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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

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NATURE DETECTIVES

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IN CLOSING

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PRINTING

Boulder County Printing Department

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Images is a quarterly publication. Subscriptions are free to Boulder County residents or \$6 annually. Contact us at 303-678-6222 or swilliams@bouldercounty.org

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volume 38, number 3

Ron Stewart: Legacy of a Visionary Leader

by Tina Nielsen

In his book "Outliers," Malcom Gladwell shows that many great men and women succeed through specialization, collaboration, time, and place—a convergence of opportunity and time on task. Ron Stewart exemplifies one such convergence right here in Boulder County. Growing up in Longmont, Ron had close ties to his grandparents' farming roots. At Longmont High School he played clarinet and saxophone in the band. After obtaining a degree in Political Science from the University of Colorado, he became the Boulder County Democratic Party's youngest ever chairman at age 22. That was 1970.

EARLY IDEAS OF OPEN SPACE

The 1970s were tumultuous. Colorado, especially the Front Range, was experiencing rapid population growth. The idea of open space was gaining momentum following the City of Boulder's successful vote to raise taxes for open space in 1967. The environment was a big national topic, and the EPA was created to address pollution in places like Denver, which had terrible air quality. A charismatic young politician named Dick Lamm famously warned that the I-25 corridor from Ft. Collins to Colorado Springs was in danger of becoming one continuous metropolis. Lamm went on to serve as Governor from 1975 to 1987.

Ron was just 28 when he was elected to the State Senate in 1976. During his two terms in the Senate, Ron sponsored a number of environmental protection bills. Ron joined the Parks and Open Space Advisory Committee in 1978, where he served for six years along with community activists like Ruth Wright, Janet Roberts, Dickey Lee Hulinghorst, Carolyn Holmberg, Anne U. White, and JoAnn Dufty. The Parks and Open Space Department was in its infancy; these energetic visionaries worked hard to promote a county-wide funding mechanism for land conservation and helped formulate the Boulder County Comprehensive Plan, adopted in 1978. The comp plan provides the vision and policy foundation for compact development and preservation of Boulder County's rural character. Years later JoAnn Dufty would say, "in the beginning, people thought we were either crazy or dreamers...we were a little of both."

FROM PLAN INTO PRACTICE

Although the vision of the comp plan was clear, zoning and regulations were not in alignment. Following his election to the Board of Commissioners in 1984, Ron Stewart and his fellow commissioners started the process of downzoning about 30,000 acres. Zoning was changed to agricultural and forestry districts with minimum lot sizes of 35 acres, thus preserving an open, rural development pattern for much of Boulder County's 680 square miles. Needless to say there were fervent opponents to this action, but a recall campaign of Ron and fellow commissioner Josie Heath eventually fizzled. In a related, though less controversial action, the commissioners discontinued the practice of recognizing townsites, most of which were located in mining areas. This action resulted in eliminating 8,000 buildable sites in Boulder County. One such townsites was located in Antelope Park, now part of Hall Ranch Open Space.

We might take it for granted today, but it took three attempts over 15 years to pass the county's open space sales tax. Ron chaired the Open Space Task Force in 1991



Top photo: Ron Stewart addresses a crowd at the dedication of the Benjamin Trail.

Below: Ron (left) at the opening of the Agricultural Heritage Center

Under Ron's guidance, the department has grown to be one of the most successful programs in the country.

OPEN SPACE LEGACY BEGINS IN 1998

Ron took the reins as Open Space Director in 1998 after Director Carolyn Holmberg's untimely death in 1997. Under Ron's guidance, the department has grown to be one of the most successful programs in the country. Our agricultural program manages over 100 leases and a growing organic program; our historic preservation program showcases the county's mining and agricultural history through three museums, living history programs, and school outreach; our ecological restoration program improves habitat values on grasslands, forests and riparian areas; our robust volunteer program engages diverse populations with volunteer projects nearly every week of the year, in addition to corporate partners, an artist-in-residence program and many other collaborations. And not least, our 110 trail miles attract more than a million enthusiastic visitors every year.

Ron's unique position as County Commissioner and then Open Space Director provided the platform to develop and implement a broad set of land conservation tools. Ron would say that working with diverse people and interests in collaboration is the foundation of his success, perhaps like playing in a band. But a band needs a score and a director, and Ron has filled all those roles. Ron Stewart's legacy will always be one of conservation and preservation, foresight, and cooperation. He has truly left his mark on Boulder County.

BOULDER COUNTY LAND CONSERVATION MILESTONES

1978: Adopted Boulder County Comprehensive Plan, setting the stage for a compact development pattern and preserving rural character

1984: Downzoning created Agricultural and Forestry Zones, allowing one unit per 35 acres

1985: Eliminated 8,000 building sites by ending the practice of recognizing townsites

1990s: IGAs with communities in the county defined urban annexation areas and rural lands

1993: 0.25% county-wide sales tax resolution passed on third try (first two tries failed in 1978 and 1988)

2003: "Super IGA" Comprehensive agreement reached with all communities in Boulder County

2015: By Parks and Open Space 40th Anniversary; 104,000 acres preserved



to 1992 that ultimately recommended the 1993 open space sales tax proposal. The Task Force included environmental, business, municipal and agricultural interests who reached consensus on the need to expand land preservation. In 1993, Boulder County's open space program had 16,000 acres of land. With a funding mechanism in place, open space purchases exploded through the 1990s and early 2000s, becoming the single most important planning tool for Boulder County. Today, Boulder County has preserved a total of 104,000 acres of open space, along with agricultural water rights worth over \$100 million.

At about the same time the open space tax passed, an annexation dispute erupted between Erie and Lafayette. Ron facilitated an effort that led to an intergovernmental agreement establishing growth boundaries and rural preservation areas for the two cities. This successful collaboration started a broader effort to bring cities and towns to the table to work through their differences and pursue a common vision for growth and preservation. By 2000, the county had intergovernmental agreements with nearly all the communities in the county. Ron decided the best thing to do at this point was to put all these IGAs together into a single IGA that would be adopted by all communities establishing enforceable urban growth boundaries. That "Super IGA" was approved by all communities in 2003 and is in effect for 20 years. It is the only such voluntary growth boundary agreement for an entire county in the country.

Biomonitoring Brings a Stream of Data

By Zach Goodwin



Wildlife biologist using a Hess Collector to study aquatic insect response to the 2013 flood.



Wildlife biologists collect fish with a seine net to help understand and preserve native fish on the St. Vrain Creek.



BCPOS wildlife biologists use electrofishing backpacks and nets to temporarily examine native fish on the St. Vrain Creek.



A basket of native fish and brown trout ready to be released back into the St. Vrain Creek.

In September 2013, the Colorado Front Range suffered numerous impacts brought on by 10 inches or more of rainfall and subsequent flooding. Boulder County open space properties, private residences, and local municipalities suffered catastrophic impacts that are still felt today. Despite these impacts, flooding is a natural phenomenon that pushes nutrient rich sediment downstream, establishes a more natural river corridor, and maintains floodplain biodiversity. This happens through natural processes such as seedling recruitment, felling trees for small mammal and native pollinator habitat, and deposition of organic and inorganic material on the floodplain. All of these immediate consequences have long-term implications for overall fishery health.

