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OF BOULDER COUNTY PARKS AND OPEN SPACE



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Images

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

COVER PHOTO: Marmots on Boulder County open space. Photo by Susan Spaulding.

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10 Years of History at the Agricultural Heritage Center

by Jim Drew

When the Agricultural Heritage Center at the Lohr/McIntosh Farm (AHC) opened its gates 10 years ago, visitors could saunter through the period-furnished 1909 farmhouse, see where the Lohrs extended their garage to accommodate larger cars in the 1940s, gaze at the dilapidated 1881 barn that many consider a Hwy 66 landmark, and walk inside a big, empty red barn. A lot has changed in 10 years.

A Legacy to the Community

During the last decade of his life, Neil “Shorty” Lohr looked out to the development of the land south and east of Lake McIntosh and called it “the encroachment of the tenements.” Shorty was a lifelong bachelor and 85 years old when both developers and Boulder County showed interest in his farm, which sat adjacent to the lake. His grandfather, George McIntosh, homesteaded 160 acres of that farm back in 1868. Shorty was born in the house across the dirt road (now Highway 66) and his parents built the white farmhouse when he was nine years old. He chose to sell his property to Boulder County Parks and Open Space in what would be called the Longmont-Hygiene buffer. This action started what would become 265 acres of protected agricultural land that includes his family homestead as well as land parcels from his neighbors. Upon his death in 1991, Shorty gave \$250,000 to Parks and Open Space to set up an education center. In response to why he chose to sell his family farm to Boulder County, he commented that “someday, everyone will have a nice big house, but an empty belly because all the farms will be gone.” Shorty’s love of the land, interest in helping children, and desire to preserve and share his family’s land (along with its 100 mile view of the Front Range) is his legacy to this community.

Ten Years of Big Changes

You may have noticed changes and growth at the AHC over the past 10 years. The dilapidated bank barn built by George McIntosh was fully restored and opened, the Stroh-Dickens’ barn was furnished with hands-on exhibits about local history and farming and historic buildings were repurposed for a honey house, blacksmith shop, and a feed and tack shed. Historically accurate buildings such as the smokehouse, pole barn, milk house, modern outhouses, and heirloom garden have been constructed with reclaimed materials. Live-stock pens and a coop were built to house chickens, goats, sheep, horses, donkeys, and pigs.

Have you ever driven by the AHC and asked yourself, “I wonder who owns those cows?” The historic site is 10 acres, including a four-acre demonstration field, but the rest of the property is leased out to a local family that has been farming in Boulder County for four generations. You will see their cattle grazing upon the grasses around the lake or you may be lucky enough to see farmers cutting and baling hay or doing a horseback cattle drive.

The City of Longmont and Boulder County teamed up to provide trail access to Lake McIntosh from the Agricultural Heritage Center. The natural

spaces around the lake provide an ideal setting to spot waterfowl, migrating birds, prairie dogs, birds of prey, the occasional coyote and of course, cows in the pasture.

Boulder County Youth Corps built trails and livestock pens, maintained the grounds and even did a little field crop management (weeding and watering) for a summer.

The big red barn was built by Williams Dickens back in 1900 near the intersection of 17th Avenue and Hover Street in Longmont. The Federal Aviation Administration purchased the property where the barn sat back in the early 1960s and the barn remained until 1997, when the FAA decided to expand its operations. Boulder County and the FAA came to an agreement to move the barn to what would become the AHC. The opportunity to acquire this barn served as a catalyst to create an education center based on Boulder County's agricultural history. Today, the Stroh-Dickens' Barn houses several hands-on exhibits and the north wing has classroom and rotating exhibit space.

A Learning Experience

The creation of the Agricultural Heritage Center came as a response to the rapid residential and commercial development of the area. As many family farms disappear and professions move into business parks, the growing population of the area has less opportunity to interact with farms. Many children don't have "a friend's farm" to visit and have a difficult time connecting plants and livestock to the food that they eat.

School children visit the AHC every spring and fall to learn about local and state history, as well as farming. They learn about water on the Front Range, where organic fertilizer comes from, how people lived in the 1910s and get up close and personal with livestock. Younger classes not yet studying history come out to see the different animals, look at the big machines, and simply play outside in a safe place.

In addition to leading school programs, dedicated volunteers and staff feed livestock twice a day, water our infant heirloom apple orchard and garden, clean livestock pens and exhibits, research and catalog artifacts, and even restore old farm machinery. As we continue to grow, we will focus more on food produc-

tion and preservation with our new volunteer-managed bee hives, and smokehouse, canning, and producing our own crops using historical methods in the four-acre demonstration field.

A Peaceful Respite

People come out to the AHC for more reasons than just learning history. Some come to share stories with their grandchildren about growing up on a farm, while some appreciate the calm farm setting. Others paint and photograph the historic buildings and expansive views of the Front Range. Parents bring their children weekend after weekend to teach them about treating animals with respect, watch food grow in the garden, and let them know that getting a little dirty while playing is okay.

The Next Ten Years

The Agricultural Heritage Center completed much of its physical growth over the past 10 years. The next 10 years look ripe to grow as a community center, inviting more participation and collaboration with schools, families, and community groups and programs. If you have never been out to the Agricultural Heritage Center, or if it has been a while, please come out and say hello. If you like it, please tell your friends and if you *love* it, please consider volunteering with us!

Annual Special Events

We hold two special events each year at the Agricultural Heritage Center:

- Crafts and Trades of Olden Days in May
- Barnyard Critter Day in June.

These events highlight old time crafts and skills through demonstration and participation, and how livestock are important parts of life on the farm.



- A school group enjoys a tour of the Agricultural Heritage Center in Longmont.
- During Crafts and Trades of Olden days, a visitor gets hands-on experience learning to spin wool.

Whistle Pigs and Rock Rabbits

by Francesca Giongo

These are the colorful names the yellow-bellied marmot and the pika sometimes go by. Both are diurnal mammals that live up in the mountains and have several characteristics in common. They are both very vocal, more likely seen on rock outcrops, and are herbivores.

The yellow-bellied marmot (*Marmota flaviventris*) is a large ground squirrel, about the size of a house cat. Adults are about 19-26 inches long and weigh up to 11 pounds. They live in steppes, meadows, rocky fields and other open habitats typically above 6,500 feet. Most of their life is spent in burrows with several entrances constantly kept clean of debris. Burrows usually are over three feet deep, and hibernating burrows can be up to 20 feet deep. Marmots use rocky areas near their burrows for sunning and spotting predators. When a marmot sees a predator, it whistles, chucks, and trills to warn the others.

Fun facts: Like rabbits, after eating, pikas produce soft green feces, which they eat again to extract further nutrition, before producing the final, solid, fecal pellets. Unlike rabbits, they have fur on the soles of their feet, a nonskid device for rocky surfaces.

All species of marmots are social, and the yellow-bellied marmot is one of the most social species. They live in colonies made up of a dominant male, his two to three female mates, and their offspring. Each female has three to eight babies, and the babies are all raised together. Young males are driven out by the adults at about one year of age, whereas about half of the young females do not disperse. When a colony becomes too large (typically over 20), the group splits, and a solitary male takes over the new family group.

Marmots are true hibernators, lowering their body temperature from 104 to about 38 degrees F and their heart rate from 105 to just four beats per minute during the winter. In the summer they accumulate fat reserves equal to about 20 percent of their weight. Half of this summer weight is lost during hibernation; individuals with insufficient fat, or a burrow too shallow to prevent freezing, will not survive to the spring. They may sleep up to nine months out of the year, depending on elevation. During this time, they awaken every week or so to eat small quantities of stored food and then go back to sleep.

Car Vandals!

Since the 1980s, yellow-bellied marmots in the Sierras have developed the habit of eating radiator hoses of cars parked at trailheads. They might like the sweet taste of the antifreeze, or they

are attracted to the warmth of the car engines. This has negative consequences for all parties involved. Antifreeze contains ethylene glycol and it is toxic to the marmots. Backpackers return from days on the trail only to find that their cars have to be towed many miles down backcountry roads. The savvy among them now surround their cars with wire mesh before setting out. Do not worry, you will not have to take that precaution if you visit Caribou Ranch or Meeker during the summer; our marmots have not yet picked up this troublesome habit!

