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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: Niwot Ditch, Field of Gaillardia Flowers,

Brad Winckelmann

East Boulder Creek, Jeff Moline

Pond at East Boulder Creek, Jeff Moline

Columbine, Cathy Bryerly

Automeris io, Pam Piombino

Lichens, Stephen Hauptli

Reynold Ranch Wilflowers, Sausan Spaulding

Chores at Walker Ranch, Tiffany Fourment

*Uncredited photos from POS Collection

NATURE DETECTIVES

Cindy Hutchins and Pam Sherman.

Illustrations, Carol Tuttle

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EDITORS

Summer Alameel and Pascale Fried

Suggestions and comments are welcome.

Please contact us at 303-678-6201 or

pfried@bouldercounty.org. Non-credited articles

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Volume 45, number 2

New Open Space Site Coming to Boulder County!

by Jeff Moline

Boulder County Parks & Open Space is leading a planning process to shape the land management and public use of the East Boulder Creek (EBC) site. This 1,377-acre property, at the confluence of Boulder and Coal Creeks, contains five miles of streams, 12 ponds, and four agricultural leases. It lies in the Boulder Valley between Longmont and Erie. This is an important place to the community, and I hope you'll want to participate in the process. To get you familiar with the area and interested in EBC, let me tell you about some of my experiences on the site.



THE DEPARTMENT'S FIRST PLAN

After the first purchase of EBC properties, the department undertook a master planning effort for the area in 1998. As a young resource planner at that time, I was excited by the community's vision of restored habitats, continued agriculture, and public recreation in an area on the plains that already had ponds and streams. It was the following spring that I got my first chance to do some field work on the land. And, honestly, that first project left me worried that we wouldn't be able to deliver on the promises we made in that 1998 plan.

I had volunteered to establish some vegetative cover on the north side of Boulder Creek, where stream flows were collapsing the bank between the channel and some gravel mine ponds. I installed several hundred feet of erosion control mat over a dry and dusty slope that I had previously seeded with native grasses. The work was challenging—pounding in stakes to hold the mat—I was exposed on a treeless stretch of creek getting sunburned and

tired. And when I reflected on the task, I felt like I was slapping a large band-aid on just a tiny part of a property that had already been heavily affected by gravel mining and oil and gas operations. In fact, one large tank battery was just 30 feet from Boulder Creek right across the stream from my work. When you looked around the site, it was hard to find any encouraging signs that the landscape was beginning to recover from all these disturbances.

By the end of the project, I seriously wondered if our department be able to follow the plan and make this a place the public would enjoy, where natural values could be restored, wildlife would find suitable habitat, and agricultural operators would prosper.

RESTORATION

Fast forward to the present, and the answer is a resounding YES! One early morning last fall, I visited the site. A cool mist rose from a pond, American pelicans and ducks floated by, a bald eagle flew overhead, and a reflection of the snow-covered Indian Peaks danced on the water. This site is making an incredible recovery. It made me realize that these kinds of transformations are only possible with an open space program that has robust community support... along with the life-giving power of 24 growing seasons!

How did this happen? Following the conclusion of the last gravel mining operation in 2004, the department set about reclaiming the southeast portion of the EBC site. With available water, the department created a pond with rich wetlands that has recovered so well it has been designated a critical wildlife habitat in the county.

Then, in 2016, the department completed a massive effort to restore a mile-long stretch of Boulder Creek on the west side of EBC with the U.S. Army Corps of Engineers. This project undid some of the destructive channelizing and straightening of Boulder Creek that had occurred in the past and reconnected the stream with its floodplain to support a much wider riparian and wetland

corridor. What would have taken several decades to recover on its own was repaired more quickly and sustainably by a partnership of department staff, government agencies, contractors, and volunteers.

Through this entire timeframe, our tenants have leased parts of the area for grazing and hay production, thereby keeping this area connected to the agricultural community. This property can serve as reminder of the community effort it has taken to restore the site. Additionally, it prompts us to realize there is more restoration work to be done here.



YOUR TURN TO SHAPE THE FUTURE OF EBC

Your involvement in the planning process will guide how we create public access to the open space while at the same time protecting the natural and agricultural values that the site already contains. Your input will help us tailor our management priorities so we can create a place where the important history and recent stewardship of many people are acknowledged. Look for updates on our website and social media to participate in the planning of this open space. Join the movement at boco.org/eastbouldercreek.



Understanding our Regional and Neighborhood Trail Visitors

By Michelle Marotti

Every year, Boulder County Parks & Open Space (BCPOS) gathers information about how many people visit our trails. Then, to better understand who our visitors are, what activities they enjoy, and their satisfaction with their experiences, we hit the trails and ask visitors to complete surveys. We have done county-wide visitor studies at our parks, regional trails, and neighborhood trails every five years since 1990. We use the information to follow long-term trends and learn how we can continue to improve the experience for you, the visitor.

This marks the first time that surveys at parks (e.g., Caribou Ranch) were done separately from surveys along regional and neighborhood trails (e.g., LoBo Trail). The decision to separate out regional and neighborhood trails was made because these trails differ significantly from parks that have distinct trailheads; they are found in more urban areas that travel through backyards and connect communities. Separating the surveys also allowed us to address questions unique to these trails, exclude questions that do not apply, and observe the differences from parks in visitation trends and visitor demographics. The results from the Regional and Neighborhood Trails study covers information gathered at three regional and three neighborhood trails, as well as comparisons to the surveys collected in 2021 during the Five Year Visitor Study at parks.



KEY FINDINGS

During the spring and summer of 2022, a visitor study intern collected 942 surveys (response rate 52%) at the following trails:

Coal Creek Trail, LoBo Trail, Rock Creek Trail, Twin Lakes, Niwot Trails, and the Boulder Canyon Trail.

