

BOULDER COUNTY PARKS AND OPEN SPACE

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winter 2013-14



Images

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

COVER PHOTO: Snowy day at Caribou Ranch, photo by Michael Lohr

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Senior Michael Bauer
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NATURE DETECTIVES

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DISCOVER BOULDER COUNTY

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IN CLOSING

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Extension Services Celebrates 100 Years, 1914 to 2014

By Sharon Bokan

In February of 2014, Colorado State University Extension Boulder County celebrates 100 years of service to the county.

The Morrill Act of 1862 established land-grant universities. Their purpose was, and still is, to educate people in agriculture, home economics, mechanical arts and other practical professions. States were allocated 30,000 acres for each congressional delegate. The lands, or proceeds from the land sale, were to be used to establish a public university. Within Colorado, the land-grant college is Colorado State University, established in 1870 and called Colorado Agricultural and Mechanical College. Sixty nine colleges in the U.S. were funded by the Morrill Act.

The Mission

The Smith-Lever Act of 1914 established the Cooperative Extension Service (now known as Extension) whose responsibility is “development of practical applications of research knowledge and giving of instruction and practical demonstrations of existing or improved practices or technologies in agriculture, home economics, and rural energy, and subjects relating thereto to persons not attending or resident in said colleges.” Seaman Knapp, known as the “Father of Extension,” proposed cooperation between farms, universities and counties and the use of demonstration farms for teaching. In the early 1900s quite often railroad cars were used as rooms for agricultural education demonstrations.

In the following years, agriculture and home economics improvements from universities were making their way to the public. In 1913, the State of Colorado passed an act authorizing county commissioners to appropriate public funds for a county agriculturist.

On February 6, 1914, Boulder County hired Mr. H. H. Simpson as the first agriculturist; he held the position for six years. During his first year, Simpson had to deal with two hog cholera outbreaks, testing milk for bacteria, testing seeds for purity and germination, spraying apples for worms, assisting with the construction of 15 silos, doing demos of new field crop varieties, and organizing the County Fair.

The first Extension Office was in the Longmont City Hall building. Mrs. Robert (Elizabeth) Linton worked part time with Mr. Simpson, and the Boys and Girls Clubs (later to be known as 4-H). The Boys and Girls Club demonstrated new techniques to the children who in turn took the information home to mom and dad. Four clubs were formed that first year with projects in poultry, corn, sewing, gardens and canning.



Farming to Public Health and Beyond

Over the years, agents worked to improve livestock breeding and health, dealt with livestock disease outbreaks, the quality and viability of seed, increased crop production, provided methods of prairie dog, rat, magpie and weed controls, improved home keeping methods, nutrition, food preparation and preservation techniques, purchasing of clothing and new home appliances, repairing clothing and hat making. They worked with the county public health nurse to improve public health, beautification of the home and worked with and guided 4-H clubs and the Boulder County Fair.

During World War II, the Agriculture Agent Max C. Grandy worked with farmers to get needed parts to keep equipment running for food production to support the war effort. Together, they helped with fuel rationing, scrap recycling and secured farm workers. Meanwhile the Home Demonstration Agent helped women deal with rationing by providing demonstrations and classes on clothing construction and mending,

food production (Victory Gardens) and preservation, ingredient substitution in meal preparation and upholstery. Unfortunately, many of the older 4-H children did not complete their projects as they were helping their families keep the farm operating while older brothers or fathers were fighting in the war or building war equipment.

In 1958 after a major flood, Extension was involved in determining the damage to crops as well as assisting the Flood Control Committee in figuring out how to handle flood debris and cleaning up channels to prevent further damage.

Extension was a part of Boulder County's Land Use Department until 1975 when Extension joined the new county Parks and Open Space Department. Today Extension provides research-based information on a variety of subjects from food nutrition and safety, family issues such as aging parents, leadership development (4-H program), food stamp nutrition education, gardening and horticulture, and agriculture from crops to livestock.



These photos demonstrate the history of Extension and the many services it provided over the years and provides to this day in some fashion.

Top left: Girls Club members (now known as 4-H) demonstrate a canning process—most likely in the 1920s.