Unlike the marmot, the pika is not a rodent, but belongs to the order *Lagomorpha* which includes rabbits and hares. The pika is a small mammal, about the size of a guinea pig, and weighs only six to nine ounces. It has short limbs, rounded ears, and no tail. The American pika (*Ochotona princeps*) is found in the mountains of western North America, usually in boulder fields at or above the tree line.

Pikas do not hibernate, so they rely on collected hay for food and bedding. In preparation for winter, they gather fresh grasses and lay them in stacks to dry under overhanging rocks and underground. These hay piles can be up to three feet in diameter. If their food supplies get low during winter, they search either for lichens or cushion plants, which can be accessed by their underground tunnels.

A Chatty Bunch

Like marmots, pikas are very vocal, and are more often heard than seen. They use both calls and songs to communicate among themselves. A call is used to warn when a predator is lurking near, and a song is used during the breeding season (males only), and during autumn (both males and females).

American pikas are territorial and will guard their area from others.

In 2010, the U.S. government considered, but decided not to add the American pika under the U.S. Endangered Species Act. Recent studies suggest some populations are declining, mostly due to global warming. As they live in the high and cooler mountain regions, they are very sensitive to high temperatures. American pikas cannot easily migrate in response to climate change; they already live at the top of the mountains!



The pika (top) is a small mammal, about the size of a guinea pig, and weighs 6-9 ounces.

Adult marmots are 19-26 inches long and weigh up to 11 pounds.

Wildfire Protection Plan for Boulder County

In July 1989, the Black Tiger Fire destroyed 44 homes within six hours of ignition. With damages of \$10 million, it was the most destructive fire in Colorado history at the time.

Following the Black Tiger Fire, new policies and programs were adopted to help prevent the negative impacts from future fires. Over the next 20 years, Boulder County experienced many wildfires. However, none of these fires caused the level of damage of the Black Tiger.

This period of relative calm ended last year on September 6, 2010. The Fourmile Fire destroyed 169 homes, burned 6,181 acres, and caused \$217 million worth of damage. Once again, the most destructive fire in Colorado history is located in Boulder County.

What can be done to help prevent future wildfires from producing the levels of destruction associated with the Black Tiger and Fourmile Fires?

Boulder County is in the process of developing a Community Wildfire Protection Plan (CWPP) to answer this question. This plan will contain recommendations for policies, programs, and projects to mitigate the risk from future wildfire. It will be completed by September 30, 2011.

In addition to this plan, the Boulder County Commissioners will declare October as Wildfire Awareness Month. This initiative is based on a recommendation from the Public Advisory Team of the Boulder County Community Wildfire Protection Plan. A number of events are being planned to engage residents and empower communities.

In October, individuals will be encouraged to take action to protect their own homes and come together to mitigate the risk facing their neighborhoods. Planned events include community chipping days, volunteer projects, a poster contest, tours, keynote lectures, raffles, training, school visits, workshops, and the launching of the countywide Community Wildfire Protection Plan.

Expected partners include fire protection districts, wildfire mitigation contractors, the Colorado State Forest Service, the U.S. Forest Service, the City of Boulder, the University of Colorado, the Boulder County Sheriff's Office, and the Boulder County Land Use and Parks and Open Space Departments.

You can find more information about the events and activities taking place during Wildfire Awareness Month at www.bouldercountycwpp.org.

View Wildfire Videos

Interns from the University of Colorado's School of Journalism produced several videos about the Fourmile Fire, other historical fires in Boulder County, and wildfire mitigation and preparedness. Everyone who is interested in wildfire protection should watch these videos and see what residents have learned about living in the wildland-urban interface.

These videos can be viewed at <http://www.youtube.com/user/BoulderCounty#g/c/466B051AC3E3C8BE>



Billows of smoke from the Fourmile Canyon Fire

Get Involved: Wildland Fire Prevention Month

Volunteer with Boulder County Parks and Open Space on projects that further our efforts to reduce risks of wildland fires.

There are two forestry projects at Reynolds Ranch on October 8 and October 15.

Boulder County staff have mechanically thinned forests and built slash piles at many of our forested properties. These efforts improve wildlife habitat, decrease fire danger, and enhance meadow ecosystems. The slash piles were burned and now we must restore leftover scars with native seeds and eradicate any invasive weeds that have moved in. This increases habitat quality, averts soil erosion, and fights invasive weeds.

Both of these projects are located near Nederland and take place from 9:00am until 1:00pm. Minimum age is 10 with adult supervision.

To register:

Visit www.BoulderCountyOpenSpace.org/wildwork or call Erica Christensen at 303-678-6329.

Cropland Policy and Walker Ranch Management Plan Update Underway

by Jesse Rounds



Boulder County Parks and Open Space (BCPOS) manages 24,500 acres of agricultural land, 16,600 of which is managed as cropland or irrigated pastureland. The department is in the middle of a process to develop a cropland policy to guide management of these lands, with the vision to be a national leader in sustainable agriculture. The department's goal is to manage open space agricultural lands to maintain a healthy agricultural economy in the county, while protecting environmental values and supporting the larger community.

Managing cropland owned by BCPOS is a joint effort between local farmers and staff. Parks and Open Space provides land throughout the county with water and infrastructure. Farmers in the program provide years of expertise and a desire to maintain a culture of farming in Boulder County. Whether farmers are growing crops on hundreds of acres or just a few, the Agricultural Resources program supports their efforts to produce food, fiber, and feed in Boulder County.

Developing the Cropland Policy has been divided into three phases: education, development, and public review. The education phase started in early 2010 when we recognized that many people in Boulder County had no idea how the Agricultural Resources program functions and what it does. The development phase started in February 2011 with the creation of the Cropland Policy Advisory Group. The public review phase will begin in the fall of 2011 with the release of a draft policy and public outreach process.

Education

Agriculture is a complicated industry and the farmers leasing land from the county practice many different kinds. Sustainable agriculture exists in a balance between economics, the environment, and the community. While we know to study the environment and to work with farmers to increase profitability, we do not always know how best to work with the community. What role does agriculture play in the lives of the residents of Boulder County? Where does the food we eat come from? What is it that farmers do?

These questions formed the basis for our education program. Since April 2010, Parks and Open Space has held an open house, a Sustainable Agriculture Forum, a Farm and Ranch Panel Discussion, and a series of farm tours. These activities help us reach out the community and show what farming in Boulder County is like. We then hear from the community regarding their interests and ideas.

Whether farmers grow crops on many acres or just a few, the Agricultural Resources program supports their efforts to produce food, fiber, and feed in Boulder County.

Development

To advise us during policy development, we asked the County Commissioners to appoint an advisory group of interested residents. In late 2010 and early 2011 the Commissioners interviewed applicants to the advisory committee and selected nine members to sit on the Cropland Policy Advisory Group (CPAG).

The goal we stated at the beginning of the process was to use the policy to make Boulder County Parks and Open Space a leader in sustainable agriculture. We believe that by working with CPAG and the commissioners, we are well on our way.

The advisory group process is scheduled to last through September 2011. At that point the process will transition to a stage focused on getting public input and preparing for a public hearing with the County Commissioners.

Public Input

CPAG is a small group of residents who work intensely on the Cropland Policy. However, to work well, we recognize we need to hear the concerns of the larger community.

On October 19, we'll host an open house that will close the CPAG process and begin our public review process in earnest. In November we plan to hold a joint session of the Parks and Open Space Advisory Committee and the Food and Agriculture

Policy Council. At the joint session we'll present our proposed draft of the Cropland Policy to the advisory boards and the boards will take comments and questions from the public. At a later date, both boards will have an opportunity to forward their opinion on the policy to the Board of County Commissioners. Depending on the decisions of these two boards, we plan to go before the Board of County Commissioners in December or January. This meeting will be the official public hearing at which the commissioners will hear our proposed policy and then take questions and comments from the public before deciding to approve or deny the Cropland Policy.

