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IMAGES

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

PHOTOGRAPHS & ILLUSTRATIONS

Cover photo, Sue Cullen

Osprey in flight, Kevin Rutherford

Horses at Heil Valley Ranch, Robert Castellino

Bison, Emily Greenwood

Monitoring at Caribou Ranch, Anthony Gunnell

Irrigation, Janis Whisman

Caterpillars, Brytten Steed, USDA Forest Service, Bugwood.org

Caterpillar, Mohammed El Damir, Bugwood.org

Snowy scene, Dave Hoerath

Winter Games, Sue Cullen

Agricultural Heritage Center, Jim Drew

NATURE DETECTIVES

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DISCOVER BOULDER COUNTY

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volume 39, number 4

Open Space Element

—Renewed and Redesigned

by Tina Nielsen

The Boulder County Comprehensive Plan (BCCP) lays out plans to achieve the vision for the county's physical form: channel growth to municipalities, protect agricultural lands, and give high priority to preserving our environmental and natural resources in land use decisions. To flesh out this vision, goals and policies are set forth in the Comprehensive Plan Elements. In addition to the Open Space Element (OSE), the other elements that directly affect open space management are: Agriculture, Environmental Resources, Cultural Resources, and the Trails Plan.

When the Comprehensive Plan was adopted in 1978, the county's Open Space Department was just three years old and the county's first successful open space tax was still 15 years off. The concept of publicly-owned and managed open space was fairly new, so naturally, the OSE had a heavy emphasis on acquisition methods and tools as well as the other programs in the department at that time. There was an update in 1996, but much has changed in the county and the open space program in the last 20 years.

UPDATE WITH GOALS IN MIND

A team of staff from the Parks and Open Space and Land Use Departments began working on the OSE Update in 2015. Consistent with the goals of other recent BCCP element updates, the staff goals for the OSE update were to:

- Continue to provide high level guidance
- Update and broaden the goals and policies to reflect the range of programs and activities inherent in a mature open space program
- Eliminate redundancies and references to programs
- Streamline and simplify the document narrative
- Streamline the mapping that accompanies the Open Space Element
- Provide a forward-looking focus to help navigate future opportunities and challenges

The 2017 OSE update was a complete redesign, with a new framework of goals to reflect the realities of a mature program. In addition to land acquisition, resource protection, and recreation, the update includes goals and policies addressing public engagement, cultural resource protection, climate change, and stewardship.

One example: new policy OS 3.05 states that Boulder County monitors and evaluates uses and resources on open space; that monitoring data will be analyzed and used to adapt management practices, and that monitoring data shall be available to the public (subject to the department's sensitive data policy).

The OSE map underwent a major refresh. The original OSE map, titled "Open Space Plan" included a mix of categories used by Land Use for development reviews and status of public lands, including Proposed Open Space; Open Corridor, Streamside; and Open Corridor, Roadside. The updated OSE has two maps associated with it. The "Open Space and Public Lands Map" focuses on the status of land ownership of county open space and other public lands. The Proposed Open Space designation has been eliminated, in large part because most of the parcels with this designation have been acquired! The Open Corridor, Streamside designation has been eliminated

as it is now incorporated into the Environmental Resources Element Maps. The second map, titled “View Protection Corridors Map” expands on the Open Corridor, Roadside designation. This map is intended to help inform a planner’s assessment of the aesthetic characteristics of Boulder County’s roadways, and to serve as a tool to support implementation of Policy 1.02.01 of the Open Space Element: “...the county shall avoid, minimize, or mitigate impacts on views from view protection corridors...”. The Open Corridor, Streamside category was incorporated into the updated Environmental Resources Element maps.

A FIRSTHAND LOOK

You can find the updated Open Space Element along with other elements of the Boulder County Comprehensive Plan at www.BoulderCounty.org/boulder-county-comprehensive-plan.

OPEN SPACE ELEMENT GOALS

1. Protect: Boulder County recognizes and protects open space for its contribution to an exceptional quality of life.
2. Conserve: Boulder County conserves the rural character of the unincorporated county by protecting and acquiring lands and waters embodying significant open space values and functions.
3. Steward: Boulder County purposefully stewards its open space resources through sound management practices and appropriate visitor uses.
4. Engage: Boulder County actively engages the public in stewarding, understanding, and enjoying county open space.
5. Collaborate: Boulder County collaborates with stakeholders and partners to promote and protect open space values and functions.

The 2017 Open Space Element update was a complete redesign, with a new framework of goals to reflect the realities of a mature program.



Top: An osprey soars above Walden Ponds Wildlife Habitat.

Horses head back to the corral at Heil Valley Ranch.

Conserving Private Land—A Future Plan

by Melissa Arnold



Larry Strear wanted to ensure that his 94-acre property would never be subdivided and developed, so in 2007 he entered into a conservation easement with Boulder County. Now when he looks out over his herd of bison quietly roaming the hills, he can rest assured that his property will forever remain an open landscape.