Top right: At the Boulder County Fair in the 1920s, Home Demonstration Agents taught women how to bake and can items. Flower arrangements were also part of the home beautification they taught.

Bottom left: A Field Crops show at the Boulder County Fair. Milk cows were tested to make sure they were producing healthy milk without bacteria. Early Extension work focused on keeping livestock healthy and dealing with disease outbreaks.

Bottom right: The Field Crops show at the Boulder County Fair, most likely shown by Boys Club members (4-H). Growing certified and registered seed was a main emphasis of Extension early on.

Aftermath & Images: Flood of 2013

by Sally Wier

In the 4.5 billion years that Earth has existed, the arrangement of its lands and waters has altered enormously. Continents have come and gone, oceans have taken on many shapes and sizes, and mountains have been washed to the oceans via rivers and streams. We often disassociate ourselves from these geographic changes because the time scales involved are so vast. Yet with the flood of September 2013, we were very viscerally reminded that geologic time includes *now*.

The Earth is a dynamic, changeable place, and as much as we like to believe that our lives are stable, under control and predictable, all aspects of our planet are inherently impermanent.

The most dramatic geographic changes that occurred with September's floods were the rearrangement of creek and river paths on the landscape. The record-breaking rains caused channels of streams and rivers to fill to the brim. The waters then spilled out onto the surrounding floodplains—areas which border water courses but are normally dry. During the peak of the flooding, many Boulder County creeks were transporting over 100 times their normal volumes of water and, as a result, also carried along silt, sand, rocks and other debris including trees and cars.

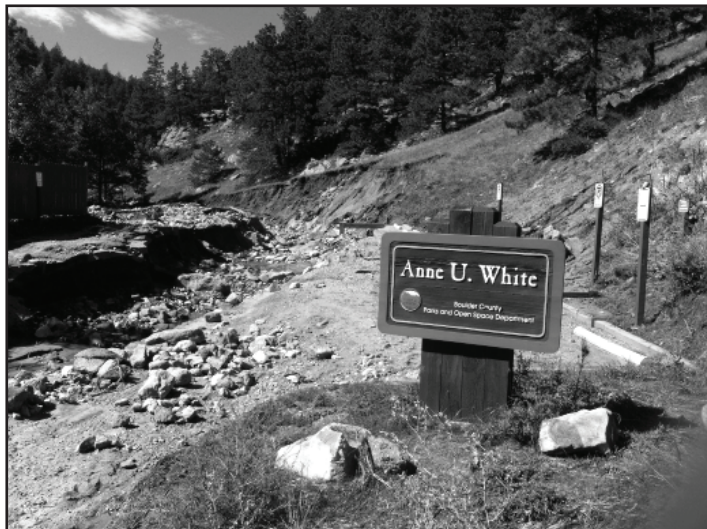
Flooding rivers powerfully re-carve their paths of travel. Water, driven by the force of gravity, flows to the oceans. Surging flood waters find the path of least resistance on their way towards the lowlands, meaning a swollen river will often cut a new channel. The rechanneling of rivers, such as the St. Vrain, can heavily impact humans.

Boulder County Parks and Open Space properties were extensively damaged by the flooding. There was damage to trails, trail-heads, restrooms, and historic buildings. There was also severe damage on agricultural properties. Some properties may take months, perhaps years, to repair. A few may not be possible to repair. We have massive damage to many properties along the St. Vrain River and many dams were breached. The damage to lakes and our water infrastructure could easily be the most difficult aspect of flood recovery for the Parks and Open Space Department. The department has our work cut out, and there is no doubt that the very able staff and thousands of volunteers will be up to the challenge!



Swept Away

Pella Crossing was severely damaged during the September floods. Photos above show the property's kiosk swept off the foundation, and mud and water burying vehicles, demonstrating the destructive power of the moving and rising water.



Around the County

Nearly all of Boulder County Parks and Open Space properties were impacted by the flood.

Clockwise from top left:

Anne U. White, a favorite trail in Boulder County, was nearly washed away.

The road through Fourmile Canyon became a rushing river.