Visitors tend to visit alone (55%) or with family (31%). They generally visit the trail more than once a week (45%) or weekly (17%). Only 13% of visitors reported that it was their first time at that trail.

Visitors were primarily biking (42%) or hiking (27%). Moreover, the average visitor did not experience conflict with other visitors on the trail (93%), and seven out of 10 visitors did not feel crowded while on the trail. On a scale of 1 (poor) to 10 (excellent), visitors rated BCPOS neighborhood and regional trails an average of 8.9, which is slightly lower than the ratings for park properties from 2021's Five Year Visitor Study rating of 9.0.

In reference to the park they were visiting, 66% of visitors described the number of trail miles as being about right. Lastly, 85% of visitors reported they prefer crushed rock over concrete for the trail surface, and slightly more visitors reported a preference for the edges of the trail to be mowed (40%) than not (34%).

FUTURE MANAGEMENT

These surveys confirmed differences in visitation trends and visitor demographics when comparing parks with the regional and neighborhood trails. For example, visitors to regional and neighborhood trails are much more likely to use human-powered transportation, with 68% of visitors hiking, biking, and running to get to trails compared to 12% at parks. They are also more likely to visit frequently, with 74% of visitors going monthly, weekly, or more than once a week compared to 45% of visitors at parks in 2021.

The information and opinions gathered from visitors in these surveys are used in conjunction with other visitor studies to better manage the land and address community preferences. These surveys provide a snapshot of who our visitors are at various trails, which helps us to update and create management plans.

Input from our visitors helps us understand what our visitors value. It also helps us respond to requests for specific amenities, trails, and types of land management.

The next time you are on a trail and see someone handing out surveys, we hope you will take the time to stop and fill one out. The input you provide can have an impact on the decisions that managers make for the future of your open space!

Read the entire “Regional and Neighborhood Trail Visitor Study” at boco.org/research.



RESEARCH ON OPEN SPACE

The Boulder County Parks and 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 2022 study conducted by Rick A. Adams at University of Northern Colorado. The project was a survey of bats at Hall Ranch, Heil Valley Ranch, Twin Lakes, and Walden Ponds Wildlife Habitat.

ABSTRACT

In 2022, major emphasis was placed on a survey of Corona Hill at Hall Ranch. This area showed high bat activity and high propensity for bats roosting in quarried areas, especially the small-footed myotis (*M. ciliolabrum*) and the fringed myotis (*M. thysanodes*). In addition, the active prairie dog colony on site was the most active foraging area, however this was driven primarily by *M. ciliolabrum* which appears to have a unique relationship with prairie dog colonies. The *M. thysanodes* maternity colony located in Geer Canyon continued to be active and productive in 2022 despite the severely burned stands most proximate to their roost site. Plumely Canyon also was highly active with bats despite the severity of burn throughout the area. Ingersol Quarry was highly active in 2022 and continues to be an important drinking and foraging site, especially for myotis species, including

M. ciliolabrum winter activity indicating over-wintering in rocks at the site. At the eastern property of Twin Lakes tricolored bats (*P. subflavus*) continued to increase, whereas at Walden Ponds, number of passes per night decreased from 2020 to 2021 but rebounded somewhat in 2022. The Left Hand Canyon elevational transect begun in 2021 and also showed high activity at middle and highest elevation near Brainard Lakes in fall 2022. High-elevation building sites, Rocky Mountain Mammoth, Cardinal Mill, and Blue Jay Mine showed continued high activity in 2022 and showed clear indication of large maternity colonies for little brown myotis (*M. lucifugus*) and long-legged myotis (*M. volans*).

If you want to read the full report, or other funded research, visit the department’s website at boco.org/research.

SCAN HERE



TO LEARN MORE

Moth Mania

by Ann Cooper

Butterflies are easy to admire and love. They are brightly colored, harmless, fly by day, and catch the eye as they flit from flower to flower. Lovely! But moths? Aren't they mostly drab night fliers that flutter around campfire lights, get in your face as you sit outdoors, and come indoors to devour your stored wool sweaters? Staying close to home during the pandemic, enjoying small local wildlife changed my thinking about moths and spawned a new hobby—or mania—I call it “mothing.”

Moths and butterflies belong in the same insect ‘Order’—Lepidoptera—which means “scaled wings.” The scales are modified hairs and are responsible for insects’ coloration through pigments and reflective structures. Adults of all moths (and butterflies, as well) have the typical insect body parts: paired feelers (antennae) and straw-like feeding tubes (proboscises) on the head that curl up when not in use; two pairs of scale-covered wings and three pairs of legs on the thorax (mid-section); and long, fleshy abdomens.

All lepidopterans follow similar life cycles. Eggs hatch into tiny caterpillars (eating machines) that grow and shed through several stages (instars) until they are ready to pupate. They shed their tight casings (exoskeletons) each time they have a growth spurt—think kids outgrowing tight T-shirts! Finally, they hatch from the pupae as flying adults, the final, finished product.

Butterflies and moths are not always easy to tell apart. Field clues can be iffy. Take these suggestions with the proverbial grain of salt!

Worldwide, there are roughly 10 times more kinds of moths than there are butterflies, and no doubt many more to discover. It would be a tragic loss for species to disappear before we even know of their existence.

Thousands of moth species live in Colorado, from huge to microscopic. A black witch’s wingspan can be greater than 6-inches. Many so-called “micromoths” are measured in mere millimeters. Some moths are brightly colored. Others are drab. Most fly by night, but others fly by day. Many are important plant pollinators. Several species are serious pests of crops and forests. Some appear densely furry. Others have see-through wings. They may hover like hummingbirds, twirl like dancers, or rest almost invisibly in their cryptic splendor. The variety among moths is mind-blowing.