Did you know that 40 percent of Boulder County's open space is privately owned? As you travel throughout the county, you may notice how the cities and towns are separated by land still in agricultural production, or a beautiful mountain ridgeline unobstructed by the sight of houses. Many people are aware that Boulder County owns and manages much of the open space that makes our county a special place to live. But what people may not know is that over 40,000 acres have been conserved thanks to landowners who have made the decision to protect their land with a conservation easement.

WHAT IS A CONSERVATION EASEMENT?

A conservation easement is a legally binding agreement between a landowner and qualified organization that restricts how the land can be used and/or developed. This agreement "runs with the land," which means that when the property sells or transfers, it passes on to the next owner.

Each conservation easement is written to protect the important conservation values of that property, such as natural features or habitats, agricultural land, and/or scenic open space. The qualified organization, in this case Boulder County, holds the conservation easement in trust for the

public to ensure that the land is protected from development or other uses that may harm the conservation values. However, the landowner continues to privately own and manage the property. In fact, most people will never know that a property has become a part of the county's open space program except to notice that it has remained relatively unchanged over the years.

A HISTORY OF PRESERVATION

The Boulder County Comprehensive Plan was adopted in 1978, and through citizen input and independent studies, helped prioritize natural resources across the county for protection. Some of Boulder County's first conservation easements came through the rural subdivision process, when the Land Use Department allowed a developer greater housing density in exchange for granting a conservation easement over 75 percent or more of the land. Then after the first open space sales tax passed in 1993, Boulder County was able to start purchasing conservation easements using public funds. The county has also received donated conservation easements over the years, where the landowner relies on state and federal tax benefits designed to promote the preservation of open space. Still other conservation easements have been created through regulatory processes such as



"The Boulder County Comprehensive Plan was adopted in 1978, and through citizen input and independent studies, helped prioritize natural resources across the county for protection."

Top: Parks and Open Space stewardship staff monitoring the conservation easement at Caribou Ranch.

Left: Stromquist Conservation Easement

the Transferrable Development Right Program (TDR Program). The TDR Program allows landowners to lift development rights off of their land and send them to be used in areas that have been identified as more suitable for development, in exchange for a conservation easement on their property. These are only a few of the ways that the county has acquired conservation easements over the last 40 years, and a few ways it continues to acquire new ones every year.

STEWARDSHIP — A FOREVER JOB

When a qualified organization agrees to be the “holder” of a conservation easement, they are taking on the perpetual responsibility to ensure that the terms of the agreement are forever upheld. At Boulder County, our stewardship team at Parks and Open Space heads into the great outdoors to monitor the county’s conservation easement properties every summer. During these site visits, we document the condition of the property, look for anything that has changed, and talk with the landowners to discuss their future plans. If a landowner needs help controlling invasive weeds, implementing grazing plans, or figuring out how to best irrigate their property, our team connects them with the right resources. We may look to CSU

Extension Services, the Natural Resource Conservation Service office, or our very own Parks and Open Space staff that manage county-owned open space. These partnerships, together with good stewardship practices and dedicated landowners, help conservation easement properties maintain their conservation values over the years.

A CONFIDENT OUTLOOK

Looking towards the future, stewardship of Boulder County’s conservation easement properties will be more important than ever. Colorado’s State Demography Office projects that the population in Colorado will nearly double to 8.5 million by 2050. As local planners determine the best places to absorb this anticipated growth, the conservation values that the citizens of Boulder County identified as important are being protected, even as conservation easement properties change hands from one landowner to the next. This effort, together with the preservation of public lands, will ensure that Boulder County remains a special place to live.

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 2016 study conducted by Elizabeth Barnes, a doctoral candidate at the University of Denver. Her project focused on the competition and community interactions of the western tent caterpillar.

Introduction:

Competition is one of the fundamental structuring forces in most communities (e.g., Volterra 1926, Lotka 1932, Gause 1934, Connell 1961, MacArthur and Levins 1967), yet indirect competition has been historically misunderstood and misrepresented (Kaplan and Denno 2007 and references therein). My dissertation research investigates not one, but three separate effects of competition in a single community. I study the intraspecific, interspecific, and community wide effects of competition between two generalist species.

While all organisms influence their communities, some species play a more prominent role. Ecosystem engineers are organisms that alter their environment and shape their community by drastically modifying their habitat (Jones et al. 1994). Ecosystem engineers transform their environment to fit their needs and in doing so create habitat diversity that has ripple effects through the entire community (Wright and Jones 2006). Megafauna may be the most visible ecosystem engineers, but organisms that impact microhabitat also have far reaching impacts on 3 communities (Marquis and Lill 2010). The first two sections of my dissertation test how competition drives host-plant use by competing organisms. The third section of my dissertation tests the community wide impacts of a potential ecosystem engineer mediated through competitive interactions.

Competition alters the distribution of host-plant use by the competitor species, which may alter the community of arthropods on those plants. One goal of my inter- and intraspecific competition experiments is to determine how competition shapes host-plant selection. Host-plant selection is often driven

by either the chemical or visual cues associated with prior host-plant damage (Renwick 1989). Tent caterpillars can cause large-scale damage to their host-plants and build highly visible structures that alter the landscape of their host-plants (Fitzgerald 1995). These generalist caterpillar species may therefore act as ecosystem engineers (Jones et al. 1994) and affect the survival and distribution of all arthropods on CC, not just the other Lepidoptera herbivores. My experiments test how large-scale leaf damage and distinctive visual cues alter arthropod communities.