The Geer Road entrance to Heil Valley Ranch is nearly unrecognizable after being carved away by rushing water.

Eye Towards Recovery

Even as winter approaches, volunteer projects have taken place to repair and restore properties affected by the flood.

Photos below:

On the left: Volunteers help clean up debris as part of a fence repair project on agricultural lands.

On the right: Volunteers spread crusher fine gravel to help repair trails at Carolyn Holmberg Preserve at Rock Creek Farm.



Look, up in the Sky...It's a Cloud!

by Ken Sherlock

One of the reasons my wife and I moved to Boulder was for the 300 days of sunshine each year. In the Midwest where we lived, that is unheard of. It is not unusual to go for two weeks straight under a blanket of grey stratus clouds, covering the sky completely.

All the sunny days in Colorado led me to believe I wasn't going to be able to spend time studying cloud formations, one of my favorite outdoor pastimes. Boy, was I wrong.

Clouds: Not All Alike



Cumulus

Cumulus clouds, those billowing balls of cotton we generally see in the mornings, are known as fair-weather clouds. They can be found in the lower levels of our atmosphere rising to as high as 6,500 feet. Features of cumulus clouds include rounded tops that increase in size as the day unfolds, and flat bases on the same plane as their neighbors.



Stratus

Stratus is another common cloud type; an indistinguishable grey cloud that covers the sky. They are the lowest of all the cloud types. Their bases rarely rise above 1,700 feet. Fog is a stratus cloud that is at ground level. You are likely familiar with an aspect of stratus clouds known as flat light. Flat light makes it hard to make a distinction between the ground and the horizon on snowy days. Also, changes in snowy terrain are difficult to see, so these are good days to stick to groomed slopes and avoid mogul runs.



Cirrus

Cirrus clouds are the highest of cloud types, extending from 16,500 to 60,000 feet. Cirrus are formed of ice crystals, and have many varieties associated with them. Delicate straight white cloud streaks with only slight curvature are known as cirrus fibratus.

Cirrus uncinus, also called Mare's Tails, are streaks with hooks or commas on their ends. Cirrus clouds that consist of small tufts are known as cirrus floccus. These are just a few types of graceful cirrus clouds.

Precipitation is often associated with two types of common clouds. The innocent architect of light drizzles and snow flurries is the previously mentioned stratus cloud.



Nimbostratus

When a stratus cloud becomes thicker, dark grey in color, and blocks out the sun completely, it becomes a **nimbostratus** cloud. Nimbostratus clouds are known for rains and snowstorms that can persist for days. Nimbostratus clouds don't produce lightning, thunder, or hail.

A Sign of Danger



Cumulonimbus

Cumulonimbus clouds are the source of extreme weather. They form from cumulus clouds that migrate into cumulus congestus clouds, a variety of cumulus clouds whose height are greater than or equal to their base. A watchful eye should be kept on cumulus congestus clouds as you hike because they may produce rain showers. A greater danger occurs when they begin to grow larger and form into cumulonimbus clouds. Cumulonimbus can grow higher than 20,000 feet. They are very dense clouds that can appear bright white with ragged dark grey bases and sometimes have anvil shaped tops. These clouds produce falling rain, hail, snow, thunder and can even spawn tornadoes.



Lenticularis

Lenticularis clouds are the Aphrodite of the atmosphere. These clouds are almond shaped, beautifully smooth, and hang motionless in the sky like a Chinese lantern at a pool party. They are quite common in the foothills and mountainous areas. Lenticularis clouds form when air streams over hills and mountains the same way that water flows over rocks in a fast river. These dramatic clouds can form layers on top of each other that look like a "pile of plates" or as the French call "pile d'assiettes."

Precautions to take when visiting open space:

- Start your hike early in the day. Plan to be out of the high country by early afternoon, before thunderstorms form. Pack proper clothing for the possible change in weather.
- Beware of sudden cloudbursts and know where you are in relation to streams and lakes that may flood. Avoid narrow canyons and gullies.
- Avoid ridges and exposed areas when inclement weather is present. Get below treeline immediately if you find yourself in such a situation.
- Read all the information on kiosks at trailheads.