Many moths communicate with pheromones—chemicals released in the air and perceived by other moths. That’s how they find a mate.

A few moth species have ears sensitive to bat echolocation and react to potential bat danger by plummeting to the ground out of harm’s way. Some developed sound-making organs that can startle or warn bats away—or even jam a bat’s sonar to escape becoming prey.

One way to find night-flying moths is to look around lights, especially those having UV wavelengths. (The trait of light seeking is called positive phototaxis.) Why do moths come to lights? There is no generally accepted theory, and not all night-flying moths come to lights anyway. We just notice those that do.

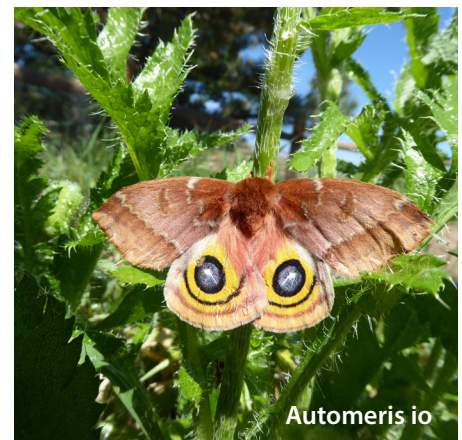
Are moths attracted to the moon as a means of orientation, (anticipating that light means up, dark means ground), and mistake random lights for the moon up in the sky? Is heading upwards (moonward) a tactic to avoid predation as moths migrate? Do moths use the moon and stars in navigation by keeping the light at a constant angle to the eye to keep on track . . . and mistakenly use the same tactic in homing in on random lights? (This might cause a spiraling path in toward a lamp—or

lethally, an open flame.) The jury is still out on the exact “why” of light attraction, but it is worth noting that lights are less effective in attracting moths on full moon nights.

Regardless of why moths fly toward light, it’s evident that those bright gas stations, all night diners, security-lit office complexes, brightly lit homes, ball fields, and the like may well disrupt the normal lives of moths going about moth tasks of eating, pollinating, and mating. It is also evident that there’s much to learn about moths and their lives, and citizen science can be a part of it.

MOTHS VS. BUTTERFLIES

MOTHS	BUTTERFLIES
Fuzzy or feathery antennae	Clubbed or hooked antennae
Active at night (not all)	Fly by day
Rest with wings flat (not all)	Rest with wings held above body, but bask with flat wings
Front and hind wings hook together	Front and hind wings are independent of one another



Automeris io

NATURE DETECTIVES



What's the Big Deal about Pollination?

It is summertime! Something natural and important is happening everywhere ...and you may not even notice. We're talking about pollination and pollinators- big words and a big deal. Pollination affects everyone and everywhere- not just Boulder County, the entire planet!

Pollination is how flowering plants reproduce, spread, and make new seeds and fruit. Plants don't walk around, they're immobile, so many must rely on relationships with helpers in order to reproduce and spread. When pollen is transferred from the male part of a plant to the female part of another plant of the same species, pollination is happening. Pollen is the fertilization agent.

Pollinators: Our Hidden Heroes

Some options for pollination are wind, water, and animals, including insects.

- ★ We focus on insects and birds today. It's estimated that more than 80% of flowering plants use animals (mostly insects!) for pollination. That's a lot of busy bugs; you could think of them as **super heroes!**

Pull Out and Save



So, How Does it Work?

Bright colored flowers from native plants, fruits, vegetables, or trees- with sweet smelling, high-energy nectar attract pollinators. A bee, for example, approaches a flower to eat, look for shelter, nest-building materials, or a mate...whatever they're doing, they may leave with a load of protein-rich pollen- the powdery stuff in the center of the flower.

Pollen is often yellow with sticky teeny barbs to enable it to stay on the pollinator until it goes to the next flower...and the next, and the next, pollinating away. Bees and other insect pollinators prefer yellow pollen as they can't see the color red; birds and butterflies can see the color red; maybe that is why they often prefer flowers with red pollen. There are many colors of pollen in nature. Remember, the plants have learned what colors, smells, and shapes attract just the right kind of pollinator for them.

Who are These Pollinators?

Bees- native, and honey bees are major players in pollination. Native bees pollinate wild plants while honey bees, the bees that live in hives (they are not native) pollinate agricultural crops.

Here's a fascinating fact you can share- There are about 550 species of **native** bees just in Boulder County (over 900 species in Colorado). Imagine how much pollinating that many bees can do!

Bees, beetles, and flies probably move the most pollen because there are so many of them. Other pollinators include butterflies, wasps, moths, hummingbirds, and bats. Each of them has a particular trait that pairs up with specific kinds of plants. Butterflies like big flat showy surfaces to land on- they like wide petal flowers. Hummingbirds like tubular shaped flowers that they can get deep into with their super long bills and tongues. Bats and moths pollinate at night.



Why are Pollinators Important to Me?

Start to get the idea how important pollinators are? If you think insects are yucky and a nuisance, give this some thought. One out of every three bites of food you eat is part of the pollination cycle. WOW- 1 out of 3! Since it is recommended that we get around 5 servings of fruits and veggies a day, you can see we need these insects and other pollinators.

Here is a short list of foods that you might eat (at least a couple of which you probably REALLY like), that rely on pollination. Many of these are grown in Boulder county or nearby, some are grown far away. Many of the vegetables and fruit you might grow in your own family garden are pollinated by insects or birds and are a part of this vital process.

Apple, almond, apricot, avocado (do you like guacamole? It comes from pollinated avocado trees), banana (pollinated at night by bats), blueberries, broccoli, celery, carrot, cucumber, cinnamon, grapes, kiwi, lettuce, lime, onion, oranges, pineapple, potatoes, strawberries, tomatoes, even chocolate!
Plus, **SO** much more.