Western tent caterpillars (*Malacosoma californicum*; hereafter TC) are tent-building caterpillars that feed gregariously as larvae through their penultimate instar before dispersing. Larvae construct silk tents that last through the summer and, occasionally, into the next year. While TC can have large-scale impacts on tree health, they rarely kill their host-plants (Cooke et al. 2012). In midsummer, TC adult females oviposit all of their eggs in one group on a tree branch (Fitzgerald 1995). The eggs overwinter on the branch and hatch in the early spring. TC larvae are generalists when considered across their full geographic range, but frequently specialize at a local level (Powell and Opler 2009). My study takes place on the eastern slopes of the Rocky Mountains in Colorado, where I have found that TC prefer chokecherry (*Prunus virginiana*).

To read the full report, or other funded research, visit www.BoulderCounty.org/open-space/education/research.

CALL FOR 2018 STUDIES

The department is currently accepting research proposals for 2018 funding for grants up to \$10,000 per project. The deadline for proposals is January 15, 2018. Department staff have identified priority needs for research including these four topics:

- Comparison of soil amendments for ecological restoration of flood deposited cobble (eg. biochar, compost, humates, mycorrhizae, topsoil, etc.)
- Study to analyze the overall impacts of infrastructure (roads, trails, structures, diversions) on stream corridors (ephemeral and perennial) within Boulder County.
- Habitat Fragmentation Analysis of Boulder County.
- Evaluate and summarize existing archeological information at Ron Stewart Preserve at Rabbit Mountain for future management.

Other research proposals will be accepted. Visit the department's website at www.BoulderCounty.org/open-space/education/research for a full listing of research topics and proposal guidelines.

NATURE DETECTIVES



Winter 2017



Downy and Hairy, the Woody Look-alikes

Winter is a good time to search for downy and hairy woodpeckers. With luck you might find both species in the same Boulder County Park.

Identifying *which* bird you are viewing is a tricky challenge. Both birds sport dazzling black and white feathers. The feathers are patterned in spots, stripes and solid black or white. A patch of red feathers on the back of the head marks the males. The feather patterns on the two species closely resemble each other.

To watch for downy and hairy woodpeckers, spend some time exploring places with trees. Woodpeckers need trees like goldfish need water.

Downy woodpeckers like forests with a variety of trees. They visit trees in city parks and trees around houses. Downies sometimes check out bird feeders.

Hairy woodpeckers prefer mixed forests with larger trees. Hairies are not as common around towns.

Downies and hairies search for food in different ways even on the same tree. The smaller **downy** is a little acrobat, often hanging upside down under a tiny twig or clinging to a slender weed stem in the grass. The heavier **hairy** searches along tree trunks and large branches. Sometimes hairies forage on the ground.

Fleeting Flocks of Little Birds Forage and Fly

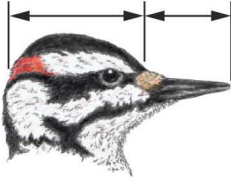
Chick-a-dee-dee! Did you hear it? Stop and watch for movement in the trees. The chickadees will be calling to each other as they hunt for food this winter. Their chick-a-dee-dee chatter often signals the arrival of a mixed group of birds briefly traveling together in open woods. It is a good opportunity to look for downy woodpeckers. Downies often join a mixed flock that might include nuthatches too. The birds take advantage of the combined eyesight of the group to watch for hawks, owls and other predators while they forage for food.



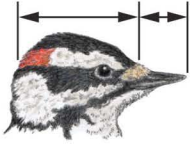
Shadows and Light, Dark and White – Hide in Plain Sight

When sunlight filters through a forest, shadows crisscross branches, trunks and leaves as sunshine lights up the trees. The woodpeckers' black and white patterning is good camouflage in a wooded habitat preferred by both downies and hairies.

Clues to Hairy and Downy Identification



Size difference, head to tail, between the almost seven-inch downy and the over nine-inch hairy is quite easy to see...if the birds would just perch on a tree side by side. Hah! That's not likely to happen. Slight differences between the feather patterns of these look-alike woodpeckers are also tricky to observe.

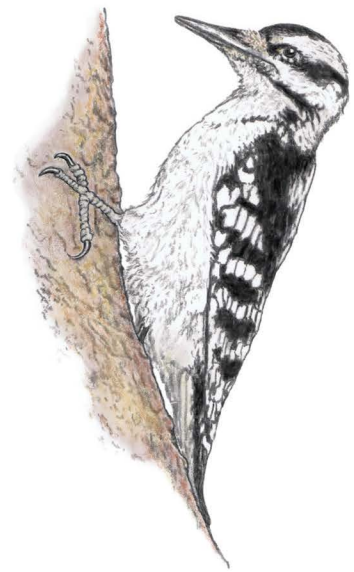


Fortunately, bird sizes and feather patterns are not the only clues. A sharp-eyed detective can notice that the downy has a short beak while the hairy's beak is quite long relative to their head sizes.