MEASURES OF SUCCESS: BIOMONITORING

With these potential benefits in mind, Boulder County Parks & Open Space (BCPOS) is in the process of rolling out a biomonitoring program. This program aims to assess the short and long-term response of aquatic life and water quality to stream restoration activities on POS properties. Specifically, POS plans to monitor aquatic insects, fish, and water quality through sampling. Each sampling method offers insight into overall stream health, but when the three sampling methods are used together, their findings become even more significant.

To sample aquatic insects, specialized equipment is needed. The Hess Sampler is a cylinder that is pushed into the streambed. The streambed is then agitated, and organisms are forced into the front screen of the collecting bag by the flowing current. Once sampling is complete, the insects are preserved and later identified at BCPOS facilities and checked by Colorado State University experts for accuracy. The species found in each stream section can provide valuable insight into overall stream and fishery health.

...flooding is a natural phenomenon that pushes nutrient rich sediment downstream, establishes a more natural river corridor, and maintains floodplain biodiversity

In addition to insect sampling, BCPOS will use non-destructive electrofishing to sample the same stretch of creek for fish. At each location, a length of creek will be electrofished by a crew of at least six people. The electrofishing process consists

of two electrofishers probing the water with a metal rod that emits an electric current that temporarily and non-lethally immobilizes the fish for an easy capture. Once the fish is temporarily stunned and captured in sizeable mesh nets, it is held in an aquatic cage until the sampling has ended. The fish is promptly identified and then safely released back into the stream.

BEYOND INSECTS AND FISH

The underlying explanation for both insect and fish numbers in any given stretch of stream is largely attributed to chemical, physical, and biological indicators of stream health. In addition to insect and fish sampling, POS will use various instruments to record temperature, pH, dissolved oxygen, and water clarity. Most aquatic organisms have evolved to thrive in a finite temperature range (especially cold water fish in Front Range mountain streams) and any small changes can have lasting impacts. For example, humans often remove streamside vegetation for timber to maximize agricultural operations or make room for new roads. This permits more sunlight to warm the stream and consequently impacts aquatic organisms. Higher stream temperatures also lower the amount of dissolved oxygen which is vitally important for maintaining healthy, self-sustaining cold-water fisheries such as for trout or native Colorado mountain and plains fish. Humans also contribute to stream pH imbalance through industrial activities such as mining, agricultural operations, or wastewater treatment returns. The viability of any fishery

The underlying explanation for both insect and fish numbers in any given stretch of stream is largely attributed to chemical, physical, and biological indicators of stream health.

is impacted by a changing pH level because many aquatic organisms have evolved over time to flourish in streams with a consistent pH (with many historic pH levels being near neutral) depending on the region.

A CHANCE TO OBSERVE

As the years pass, the flood event of 2013 will be remembered for various reasons, but it will also have provided an opportunity to observe how local streams respond to such an impactful and historic flood. POS will continue to monitor streams as they recover from this flood event and any future disturbances that may occur.

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 2015 study conducted by Joseph Ehrenberger, Kevin Urbanek, and Tom Mathies. Their project focused on a general herpetofauna assessment and mapping of hibernacula at Rabbit Mountain Open Space.

Executive Summary: Rabbit Mountain Open Space is a centerpiece of ecological diversity recognized for its largely intact and high quality foothills natural communities, mountain mahogany shrublands, and Piedmont grassland communities. Its herpetofaunal component, however, has yet to be systematically investigated. Information on the herpetofauna on the property is needed to better inform management practices for the Rabbit Mountain Open Space Management Plan, which is currently undergoing an update over the 1986 version.

The goal of this project was to provide an account of all reptile and amphibian species occurring on Rabbit Mountain, with emphasis on locating species of state and county concern, and identification of areas of critical habitat. Field survey work by Adaptation personnel and expert volunteers, began March 28, 2015, and continued to September 25, 2015 using visual encounter surveys and turning of surface objects. Search effort implemented was 491 hours search time over approximately 656 miles foot/vehicle travel.

Results of the survey confirm that there are at least three species of amphibian (Western Tiger Salamander, Woodhouse's Toad, Boreal Chorus Frog), one species of lizard (Prairie Lizard), and for the Front Range, a remarkably large assemblage of at least nine snake species (Eastern Yellow-bellied Racer, Milksnake, Bullsnake, Plains Black-headed Snake, Terrestrial Gartersnake, Plains Gartersnake, Common Gartersnake, Lined Snake, Prairie Rattlesnake). Two amphibian species and three snake species are Boulder County Species of Special Concern. The Colorado Natural Heritage Program tracks the Common Gartersnake and Lined snake as sensitive species and ranks them as G5 S3 and "watchlisted", G5 S3, respectively. Both species are uncommon in the state and Boulder County. This new location for the Lined Snake stands as the northernmost known location for the species in the state. One particular survey site was exceptional in that it yielded eight of the nine snake species documented on the property.

To read the full report, or other funded research, visit www.BoulderCountyOpenSpace.org/research

The Plan for Weeds: Integrated Pest Management

by Steve Sauer

Boulder County Parks and Open Space is no different than any other open space agency in that we have issues with noxious weeds. One of the questions I often get is how do we deal with these non-native plants that affect our open space properties?

We use a strategy called Integrated Pest Management (IPM). This is a process used to solve noxious weed problems while minimizing risks to people and the environment. IPM can be used to manage all kinds of weeds in any location, such as in urban, agricultural, and wildland or natural areas.

WHAT ARE WEEDS?

I like the definition given by a philosopher that “a weed is a plant whose virtue has yet to be determined.” Very simply, weeds are non-native plants that can take over an ecosystem and crowd out desirable grasses, forbs and shrubs. Once we determine that we have a weed problem, we use the Integrated Pest Management strategy. The most effective long-term way to manage a noxious weed problem is by using a combination of methods that work better *together* than separately.

FOUR APPROACHES FOR MANAGING WEEDS:

1. Biological control: the use of natural enemies such as predators, pathogens and competitors to control weeds and their damage.
2. Cultural control: practices that reduce weed establishment, dispersal and survival. For example planting native grasses and forbs to reduce disturbance and increase competition which we hope will out-compete non-native plants.
3. Mechanical control: mowing, tillage, weed whacking and even using mulch to control weed populations. This is usually only a means of suppression for most species.
4. Chemical control: Herbicides are used in combination with other approaches for more effective, long term control. They are selected and applied in a way that minimizes their possible harm to people, native vegetation and the environment. With IPM you use the product with the lowest toxicity, at the lowest rate in order to attain the needed results.

We combine these IPM principles and practices to create our weed management guidelines. While each situation is different there are some major components common to all IPM programs: proper weed identification, monitoring and assessing weed infestation, determining when management is needed, preventing weed issues, using a combination of biological, cultural, mechanical and chemical management tools, and after action is taken, assessing the effect of weed management.

Following this approach to weed management doesn't guarantee success, but it does mean you may have a better chance to control non-native plants and establish desirable vegetation.



Top photo: Myrtle spurge is an aggressive, noxious weed that crowds out native plants. Eradication of this weed is a goal of the Integrated Pest Management plan.

Bottom: Volunteers pick myrtle spurge at a Parks and Open Space property. Volunteers are an integral part of our weed management program.