Would you miss any of these foods if we couldn't eat them? I think we all would!

If that isn't enough, we also know pollinators help create healthy ecosystems by supporting plants that stabilize our soils and help keep our air clean, support wildlife... even our economy!

Bee a friend to pollinators

You might be inspired and excited about this pollination thing by now and wonder what you can do to help these hard-working helpers. Here are some suggestions:

Bee aware: Look around when you're in your garden, yard or in nature. Look for pollination in action. Observe these insects you might not have noticed before.

Bee kind: If you do nothing else, be gentle. All sorts of insects are doing beneficial work. Leave them alone or watch from a safe distance- for you and for them. Appreciate how amazing they really are.

Bee a friend to pollinators: You can plant flowers, herbs or vegetables (even just a pot or two- as big a pot as you can get) and tend to it throughout the summer. Plant native milkweed and see if you get Monarch butterflies in your garden! Let your garden be a little messy- it mimics nature, giving shelter to caterpillars, larvae, insects, and birds. These creatures are all happiest in wild places. You can put out a small tray with pebbles and just enough water to cover them. This provides water for bees and other insects- just remember to change it often.



See Pollinators in Action

Plants and pollinators work together to create pollination. If you read the last edition of Nature Detectives, you understand that native plants and animals that have evolved together for many generations know how to interact and support each other. . . they understand each other and are stronger together.

Here are suggestions for nearby places where you can really see pollination happening. Make it a family field trip and **bee prepped**-- sunscreen, hat, water, maybe a snack, your nature journal or notebook and a pen and/or markers for recording and drawing pollinators. If you have a camera, you can snap pics of your favorites; binoculars might be fun too.

- Any Boulder County Parks and Open Space Trails
- Longmont: native plant demonstration gardens at the Boulder County Fairgrounds
- Golden Ponds: the trails along the river and ponds are full of insects right now!
- Lyons: Rocky Mountain Botanic Gardens (rmbg.org)
- Boulder: Tierra Canta garden at 19th and Grove streets
- Westminster: Butterfly Pavilion- a great place to get buggy! (butterflies.org)
- Loveland: High Plains demonstration garden (suburbitat.org)



ACTIVITY: Pollinator Patrol

Choose any place on the previous page or wherever you find native plants or gardens-including yours. Let's get our science on!

Choose a small area to observe extensively.

What are the most prominent kinds of plants you see?

Create a hypothesis- decide if you think you will find more bees, Butterflies, or other insects or birds. Why?
 Count the pollinators (as many as you can keep track!) and record your observations and findings in the chart below.



Date/time: _____ Location: _____ Weather: _____

Hypothesis:

ID	Count:	Total:	Notes:
Bees			
Beatles			
Butterflies			
Birds			
Unidentified species			

Observations/findings: Was your hypothesis correct? Did you learn something new?

Describe or draw the most prominent pollinator you've found today.
 How do you feel about these super-hero pollinators now that you know them better?

How long did you spend outdoors at this activity? Circle your answer

Less than 30 minutes
 1 hour plus

30 minutes to 1 hour
 more than 2 hours

Look at Some Lichens!

by Anna Freundlich

When we go outside, we go to get some exercise, take in the fresh air, and enjoy the nature around us. We often focus on the plants and animals we might see as we are hiking, but what about . . . lichens? That's right, there is more than meets the eye at the Anne U. White Trail!

WHAT IS A LICHEN?

A lichen is unusual in that it is not one organism but several living together in something called a symbiosis. A lichen thallus, or body, consists of at least one fungal partner and a photobiont. The fungal partner(s) will provide support and prevent the lichen from drying out, while the photobiont is the photosynthetic partner that provides food for the lichen.

Lichens are all around us. In this article, I am going to describe the different ways we categorize lichens, tell you about some common species, and tell you where to look to find them on your next hike.

Lichens first can be categorized by size as either microlichens or macrolichens. Microlichens are extremely small and are difficult to differentiate without specialized equipment, like a compound microscope or chemical tests. Macrolichens, on the other hand, are easily visible and can often be identified to genus in the field.



Lichens are also categorized by their growth form. The common forms seen in Colorado are crustose, foliose, and fruticose lichens.

Crustose lichens are microlichens you will notice most often at lower elevations, in dry and exposed areas, and on rocks. These lichens come in a variety of colors and are closely appressed to the surface of the rock and may even look like they are part of the rock. They are extremely difficult to identify, and scientists will often take the lichen, and part of the rock to which its attached, back to the lab to confirm species identifications!

Foliose lichens are macrolichens that have a leafy appearance and often grow along the ground or on tree branches and rock surfaces. Common lichens you could find growing on the ground along the Anne U. White Trail are in the *Peltigera* genus. These lichens, commonly called dog lichens, have distinctive root-like structures called rhizines on their lower surface that (to the imaginative lichenologist) look like dog's teeth!

If you look at tree branches, you may notice *Melanohalea* growing there. The Greek root of this word means dark, which makes sense for this group of dark-brown lichens. On tree bark, you may also see *Parmelia* lichens, often known as shield lichens.

Finally, if you are lucky, you could see *Dermatocarpon* growing on some rocks. *Dermatocarpon* is a genus of foliose lichens that almost look like an ear growing out of the rock. It has a light tan surface and is black on the lower surface.



Some charismatic fruticose lichens you could see on the Anne U. White Trail are *Cladonia* or *Usnea* lichens. *Cladonia* species, also known as pixie cups, will have a leafy-looking base with cuplike or finger-like light green projections. These are most often found on rotting wood along the ground and in damp, shady areas of the trail. *Usnea*, on the other hand, are light green lichens that are hairlike in appearance, which is why they are often called, Old Man's Beard. They can be found on tree branches and are extremely common in Northern Colorado when you get above 10,000 feet elevation. Next time you hike Anne U. White Trail, take some time to slow down and bring a magnifying glass. You may be surprised at what lichens you find!