Body of a Tree Climber and Excavator

Loggers of yesteryear wore shoes with nails sticking out of the soles to grip the trunks of trees. Woodpeckers have sharp, curved claws to serve the same function. They have two clawed toes pointing forward and two pointing backward to cling tightly to bark.

They also have strong, stiff tail feathers that act like a prop or brace. The tail and clawed toes give solid support for hammering into trees. The tail and toes keep the birds from being knocked backward when their beak hits wood. The legs and tail work together to give the woodpecker a rather jerky, hopping motion as it walks up branches and trunks.



Heads for Hammering

If you run into a tree face-first, you are likely to get a nosebleed, a broken nose or even a concussion. Woodpeckers hammer into trees without injury. The secret to their safety is all in their head.

First of all, their ax-like beak is incredibly tough. Thick bones and muscles behind the beak act as shock absorbers, cushioning the hammer blows. Their brain is protected from bouncing around by fitting tight inside their skull.

Stiff feathers surround their nostrils at the back of the beak and serve as a dust mask to keep out sawdust. They close their eyes just before their beak makes contact.

Hammering is a whole body effort and is used for excavating holes for nesting and roosting. The birds use a gentler strike to reach insects and larvae hidden beneath bark.

Both hairies and downies also use tapping and drumming with their beak to attract mates, announce their location and claim territory.

Tap – Tap – Tapping for Food

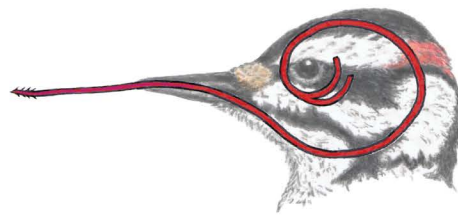
Downy woodpeckers use their smaller beak to chisel off pieces of bark to uncover insects, insect eggs or larvae hidden below. Small beaks easily probe small crevices and cracks for food bits. They investigate the underside of leaves as well. This smallest of our woodpeckers can cling to weeds to tap into stems for hidden bugs. Toward spring downies tap little holes in live trees to sip the sap that pools in the small openings.

Hairy woodpeckers hammer harder to reach insects and larvae hidden in deeper channels inside the trees. Their longer bills reach into deep cracks and crevices to find food. Woodpeckers provide a strong defense for trees against tree-killing beetles.

Both kinds of woodpeckers add to their insect diet with seeds and berries. They also snatch spiders, and they sometimes hide food for later.

Sticky Woodpecker Tongues

Muscles and bone give the back of the downy and hairy woodpecker tongue strength for pushing into nooks and crannies.



The tip of their tongue is coated with sticky saliva that adheres to bugs and eggs. The tasty tidbits are pulled from their hiding places and put directly into the woodpecker's mouth.

Both woodpeckers have a long tongue, but the hairy's tongue is especially long to reach into deeper holes. For each species, most of the tongue conveniently coils up inside their skull when it isn't in use.

The Wonder of Woodpecker Holes

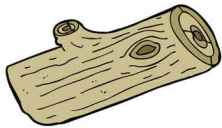
Woodpecker drumming increases considerably in spring. The sounds signal the start to the busy season of finding a mate, excavating a nest hole together and raising their young. The woodpeckers will only use the nest hole for one season's nestlings.

The next year, a chickadee, nuthatch, wren or maybe even a little mouse will move into an old woodpecker hole that they could not create themselves. Holes are better shelters in bad weather than nests built out on branches. Nest holes are valued for their security from predators such as snakes, bears and raccoons.



Life in Dead Trees

Take a walk in the woods. Are there any dead trees standing? Dead, standing trees are often called “snags.” If you find one, observe it for a while and look for wildlife. When a tree dies, the heartwood inside the tree softens as fungus grows in the wood. This makes it much easier for woodpeckers to excavate holes and find insects. Many other animals also bore into the dying wood to make a home.



You can also look for decaying wood on the ground. Compare the hardness of that wood to the strong wood of a living tree, and you'll see why woodpeckers enjoy the dead snags!

Tongue Test

Woodpeckers have a very long, thin tongue to stick into tree crevices to catch bugs. How long is your tongue? See how far you can stick your tongue out in front of your face. Imagine trying to use your tongue to get insects out of tiny crannies in tree trunks.

The long woodpecker tongue coils up inside the woodpecker's skull, kind of like a party favor. Our tongues are attached at the base of our throats and don't coil up. Our tongues are better for licking ice cream cones than catching bugs!



Watching Woodpeckers in Your Yard

Downy woodpeckers often visit backyard feeders. Even though they eat lots of insects, some of their favorite treats are also sunflower seeds, nuts, and suet. Suet is a high-fat food that provides needed nutrition for birds, especially in winter. Bird seed and suet can be purchased at local stores. You can also make your own cold weather suet with this simple recipe:

1 part crunchy peanut butter
1 part yellow cornmeal
1 part melted bacon grease

(**Note:** Melted bacon grease can cause burns on your skin when it is hot. It is wise to ask for **adult assistance** when making the suet recipe.)