Head in the Clouds

Of course, no discussion about clouds is complete without mentioning looking for shapes in puffy clouds overhead. Who hasn't at sometime laid down in a field of green grass to look for Abraham Lincoln, the Starship Enterprise or an elephant? If you look hard enough, you might even see Superman.

Research on Boulder County's Open Space Lands

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 2013 study conducted by Corona Insights in Denver. The research project focused on open space amenity preferences of older adults.

Introduction: Outdoor recreation amenities such as picnic shelters, restrooms, and trails are integral to open space design, and they facilitate visitors' recreation experiences. For various reasons, older adults may hold opinions towards outdoor recreation amenities that differ from the rest of the population. Older adults may also perceive barriers that inhibit them from accessing open space. Boulder County Parks and Open Space (BCPOS) granted Corona Insights, a Denver-based market research and strategic consulting firm, with funding and resources necessary to research older adults' preferences for outdoor amenities and their perceived barriers to recreating on open space. The following are key findings of the study:

Most seniors use open space at least occasionally. Over 70 percent of Boulder County seniors have visited an open space area during the past year.

Age appears to be correlated to the frequency of visitation to open space. Younger-seniors (age 65 to 74) were twice as likely to have visited open space very often as older-seniors (75 or older); conversely, a smaller proportion of younger-seniors never visited open space.

Enjoyment of recreating on open space is very high. Ninety-eight percent of seniors who visited an open space in the last year reported that their most recent visit to open space was either very or somewhat enjoyable. Both younger and older seniors equally indicated that their most recent trip was enjoyable.

Activities change with age. While hiking and walking are by far the most common activities among seniors in open space regardless of age, other activity patterns change with age. Younger-seniors are more likely to participate in biking, running, photography, and dog walking while older-seniors are more likely to watch wildlife and picnic.



Seniors mentioned that amenities such as bathrooms, better parking, picnic tables, signs, and grills would improve their next visit. Amenities was suggested as a potential improvement by 15 percent of respondents, which is a higher proportion than other suggested improvements, but much lower than the 50 percent of respondents who could not suggest any action that would make their next open space visit more enjoyable. The point above notes that this may be an issue more for other land managers than for Boulder County.

Most seniors prefer trails made of dirt, trails that are wide enough for two people to travel side-by-side, and trails that are between one and three miles long. Trails made of crushed rock, trails wide enough for three people to travel side-by-side, and trails longer than three miles were the second most preferred trail features.

Seniors hold strong opinions about trail management regarding bicycles. Not allowing bicycles on trails would increase the enjoyment of a majority of seniors. Decreasing biker speed would increase trail enjoyment more than ordering bikers to travel in one direction, and decreasing biker speed produces almost as much benefit as not allowing bicycles at all. Bicycle management would increase the enjoyment of females more than males.

Bicycle policy and management would increase the trail enjoyment of more older-seniors than younger-seniors. The difference between the two age groups is greatest in regards to not allowing bicycles and is narrowest regarding bikers traveling at slower speeds.

Prohibiting dogs on trails is more likely to decrease trail enjoyment than increase enjoyment for seniors. Opinions about not allowing dogs on trails differ by age and gender. Younger-seniors and males are more likely to say not allowing dogs would decrease their enjoyment.

Call for 2014 Studies

The department is currently accepting proposals for 2014 funding. Two categories will be awarded -- grants up to \$5,000 and grants up to \$10,000. The deadline for proposals is Monday, January 20, 2014. Department staff have identified priority needs for research including these three topics:

- Post-flood inventory of Preble's meadow jumping mouse (*Zapus hudsonius preblei*) in Boulder County watersheds
- Post-flood inventory of fish species in the St. Vrain River and Lefthand Creek watersheds
- Post-flood vegetation recovery in affected county open space properties, primarily Boulder Creek, Lefthand Creek and St. Vrain River stream corridors

Other research proposals will be accepted. Visit the department's website at www.bouldercounty.org/os/culture/pages/posresearch.aspx for a full listing of research topics and proposal guidelines.