Calendar of Events

THE YIP ABOUT PRAIRIE DOGS

Saturday, June 10, 1-3 p.m. Near Broomfield.

These fascinating creatures are more than cute little rodents who chew up the grass. This entertaining and lively presentation by volunteer naturalists delves into the ecology, social structure, life cycle, behavior, and language of this keystone species – the pillar of the prairie. Register at boco.org/discover.

THE BEAUTIFUL BUTTERFLIES OF BOULDER COUNTY

Tuesday, June 20, 6:30-7:30 p.m.

Lafayette Public Library, 775 Baseline Rd. Lafayette

Are you curious about butterflies or ever wondered where monarchs go during their incredible migration? 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 basic information on behavior, host plants, identification tips, and more. Register at boco.org/discover.

ASTRONOMY: TURNING SEASONS

Friday, June 23, 8:15-10:30 p.m. Near Lyons.

How does the position of the sun and earth affect our seasons here in Colorado, and why does the weather not match up with the calendar seasons? Join us to learn more about our seasons and the stars in the night sky, followed by stargazing with telescopes provided by the Longmont Astronomical Society. All ages are welcomed. Register at boco.org/discover.

NATURE JOURNALING AT THE PONDS

Saturday, June 24, 10 a.m.- noon. Near Boulder.

Join us for a day at the ponds. We'll use observation, listening, and mindfulness techniques to interact with our natural surroundings, note what we experience, and reflect on how we, too, are natural. Short walk included. Materials available if needed. For ages 10 and older with an accompanying adult. Register at boco.org/discover.

DRAGONS AND DAMSELS AT SANDSTONE RANCH

Saturday, June 24, 10 a.m.-noon.

Sandstone Ranch, 3001 CO HWY 119, Longmont

Have you ever been curious about those colorful gems flying over pond and stream? Join volunteer naturalists to learn about the amazing life of dragonflies and their damselfly cousins! We'll cover their acrobatic flying, huge multi-faceted eyes, convoluted mating schemes, and behavioral quirks. For ages 8 and older with an accompanying adult. Register at boco.org/discover.

WILDFLOWER WEDNESDAY

Wednesday, June 28, 4:30-6:30 p.m. Near Boulder.

Join volunteer naturalists for a wildflower hike in the foothills west of Boulder! We will hike about 1.5 miles through forest and meadows in search of summer wildflowers while enjoying beautiful views of the snowy high country. Register at boco.org/discover.

WILDFLOWERS OF BOULDER COUNTY

Thursday, July 6, 6:30-8 p.m.

Parks & Open Space Building, 5201 St. Vrain Rd. Longmont

Join volunteer naturalists for a slide program to kick off the wildflower season! You'll learn about the diversity of wildflowers in Boulder County from the plains to the alpine, where and when to look for them, and some interesting stories about some of our native plants. Register at boco.org/discover.

SUMMERTIME IN THE FOOTHILLS: FAMILY PROGRAM

Saturday, July 8, 10 a.m.-noon. Near Boulder.

Ever wondered who spends their summers in the foothills besides humans? Learn to be a detective and explore the clues that point us to discover which plants and animals we share these beautiful open spaces with. Ages 6 and up welcomed with an accompanying adult. Register at boco.org/discover.

FLOWERING AT ATTITUDE

Sunday, July 16, 10 a.m.-noon. Near Nederland.

Follow us up the canyon and into the mountains in search of high-altitude bloomers. We will hike in the montane life zone looking for the reds, purples and yellows that come up from the ground. Learn about the special adaptations of these wildflowers and their pollinators that allow them to live in the cooler environments up top. Register at boco.org/discover.

MOTH MONTH CELEBRATION

Wednesday, July 19, 9-11 a.m. Near Boulder.

July is national moth month. Help us celebrate our hero pollinators and learn more about the invaluable service they perform for our ecosystems. Join us for hike in the foothills in search of moths, butterflies, and other pollinators. Register at boco.org/discover.

ASTRONOMY: OUR SOLAR SYSTEM

Friday, July 21, 8:15-10:30 p.m. Near Lyons.

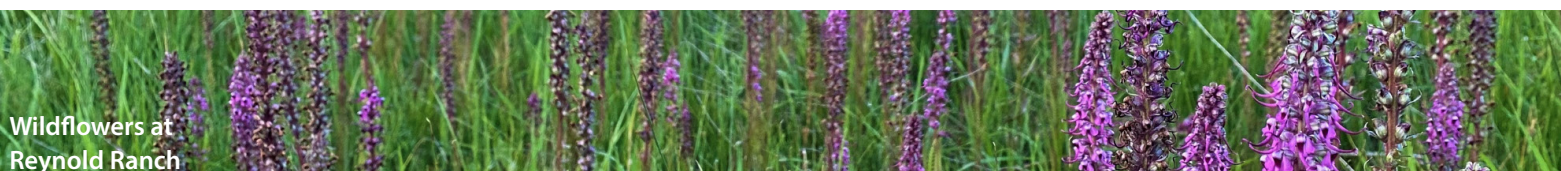
What is the difference between a planet and a dwarf planet or an asteroid and a comet? Join us to learn more about the objects in our own solar system. Followed by stargazing with telescopes provided by the Longmont Astronomical Society. All ages are welcomed. Register at boco.org/discover.

DRAGONFLIES AND DAMSELFIES SLIDESHOW PROGRAM

Saturday, July 22, 2-3:30 p.m.