Mix together and press into a mold (you can use a flat plastic food container) and let it harden. Then you can put it in a suet feeder, or just place it on a flat platform above the ground. If your suet doesn't harden, rub some onto tree bark or dab some into pinecones to hang on a branch.



Sherlock Fox says: Try keeping a record of the birds that visit your suet. How many different species enjoy the fatty treat?



Text by Katherine Young and Deborah Price
Illustrations: Woodpeckers by Roger Myers,
Chickadee by Michelle Durant

Community Partnerships Fulfill a Vision

by Karen Imbierowicz

In 2008, the Boulder County Parks and Open Space Department created the framework for the goals of partnering with the community to advance the department's mission to conserve natural, cultural, and agricultural resources and provide public uses that reflect sound resource management and community values.

The Partnership Initiative Vision has three objectives in creating a community-based stewardship ethic.

1. **Creating and expanding partnerships with all segments of our population to advance community ownership in the preservation and care of Boulder County Parks and Open Space.**

A variety of businesses and organizations participate in volunteer projects including students from elementary school through college as well as people from various socioeconomic, and ethnic backgrounds. Stewardship teams also include employees from the recreation industry, environmental consulting, technological and engineering firms, and pharmaceutical companies as well as recreation and environmental organizations.

2. **Offering opportunities that enhance the appreciation of the diverse aspects of environmental stewardship, integrating user groups, and promoting responsible use.**

Many partners worked on the Overland Loop at Heil Valley Ranch, a trail which marks the addition of 2.3 miles of multi-use trail. In 2018, Ari Addes, the Trails and Facilities volunteer coordinator will work with partners to build new trails at Heil Valley Ranch and may also help with construction at the newly-acquired Toll trail easement, a 9-mile trail near the Town of Nederland.

The Forestry volunteer coordinator, Shane Milne, has been working with partners to build slash piles from forestry thinning work at Hall Ranch. We hope to burn slash piles during the cooler months so volunteers can then restore the burn scars in summer.

The Plant Ecology volunteer coordinator, Carrie Cimo, has been engaging volunteers in native seed collection projects at Heil Valley Ranch, Peck Native Seed Garden, Sadar, Centennial, and other properties. Also, groups planted almost 8,000 shrubs and

other plants on the newly reopened Pella Crossing and on other riparian areas. Volunteers also cleared willows from an agricultural ditch and stored them for later use in flood restoration plantings. In 2018, we will continue to focus on collecting seed, as well as on flood recovery and other planting projects.

Our volunteer coordinator who manages all types of projects, Craig Sommers, worked with partners placing cages around trees at Walden Ponds Wildlife Habitat to protect them from wildlife, and built a fence to keep wildlife out of sensitive ecological areas. In addition, partners cleared weeds from three acres of land and expunged 20 pounds of weeds from Caribou Ranch. Volunteer groups also painted buildings at the Agricultural Heritage Center and stripped antique school desks for the historical Altona School House at Heil Valley Ranch.

3. **Involving residents in inspirational and educational experiences to strengthen the culture of conservation of our land in perpetuity.**

Partner volunteers often tell us that their volunteer experiences are educational and rewarding. In 2017, we surveyed participants to gather feedback about what effect projects had on them. Preliminary results show that 94 percent of volunteers report increased knowledge of land stewardship practices after participating in a project. In regard to the importance of public land, 43 percent of volunteers rated public land protection as extremely important before attending a project. Of the volunteers who did not initially rate public land protection as extremely important, 76 percent gave the protection of public land a higher rating of importance after participating in a project.

Are we achieving our Partnership Initiative vision? The answer is a resounding, "yes" and we are extremely grateful to each partner group for their devotion to our mission!

To see a list of our current partners, please visit www.BoulderCountyOpenSpace.org/partners.



Employees from (left) Dell EMC² and (right) Level 3 Cares volunteer on forestry projects.

Too Cold to Snow? Folklore Says, "Yes!"

by Trace Baker

Long before there were weather satellites and mathematical models of the atmosphere, people who worked and lived outdoors tried to predict future weather. Their attempts at forecasting were driven by the need to manage farms for productive yields and to travel safely. They were keen observers of the natural world, believing they had discovered causal relationships among what they saw in the sky, plant characteristics, animal behavior, and what the weather would be. Notable coincidences were given status approaching that of physical law, and contradictory observations were ignored. With a discovery process limited by a lack of scientific theory and instruments, predictions were often not accurate.

True or not, beliefs about weather persisted, becoming embedded in the culture's folklore. Some of these beliefs are still in use today, enduring in the media and conversation without validation, or even serious skepticism.

People use weather forecasts on two time scales to plan their activities: What the weather will be over the next few days, and what it will be for the next season. This article discusses three beliefs from folklore that were used to predict winter weather on both time scales.

THE OLD SAYING GOES...

Some forecast rules were expressed in rhyming proverbs to aid recall. One folklore saying, believed to predict weather for the next few days is, "Ring around the moon means rain or snow soon." There is some truth to this one. The ring results from moonlight passing through tiny ice crystals in cirrostratus clouds that form at altitudes above 23,000 feet. If the ice crystals are there, sometimes one can see the ring when the clouds are not visible. Cirrostratus clouds can precede low-pressure weather systems by a day or two, and these systems can bring snow—but precipitation is not certain.