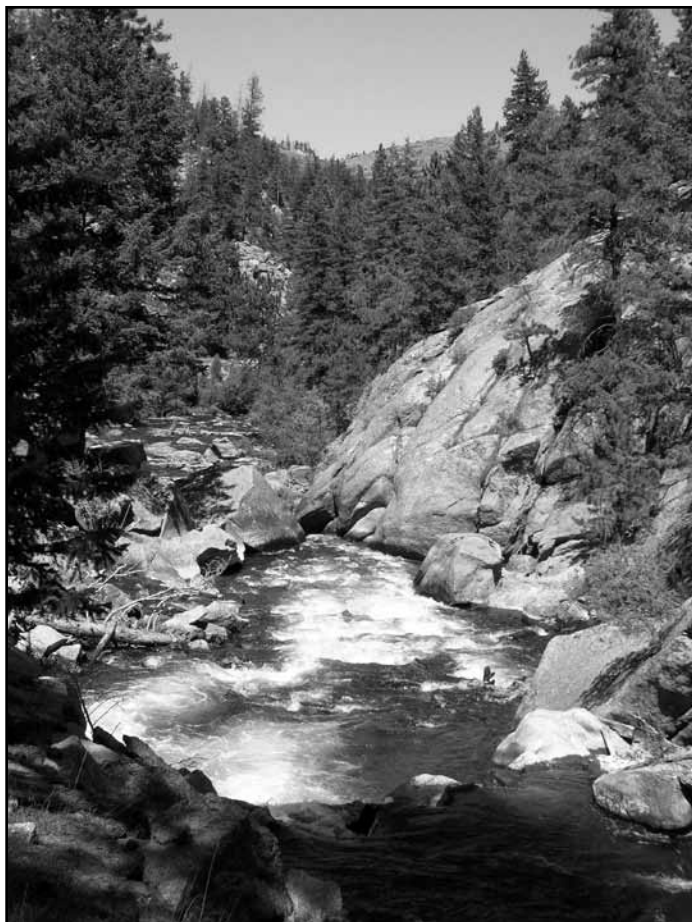
Walker Ranch Management Plan

Just west of Boulder on Flagstaff Road lies Walker Ranch Open Space. With 10 miles of trails and 3,500 acres of open space, Walker Ranch is one of the biggest parks in our system. Walker Ranch was one of the first open space parks in the Boulder County system and is deservedly popular with many users. The park includes trails, great wildlife habitat, access to South Boulder Creek, and a ranch complex listed on the National Register of Historic Places.

The management plan for this property was written in 1985. Many of the goals in that plan have been met and the evolving park itself mean that it is time to update the plan. Since 1985 the park grew by 1,000 acres, a fire affected much of the center of the property, there is now a resident caretaker on the property, and visitation increased. How should these changes affect how we manage the property? How can the property better serve the community?

Luckily for us, we have a great staff of biologists and ecologists who have been studying the plants and wildlife at Walker Ranch for years. We also have wonderful volunteers who have helped gather data about specific bird species and migration on the open space.

With this information and input from the public, we have the opportunity to plan for the next 20 years at Walker Ranch. We can't create a good management plan without the public. Please visit our website, come out to meetings, and submit comments. The next public meeting will take place in September. At that meeting we will present management options for public review and comment.



A view of South Boulder Creek in Walker Ranch Open Space.

Learn More

- For more information about the cropland policy programs please visit <http://www.bouldercounty.org/live/environment/land/pages/croppolicypart.aspx>
- For more information about the Walker Ranch management plan or to sign up for updates, please visit <http://www.bouldercounty.org/live/environment/land/pages/walkerplan.aspx>

Marvelous Mysterious Mushrooms

by Geoff Goss

Mushrooms — perhaps nothing is so steeped in mythology and lore, so simultaneously feared and revered, yet so commonplace. In some parts of the world, families go on mushroom hunts for summer vacation. A little closer to home, many parents teach their children that avoidance is the best policy. For me, this dichotomy of attitudes only adds to the mushroom's allure. My childhood saw them as something for kicking, not picking. But, as usual, my gut got the better of me. I thought "Since I eat store-bought mushrooms, I should learn a little more about them." I now obsess over mushrooms. I have learned through research that, armed with proper knowledge, mushrooms should not be feared. They are fascinating and likely have more benefit to us than we give them credit.

Of the roughly 14,000 scientifically described species of mushroom on the planet, experts estimate about 3,000 are present in Colorado. Some are poisonous, others prized for their edibility. Some are beautiful and exotic, others grotesque. Some mushrooms look so foreign and un-mushroom-like, it begs the question: what makes a mushroom?

The Anatomy of a Mushroom

The word "mushroom" is a catch-all term for the fruiting body of a fungus. The shape, size, color, and texture of each fruiting body can vary. Most, except for truffles, are produced above ground. As a rule, all mushrooms bear spores, which act as the reproductive mechanism for the fungus. The most familiar mushroom to Americans is probably the *Agaricus bisporus*, or the button mushroom. This is the white mushroom found in grocery stores. Interestingly, the button, crimini, and portobello mushrooms are one and the same. The button and crimini are harvested when young — the latter is a darker strain of the species. The portobello is a mature *Agaricus bisporus*. This and all other mushrooms develop from a web of fungal strands called *mycelium*. Some mushrooms grow on stalks while others adhere directly to a host. Many open up like an umbrella to expose an underside with gills (like the button mushroom), pores (like a porcini), or teeth (like a hedgehog mushroom). From the underside emerge spores, which eventually lead to more *mycelium*, which begins the process over again.

Part of what makes mushrooms so interesting is that any generality about mushrooms comes with a caveat. For example, the giant puffball, native to Boulder County, forms without a stalk, so it does not make the classic umbrella shape like other mushrooms. Instead of letting spores fall from its underside, the giant puffball cracks open, letting its trillions of spores escape with the wind. Picture a smoking soccer ball sitting in a field. The spores can cause serious breathing problems if inhaled, but have been used by the Cheyenne Indians as blood-clotting

agents. If found when immature, the giant puffball is edible and has a smooth, creamy texture.

Another county native is the water-measuring earthstar. This mushroom's "legs" open and close based upon the humidity, which raises or lowers the spore-sac, giving the mushroom greater ground-clearance to distribute its spores. The water-measuring earthstar is too tough to eat, but might look good as a garnish...or maybe a Christmas ornament.

Edible or Poisonous

To eat or not to eat? That should NOT be your first question. Whenever there is a choice edible, there is usually a nasty toxic look-alike. Take the previously mentioned *Agaricus bisporus* — most of us are familiar with it. But what about the *Amanita bisporigera*, the destroying angel? This deadly mushroom is regularly mistaken for the benign button mushroom. But do not let this throw you off the idea of mushrooms. Like anything else in the natural world, it is important to learn all you can before venturing off on your own.

Some poisonous mushrooms are beautiful and worth closer examination. The near-mythological *Amanita muscaria*, the fly agaric, is a show-stopper. Often portrayed in popular culture, this mushroom is found worldwide, including in Boulder County. More closely associated with smoking gnomes, caterpillars, and Super Mario, these mushrooms are important in sacred rituals to the native peoples of Siberia. Outside Siberia, they were historically used as a pesticide, sprinkled in milk and placed out to kill flies. Deaths from these mushrooms are rare, but they are better left for flies and gnomes.



Amanita muscaria,
or fly agaric

Hunting Mushrooms

If you can inarguably determine the species of mushroom, should you take it? Not necessarily. On Boulder County Parks and Open Space, it is against regulation to collect anything. If you see a mushroom on open space, admire it, and leave it be. If on Bureau of Land Management or Forest Service land, collecting is usually permitted (check local offices for regulations).