Superior Community Center, 1500 Coalton Rd. Superior

Have you ever been curious about those colorful gems flying over pond and stream? Join volunteer naturalists to learn about the amazing life of dragonflies and their damselfly cousins! We'll cover their acrobatic flying, huge multi-faceted eyes, convoluted mating schemes, and behavioral quirks. Register at boco.org/discover.



Wildflowers at
Reynold Ranch

Calendar of Events

SUMMER HERITAGE MORNING

Sunday, July 23, 10 a.m.-1 p.m.

Walker Ranch Homestead, 7001 Flagstaff Mountain Road

Talk with costumed volunteers as they demonstrate late 1800s ranch tasks. You will also be invited to do some chores and play historical games. Free and fun for all ages. If you like, bring a picnic (and a blanket)! Registration not required. For more information, call Sheryl Kippen at 303-776-8848 or email skippen@bouldercounty.org.



COBBLES OF TIME

Saturday, July 29, 9 a.m.-1 p.m. Near Nederland.

The story of Glacial Lake Devlin and evidence of its catastrophic demise is a fascinating and little-known chapter in the geologic history of Caribou Ranch. Join volunteer naturalists on this 4.5-mile moderate hike to learn about the evidence firsthand. We will also learn about some of the oldest rocks in the area and the valuable minerals that formed and were mined nearby. Register at boco.org/discover.

I LOVE BUGS!

Thursday, Aug. 3, 6:30-8 p.m.

Parks & Open Space Building, 5201 St. Vrain Rd. Longmont, CO

What are bugs? Some are tiny, others are big. Some are colorful, some fly. Some can sting, and others can jump. Come explore the life of the creepy crawlies. Learn about what makes a bug, a bug, and the different types of insects that live in Boulder County. Ages 10 and up welcomed with an accompanying adult. Register at boco.org/discover.

INVASIVES: THE NOXIOUS WEEDS OF BOULDER COUNTY

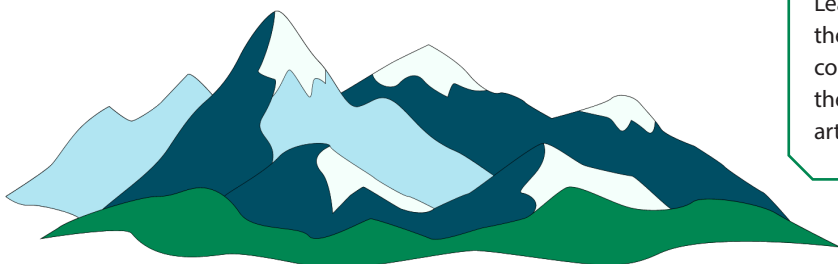
Saturday, Aug. 5, 9-11 a.m. Near Longmont.

Myrtle spurge, purple loosestrife, and orange hawkweed are some of the county's most wanted. Join volunteer naturalists on a short hike and explore the world of noxious weeds and which ones can be found across Boulder County's open space, roadways, and backyards. Learn identification tips and tricks and how different species are managed on a large and small scale and what you can do to help. Register at boco.org/discover.

SUMMERTIME IN THE HIGH COUNTRY

Tuesday, Aug. 15, 9-11 a.m. Near Nederland.

Join volunteer naturalists for a fun hike in the high country. We'll enjoy the summertime weather among the pines. Experience amazing vistas and fresh air of the montane. Learn about the history, wildflowers, and wildlife in the area. Register at boco.org/discover.



I AM NOT A SAVAGE — LAKOTA PERFORMERS IN EUROPE

Wednesday, Aug. 16, 7-8:30 p.m.

Nederland Mining Museum, 200 N. Bridge St., Nederland

In the latter 19th and early 20th century, U.S. government policy was aimed at eliminating the Lakota Indian culture. The concept was "kill the Indian, save the man." Wild West shows like that of Buffalo Bill offered an alternative way, where Lakota could show off and preserve their culture, demonstrating that it was valid, and they were not "savages." This presentation will examine that culture, the lives of those who performed, and the impacts of their performances. Registration required at boco.org/discover

SUMMERTIME BIRDS

Sunday, Aug. 20, 8-10:30 a.m. Near Boulder.

As summer heats up, birds are highly active, feeding, and fledging young, defending territories, and avoiding predators. Join Naturalists on a slow-paced, easy walk in Boulder County to explore bird behavior, wetlands, and a variety of wildlife. Register at boco.org/discover.

ASTRONOMY: BLUE MOON

Friday, Aug. 25, 8-10:30 p.m. Near Lyons.

Explore more about the many faces of the brightest item in our night sky, the moon. Learn why there are phases of the moon, what a Blue Moon is, and more! Join us afterward for stargazing with telescopes provided by the Longmont Astronomical Society. All ages are welcomed. Register at boco.org/discover.

FIRE ECOLOGY HIKE: THE STORY OF THE CAL-WOOD FIRE

Sunday, Aug. 27, 10 a.m-noon. Near Boulder.

Take a hike with volunteer naturalists through the burn scar from the 2020 Cal-Wood Fire. This two-mile moderate hike will lead participants through the landscape, providing opportunities to see the changes two years after Boulder County's largest wildfire. Learn about the impact of the fire on local flora and fauna, the work that led to reopening Heil Valley Ranch, and future mitigation plans for the forest. Register at boco.org/discover.

FULL MOON HIKE: MOON MYTHS

Wednesday, Aug. 30, 7:15-9:30 p.m. Near Broomfield.

The moon has many stories to tell. Come and learn about the beauty that lights up our night skies, the phases, eclipses, and its origin. Listen to the stories and interpretation of its presence from then and now and observe the full moon from the peaceful stillness of open space after dark. Please bring a flashlight or headlamp. Register at boco.org/discover.