If you have any questions about weed management, feel free to contact Steve Sauer at ssauer@bouldercounty.org or 303-678-6110.

The Elusive and Enchanting Fox

by Susan A. Legler

Among the most handsome and clever of Boulder County mammals is the fox. We are apt to see the red fox (*Vulpes vulpes*) more often than the gray fox (*Urocyon cinereoargenteus*). Red foxes look similar to a small, slender dog, with pointed erect ears and weigh up to 15 pounds. The red fox is not always red; genetic variations result in four recognized color phases: red (the most common), silver, black, and cross. A white-tipped bushy tail is characteristic in all four color phases. The gray fox weighs up to 11 pounds. Colorings include gray on top, rusty-red on the sides, a white throat and a dark-tipped tail. Male and female foxes have few differences in appearance, but behavior can distinguish them. Males roam more freely; females (vixens) tend to stay in the same territory for life.

NORTH TO SOUTH & EAST TO WEST

The range of the red fox is vast (the entire Northern Hemisphere) while the gray fox is plentiful along the western U.S. coast and also makes its home in southern North America and northern South America. At one time, the gray fox was the most common fox in the eastern U.S., however, deforestation and human advancement allowed the red fox to become more dominant. In Colorado, red foxes are common on the plains in open farmlands, riparian woodlands, and brushy areas along the foothills. They do well on the edges of urbanized areas. The top months for observing red foxes in Colorado are January, February, April and October. Gray foxes prefer Colorado's desert-like regions, hiding among boulders on the slopes of rocky ridges in canyons and brushy areas along the foothills. In areas where both red and gray foxes exist, the gray fox is dominant.



Red and gray foxes inhabit Betasso Preserve

Foxes are important predators of rabbits, mice, and rats. They are omnivores, meaning they eat both plants and animals. Solitary hunters, foxes eat small rodents, squirrels, birds and eggs, amphibians, reptiles, fruits, nuts, carrion, insects, and garbage. The gray fox generally eats more vegetable matter than does the red. Foxes are nocturnal which helps them coexist with humans and urban development.

PLAYFUL...WITH A PURPOSE

The fox's famous "mousing leap" appears as a playful way to attack its prey. The fox lies flat on the ground, silently creeps toward the prey, and then launches into the air, landing directly on its unlucky target. Foxes can even locate and catch prey moving under three feet of snow! Despite being a canine species, foxes actually resemble cats more than dogs in many ways. Their pupils are cat-like vertical slits, which gives them excellent night vision. The gray fox is the most cat-like fox species. Its semi-retractable claws make it a good tree climber, easily jumping from branch to branch to reach tree-bound food sources.

The reproductive cycle between male and female foxes begins between December and April, depending on region and climate. Foxes generally mate in pairs. Paired foxes seek out the same mate from the previous breeding season. Males have been known to mate with multiple females at one time, and when this occurs, they all give birth in and inhabit the same den. Females give birth to four or five offspring, called kits or pups. The male fox never enters the den where the female is caring for the young. At 10 months old, young foxes reach sexual maturity.

A PROGRESSION OF PREDATORS

For centuries, the red fox was captured by humans for its luxurious pelt. These days the red fox is preyed upon by wolves, coyotes and mountain lions. Gray foxes have been much more difficult for people to capture than red foxes due to secretive living habits, a tolerance for dry conditions, and intolerance for civilization. The main predators of the gray fox are the coyote, bobcat, great horned owl, and golden eagle.

Healthy foxes pose virtually no danger to humans. They frequently inhabit yards, parks, and golf courses and can become accustomed to human activity. Animals acting abnormally or appear to be sick should be avoided. Problems associated with foxes include plundering of domestic animals and their potential to carry disease organisms. Where foxes are continually present, it's best not to allow pets to run free. Protect your chickens and close off crawl spaces under porches and decks. Foxes that travel into residential areas can be scared away with bright lights, loud noises, and water sprayed from a hose.

Carry binoculars the next time you venture into the foothills. If you're lucky, you might go home with lovely photos. Listen for their "yap" or bark to help you discover their hiding places. They're elusive enough to enchant when seen, but common enough to see along many of Boulder County's foothill trails.

Altona Middle School STEM Explorers Club: Observe and Report

by STEM Explorers

Boulder County Parks and Open Space (BCPOS) began a collaborative project this past year with Altona Middle School students enrolled in the STEM Explorers Club (Science, Technology, Engineering, and Math). Teachers Kathleen Jakobsen and Kaarina Demers worked with two student scientists to monitor a motion-triggered wildlife camera and record data from a known wildlife corridor at a nearby open space property.

Julianne and Mckenzie started their project as sixth graders during the 2015–2016 school year. Before they received the database program, the girls looked at the pictures only. Using the pictures, Julianne and Mckenzie helped the department analyze and identify wildlife species, the animals' patterns, and the size of their groups.

Quotes from Altona student scientists:

"I like being able to look at the animals and then identifying them. I also like to watch and see what patterns the animals have."

"... I also like being able to help scientists discover different things about animals."

Boulder County Parks and Open Space is interested in wildlife activity at the site as the surrounding area transitions to gravel mining in future years. Animals seen include raccoons, white-tailed deer, striped skunks, bobcats, coyotes, red foxes, squirrels, and a bear. The bear was seen last October before hibernation, and the girls hope it will come out again so they can study the bear more.

When asked why she liked working with the camera, Julianne commented, "I

like being able to look at the animals and then identifying them. I also like to watch and see what patterns the animals have." When Mckenzie was asked why she decided to work with the camera, she said, "I get to see animals that people don't usually get to see. I also like being able to help scientists discover different things about animals."

It is always interesting to find new species that the camera photographs. Working with the camera is always fun and the girls have learned lots of new things with the help of their teachers and the BCPOS Education Liaison, Deborah Price, like what the

difference is between a mule deer and a white-tailed deer. They also learned the difference between other animals such as red foxes and gray foxes. The girls have also learned about the patterns that different animals have, like raccoons for instance. When they pass by the camera the animals are usually traveling in groups of three or four and are rarely by themselves. The students also learned that animals they thought were diurnal (active during the day) are actually nocturnal. Both girls plan to continue to work with the camera during the next school year.

"This has been a very fun, exciting, and rewarding experience for me and I will never forget it," noted Julianne. Julianne and Mckenzie have been working really hard and have learned a lot. With the student's help, BCPOS can continue this long term trends analysis.



Clockwise from top left:

Julianne and Mckenzie are members of the STEM Explorers Club at Altona Middle School. STEM stands for science, technology, engineering and math.

Trail camera photos:
This mule deer seems to know a picture is being taken.

A bear wanders by the camera at night. The picture was taken before hibernation — Julianne and Mckenzie hope to see it again.

NATURE DETECTIVES

Fall 2016



Sweet Dreams, Yellow-bellied Marmot

If you were a marmot, you would be going to bed about now and you wouldn't get up until at least April or maybe May! Your breathing and heartbeat would sloooooow way down and your body temperature would begin to drop. Zzzzzzzzz.

Yellow-bellied marmots are Boulder County's largest ground squirrels. They spend about eight months of every year hibernating in their underground burrows. As they sleep through chilly days and nights, their bodies use up fat the marmots packed on during the summer.