Mushroom hunters, like anglers and the CIA, are notoriously secretive. If someone has a good hunting spot, they likely will keep it hidden. A good way to learn where to go is through clubs. The Colorado Mycological Society hosts forays throughout the warmer months. Not only will you get an idea of a good hunting ground, you will meet great people, too. Slowly, those mysterious mushrooms will become familiar fungi.

Special thanks to Vera Stucky Evenson, M.S., curator of the Denver Botanic Gardens Herbarium of Fungi.

NATURE DETECTIVES

Fall 2011



Milkweed
and Pod
with Seeds



Way to Go, Seeds!

Plants are stuck in one place. A growing plant is held to the ground by its roots and cannot leap, fly, roll away or even hitch a ride.

But, those stuck-in-the-dirt plants make **seeds** that do travel, in an amazing variety of ways. Seeds from different kinds of plants have their own special way of getting about. Some are shaped for jumping, some for rolling or floating, some for flying and some for hitchhiking.

Why Do Seeds Travel?

Seeds travel so they can find room to grow. If every seed sprouted beside its parent plant, crowding would keep most seeds from becoming strong thriving plants. Each seed needs its own space in order to get enough water and sunlight and soil necessary for growth.

End of a Seed's Journey

A seed will sprout when conditions are just right for that particular kind of seed. If the seed lands where there is enough sunlight, moisture and warm earth, perhaps it will start to grow the next day, or maybe not until the next spring or even not for several years. Moth mullein seeds can wait up to 90 years for perfect growing conditions! When a seed ends up in the right spot, it is like a little surprise package. At some point, a baby plant will emerge, unfolding like a tiny gift of nature.

Talk About Travel

People move by walking, jumping, and so forth. Inspired by the many ways seeds travel, inventors designed machines to move humans farther and faster. Challenge yourself or a friend to list all the ways people can travel. Did you think of unicycle or pogo stick? How about somersaulting?



Moth Mullein and Seeds

Seeds Go Far and Wide, All Over the Countryside

Seeds that are good travelers may spread new plants over long distances. You can probably guess one plant that has become widespread around the world.

Here are your clues: The plant has bright yellow flowers. It often grows in lawns, but is tough enough to sprout in sidewalk cracks or rocky paths and in many other places. You might have picked its puffball seed head. If you blew on the delicate, wispy ball at the end of the stem -- poof, seeds floated off in all directions. What plant is it?



Some Seeds Fly in the Wind



Dandelions don't have to depend solely on children to scatter their seeds. If you look closely, you will see each seed has a feathery top that will float like a parachute on the wind. A gentle breeze can lift the seeds across mountains.

Milkweed plants also have seeds with parachute tops to soar in the wind. Have you seen other kinds of plants with similar seeds?

Maple trees have seeds that are tucked into helicopter-type wings.

When a seed falls off the tree, it whirls around in the breeze to land away from the tree that released it.

Maple Seed

Some Seeds Pop

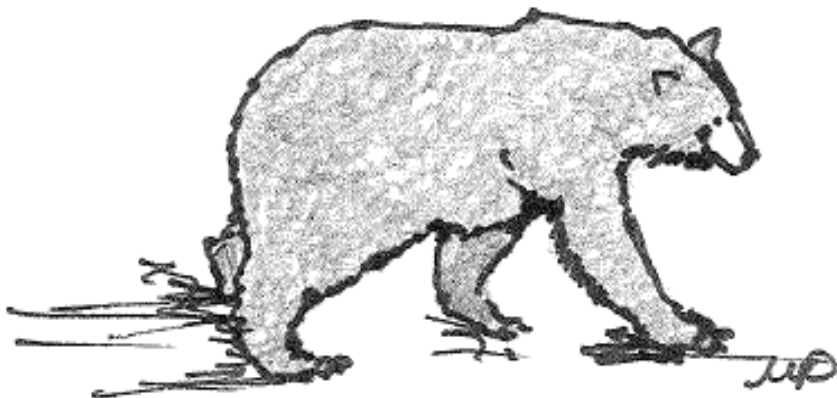
Some seeds grow in pods that act like springs as they dry out in the sun. When the seeds are ripe and ready to travel, the pod cracks open with a pop and the seeds shoot off. It is almost like the seeds are jumping away from the parent plant.

California poppies have pods like this, and if you touch a seed pod that is ready to go, you can hear it pop and watch the teeny seeds leap out.

Some Seeds Simply Drop

Apple trees have seeds that simply drop out of the tree. Of course, those seeds are inside a round-shaped apple that will often roll a little distance.

Can you think of other seeds that drop?





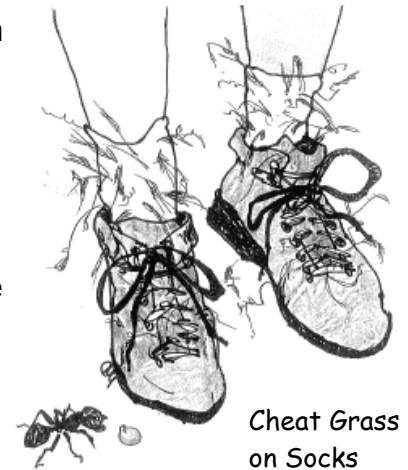
Some Seeds Trick Animals

Sometimes apple seeds are carried far away from the apple tree. Can you guess how?

Apples are one example of seeds that trick animals into carrying them. These seeds are hidden in fruit that tastes good, or is colorful or dangles in plain sight on a tree or bush. Some seeds actually have to go through an animal's digestive system to be ready to sprout. When the animal poops, the seed comes out. The animal waste pushed out with the seed is like a packet of fertilizer to help the seed grow quickly into a hearty plant.

You could say fruit is the payment to an animal for carrying seeds. Some plants trick animals into carrying seeds without giving them a reward. Those seeds stick to fur and feathers. They also stick to socks and shoes and vehicle tires. Cheat grass is an annoying plant with bristly clingy seeds that are hard to get off your socks.

Seeds of yellow violets are adapted to being carried by ants. The seeds have a little knob that makes it easy for the ant to hold on. Clark's nutcrackers are birds that hide thousands of pine tree seeds every fall for eating later. Many other birds and rodents do the same. A few of those seeds not found and eaten will sprout into new trees.



Cheat Grass on Socks

Some Seeds Float Like a Boat

Seeds that are round roll to new places, but round seeds are often good at water travel too. Willows have seeds that can float away to establish new wetland bushes.

Seeds are Good Food

People the world over eat seeds. Often, it is hard to remember that our most common foods are actually seeds. Wheat, oats, rice, corn, peas, beans - even coffee beans - are seeds. Can you think of other seed foods?

Silly riddle: What beans are not seeds and will never grow into plants?
(See page 4 for the answer.)

Seeds are hidden in blueberries, peaches and tomatoes. Where are a strawberry's seeds?

Warning: some seeds are poisonous. Never eat a seed without checking with an adult.



Ants with Violet Seeds



Lima Bean Discovery

Soak a few dry, uncooked lima beans in water overnight. The next day, slip off the outer seed coat and split the bean in half. Can you find the baby plant?

The two halves of the seed nourish the tiny plant as it sprouts.

Outdoor Seed Hunt

Look for as many different kinds of seeds as you can find. Draw a picture of them on a piece of paper or in a journal. Write down what way or ways you think the seeds will travel. Keep in mind that some seeds travel in more than one way.

Nature Detectives Club

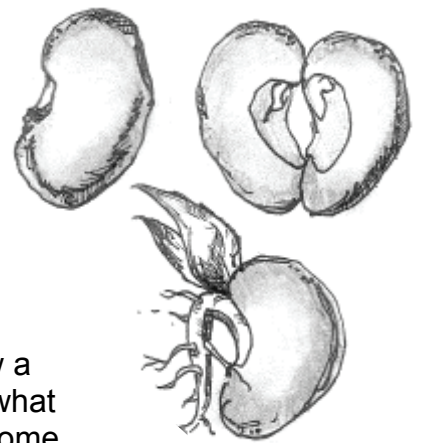
Fall can be an exciting time to explore Boulder County Open Spaces. There will be plenty of seeds to see.