James F. Bailey Assay Office Museum

Third Saturday, May through October. 11 a.m.-3 p.m.

6352 Fourmile Canyon Dr. Boulder

Admission: Free. Registration not required.

Learn more about our mining past by visiting the assay office museum! The museum contains many tools and implements used in the assaying process, as well as furniture and artwork owned by the Bailey family.



SUMMER EVENING HIKES

Join volunteer naturalists to hike about one mile round-trip on an easy trail. By starlight, listen for night sounds, and learn about nocturnal habits of the critters that live here. Bring water, closed-toe hiking shoes, and a flashlight. Space is limited. Meeting locations provided to those registered. Register at boco.org/discover.

SUNSET ON THE TRAIL

Friday, June 30, 7:30-9:30 p.m. Near Boulder.

Watch the sunset from one of Boulder County's historic natural areas, and learn about the animals that make their living at dusk.

CREPUSCULAR HUNTERS

Friday, July 14, 7:30-9:30 p.m. Near Lyons.

Mountain Lions, red foxes, and coyotes all shine in the twilight moments of every day. Come learn with us about these animals and their hunting practices.

DARK SKY PREDATORS - BATS

Saturday, August 12, 7:30-10 p.m. Near Boulder.

Bats play an essential role in many ecosystems and for the humans that share their home. Come with us as we look for the leather-winged flyers that fill up the night sky.

HIKES FOR SENIORS

Join volunteer naturalists for hikes around the county to explore and learn about the unique geology, history, plants, and wildlife of these beautiful properties. Register at boco.org/discover

BEAVER WALK AND TALK

Thursday, June 22, 9-11 a.m. Near Longmont.

Learn all about beavers and how they interact with their environment. We will look at evidence of their impact and keep our eyes peeled for a guest appearance of these amazing mammals.

HISTORY AND WILDFLOWERS

Thursday, July 27, 9-11 a.m. Near Nederland.

Join us for a hike to learn about wildflowers and history. Along our hike we will stop to chat about the wildflowers we find and share information about homesteading and mining in the area.

A CHANGED LANDSCAPE

Friday, August 18, 9-11 a.m. Near Boulder.

Join us for a general nature hike. We will use our senses to experience our environment. We will also explore how fire changes our landscapes over time. Expect uneven terrain and approximately 200 feet of elevation gain.

MINING PROGRAMS

GOLD PANNING

Sunday, June 18, noon-2 p.m.

Saturday, July 1, noon-2 p.m.

Sunday, August 22, noon-2 p.m.

Nederland Mining Museum 200 N. Bridge Street, Nederland

Try your hand at gold panning! This activity led to the European settlement of Boulder County as people sought their fortunes. Do you have what it takes to travel back in time and search for gold? Programs are open to ages 5 and older. Register at boco.org/discover

HARD ROCK MINING VAN TOURS

Thursday, July 13, August 24, and August 31, 9:30 a.m.-1 p.m.

Nederland Mining Museum 200 N. Bridge Street, Nederland

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 accompanying adult. Some walking required. Register at boco.org/discover

ALTONA SCHOOL OPEN HOUSES

Sunday: June 11, July 9, and August 13, 11 a.m.-2 p.m.

Altona Schoolhouse at Heil Valley Ranch Open Space (park at the Corral Trailhead at Heil Valley Ranch and hike 10 minutes on Schoolhouse Loop to the Altona School)

Drop by anytime during the open house to go inside the historic schoolhouse where students studied and played from 1880 to the World War II era. Volunteers will be on hand to share the school's history and restoration with visitors. If time allows, you can take part in a game or spelling bee.

Nederland Mining Museum

Open Fridays, Saturdays, and Sundays, June 2-Oct. 29. 11 a.m.-5 p.m.

200 N. Bridge Street Nederland

Admission: Free. Registration not required.

Visit the Nederland Mining Museum and get a glimpse into the world of hard-rock mining days in Boulder County during the late 19th and early 20th centuries. Learn about the lives of the miners of yesteryear and see the various "tools of the trade," including indoor and outdoor displays of trams, ore carts, engines, historic photographs, and rare mining claim maps.



ALL PROGRAMS:

All ages welcome unless otherwise noted. Children must be accompanied by an adult. Locations given upon registration if not listed. NO PETS, PLEASE! Be prepared for cool to high temperatures and afternoon thunderstorms. Bring water, dress in layers, and wear appropriate shoes. For information about these programs or to arrange a private program, please call 303-678-6214.

AGRICULTURAL HERITAGE CENTER

8348 Ute Highway 66, Longmont

FUN ON THE FARM

Friday, June 16, Horsing Around

Friday, July 14, Chicken Scratch

Friday, August 11, Cow A Palooza

9:45 a.m. – 10:30 a.m.

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. Registration not required.

HAMMERING ON THE FARM

Friday, June 9, July 7, and July 28, 10 a.m.-noon.

Drop by anytime from 10 a.m. to noon to watch the blacksmith work his craft. Listen to the clang-clang-clang of the hammer and the hum of the coal forge blower. Learn about blacksmithing tools, such as hammers, tongs, anvil, swage blocks, and more. Registration not required.

YOGA ON THE FARM

Friday, June 9, July 7, and August 4, 9-10 a.m.

Join Andrea Van Sambeek (certified yoga instructor) for a gentle yoga class and take in the views from your mat. Pause, breathe, and revitalize in this idyllic setting. After connecting with breath and movement, stay to explore all the Agricultural Heritage Center has to offer. Please bring your own yoga mat. All levels are welcome! Ages 12 and up. Register at boco.org/discover

AGRICULTURAL HERITAGE CENTER DETAILS

Hours: April-October, Friday, Saturday, and Sunday. 10 a.m.-5 p.m.