What's in a Name?

by Francesca Giongo

Have you ever been curious where the common or Latin names of animals come from, when those names feature people's last names, like the Abert's squirrel and the Wilson warbler? Read on, and you will discover the mystery behind each name!

John James Abert—Abert's squirrel

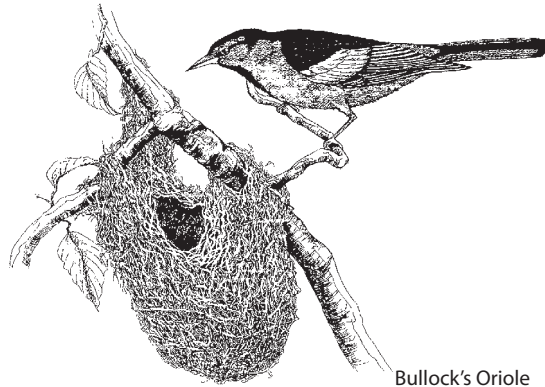
Born in West Virginia in 1788, Abert was a United States soldier. A graduate of West Point, he enlisted in the D.C. Militia during the War of 1812 against British rule, and rejoined the army as a topographical engineer in October 1814. He remained with the Corps of Topographical Engineers for 32 years, and was promoted to Colonel in July 1838. Officers working under him were responsible for the exploration and mapping of the lands west of the Mississippi River.

Charles Lucien Jules Laurent Bonaparte—Bonaparte's gull

The nephew of Napoleon, Charles was a French biologist and ornithologist. Raised in Italy, he moved to Philadelphia in 1822. Before leaving Italy, Charles had already discovered a warbler new to science, and on the voyage, he collected specimens of a new storm-petrel. On arrival in the United States, he presented a paper on this new bird, which was later named after Alexander Wilson. Bonaparte then started studying the ornithology of the United States and updating Wilson's *American Ornithology*. In 1824, Bonaparte tried to get John James Audubon (then unknown) accepted by the Academy of Natural Sciences. At the end of 1826, Bonaparte and his family returned to Europe, settling in Rome in 1828. There he promoted several scientific congresses, and lectured and wrote extensively on American and European ornithology and other branches of natural history.

William Bullock—Bullock's oriole

Bullock was an English traveler, naturalist and antiquarian. In 1795 he founded a Museum of Natural Curiosities in Liverpool containing works of art, armory, objects of natural history, and other curiosities, some of which had been brought back by members of James Cook's expeditions. He later moved his collection to London, where it grew to 32,000 items and became extremely popular. He visited the United States in 1827, and bought land along the Ohio River. Bullock was a fellow of the Linnean, Horticultural, Geological, and other societies, and published several pamphlets on natural history.



Bullock's Oriole

John Cassin—Cassin's finch Cassin's kingbird, Cassin's vireo

Born in 1813 in Philadelphia to a Quaker family with distinguished military and naval service, Cassin is considered one of the giants of American ornithology. He was America's first taxonomist, describing 198 birds not previously mentioned by Wilson or Audubon. Cassin drew, printed and hand-colored many of the illustrations for the Pacific Railroad Surveys as the western regions of the United States were explored. The best known of

Cassin's many publications are his *Illustrations of the Birds of California, Texas, Oregon, British and Russian America* (1853-56), and *Birds of North America* (1860), co-authored with Spencer Fullerton Baird and George Newbold Lawrence.

William Clark—Clark's nutcracker, Clark's grebe

Best known for the Lewis and Clark expedition, William Clarke was an American explorer, soldier, Indian agent, and territorial governor. Born in Virginia in 1770, Clark grew up in pre-statehood Kentucky before settling in what became the state of Missouri. He was a planter and slaveholder. In 1803, Meriwether Lewis recruited Clark to share command of the newly formed Corps of Discovery, whose mission was to explore the territory of the Louisiana Purchase, establish trade with Native Americans and the sovereignty of the US. Clark spent three years on the expedition to the Pacific Coast. He concentrated chiefly on the drawing of maps, the management of the expedition's supplies, and leading hunting expeditions for game.