Have you tried the Nature Detectives Club activities?

Look for Club information at:



Walden Ponds Wildlife
Habitat
The Agricultural Heritage
Center
Meyers Homestead at
Walker Ranch
Carolyn Holmberg
Preserve at Rock
Creek Farm
Caribou Ranch
Betasso Preserve
Mud Lake
Heil Valley Ranch – Lichen Loop



Riddle answer : jelly beans

History of Niwot

by Jack Ryan

The year is 1858, and from the eastern United States a group of people come to settle native land. The people are gold miners, arriving for their own share of prosperity, and they are not alone on the Front Range. It is in this year that the miners make first contact with the Arapaho people led by Chief Niwot, forming a relationship that would come to define the land and culture of Niwot, Colorado.

A Place of Beauty

Before 1858, the Arapaho lived in moderate seclusion, hunting and fishing near present day Niwot and wintering in Boulder Valley, as far south as Boulder Creek. To the Arapaho, and especially Chief Niwot, Boulder Valley was a place of extreme beauty. To this day, the Arapaho people still revere Valmont Butte as a sacred place. So when miners, led by Thomas Aikins, first arrived in Boulder Valley and made contact with the Arapaho, Chief Niwot immediately saw them as a threat to the land. Despite his unease, Chief Niwot and his people reacted to the coming of the settlers peaceably, but later asked them to leave. Chief Niwot's greatest concern was that the lands of the Front Range would be destroyed by eastern settlers. "People seeing the beauty of this land will want to stay, and their staying will be its undoing," he said. However, these newcomers were determined. After a hearty feast of canned beans and pork, Niwot struck up a shaky truce with the miners.

However, no matter how good the intentions of the miners, tensions within the tribe rose. Two leading Arapaho, Many Whips and Bear Head, became very uneasy over these new folk. While Niwot was bribed by miners, these other two Arapaho men were striking up a war party to end the tension, riding out only to find Chief Niwot had made peace with the settlers. However, the pacts made by leaders were not quite enough for permanent peace, and the tribe and settlers remained wary of one another. It was the vision of a shaman who ended the tension. He told Niwot that the white men would continue to come, and the only way for the tribe to survive was to be peaceful and not resist the arrival of the settlers. And so they were—the peace allowed for friendship between the settlers of the town and the tribe. The peace did not last long. The decision of one man, Governor John Evans, sent the Arapaho away from their native land to a place in the east called Sand Creek.

The Railroad Fuels Growth

Despite the absence of the tribe, the Town of Niwot continued to grow. The fuel for its prosperity came not from the presence of precious minerals, but

from its very location. In 1875, the Central Colorado Railroad was built. It ran straight through the town just as it does today. For the towns of the late 1800's, the presence of a railroad did wonders for the business of the town. In Niwot, the railroad led to the construction of several general stores, loading docks, feed stores, a depot, and a blacksmith, all west of the tracks. Because of these, the population of settlers also grew on the eastern side of the tracks, and the agricultural industry, transporting local crops to Denver and Cheyenne, flourished. At the start of the 20th century, the business section of the town was moved from the west to the east side of the tracks, where it stands today. The Hinman Ditch, named after town planner Porter Hinman, still runs through the town today.

2nd Avenue - A View to the Past

The town of Niwot in 1915 was much the same as it is today. Now called old town or historic Niwot, many original structures still stand, including the oldest operating Grange in Colorado. Most of the shops and restaurants along 2nd Avenue are housed in the historic buildings, including buildings that used to be the general store and the blacksmith's shop. Boulder County created the Niwot Historic District in 1993.

Not all of the town's historical buildings were entirely saved though. The entire town west of the tracks was razed or moved to make way for the Diagonal Highway in the 1950s.

Niwot is a unique piece of Colorado. The careful preservation of its history offers a view into the life of the settlers of the region, and the hardship and prosperity they experienced in establishing the town. The town itself is a living tribute to its peoples, from the Arapahos who first lived there, to the miners who passed through, to the settlers who built the town itself.



A view of the Niwot railroad station, 1890s. Photo from Carnegie Branch Library for Local History, Boulder Historical Society Collection.

Raptors Rough It in 2011

by Michelle Durant

With the help of 15 volunteers and staff, Boulder County Parks and Open Space confirmed and monitored 17 raptor nest sites this year. Late winter delivered anticipation and climbing temperatures, as bald and golden eagles began incubating eggs. Volunteers patiently observed during the 40 days of incubation, watching pairs engage in the ritual exchange of incubation duties, perform territorial dives, and hunt above the rims and grasslands. Bald eagles built a new nest near Hygiene, and the Keyes North pair started early with their first hatchling in late March. However, balmy temperatures in April came to an abrupt halt with a storm that left Nederland under 14 inches of snow. Boulder County raptors experienced days on end of wind, rain, and cold temperatures, just as the first young were hatching. A cold, wet spring punctuated with high winds may have contributed to a series of nest failures. Hope for a rarely documented Long-eared owl nest on Hall Ranch was blown apart, just like their nest. June proclaimed it was finally summer, hitting 90-degree temperatures in the first week. Bittersweet news filled reports from volunteers and staff, with the

conclusion of three failed golden eagle nests and some newly sighted nestlings. Golden's nest only once each year, and a failure means we hope for better luck in 2012.

"Either this is a well fed, sleepy eaglet or it has recently died and the adults are perplexed, but still somewhat attentive to the nest. This is the kind of situation where I start scanning the slope for a dead eaglet, but there are so many rocky crevices it could be hard to see. Perhaps the Memorial weekend's cold weather was too much. Sad as it may conclude, I'm always very thankful that the mated pair remain healthy." (Observation from volunteer raptor nest monitor Todd VanDyke.)

We thanked our lucky stars for the first observations of fuzzy, white osprey nestlings on a platform at Lagerman Reservoir. Mid-June gave us music to our ears (and pounding in our chests) as prairie falcon nestlings at Hall Ranch and Heil Valley Ranch wobbled their way along cliff ledges, squabbling over prey. July brought reports of baby burrowing owls getting their first glimpse of the world above ground.

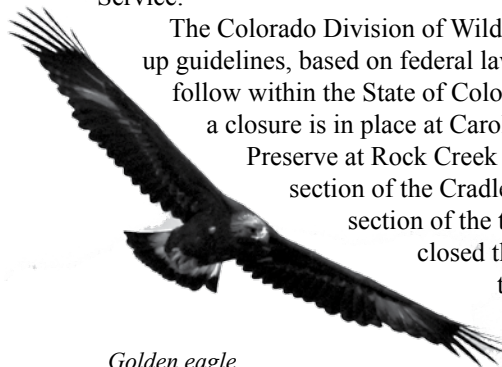
Why Do We Collect This Information?

Boulder County hosts many raptor nests due to its topography and ample open space. We are fortunate in this respect. Many of these species are rare or declining, so it is important that we document the birds' nesting success over time. Our vigilant monitors collect useful information that helps guide management direction on our open space. Their ability to spend many hours monitoring nests provides us with specific information such as arrival dates by adults on their breeding grounds and dates when nestlings hatch, and fledge. If raptors are of interest to you, we prioritize recruitment of volunteers to assist us in our data collection. Spending time with a nest over the entire breeding season allows direct insight into raptor behavior. If you're interested in becoming a raptor volunteer, please call 303-678-6200.

Protection for Raptors

All nesting raptors are protected under the Migratory Bird Treaty Act. Bald and golden eagles are also protected under the Bald and Golden Eagle Protection Act. Both acts are federal protections administered through the U.S. Fish and Wildlife Service.

The Colorado Division of Wildlife (DOW) sets up guidelines, based on federal law, for agencies to follow within the State of Colorado. This year, a closure is in place at Carolyn Holmberg Preserve at Rock Creek Farm along a section of the Cradleboard Trail. This section of the trail will remain closed through Sept. 15, to protect burrowing owls.