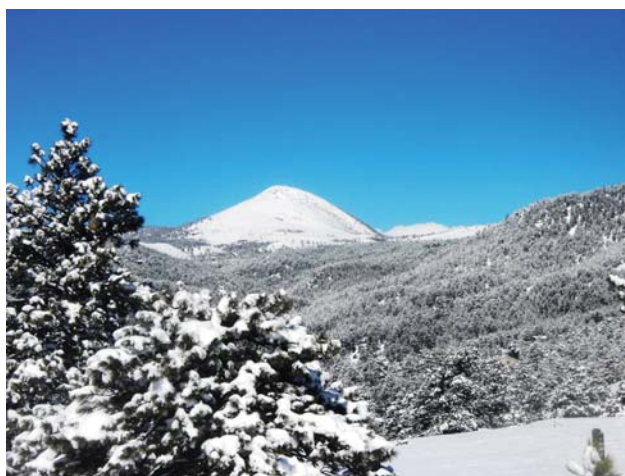
A WOOLLY WINTER

Another observation thought to predict weather on the seasonal scale is the coloration of woolly bear caterpillars. The woolly bear has black "fur" bands on both ends of its body, and a band of brown

fur in the middle. Folklore says that when the brown band is smaller, the coming winter will be snowier and colder. One study, performed in 1948 by the curator of entomology at the American Museum of Natural History, appeared to confirm this belief, predicting the severity of the following winter correctly. Not surprisingly, he could not repeat his success consistently over the next few years. Current science has shown that the length of the brown band depends on the caterpillar's species, age, and the number of times it sheds its skin as it grows. In years with an early transition from winter to spring, woolly bears have more time to feed and grow, giving them longer brown bands by the time fall arrives. Therefore, the width of brown fur is a result of the current-season's weather, but does not predict the next season's weather.

Folklore: traditional customs, tales, sayings, dances, or art forms preserved among a people...

- Merriam Webster Dictionary



You may be able to predict a cold and snowy winter if the brown band of the woollybear caterpillar is small.

NEVER TOO COLD

Have you heard people say that it is too cold to snow? Is it correct? In a word, no. Snowfall has been recorded in Antarctica at -70° Fahrenheit, and temperatures in Boulder County rarely fall below -20° F. It is true that snowfall amounts are usually lower when temperature falls toward and below zero. The reduction in the amount of snow happens because the capacity of air to hold water vapor decreases with temperature, so when there is less water vapor, less snow falls.

Today's forecasters using scientific methods know their results are not 100 percent accurate. Even so, we find their predictions useful for planning our outdoor activities. It is easy to go to the NOAA Climate Prediction Center web site (www.cpc.ncep.noaa.gov) in the fall to see the seasonal climatic forecast for the next winter. But it is much more fun to go to your favorite open space trail to look for woolly bears.

NATURE HIKES for SENIORS

Join us for monthly nature hikes just for seniors. Unless noted, hikes take place the last Thursday of the month. Programs begin at 10 a.m. and end by noon.

- Hikes include information about the area's history, wildlife, and plants.
- Meet at the park entrance kiosk, unless noted below.
- For more information call 303-678-6214.
- Please call in advance if you plan to bring a group so we can provide enough naturalists to lead the hike.

January 25, Heil Valley Ranch Open Space
(meet at shelter near the Lichen Loop Trailhead)

February 22, Carolyn Holmberg Preserve at Rock Creek Farm
(meet at Stearns Lake parking lot on South 104th St.)

March 29, Walker Ranch Open Space (meet at Meyers Homestead Trailhead)

April 26, Walden Ponds Wildlife Habitat Area
(meet at the picnic shelter at Cottonwood Marsh)

May 31, Agricultural Heritage Center

June 28, Mud Lake Open Space

July 26, Bald Mountain Scenic Area

August 30, Caribou Ranch Open Space

September 27, Betasso Preserve (meet at the group shelter)

October 25, Heil Valley Ranch (meet at shelter near the Lichen Loop trailhead)

November 29, Pella Crossing Open Space

December 27, Ron Stewart Preserve at Rabbit Mountain Open Space

ALL PROGRAMS: All ages are welcome unless otherwise noted. NO PETS PLEASE! Be prepared for winter temperatures. Bring drinking water and wear closed-toe walking/hiking shoes.

For more information about these programs or to arrange a volunteer-led program for your group, contact Larry Colbenson at 303-678-6214 or lcolbenson@bouldercounty.org.

WILDLIFE AND WINTER HIKE

Saturday December 9, 1-3 p.m.

Heil Valley Ranch Open Space (south trailhead), north of Boulder off Lefthand Canyon Drive, meet at group picnic shelter

Join volunteer naturalists for a hike to observe seasonal changes and discover how wildlife prepares for winter. You'll learn about behavioral and physiological adaptations to the shortening days and cooling temperatures, and look for signs of wildlife that are active year-round.