On fair weather days during the other four months, they gorge on grasses and flowers. Marmots need to almost double the amount of fat on their bodies to survive their long hibernation. Marmots are such sleepyheads, they frequently nap between meals. If days get too hot, they may head to their burrow for a deep summer sleep.* They better not sleep too long because they need to eat and eat before fall arrives.

*The summer version of hibernation-like sleep or dormancy is called **estivation**.

Marmot, Wake Up! Get Going On Your Daily Schedule!

Sunrise means it is time to get up and start the day.
First job is eating.

Slowly amble along a flattened path to munch on flowers and grasses.

Then climb to a favorite, sunny rock for guard duty plus basking and resting.

Digging work gets done before or after a long noontime snooze down in the den.

A rain shower prompts a retreat into the den for a nap *any* time.

Eat a late afternoon meal of plants mixed with a few seeds. Delicious!

Sunset signals bedtime.

Tomorrow will be another *busy* marmot day.





Marmots Need Boulders

Good habitat for marmots starts with a rocky slope and large boulders. Marmots tunnel under rocks because rocks are somewhat of a barrier against digging predators such as badgers. Boulders also make a perfect high perch for sunbathing and watching for danger and intruders.

The size of the boulder field and the amount and kinds of juicy plants nearby affect the numbers of marmots that live there. They are choosy about their food. Dandelions are just one of many favorites.

The best habitat is found in the mountains. A few marmots find suitable boulder fields in the foothills, but most live higher up. Montane and subalpine meadows grow lush plants and provide good habitat where there are rocky rises. Some marmots make their homes in boulder fields above treeline in high alpine areas.

Cozy Dens

Typical tunnels head straight down beneath rocks for a couple feet then level off into a long run of 10 to 15 feet. Sleeping rooms and a toilet room branch off from the run. Sleeping rooms are lined with dry grass.

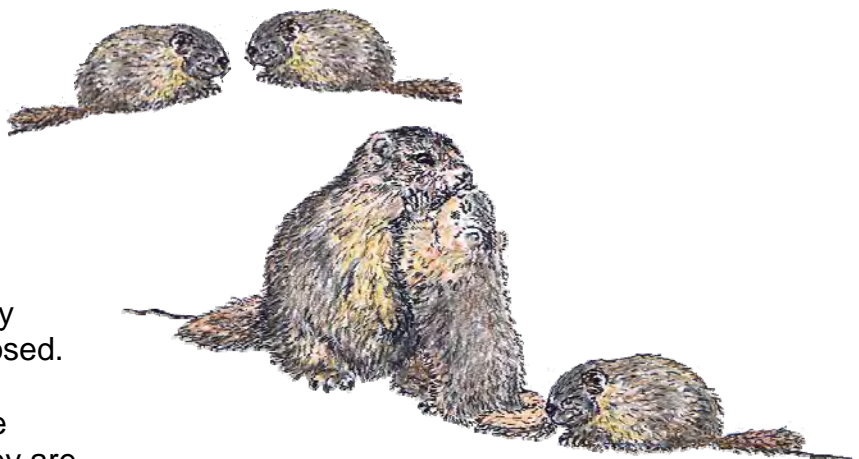
Tunnel entrances are plugged with dirt when marmots are ready to hibernate. Plugged tunnels will stop cold drafts and deter some predators looking for an easy meal.

Baby Marmots Need Care

About a month after marmots awake from hibernation, the babies are born in the den.

There are four babies in a litter on average. They are born completely helpless, furless and with eyes closed.

Babies born in June appear above ground in July. Like the adults, they are active in the morning and afternoon. All other times they are resting in their den.



By fall young marmots are almost adult-size and look like adults. Males are larger than females. True to their name, they have yellowish-colored fur on their bellies. Their faces and feet have the shortest hair with patches of white near their nose and chin. Their underfur is thick and insulating. The long, outer hairs are edged with bands of dark and pale colors.

Social Family Life



Marmots are social animals. They live in colonies of different sizes, depending on habitat quality. A colony has at least one male, one female and their babies.

Many colonies have one male, several females, their daughters and the babies.

The sons and some daughters set off on their own when they are a year old.

Colony members groom each other and youngsters play together.

They recognize each other by sniffing scent glands in their cheeks and identifying the different voices of individuals.



Most marmot vocals are a variety of six different whistles with multiple meanings. Daughters listen closely for alarm calls from their mom. Marmots sometimes squeal when excited or scared. They make soft, friendly chucking sounds to their kin.

Non-colony members are intruders that are warned off the family territory by threatening postures, tail waving, whistles, teeth chattering, chases and sometimes by actual fights.



Life in the Colony Means Safety in Numbers



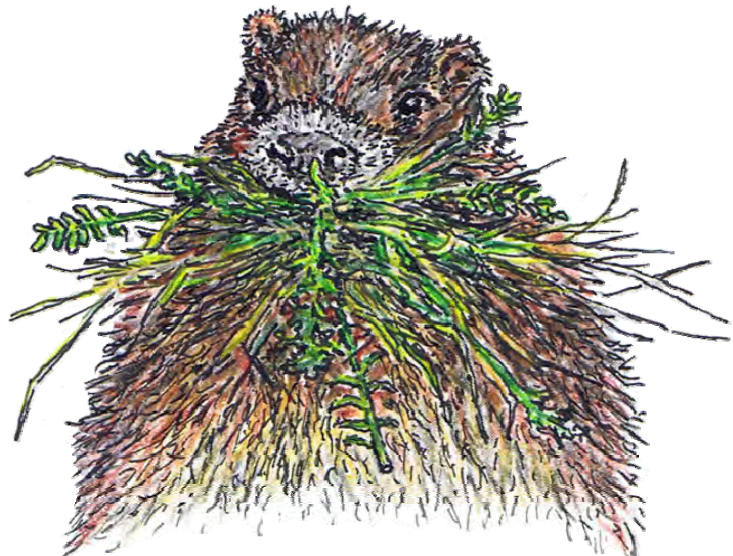
Slow-moving marmots rely on watchful colony members to warn them of danger. Living in a colony with multiple sets of eyes is safer than living alone or as a pair. A sharp-eyed relative can give family members time to dive into a burrow to escape a golden eagle flying overhead or a fox or coyote stalking nearby.

Some enemies can find marmots in their burrow. Badgers are dangerous digging predators. Weasels on the hunt for newborns are expert den raiders.

Eating for Hibernation Survival

It is legal to hunt marmots, and they can also die of disease. But being too thin is the biggest danger for marmots.

Without adequate body fat, skinny marmots cannot survive hibernation.



Marmot Hide-and-Seek



Marmots like to take it easy, but they have a lot of predators.

You are a marmot!

Go outside and hide somewhere in your backyard. One or two of your friends or siblings can be marmots with you. Find a place to rest and lie very still.

Have other friends or siblings be predators – things like a coyote, fox, badger, weasel or a golden eagle. After you have hidden, the predators can come out and move around the yard.

But you want to lie on a rock! Sneak out somewhere in open view and try to remain quiet. If one of the predators sees you, they can try to tag you. You can also make a loud whistle sound to warn the other marmots to take cover. Once you have done this a few times, switch places. Now the marmots will be predators and the predators will be marmots.



Was it difficult to be a marmot? What was it like to be a predator?

