Discover the interesting habits of these hard-headed insect-eaters through hands-on activities, and learn where to look for them. For ages 5-10 with accompanying adult.

BACKYARD WILDLIFE AT SANDSTONE RANCH

Saturday July 28, 10:30 a.m.-noon

Sandstone Ranch, visitor center is located south of Highway 119, one mile east of Weld County Road 1. Follow signs to Upper Visitor Center parking lot.

Join volunteer naturalists for a fun, hands-on program to learn about animals that call Sandstone Ranch and your backyard home. After the program you can visit the beautiful and historic ranch house. Children must be accompanied by an adult.



WALKIN' IN THE MOONLIGHT

Saturday July 28, 8-10 p.m. Space is limited. Meeting location provided to those registered.

Enjoy open space after dark on a glorious walk, while exploring phases of the moon, moon stories, and wildlife interactions on a moonlit night. For ages 5 and up with an accompanying adult. Register at www. bouldercountyopenspace.org/register.

All Programs: All ages welcome unless otherwise noted. NO PETS PLEASE! Be prepared for cool to high temperatures and afternoon thunderstorms. Bring water and dress in layers. For information about these programs, or to arrange a private program, please call 303-678-6214.

great for kids!

GIVE METHAT OLD TIME MUSIC

Saturday August 4, 5-7 p.m.

Walker Ranch Homestead, 8999 Flagstaff Mountain Road, approximately seven miles west of Boulder

Join musicians Bill and Crystal Atkinson for some fun, foot stompin' tunes. Bring a blanket and picnic, and sing or dance along. Bring your own instruments and be part of the band.



ASTRONOMY: BRIGHT AND DARK

Friday August 3, 8-10 p.m.

Space is limited. Meeting location provided to those registered.

Discover some of the ways wildlife depend on starlit nights for migration, navigation, and more at a brief program followed by sky gazing with telescopes. For ages 5 and up with an accompanying adult. Register at www.bouldercountyopenspace.org/register.

COBBLES OF TIME—THE GEOLOGY OF CARIBOU RANCH

Saturday August 11, 9 a.m.-1 p.m.

Caribou Ranch, 2 miles north of Nederland on County Road 126 Space is limited. Meeting location provided to those registered.

Join volunteer naturalist Roger Myers and others on this 4.5-mile moderate hike to learn about some of the oldest rocks in the area, as well as the valuable minerals that formed and were mined nearby. Register at www.bouldercountyopenspace.org/register.



Mining Programs through the Summer

HARD ROCK MINING TOURS

Saturday July 7, 9:30 a.m.-12:30 p.m.

Thursday August 9, 9:30 a.m.-12:30 p.m.

Meeting location provided to registered participants

Tap into the towns, tools, and characters of our hard rock mining heritage by visiting mining sites of years gone by. Tours are open to ages 10 and older with accomapnying adult. Some walking required.

Registration opens two weeks prior to the tour at www.BoulderCountyOpenSpace.org/register or call 303-258-7332.

AN EVENING AT THE MUSEUM

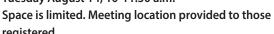
Share coffee and dessert as you explore history and mountain lore.

Nederland Mining Museum, 200 N. Bridge St., Nederland *Programs run from 7-8 p.m.*

Friday July 13, How the Goldrush put Colorado on the Map **Friday August 10,** History of Colorado Railroads

WATER STRIDERS WALK ON WATER

Tuesday August 14, 10-11:30 a.m.





These fierce little predators can walk on the surface of water. Discover how they do their tricks and look for live striders in action at this interactive program. For ages 5-10 with an accompanying adult. Register at www.bouldercountyopenspace.org/register.

LIVING IN LION AND BEAR COUNTRY

Saturday August 18, 9-11 a.m.

Heil Valley Ranch Open Space, North of Boulder off Lefthand Canyon Drive. Meet at the group picnic shelter.

Join volunteer naturalists for a moderate 1.5-mile hike and learn about the ecology and behavior of our local mountain lions and black bears. We'll talk about why the foothills are such good habitat for these animals and how to be safe in lion and bear country.



Lily pads, by Kathleen Lanzoni

Picturing Open Space: Painting and Photography Sessions

These painting and photography events are held to encourage participation in the 2018 "Outdoor Creations – En Plein Air" exhibit. Photographers can also create work to submit for consideration to the 2019 "Land through the Lens" exhibit. Register at www.BoulderCountyOpenSpace.org/register.

Artist Led Paint Session at Cardinal Mill Saturday June 9, 8-11:30 a.m.

Sunrise Paint Session at the Agricultural Heritage Center Saturday June 16, 5-8 a.m.

All Day Paint and Photography Session Saturday June 16, 9 a.m.–2 p.m.

Paint and Photography Session at Hall Ranch Saturday July 14, 8 a.m.–noon

Paint Session at Walker Ranch – Summer Heritage Evening Saturday July 21, 3:30-6:30 p.m.

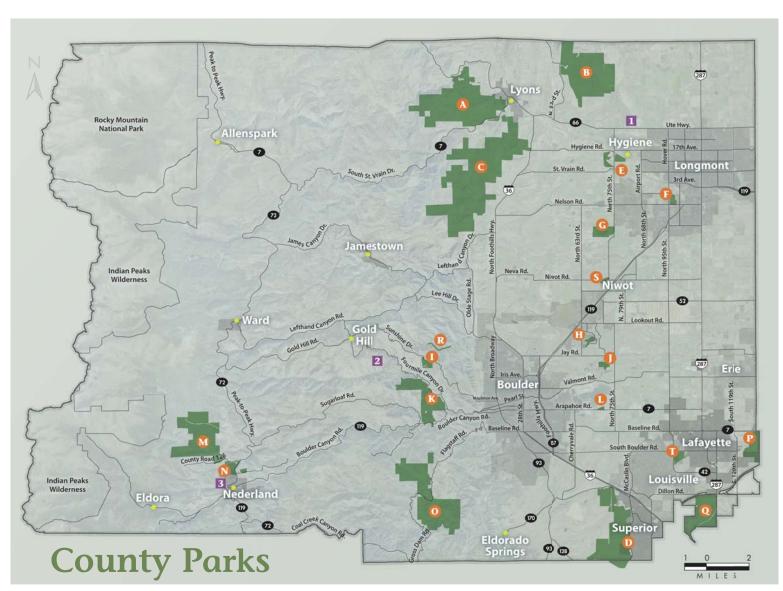
Sunrise Photography Session at Betasso Preserve Saturday August 18, 5:30–8 a.m.

To learn details about each event, visit www.BoulderCountyOpenSpace.org/photoshow.



Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503 www.BoulderCountyOpenSpace.org



- A Hall Ranch
- **B** Ron Stewart Preserve at Rabbit Mountain
- C Heil Valley Ranch
- D Coalton Trailhead
- **E** Pella Crossing

- **F** Boulder County Fairgrounds
- G Lagerman Reservoir
- H Twin Lakes
- I Bald Mountain Scenic Area
- J Walden Ponds Wildlife Habitat
- K Betasso Preserve

- L Legion Park
- M Caribou Ranch
- N Mud Lake
- Walker Ranch
- P Flagg Park
- Q Carolyn Holmberg Preserve at Rock Creek Farm
- R Anne U. White
- S Dodd Lake
- T Harney Lastoka
- 1 Agricultural Heritage Center
- 2 James F. Bailey Assay Office Museum
- 3 Nederland Mining Museum