Golden eagle

Current raptor nest status:		
Species	Site	# of Fledged Young
Golden Eagle	Wyn / Forsberg	1
Golden Eagle	Heil Valley Ranch	2
Golden Eagle	Heil Valley Ranch	Failed
Golden Eagle	Hall Ranch	Failed
Golden Eagle	Rabbit Mountain	Failed
Bald Eagle	Keyes N./Quicksilver	2
Bald Eagle	Panama Reservoir	2
Bald Eagle	W Mobile (Hygiene)	3
Bald Eagle	Braly	Inactive
Osprey	Lagerman Reservoir	3
Osprey	Fairgrounds	1
Osprey	St. Vrain Road	3
Prairie Falcon	Hall Ranch	4
Prairie Falcon	Heil Valley Ranch	3
Burrowing Owl	Holmberg Preserve at RFC)	6
Burrowing Owl	Holmberg Preserve at RFC)	6
Burrowing Owl	Holmberg Preserve at RFC)	2
Long-eared Owl	Hall Ranch	failed

Discover Boulder County

A CALENDAR OF NATURAL AND CULTURAL HISTORY EVENTS

Rattlesnake Hike

Thursday, September 8; 6:00pm to 7:30pm

Rabbit Mountain Open Space; NE of Lyons on north 55th Street; meet at group picnic shelter

As summer winds down and fall approaches, rattlesnakes become more active as they prepare for hibernation. Enjoy a moderate 1.5-mile evening hike and learn about this fascinating reptile which can be found in the plains and foothills. Volunteer naturalists will lead this hike and share information about the western rattlesnake, *Crotalus viridis*, including habitat, ecology, behavior, and how to be safe in rattlesnake country.

Bears in Our Backyard

Saturday, September 10; 10:00am to noon

Bald Mountain Scenic Area; 5 miles west of Boulder on Sunshine Canyon Drive (Mapleton Ave in Boulder city limits) --and--

Saturday, October 8; 10:00am to noon

Heil Valley Ranch; North of Boulder off Lefthand Canyon Drive; meet at group picnic shelter

As summer winds down, Boulder County's black bears gorge on berries and other food preparing for their long winter sleep. How much do bears need to eat before hibernation, and what are their chances of survival? What would you do if you encountered a bear on the trail, and how do you bear-proof your backyard? Join volunteer naturalists to get answers to these questions and more as you hike in search of bear signs, and learn how people and bears can share our wild places. Be prepared for a moderate 1.5-mile hike.

Lions of Boulder County: From Persecution to Coexistence

Monday, September 12; 6:30pm to 8:00pm

REI Store, Community Room, 1789 28th Street, Boulder

Despite urban development, Boulder County boasts a thriving population of mountain lions. The big cats, rarely seen 50 to 100 years ago, are now more frequently observed near trails and in yards, particularly in the foothills. How did this remarkable and once-maligned creature stage its comeback? Volunteer naturalists David Baron, Cathy Koczela, and Sally Bell will share the natural history of Front Range lions and provide tips on how *Homo sapiens* and *Puma concolor* can coexist.

All Programs

All ages are welcome unless otherwise noted. NO PETS PLEASE! Dress in layers and be prepared for fall temperatures. Bring drinking water and wear hiking shoes. See the back cover for park locations. For information about these programs, or to arrange a volunteer-led program for your group, please call 303-678-6214.

Oh Deer – And Other Local Cervids

Saturday, September 17; 10:00am to 1:00pm

Caribou Ranch Open Space; 2 miles north of Nederland on County Road 126; meet at parking lot kiosk

Join volunteer naturalists for a fall hike in the high country and learn about and look for signs of the three members of the deer family *Cervidae* that call Caribou Ranch Open Space home—mule deer, American elk, and moose. We will hike about 3 miles round-trip over easy terrain, and learn about the natural history, behavior, and ecology of these hoofed mammals. Dress for seasonal weather conditions at 8,500 feet.



I Sit Listening to the Wind: A Woman's Encounter Within Herself and Nature

Saturday, September 24; 9:30am to noon

Meeting location will be given to registered participants

Join volunteer naturalist Louise Alderson for a walk in nature. Using passages from the book *I Sit Listening to the Wind*, by Judith Duerk, you will experience the rhythm of nature and personal reflection and growth. Participants should be prepared for a moderate 1-mile hike. For women of all ages; register by calling 303-678-6214 by Thursday, September 22.

Walker Ranch Fire Ecology Hike

Saturday, October 1; 10:00am to noon

Walker Ranch Open Space; Meet at the Meyers Homestead Trailhead, about 7.5 miles west of Boulder on Flagstaff Road

Join volunteer naturalists for an easy 2-mile hike to mark the eleven-year anniversary of the wildfire that burned nearly 1100 acres at Walker Ranch and adjoining areas. You will see evidence of the fire, rehabilitation efforts, and re-vegetation that occurred over the years. You will also learn about the role of fire in ponderosa pine ecosystems, and forest management practices that mitigate against the effects and scale of wildfires.

Quaking Aspen Hike

Sunday, October 9; 10:00am to noon

Caribou Ranch Open Space; 2 miles north of Nederland on County Road 126; meet at parking lot kiosk

The tree that gets the most attention in the autumn has lots to offer year-round. Learn more about the aspen—the most widely distributed tree in North America. We'll hike two easy miles (round-trip) at 8,500 feet, discuss the aspen, keep an eye out for signs of wildlife, and maybe even hear bugling elk.

Discover Boulder County

A CALENDAR OF NATURAL AND CULTURAL HISTORY EVENTS

Autumn at the Walker Ranch Homestead

Sunday, September 25; 10:00am to 4:00pm
Walker Ranch Homestead; 7701 Flagstaff Mountain Road, approximately 7 miles west of Boulder on Flagstaff Road

Come see how autumn was spent on a working ranch in the late 1800s. At this special event, costumed volunteers demonstrate the chores necessary to get the ranch ready for winter such as root-cellarling, sausage-making and doing laundry with a washboard and wringer to name a few. Visitors can participate in some chores.

Visit the blacksmith as he makes hinges, nails, and other hardware needed around the ranch, or join in the fun at an old-fashioned barn dance featuring guitar, banjo and fiddle music. There will also be guided tours of the homestead.

This program is free and open to all ages. For more information, please call 303-776-8848 or email skippen@bouldercounty.org.

Please note: Dogs and bicycles are not permitted on the site. Visitors are invited to bring a picnic lunch to enjoy at nearby Walker Ranch Open Space picnic sites.



The Mystery of Bird Migration

Tuesday, October 11; 7:00pm to 8:30pm

George Reynolds Branch, Boulder Public Library, 3595 Table Mesa Drive, additional parking available across Table Mesa Drive in the King Soopers parking lot

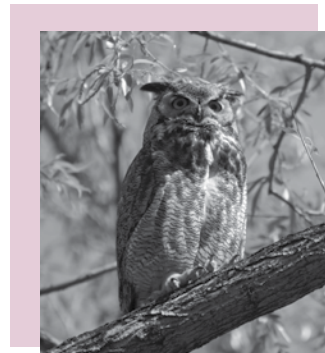
Some birds are seen all year, some are only seen in summer or winter, and some seem to only visit for a short period in spring or fall. Why do birds make seasonal journeys, what prompts them to leave, how do they know when and where to go, how do they find their way, and what brings them back year after year to Boulder County? Join volunteer naturalists Larry Arp and Vicki Braunagel to explore these and other fascinating mysteries surrounding the amazing world of bird migration.

Clever Corvids

Saturday, October 15; 10:00am to noon

Heil Valley Ranch; North of Boulder off Lefthand Canyon Drive; meet at group picnic shelter

Ravens, crows, jays and magpies are noisy, intelligent and gregarious birds found throughout Boulder County. They are all members of the bird family called *Corvidae*, or corvids for short. Join volunteer naturalists Nancy Beaudrot, Diane Klammer, and Barbara Willis for an easy 2-mile hike to learn more about their natural history and ecology, and hear stories about these clever birds.