Keep your Teeth Brushed...Oops, I Mean Sharpened

Marmots are ground squirrels, and like mice, ground squirrels are rodents. Rodents have useful front teeth (incisors) adapted to the foods they eat. Sharp incisors are good for biting off plants.

Rodent teeth keep growing all their lives, and their incisors are self-sharpening. Gnawing wears them down but also sharpens rather than dulls them.



How does that happen? Next time you lose a tooth, examine its hard enamel-coated surface. Rodents have enamel on the fronts of their incisors but the backs lack the hard coating. As rodents bite food, their top and bottom teeth come together, and continually wear down. The non-enamelled backs of the incisors wear away faster than the hard-coated fronts, keeping the tooth edges sharp.



Your teeth are not all the same shape. Look at them in the mirror. What are different shaped teeth used for?

Look at the teeth (carefully) in your dog or cat's mouth. How are the different sizes and shapes important for catching and eating food?

Agricultural Heritage is Close to Home

by Justin St Onge

As we transition into fall after months of abundant sun and good growing conditions, it's time to think about food and a plentiful harvest. Boulder County Parks and Open Space (BCPOS) has over 25,000 acres of land dedicated for agriculture purposes, and the many farms and ranches on these lands are preparing for a busy time as we approach the cooler months of the year. It may come as a surprise, but Boulder County has a rich agriculture history dating back over 150 years. These valuable lands not only provide us with local produce and meat, but also preserve our agricultural history and open space mission.

THOUSANDS OF ACRES—40 YEARS

Early settlement in Boulder County occurred simultaneously with the discovery of gold and the establishment of farms and ranches in the latter part of the 1800s. Successful farming on the plains led to increasing specialization and the introduction of crops well suited for the sunny and dry climate. By the early 1900s, significant changes brought on by severe climate factors and increasing residential growth were occurring. In order to combat these changes, BCPOS was established in 1976 to protect and purchase open space land throughout the county. As a result of these programs, thousands of acres of agricultural land have been preserved through easements and purchases over the past 40 years.

Currently, 65 tenant farmers and ranchers lease BCPOS land, mostly for livestock grazing and crop production. The variety of crops grown on these lands includes wheat, barley, corn, alfalfa, grass hay, sugar beets, pinto beans, fruits, and vegetables. Many crops grown on BCPOS agriculture land enter the food system, supporting the local economy and environment.

STOPPING TO THINK

Traveling to work from Boulder to Longmont this summer gave me time to think about our agriculture lands and the value they hold. Additionally, throughout the month of July, I taught Boulder County Youth Corps teams environmental education lessons on the county's agriculture resources. I had corps members critically examine where their food comes from. For some, this was a difficult task because we are often so tied up in our daily routine and busy schedules that we don't stop to think about where the food we consume is grown, produced, or processed and the journey it took to reach our mouths.

THE JOURNEY OF A MEAL

The average American meal travels 1,500 miles from farm to plate, so there are many benefits of incorporating more locally grown food into our normal diet. Though some residents are unaware of the agriculture presence in the county and consider Parks and Open Space land to be predominantly made up of recreation areas, in reality, open space agriculture lands provide a lot for our community and throughout Colorado.

With BCPOS agriculture tenants utilizing open space land within the county, their crops and meat can stay close to where they're grown. Many of the ranchers and farmers take advantage of farmers' markets and small-scale grocers to sell their products, which keeps transportation costs down, supports the local economy, and preserves open space land. By supporting and eating locally grown food, we eat food that is in season, promote a safer food supply, and benefit from eating food that has fuller flavor. Through eating more locally grown food we not only support these farmers and ranchers, but also invest in local businesses and community services.



Building the Boulder Canyon Road

by Leslie Brodhead

Towering granite cliffs, water crashing down the hillside in Middle Boulder Creek, and the back and forth of curves—these images of Boulder Canyon are ingrained in my memory from my commute between Nederland and Boulder over the years. Occasionally, my mind drifts to a bygone era—what would it have been like to go up this canyon 140 years ago, back when the road was first built as a one-lane wagon road? How long did it take people riding the wagons or stages? How did they even build a road up this rugged and steep canyon?

As the mining industry took off in the 1860s, the need for road-building coincided with Boulder's desire for trade and commerce and the mining industry's demand for supplies. The first road built up Boulder Canyon in 1868 took a path similar to today's road up to the Fourmile Canyon intersection, then veered south up Magnolia Hill, crossing over South Boulder Creek, before joining the Enterprise Road to Black Hawk.

ONE DOLLAR PER TRIP

Most roads built at this time were toll roads to help investors recoup their costs of upkeep. Cost for this trip was one dollar for a wagon and 25 cents for a single ride on a horse or mule. However, if it weren't for Wells Fargo and Company, we may never have seen a road built directly from Boulder to Nederland. Wells Fargo came up with an idea to run stages from Boulder to Black Hawk via Nederland. Plans extended the existing road to the town of Middle Boulder (present day Nederland). Fortuitously, while the road was under construction, prospectors found silver in the mountains above Nederland at Caribou. Workers pressed to complete the road in 1871, which now terminated at Caribou to capitalize on the freight traffic soon to come.

"The road now building up the canyon...is the most ambitious piece of work that has ever been, to our knowledge, attempted upon a wagon road in Colorado. The work is stupendous and nothing less.
— Boulder News, 1870s

DANGEROUS PASSAGE

The finished road was narrow and steep, criss-crossing Middle Boulder Creek a mind-boggling 33 times. If two wagons met, the lighter of the two had to unhitch its horses and be lifted off the roadway so the other could pass. Bells fastened to the harnesses of the horses or mules alerted oncoming traffic. The ride was long. Drivers often left Boulder at the crack of dawn, barely making it to Caribou by dusk.

Later in the early 20th century, small improvements were made to accommodate automobile traffic, with the Stanley Steamer making the first trip in 1911. Though the trip was significantly faster, it wasn't necessarily easier or less hazardous. Steep grades put stress on the radiators, often causing them to boil over. Drivers would have to gather water from nearby Boulder Creek and wait for the car to cool off and then press on.

Today, Boulder Canyon road barely resembles the winding narrow road of that bygone era. In the 1940s and 1950s, the Colorado Department of Transportation reconstructed the road to make it safer and easier to navigate. This included widening the route and straightening out many of the most hazardous curves and incorporating the construction of the canyon's only tunnel near today's Canyon Link trail to Betasso Preserve.

TRAVELED MORE THAN EVER

Though mining in the area came to a close around 1950, today the Boulder Canyon Road is traveled more than ever. In an ironic twist, the road built to serve Colorado's dominant industry of the 19th century continues to serve two of Colorado's top industries today: tourism and recreation. The history of Boulder Canyon road reminds us of a time when people came to Colorado to find fortune—an idea still in place as thousands of people travel the road, seeking the good fortune of restoring their mind, body, and spirit through recreation in the open spaces of Boulder County.



First Stanley Steamer leaves for Nederland in 1911 with ten people. Photo: Boulder Historical Society Collection of the Carnegie Branch Library for Local History

Note: Look on page 13 for details about a related program offered on Friday, October 7.

DISCOVER BOULDER COUNTY

Calendar of Events

NATURE DETECTIVES IN THE FIELD: IT'S A MARMOT'S LIFE

Thursday, September 8, 10:30-11:30 a.m.