Admission: Free

Tours are offered on open days at 11 a.m. No registration required

The farm includes two barns with interactive exhibits, a milk house, heirloom garden, and a furnished 1909 farmhouse. During the busy season there are also animals on site, including chickens, pigs, sheep, and other critters. For additional information visit boco.org/ahc

BARNYARD CRITTER DAY

Sunday June 25, 10 a.m.-3 p.m.

Agricultural Heritage Center, 8348 Ute Highway 66, Longmont

Learn about the roles of chickens, pigs, horses, and other animals on a farm. See demonstrations of various farm animals and participate in hands-on activities. Please leave pets at home so working animals will not be disturbed. For more information, call 303-776-8688 or email jdrew@bouldercounty.org.



agriCULTURE

Installation runs May through August 31.

Agricultural Heritage Center, 8348 Ute Highway 66, Longmont

The Boulder Museum of Contemporary Art and the Longmont Museum are proud to present agriCULTURE, an experimental collaborative exhibition created by more than 15 local and national artists/collectives and farmers throughout Boulder County, including three site-specific locations.

The installation at the Agricultural Heritage Center features artist Amanda McCavour's "Ode to a Prairie (Part 2)." Long fabric panels host embroidered plants that are primarily native plants and grasses, but also include crested wheatgrass – a non-native that was planted for agriculture historically. The fabric panels that hang from the barn emphasize the verticality of the space and the way that air moves through the interior – the panels twist and turn like flowers swaying in a summer's breeze. Visit agriculture.stgry.app for more information.



CATFISH NIGHTS

Friday, June 16 and July 28, 7:30 -11 p.m.

Stearns Lake at Carolyn Holmberg Preserve

Bring your family and friends and enjoy 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 call Dave Hoerath at 303-678-6204.

Event will not be canceled due to weather. Registration not required.

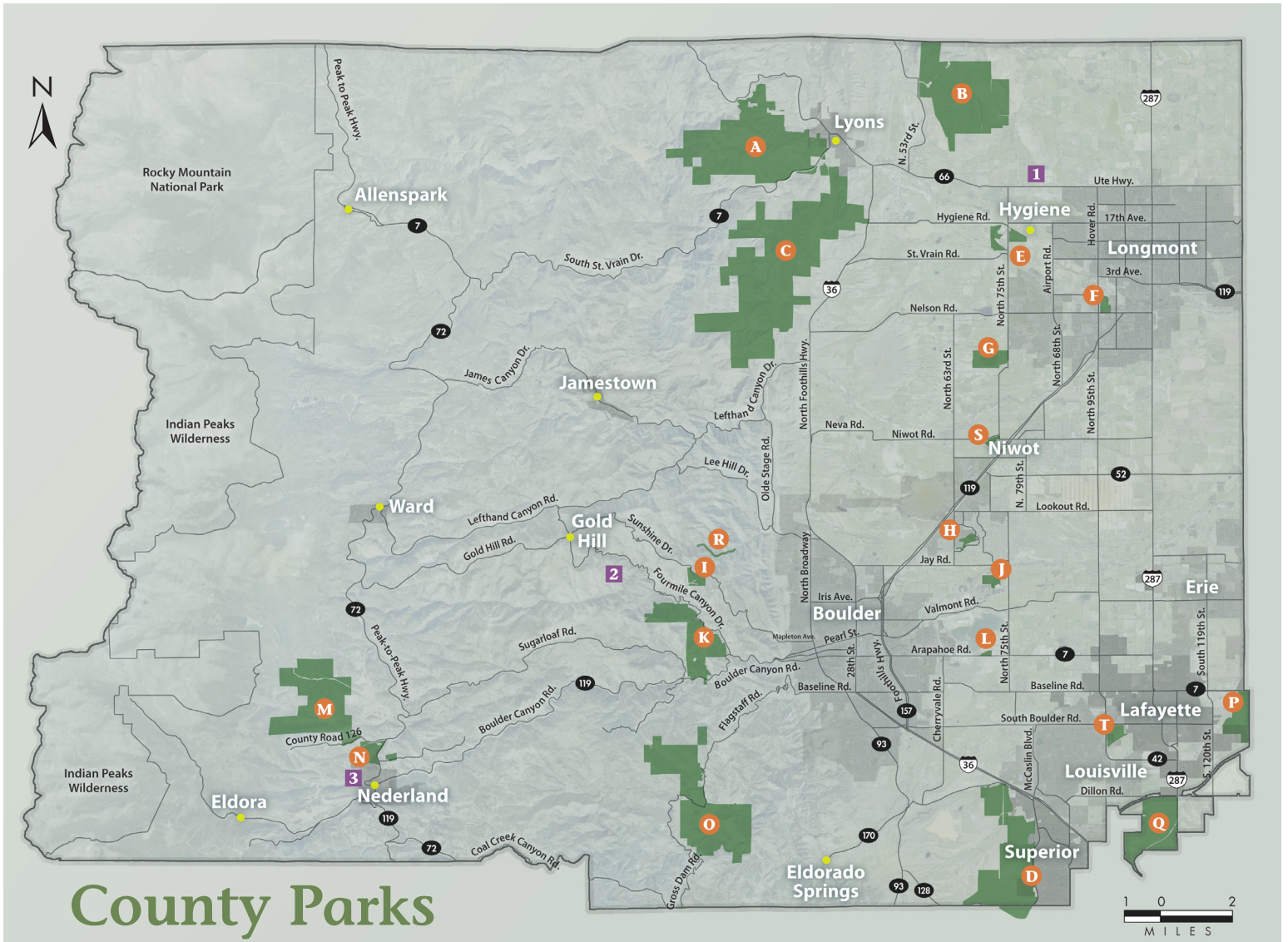




Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503

www.BoulderCountyOpenSpace.org



County Parks

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