Fire on the Mountain: One Year After the Fourmile Canyon Fire

Sunday, October 16; 10:00am to noon

Meeting location will be given to registered participants

Join volunteer naturalists for a moderate one-mile hike to learn about the natural role of fire in ponderosa pine ecosystems, and some of the forest management practices that can lessen the effects and scale of wildfires. You will see evidence of the September 2010 Fourmile Canyon fire, and learn about rehabilitation efforts that have been employed. Register by calling 303-678-6214 by Thursday, October 13.

Discover Boulder County

A CALENDAR OF NATURAL AND CULTURAL HISTORY EVENTS

Who are the Owls?

Wednesday, October 19; 7:00pm to 8:30pm

Lafayette Public Library, 775 west Baseline Road, Lafayette

Owls have been regarded with fascination and awe throughout recorded history and across many cultures. To some people they are symbols of wisdom, to others they are harbingers of doom and death. Over half of the owls recorded in the U.S. have been seen in Boulder County, and most of those owls nest here. Join volunteer naturalists to explore these fascinating creatures of the night, and learn about the diversity and special adaptations that make them such expert hunters.

Wildlife and Winter Hike

Saturday, October 22; 10:00am to noon

Mud Lake Open Space; 2 miles north of Nederland on County Road 126; meet at parking lot kiosk

Join volunteer naturalists for a hike in the high country to learn about the ways animals prepare for and survive winter in the Rocky Mountains. We'll talk about wintering strategies including migration, hibernation, and other adaptations. We will also look for signs of wildlife activity including tracks, scat, and marks on trees and shrubs. Be prepared for a moderate 2-mile hike above 8,500 feet.

Story in the Rocks Hike – Our Changing Landscape

Sunday, October 23; 10:00am to noon

Heil Valley Ranch Open Space; North of Boulder off Lefthand Canyon Drive; meet at group picnic shelter

Join volunteer naturalists for a 1.3-mile moderate hike along the Lichen Loop Trail to learn how this landscape has changed over time. The tales told in the rocks span over 200 million years, from ancient sand dunes to tidal flats to riverbeds where dinosaurs roamed. Rocks also determine the shape and ecology of the present landscape, and the plants and wildlife we find here.

I Spy Spooky Halloween Animals

Thursday, October 27; 9:30am to 10:30am

Betasso Preserve; Boulder Canyon (Highway 119) to Sugarloaf Road, follow signs to Betasso Preserve; meet at group picnic shelter

Eerie owls, bats brew. Volunteer naturalists Diane Faigen and Pam Payne will guide you through the not-so-scary woods and teach you about some animals you think of at Halloween. This program is geared to preschool children and their families, and will include hands-on activities and an art project.



Visit the Champion Cottonwood Tree

Saturday, October 29; 10:00am to noon (drop-in)

Champion Cottonwood Site: On the east side of Crane Hollow Road, just north of the intersection of Crane Hollow and St. Vrain Roads in northern Boulder County near the town of Hygiene. Please park carefully along Crane Hollow Road near the entrance gate.

The cottonwood tree has been treasured by native peoples, pioneers, and wildlife. Since 1967, Boulder County has been home to the largest plains cottonwood tree in North America, according to the National Register of Big Trees. This stately tree, over a century old, stands 105 feet tall and nearly 9 feet in diameter. Learn more about this sentinel of the plains.

No hiking is required.

Story in the Rocks - A Geologic History of Boulder County

Wednesday, November 2; 7:00pm to 8:30pm

Louisville Public Library, 951 Spruce Street, Louisville

The geologic history of Boulder County goes back over 1.7 billion years. Ever wonder where the rocks came from, what the earth was like back then, or how the ancestral and present-day Rockies formed? Rocks contain a record of earth history that can be read like the pages in a history book. Join geologist and volunteer naturalist Sue Hirschfeld for this slide program and learn how to read the story in the rocks and interpret the landscape that developed in Boulder County over the last two billion years.

Nature Hikes for Seniors

Boulder County Parks and Open Space hosts a nature hike for seniors every month. Programs include information about an area's history, wildlife and current resource management projects.

For more information, call 303-678-6214. Please call in advance if you plan to bring a large group so we have enough naturalists at the program.

Programs begin at 10:00am and end at noon.

September 29	Walker Ranch Open Space (meet at Meyers Homestead Trailhead)
October 27	Bald Mountain Scenic Area
November 17	Rabbit Mountain Open Space

Discover Boulder County

A CALENDAR OF NATURAL AND CULTURAL HISTORY EVENTS

Geology and Landforms of Hall Ranch

Saturday, November 5; 9:00am to 1:00pm

Hall Ranch Open Space; 1 mile west of Lyons on Highway 7; meet at group picnic shelter near the upper parking lot

Join geologist and volunteer naturalist Dick Pratt and others to learn about the remarkable geology and landscape of Hall Ranch. This moderately strenuous 4-mile hike (roundtrip) will cover igneous, metamorphic, and sedimentary rocks that span over 1.7 billion years of geologic history. We'll have lunch at one of the highest elevation prairie dog towns in Boulder County, a great place to observe raptors and other wildlife. Bring binoculars if you have them. This hike is geared to adults.

Birds of Prey Slide Program

Thursday, November 10; 7:00pm to 8:30pm

George Reynolds Branch, Boulder Public Library, 3595 Table Mesa Drive, Boulder; additional parking is available across Table Mesa Drive in the King Soopers parking lot

Join volunteer naturalists for the evening and learn how to recognize birds of prey—hawks, eagles, falcons, and owls—in the skies above Boulder County. During this slide presentation, you'll learn how to distinguish between different raptors by identifying field marks, behavior, location, and time of year. You will also learn about the habitat requirements and ecology of these magnificent birds.

Birds of Prey Driving Tour

Saturday, November 12; 10:00am to 1:00pm

(Meeting location given to registered participants)

Join volunteer naturalists for a driving tour of some of Boulder County's best areas to view birds of prey, or raptors. We will carpool from our meeting place searching for raptors, learning about habitat, and working on our observation and identification skills. Participants should bring lunch or a snack, binoculars, a spotting scope, and bird field guide if you have them. The tour is geared to adults and older children. Register by calling 303-678-6214 by Thursday, November 10.

Snoods and Caruncles—The Wild Turkeys of Boulder County

Tuesday, November 15; 7:00pm to 8:30pm

Longmont Public Library, Meeting Room A, 4th Avenue and Emery Street, Longmont

Did you know there are wild turkeys in Boulder County? Come learn why Benjamin Franklin thought the wild turkey should be our national bird instead of the bald eagle. Volunteer naturalists Gene Kraning and Sharon Bokan will share information about identification, ecology, and behavior. You will also learn about the turkey's habitat and foods, amazing recovery from over-hunting, and where you might find these unique birds.



Circle of Lakes Wintering Waterfowl Driving Tour

Saturday, November 19; 9:00am to 2:00pm

Meet at Lagerman Reservoir -- located near the southwest corner of Longmont, north of Niwot and the Diagonal Highway, between north 63rd Street and north 75th Street. Lagerman can be accessed from Prospect Road off 63rd Street or Pike Road off 75th Street

Join volunteer naturalist Dick Pratt and others for this tour of local wetlands and reservoirs in search of returning ducks, geese, and other waterfowl. We will carpool from Lagerman Reservoir looking for birds, learning about habitat, ecology, and behavior, and working on our observation and identification skills. Bring lunch or a snack, binoculars, spotting scopes, and a bird field guide if you have them. This tour is geared to adults and older children.

All Programs

All ages are welcome unless otherwise noted. NO PETS PLEASE! Dress in layers and be prepared for fall temperatures. Bring drinking water and wear hiking shoes. See the back cover for park locations. For information about these programs, or to arrange a volunteer-led program for your group, please call 303-678-6214.



Autumn Colors

Shorter days, cooler temperatures, drier conditions, and bright sunlight all contribute to the autumn color changes that lure aspen-watchers to the high country. Deciduous leaves appear green during the spring-summer growing season because chlorophyll, the dominant pigment, masks the yellow pigments carotin and xanthophyll. Chlorophyll is continually being used and replenished as it absorbs light energy to power photosynthesis to make food for the tree.