Mud Lake Open Space, 2 miles north of Nederland on County Road 126, meet at picnic shelter

Eat some grass, lie in the sun on a rock, and look for predators—these are the main concerns for Colorado's largest rodent. Learn fun facts and experience a marmot's life in the mountains. Designed for children ages 4-7 with adult companions.

RATTLESNAKE HIKE

Saturday, September 10, 10 a.m.-12:30 p.m.

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

As fall approaches, rattlesnakes become more active as they prepare for hibernation. Join volunteer naturalists on a moderate 1.5-mile hike and learn about the prairie rattlesnake, including habitat, ecology, behavior, and how to be safe in rattlesnake country.

THE GEOLOGIC HISTORY OF BOULDER COUNTY

Tuesday, September 13, 6-7:30 p.m.

George Reynolds Branch Library, 3595 Table Mesa Drive, Boulder

The geologic history of Boulder County's remarkable landscape goes back nearly two billion years! Join geologist and volunteer naturalist Roger Myers for this slide program and learn how to read the story in the rocks in your backyard.

I SPY CRITTER CLUES

Wednesday, September 14, 10-11 a.m.

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

Help volunteer naturalists search for evidence of who lives in the foothills. We'll look for tracks, scat, nests, bones, and antlers of animals that live here. This program is geared toward preschool children, but siblings are welcome.

Fun on the Farm: Cows and the Milky "Whey"

Friday, September 2

Friday, September 16

Offered twice each day at 9:15-10 a.m. and 10:30-11:15 a.m.

Agricultural Heritage Center, 8348 Highway 66, Longmont



Bring your 3-6 year olds to the farm to learn about animals, plants, and agricultural life. This programs include a short story time, hands-on activities, and a take-home craft. Adult chaperones must stay with children.

fun for
all ages!

Crafts and Trades of Olden Days

Sunday, September 11

10 a.m.-3 p.m.

Agricultural Heritage Center

8348 Ute Highway 66 west of Longmont

If you were a pioneer settler and there were no stores in the area, how would you get the things you needed for your family? Come to the farm and learn about old-fashioned jobs and the traditional arts and crafts that went into making what was needed for life down on the farm.

See demonstrations on:

Blacksmithing, candle dipping, wool spinning and knitting, soap making, and beekeeping. There will also be make-and-take crafts for kids.

SEEING OURSELVES THROUGH THE EYES OF NATURE

Saturday, September 17, 9:30 a.m.-noon

Meeting location will be provided to registered participants

Join volunteer naturalist Linda Weber for a contemplative walk in nature. Slow down, focus inward, experience nature's rhythms, and learn about the ways of earth and sky. Wear comfortable clothing and bring a notebook and pen. For ages 16 and up.

To register, email icolbenson@bouldercounty.org or call 303-678-6214 by Thursday, September 15.

ROCK AND WILDLIFE ROAD SHOW

Saturday, September 17, drop in between 11 a.m.-12:30 p.m.

Assay Office Museum, 6352 Fourmile Canyon Drive, Boulder

Drop in with your rock samples, photographs, and pressing questions about geology to discuss with a volunteer naturalist.



Autumn Heritage Day & Vintage Baseball Game

Sunday, September 25, 10 a.m.-3 p.m.
Walker Ranch Homestead,
8999 Flagstaff Mountain Road, approximately
seven miles west of Boulder

See how autumn was spent on a working ranch in the late 1800s. Costumed volunteers will demonstrate chores such as root-cellarling, sausage making and doing laundry with a washboard and wringer. Watch the blacksmith make hinges, nails, and other hardware needed around the ranch and attend a one-room school session or take a guided home-stead tour. A highlight of this event is the vintage baseball game that will begin at noon.

For more information, contact Sheryl Kippen at skippen@bouldercounty.org or 303-776-8848. Please note: Dogs and bicycles not permitted at the homestead.



HISTORY REVISITED WITH PENCIL, BRUSH, AND CAMERA

Sunday, September 18, drop in between 8 a.m.-2 p.m.,
Guided tour at 10 a.m.

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

Artists and photographers are invited for a day of plein air and photographic opportunities. The site features original 1880s buildings, colors, textures, and views abound. Bring your own supplies and camera, water, and sack lunch. Registration opens September 26 at www.BoulderCountyOpenSpace.org/register or call 303-776-8848.

ASTRONOMY: ALL THINGS BEING EQUAL

Friday, September 23, 6:30-9:30 p.m.

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

Enjoy the outdoors near the Fall Equinox. At a brief program, discover the motion that causes light to change through the seasons, and learn to identify constellations and stars. Afterwards, view the sky through telescopes provided by the Longmont Astronomical Society. Families welcome.

All Programs:

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

HIGH PEAKS AND SILVER DREAMS OF CARIBOU RANCH

Saturday, September 24, 9 a.m.-noon

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

Join volunteer naturalists for a hike to explore ancient mountain-building, alpine glaciation, and the history of hard rock mining. We will also identify plant and animal communities and look for signs of wildlife on this moderate 4.2 mile (round-trip) hike.

GEOLOGY AND LANDFORMS OF HALL RANCH

Sunday, September 25, 9:00 a.m.-noon

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

Join geologist Roger Myers to learn about this dramatic geology and landscape. This moderately strenuous 2-mile hike (roundtrip) will cover igneous, metamorphic, and sedimentary rocks that span over 1.7 billion years of geologic history. This hike is geared to adults.

MY SUMMER OF NATURE WRITING IN THE PARKS

Tuesday, September 27, 6-7:30 p.m.

Meadows Branch Library, 4800 Baseline Road, Boulder

In the summer of 2015, writer Ellen Orleans was awarded two Colorado artist residencies: a week at Boulder County's Caribou Ranch Open Space and two weeks at Rocky Mountain National Park. Ellen will share her experiences in the parks and read excerpts from stories. Rounding out the evening, audience members are invited to write their own pieces inspired by historic photos of the parks.

QUAKING ASPEN HIKE

Saturday, October 1, 10 a.m.-noon

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

Join volunteer naturalists on an easy 1.5 mile hike to learn about aspen—the most widely distributed tree in North America. We'll discuss the natural history of aspen, including its importance to wildlife, varied uses, response to fire, and threats to its health.

BEARS IN OUR BACKYARD

Sunday, September 11, 10 a.m.-noon

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

--and--

Saturday, October 15, 10 a.m.-noon

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

As fall approaches, black bears are busy gorging on berries and other food to prepare for their long winter sleep. Join volunteer naturalists on a moderate one-mile hike to learn about our local bruin and how people and bears can share our wild places.

Junior & Senior Fishing Derby

Saturday, October 22, 9 a.m.-noon

**Wally Toevs Pond at Walden Ponds Wildlife Habitat
off of 75th Street between Jay Road and Valmont Road,
Boulder**

Create a fishing dream team! Boulder County Parks and Open Space is hosting a Junior and Senior Fishing Derby. This special event is for pairs of one senior and one junior participant fishing together as a team.