HIKE FOR SENIORS

December 28, 10 a.m.-noon

Rabbit Mountain Open Space, meet at the group picnic shelter

Enjoy a nature hike for seniors and learn about an area's history, wildlife and current resource management projects. No registration is necessary, however, please call 303-678-6214 in advance if you plan to bring a group so we have enough naturalists at the program.

PRAIRIE WINTER HIKE

Sunday January 7, 1-3 p.m.

Carolyn Holmberg Preserve at Rock Creek Farm, Stearns Lake Trailhead, South 104th Street, ½ mile south of Dillon Road, Louisville

Learn how grassland and wetland wildlife respond and adapt to winter on the prairie along the Front Range. Volunteer naturalists will lead this easy walk to explore the different winter strategies employed by wildlife that migrate through or live year-round in prairie ecosystems.

NATURE DETECTIVES IN THE FIELD:

MEET THE WOODPECKERS—DOWNY AND HAIRY

Friday January 12, 11 a.m.-noon

Meeting location will be sent to registered participants.

Downy and Hairy Woodpeckers look almost alike—but not quite! Discover the interesting habits of these hard-headed insect-eaters through hands-on activities, and learn where to look for them in Boulder County. Program designed for children ages 5-10 with accompanying adults.

Register at www.BoulderCountyOpenSpace.org/register.

great
for kids!



Calendar of Events

THE WONDER OF WINTER SLIDE PROGRAM

Tuesday January 16, 6-7:30 p.m.

Meadows Branch Library, 4800 Baseline Road, Boulder

Join volunteer naturalists to learn about the many wonders of winter and how plants and animals adapt to snow and cold.

HIGH COUNTRY WINTER HIKE

Saturday January 20, 1-3 p.m.

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

Join volunteer naturalists on a winter hike to explore the many properties of snow and to learn how plants and animals have adapted to life in the cold. Ski or hiking poles are recommended due to possible icy trail conditions.

TRICKSTER TALES

Saturday February 3, 1-3 p.m.

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

Coyotes live throughout most of North America. Join volunteer naturalists for a moderate 2-mile hike to learn more about this clever character.

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Winter Heritage Day at Walker Ranch Homestead

Sunday January 28, 1-3 p.m.

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

What did pioneer settlers do in the winter? Learn about typical winter chores and indoor games when you explore the Walker Ranch Homestead. You'll see a working demonstration in the blacksmith shop and smell food being prepared on the wood stove. Be prepared for cold, windy weather, and to walk in snow. Please note: Dogs are not permitted at the site. For information, contact Sheryl Kippen at skippen@bouldercounty.org or 303-776-8848.



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for kids!

Junior Ranger Adventures Winter Olympics



Saturday February 10

11 a.m.-1 p.m.

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

Hey kids! The Winter Olympics are almost here, but you don't have to travel all the way to South Korea to participate. The Boulder County park rangers are bringing the winter games to Mud Lake Open Space. Join us for lots of snow-filled competition, excitement and fun!

Junior Ranger Adventures is perfect for kids ages 5-12, but all family members are welcome. An accompanying adult must be present. If you have questions, contact Ranger Erin Hartnett at ehartnett@bouldercounty.org or call 303-678-6211.

Register by February 9 at www.BoulderCountyOpenSpace.org.

WILDLIFE IN WINTER HIKE

Saturday February 17, 1-3 p.m.

Caribou Ranch 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 look for signs of wildlife activity, including tracks, scat, feathers, fur, and browse marks on trees. We will also learn about the many ways that wildlife survives winter in the Rocky Mountains. Ski or hiking poles are recommended due to possible icy trail conditions.

THE CRUSTY ROCKS OF RABBIT MOUNTAIN

Saturday February 24, 9:30 a.m.-noon

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

Join volunteer naturalists Megan Bowes, Roger Myers, and Linda Boley for a moderate 2-mile hike to discover the geology and lichens of Rabbit Mountain.

BIRDS OF PREY SLIDE SHOWS

Tuesday January 9, 7-8:30 p.m.

Longmont Public Library, Meeting Rooms A & B, 4th Avenue and Emery Street

—and—

Monday February 5, 6-7:30 p.m.

George Reynolds Branch Library, 3595 Table Mesa Drive, Boulder

Learn to recognize birds of prey (hawks, eagles, falcons, and owls) in the winter skies above Boulder County. During this slide presentation, you'll observe and learn how to distinguish between different raptors by identifying common field marks. You will also learn about the habitat requirements, behavior, and ecology of these magnificent birds.

BIRDS OF PREY DRIVING TOURS

Saturday December 16, 9 a.m.-noon

Saturday January 13, 9 a.m.-noon

Saturday January 27, 9 a.m.-2 p.m. (extended tour)

Saturday February 10, 9 a.m.-noon

Saturday February 24, 9 a.m.-2 p.m. (extended tour)

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

Join volunteer naturalists for a driving tour of some of the best areas to view birds of prey. We will carpool from our meeting place, searching for raptors, learning about habitat and behavior, and working on our observation and identification skills. Bring water, lunch, binoculars, spotting scopes, and a bird field guide if you have them. Older children welcome.