When sunlight and available water diminish as we move into fall, photosynthesis shuts down. As the chlorophyll breaks down and is not replenished, the “hidden” yellow pigments are revealed. Red and purple leaves occur when sunny days and cool nights allow sugars and starches to form in the leaves and oxidize into chemical substances called anthocyanins.

Be a Volunteer Naturalist

If you enjoy exploring and sharing the natural wonders of Boulder County with others, become a Volunteer Naturalist with Boulder County Parks and Open Space!

As a volunteer naturalist, you’ll co-lead nature hikes, present public slide and PowerPoint programs, and provide hands-on environmental field experiences for local groups.

Volunteering is a great way to learn more about your local open space. All volunteer naturalists participate in a 10-week training program. You’ll learn about local history, geology, plants and ecosystems, forestry, wildlife and birds, agricultural lands and weed management, water resources, resource management activities, interpretive techniques and resources.

Application Information

Participants must be at least 18 years old and attend all training sessions. Many of our requested programs are scheduled Monday-Friday during daytime hours, so applicants must have some ongoing weekday availability.

We’re looking for people with a passion for nature, some knowledge of local natural history, and a strong desire to learn more and share their knowledge and enthusiasm with others.

Application deadline is November 18. Training will be held on Thursdays, 8:30am-4:00pm, January 12 through March 15, 2012 in Longmont. Please contact Larry Colbenson, Natural History Program Coordinator, at 303-678-6214 or lcolbenson@bouldercounty.org.

Celebrate National Public Lands Day

Volunteer with Boulder County Parks and Open Space on Saturday, September 24. Enjoy being outside on a fall day helping to improve the open spaces we enjoy.

We are offering several projects at varying levels of difficulty. There will be general trail maintenance, shrub lopping, as well as cleaning a nearby irrigational structure and forestry projects if we have a need at that time. We will make an effort to get everyone on their desired work crew but may ask volunteers to join a particular crew that needs help.

The day starts with a light breakfast and then we split into crews and shuttle to various project sites.

Most volunteers and staff will meet at the Boulder County Parks and Open Space headquarters in Longmont; the trailside seeding project will meet on Fourmile Canyon Rd.

Minimum age is 10 with adult supervision. This project runs from 8:00am to 1:00pm. To register visit: www.BoulderCountyOpenSpace.org/wildwork or call Craig at 303-678-6216.



Now Available: The Official Boulder County Trails App for iPhone

Let your iOS4 GPS iPhone find you on the trail and show you trail options.

Know your trail options: “List view” shows trails by park with their length in miles.

Locate Parks: “Map view” displays all the trails on the map. Zoom in to your area for your nearest trails.

Extend your hike: The “Locate Me” feature tracks your progress and estimates your distance to connecting trails or parking lot.

View the landscape: Touch “Map Type” and select Satellite to see the landscape in incredible photographic detail. Hybrid shows you street and satellite layers together.

Scan this QR code or search Boulder County Trails in the App Store to download the FREE app today!

POInfo@bouldercounty.org or 303-678-6277.

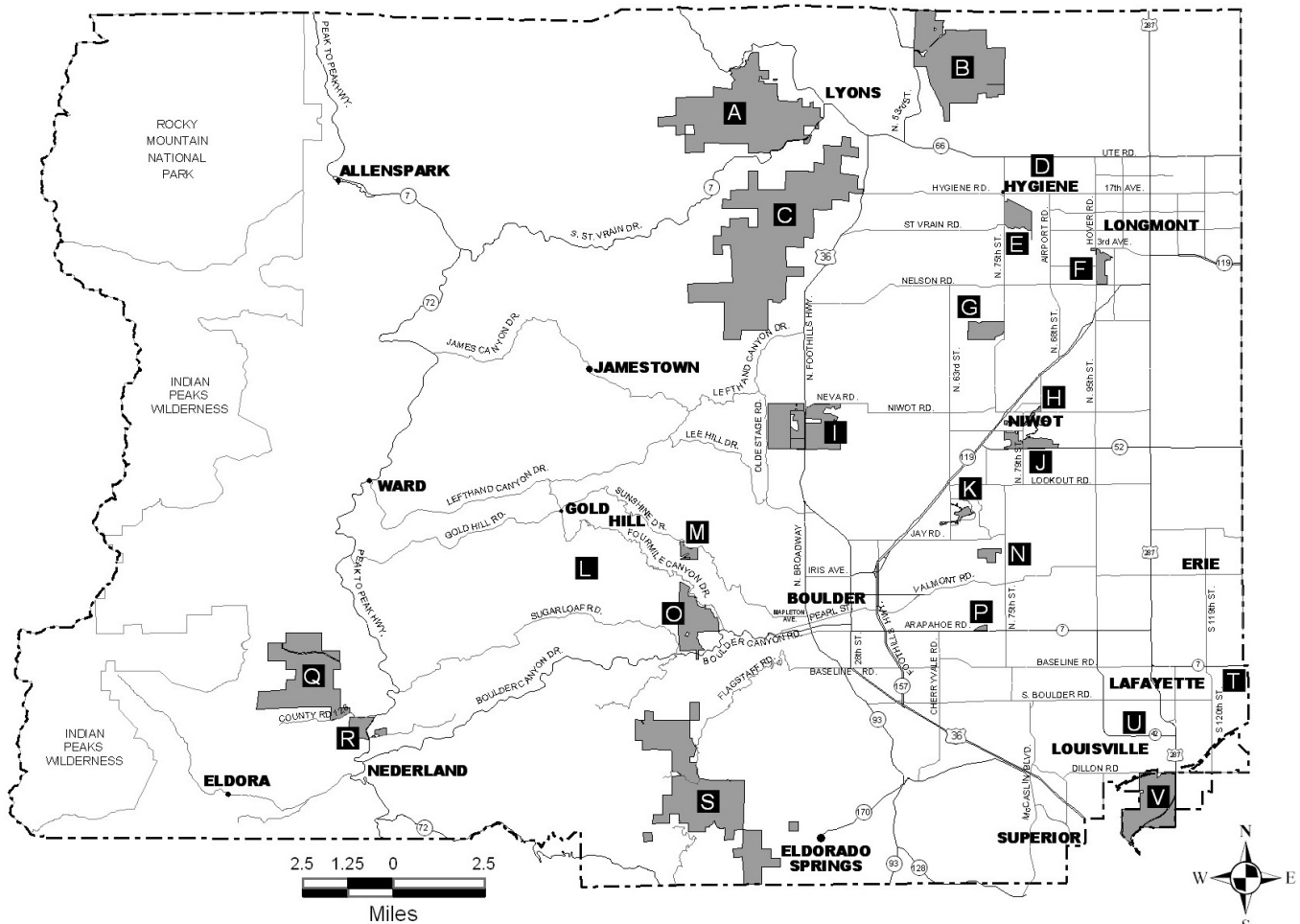




PARKS & OPEN SPACE DEPARTMENT
5201 St. Vrain Road
Longmont, CO 80503
303-678-6200

www.BoulderCountyOpenSpace.org

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|---|----------------------------------|---|
| A. Hall Ranch | H. Left-hand Valley Grange | P. Legion Park |
| B. Rabbit Mountain | I. Beech Open Space | Q. Caribou Ranch |
| C. Heil Valley Ranch | J. Niwot Loop Trail | R. Mud Lake |
| D. Agricultural Heritage Museum at Lohr/Mcintosh Farm | K. Twin Lakes | S. Walker Ranch |
| E. Pella Crossing | L. James F. Bailey Assay Museum | T. Flagg Park |
| F. Boulder County Fairgrounds | M. Bald Mountain Scenic Area | U. Coal Creek Trail |
| G. Lagerman Reservoir | N. Walden Ponds Wildlife Habitat | V. Carolyn Holmberg Preserve at Rock Creek Farm |
| | O. Betasso Preserve | |