- There will be prizes given to the senior and junior pair who catch the heaviest trout, have the largest age difference, and are first to catch the limit.
- Seniors must be age 64 or older and juniors must be age 15 or younger.
- Event takes place rain or shine!
- The pond is stocked with rainbow trout.
- Artificial and live bait are both permitted at Wally Toevs Pond.
- Seniors must have a valid Colorado fishing license.

For more information contact Michelle Marotti at 303-678-6219 or mmarotti@bouldercounty.org.



BIRDING BOULDER COUNTY THROUGH THE SEASONS

Wednesday, October 5, 7-8:30 p.m.

Longmont Public Library, 4th Avenue and Emery Street

Join volunteer naturalists to learn about birding through the seasons in Boulder County. This program will explore where to find and how to identify some of our local and migratory birds, and also introduce you to an amazing range of ecosystems and habitats.



AN EVENING AT THE MUSEUM

Friday, October 7, 5:30 p.m.-6:30 p.m.

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

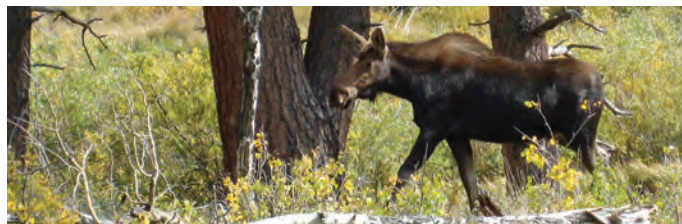
Enjoy coffee and dessert and discover the adventures and stories behind the building of mining roads and scenic byways in the area.

OH DEER, ELK AND MOOSE!

Saturday, October 8, 9 a.m.-noon

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

Join volunteer naturalists for a moderate three-mile hike in the high country to learn about the natural history, behavior, and ecology of mule deer, American elk, and moose.



ANCIENT BEACH WALK

Sunday, October 9, 9-11:00 a.m.

Registration is limited, meeting location will be provided to registered participants

Visit an ancient beach in our backyard! Join geologist Sue Hirschfeld on an easy walk to see the fossils and unusual geologic features formed in this near-shore marine environment. Wear hiking shoes or boots. To register, email lcolbenson@bouldercounty.org or call 303-678-6214 by Thursday, October 6.

GOATS GALORE – MEET AND GREET

Sunday, October 9, 10:30 a.m.-12:30 p.m.

Agricultural Heritage Center, 8348 Ute Highway, Longmont

Join the Goats Galore 4-H club and their goats for a drop-in program all about goats. Why do people raise goats? Do goats really eat tin cans and tennis shoes? How do I get involved in 4-H with goats? Get answers and learn about raising goats, different breeds, housing and feed requirements, and see a live milking demonstration.

PICNIC IN A CEMETERY

Sunday, October 9, 4 p.m.-6

Location given to registered participants.

Experience cemeteries as special gathering places. What do the words and symbols say about people's cultures and beliefs? We'll conclude by visiting a cemetery. Bring a sack dinner and put what you have learned to use. Registration opens October 18 at www.BoulderCountyOpenSpace.org/register. For more information, please email kmcdaniel@bouldercounty.org

WHOO ARE THE OWLS?

Tuesday, October 18, 6-7:30 p.m.

Lafayette Public Library, 775 west Baseline Road, Lafayette

Owls have been regarded with fascination throughout history and across many cultures. Join volunteer naturalists for a slide program to explore these fascinating creatures, and learn about the special adaptations that make them expert hunters.

Calendar of Events

LIONS AND ABERT'S AND BEARS

Saturday, October 22, 10 a.m.-noon

Betasso Preserve, Boulder Canyon (Highway 119) to Sugarloaf Road, follow signs to Betasso Preserve

Join volunteer naturalists for an easy one-mile hike to learn about critters that call Betasso Preserve home, including a squirrel that lives only in ponderosa pine forests. Learn how various animals prepare for winter.



HAMMERING AT THE FARM – BLACKSMITHING DEMONSTRATION

Saturday, October 22, 10 a.m.-1 p.m.

Agricultural Heritage Center, 8348 Ute Hwy, Longmont

Watch blacksmiths forge new tools to be used at the Agricultural Heritage Center. Blacksmithing was a common trade that supported agriculture, mining and construction in creating and repairing all things iron and steel. Stop by for this drop-in program that is appropriate for all ages.

STORY IN THE ROCKS—OUR CHANGING LANDSCAPE

Saturday, October 29, 10 a.m.-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 to learn how this scenic landscape has changed over time. The stories in the rocks span over 200 million years, from ancient sand dunes to tidal flats to riverbeds where dinosaurs roamed. The rocks also determine the landforms and ecology of the present landscape, including the plants and wildlife we find here.

WILDLIFE AND WINTER HIKE

Saturday, November 5, 10 a.m.-noon

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

Join volunteer naturalists for an easy one-mile hike to learn about the ways that animals prepare for and survive winter in the high country. We'll talk about wintering strategies including migration, and hibernation. We will also look for signs of wildlife activity, including tracks, scat, and browse marks on trees and shrubs.

NATURE HIKES FOR SENIORS

Enjoy a guided nature hike for seniors every month. For more information, call 303-678-6214. Programs begin at 10 a.m. and end at noon

Thursday September 29, Mud Lake Open Space

Thursday October 27, Heil Valley Ranch

Thursday November 17, Walden Ponds Wildlife Habitat

WILD TURKEYS!

Saturday, November 12, 10:30 a.m.-noon

Sandstone Ranch Open Space, the Visitor Center is located south of Highway 119, one mile east of Weld County Road 1. Follow the signs off Hwy 119 to the Visitor Center parking lot.

Did you know that wild turkeys can be found all over the Front Range? Learn all about wild turkeys at this program which includes hands-on crafts and play. Suitable for families and kids of all ages. To register, call 303-651-8404 before Thursday, November 10.

BIRDS OF PREY SLIDE PROGRAM

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

Louisville Public Library, 951 Spruce Street, Louisville

Join volunteer naturalists and learn how to recognize birds of prey in the skies. During this slide presentation, you'll observe and 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 19, 9 a.m.-noon

Registration is limited, meeting location will be provided to registered participants

Join volunteer naturalists for a driving tour of the 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 identification skills. Please bring binoculars and a bird field guide if you have them. The tour is geared to adults and older children. To register, email icolbenson@bouldercounty.org, or call 303-678-6214 by Thursday, November 17.



Mining Programs Through the Fall

Hard Rock Mining Tours

Saturday, September 3, 10:30 a.m. – 1:30 p.m.

Saturday, October 1, 10:30 a.m.-1:30 p.m.

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

All That Glistens Is Not GOLD

Sunday, September 18

Saturday, October 15, 11 a.m.-1 p.m.

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

For each of these mining programs:

Locations given to registered participants.

Registration begins three weeks prior to each program at www.BoulderCountyOpenSpace.org/register or call 303-258-7332.

Volunteer Opportunity

Be a Volunteer Naturalist!

If you enjoy nature and sharing your knowledge with others, become a volunteer naturalist.

Volunteer naturalists lead hikes, present slide programs, and provide hands-on experiences to people of all ages. We are especially looking for people interested in sharing nature with school groups, both on trails and in the classroom. Topics range from wildlife and plants to ecology and geology. You will learn about interpretive techniques to connect with audiences.