Registration required at www.BoulderCountyOpenSpace.org/register.

WINTER HOURS

AGRICULTURAL HERITAGE CENTER

8348 Ute Highway 66 west of Longmont

Open from 10 a.m.-5 p.m. the first Saturday of

each month November through March

Come to the farm and learn about the rich agricultural history of Boulder County. The farm includes two barns with interactive exhibits, a milk house, blacksmith shop, and a furnished 1909 farmhouse.

Contact Jim Drew at jdrew@bouldercounty.org or 303-776-8688 for more information.



BE PREPARED FOR WINTER WEATHER

Make sure you have:

- Waterproof coat, hat, additional layers
- Fully charged cell phone
- Extra food and water
- Sun protection
- Flashlight or headlamp

Bring supplies for your pet:

- Food, water, layers, and booties

Have in your car:

- Emergency kit including snow shovel and jumper cables

Plan ahead:

- Visit www.BoulderCountyOpenSpace.org for more information, including trail closures, park maps, and rules and regulations

Call 303-441-4444 for non-emergency dispatch

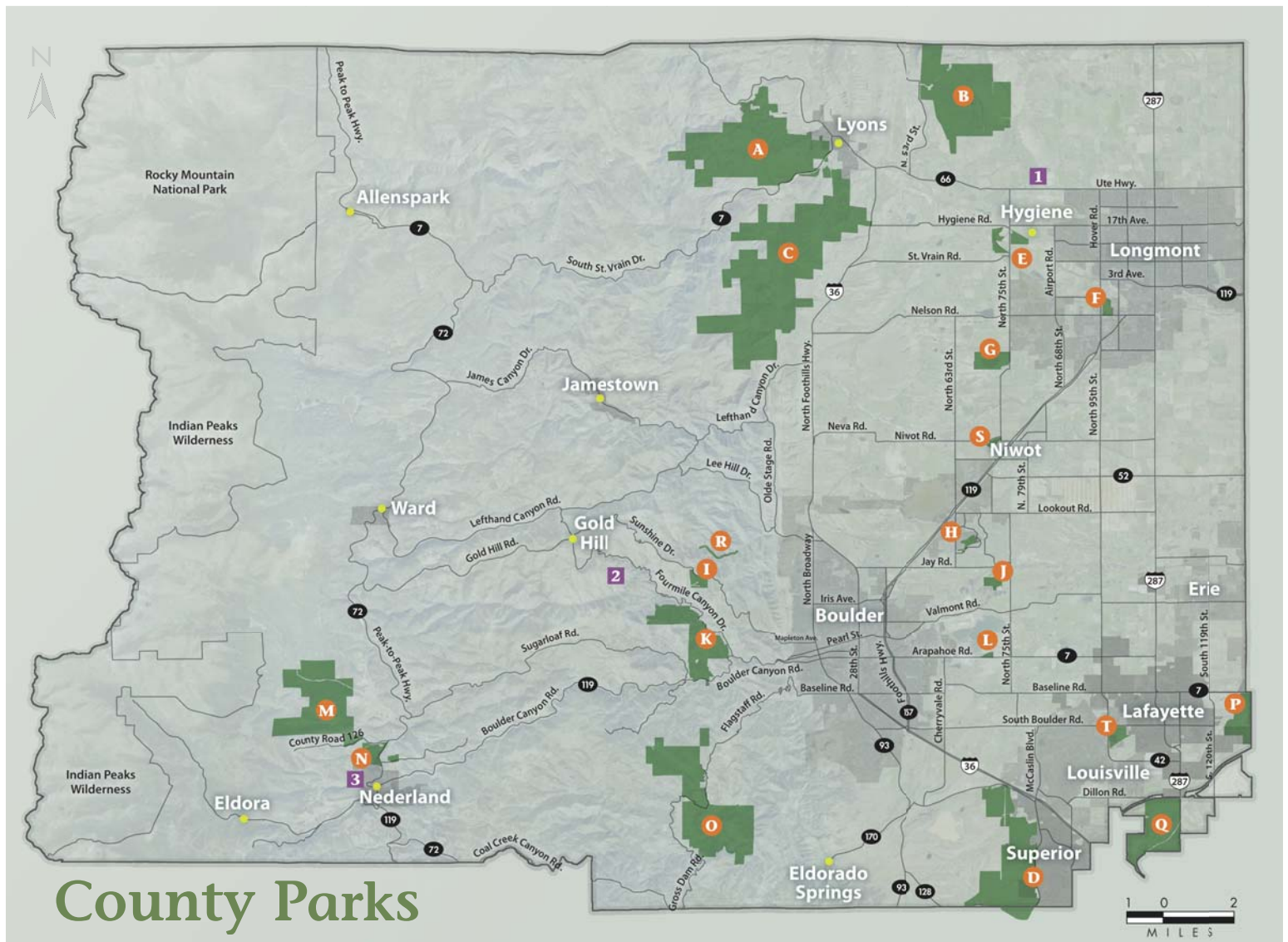
- Keep this number in your contacts



Parks & Open Space

5201 St. Vrain Road, Longmont, CO 80503

www.BoulderCountyOpenSpace.org



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