REQUIREMENTS: To apply, you must be at least 18 years old, pass a background check, and participate in the 10-week training class. Applicants must also have some ongoing weekday availability. You'll be asked to help lead at least six programs in 2017. Previous experience is not necessary!

TRAINING INFORMATION: Training classes take place on Saturdays, January 7, 2017 through March 11, 2017 from 8:30 a.m. to 4 p.m. in Longmont.

PLEASE CONTACT: Larry Colbenson, Natural History Program Coordinator, at 303-678-6214 or lcolbenson@bouldercounty.org for information and application forms. **Application deadline is November 11, 2016 or until class is filled.** Since there is limited space in the training, all applicants will be interviewed.



Art Show:

"2016 OUTDOOR CREATIONS – A BOULDER COUNTY JURIED ART SHOW"

"2016 Outdoor Creations – A Boulder County Juried Art Show"

Celebrate the culmination of the summer paint-out at the Great Frame Up in Longmont October 14 – November 4.

Join us for the exhibit opening catered by Guillaume's European Catering, on Friday, October 14, from 6-9 p.m. at the Great Frame Up, 430 Main Street, Longmont.

Exhibit hours: October 15 - November 7: 10 a.m.–6 p.m., Monday–Saturday.

For more information visit: www.BoulderCountyOpenSpace.org/paintout or contact Karen Imbierowicz at 303-678-6268.



iNATURALIST: NATURE FOR THE MODERN AGE

Would you like to help Boulder County wildlife biologists monitor the animals that live on Parks and Open Space? Well, you're in luck because Boulder County Parks

and Open Space now has a wildlife sharing platform with an online application called iNaturalist. We are looking for the public to help us understand what types of wildlife are living in our parks across the county.

It's easy to get started:

1. Visit iNaturalist.org and create an account
2. Click on **Projects** and type in **Boulder County Wildlife**
3. Download the iNaturalist application to Apple or Android and you can immediately start posting sightings from the comfort of your smartphone!



Forestry Project at Betasso Preserve Begins September 15

A forest management project will begin on September 15 at Betasso Preserve, on county land adjacent to the City of Boulder's Betasso Water Treatment Plant. Approximately 190 acres will be thinned to reduce risk of catastrophic wildfires. Hazardous fuels reduction projects like this one decrease possible fire intensity during a wildfire and increase safe access for fire fighters. The project will reduce density of the ponderosa pine forest and create a mosaic of forest cover and open spaces.

Management activity will be visible throughout much of the park and adjoining areas, including the Bummers Rock, Betasso Link, and Canyon Loop trails. There will be significant operational activity and associated noise directly adjacent to both Betasso Preserve parking areas from the nearby designated staging areas. Significant truck traffic will also occur.

Schedule of Operations

- Operations will be conducted Monday-Friday, from 7 a.m.-5:30p.m., and will be weather dependent. Betasso Preserve will be closed during October-November during aerial operations to provide for safe and efficient operations.
- Additional trail closures for short durations may be required to facilitate safe felling operations. All closures will take place Monday-Friday; there will be no closures during weekends or major federal holidays.
- The project is expected to end by March 31, 2017.

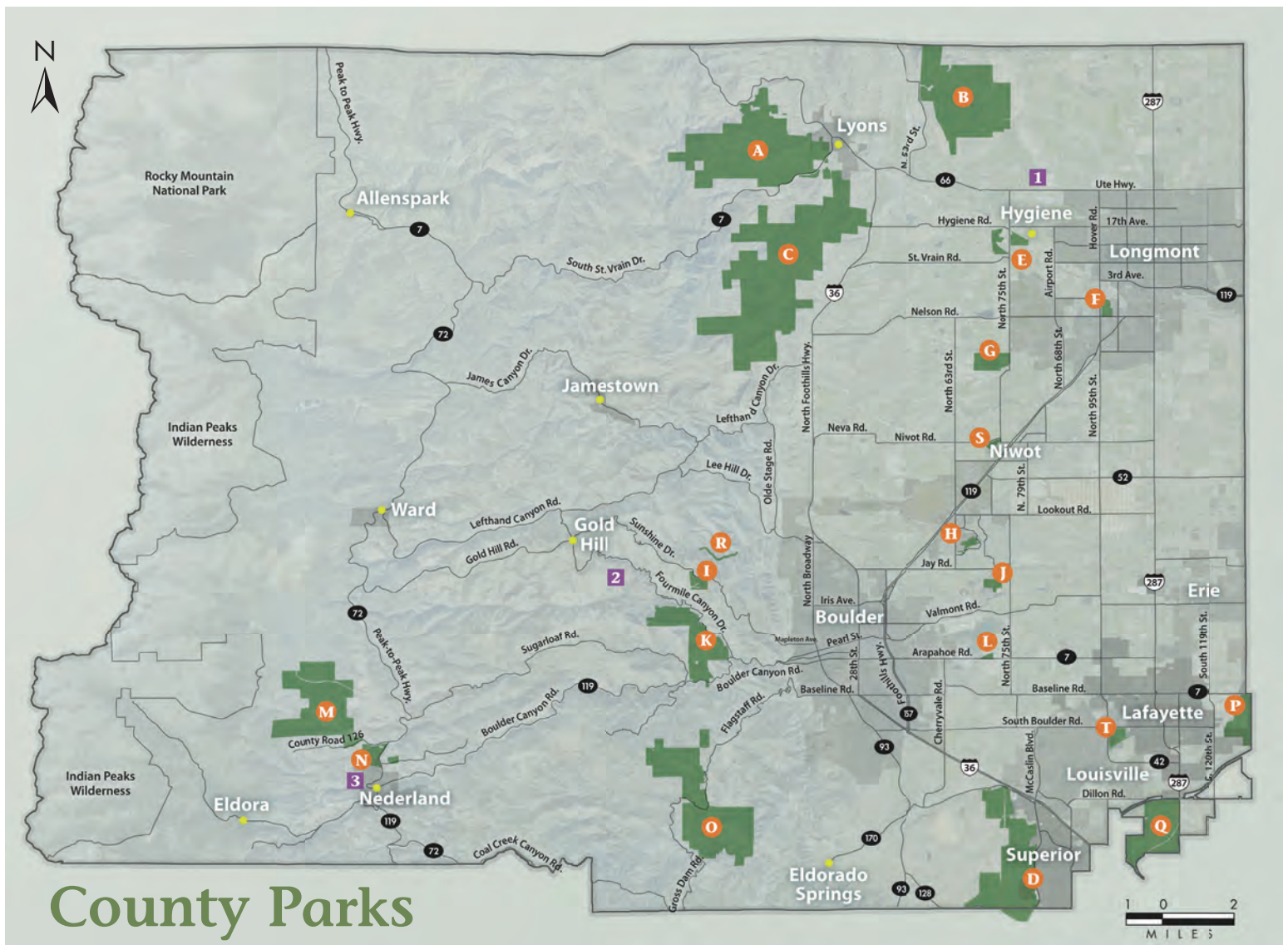
For more information about the project, including location and times of park and/or trail closures and impacts to visitors and residents, visit at www.BoulderCountyOpenSpace.org/betasso



Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503

www.BoulderCountyOpenSpace.org



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

Visit www.BoulderCountyOpenSpace.org/trails for information about properties that may be closed due to the 2013 flood.