William Cooper—Cooper's hawk

Cooper was an American naturalist, conchologist and collector. He studied zoology in Europe from 1821 to 1824, and afterwards traveled to Nova Scotia, Kentucky and the Bahamas collecting specimens. His specimens were of great help to others, such as Audubon, Charles Bonaparte and Thomas Nuttall. Bonaparte named the Cooper's Hawk for him, after Cooper collected a specimen in 1828. Cooper was one of the founders of the New York Academy of Sciences, and the first American member of the Zoological Society of London.

Meriwether Lewis—Lewis' woodpecker

Lewis was an American explorer, soldier, and public administrator, best known for his role as the leader of the Lewis and Clark Expedition (also known as the Corps of Discovery) with William Clark. Lewis' woodpecker was named after him by ornithologist Alexander Wilson.

The Shortest Day: Solstice

by Maggie Haseman

The icy air smells pure and fresh as it whistles around stinging ears. Numb feet walk leaving crisp, new footprints in the snow. Sounds are quieter, muffled, and the world is eerily serene. Many layers of clothing are snug as snowflakes gently fall. The branches of trees bow low under their heavy load. Everything glistens brightly under a clean, white blanket of snow. Winter is here.

The Sun Stood Still

In the Northern Hemisphere, the shortest day of the year around December 21, is called the winter solstice. It officially marks the beginning of the winter season. The present day English word “winter” can be traced from the old Germanic word “wintruz” meaning “wet season” and refers to seasonal precipitation. The word “solstice” comes from the Latin words, “sol stetit,” which means “the sun stood still,” and refers to the sun rising and setting in almost the same location for about six days.

When ancient people noticed colder air temperatures, shorter days, and deciduous plants and crops dying or hibernating for the winter, many became afraid the sun was disappearing and that the Earth would freeze. They also noticed that some plants remained green all year and these plants had magical powers allowing them to withstand the winter cold.

Ever Green

Evergreens are plants that remain green all year. Photosynthesis in evergreens slows but does not stop in winter. These plants continue to use sunlight and carbon dioxide in the air to make food during winter. Because of the cold, water is less avail-



Waxy and small leaves or needles help evergreens survive the cold winters when water is less available. These plants symbolize new life at the solstice in many cultures.

able to plants in winter, which is why plants have smaller leaves with waxy coating and fewer pores, preventing them from losing water.

Mistletoe, a semi-parasitic plant, English holly, a pointy-leaved, bushy plant, and trees such as spruces, firs and pines, are all evergreens. These and other plants appear fresh, green and healthy among other bare and wintry branches. Perhaps

this is why evergreens were thought to symbolize new life at the winter solstice. Evidence of winter solstice and other celebrations involving these magical plants, have historical origins around the world.

Cultures and the Sun

In many early cultures the sun was worshipped as a god. Ancient people believed that winter came when the sun god became sick and weak. As the sun began to return around the time of the winter solstice, there were celebrations to mark the sun god's recovery as he regained strength. Evergreens were displayed and used during these festivities as reminders of the coming spring.

The ancient Egyptians, who did not have evergreen trees, filled their homes with green date palm leaves. They celebrated their sun god, Ra, and his recovery from illness. The palm leaves symbolized the triumph of life over death.

Early Romans honored Saturn as the god of agriculture. To mark the occasion when farms and orchards would once again be green and fruitful they held a feast called the Saturnalia. Evergreens and lights decorated their homes and temples as they exchanged symbolic gifts: coins for prosperity, pastries for happiness, and lamps for lighting the journey of life.

In Great Britain, the woods priests of the ancient Celts, the Druids, believed that the twins, Holly King and Oak King were forever at war for domination over the natural world. In winter, when the Holly King prevailed, oaks and other deciduous plants would lose their leaves, while holly and other evergreens remained. They used evergreens as symbols of everlasting life during mysterious rituals.

The Vikings of Scandinavia believed evergreens to be the special plant of their sun god, Balder. During winters of the late Middle Ages, Germans and Scandinavians decorated their homes with evergreen trees to show hope for the coming spring.

The ancient Chinese believed that at sunrise on winter solstice the masculine principle, yang, was born into the world and would begin a six-month period of ascendancy.

The Hindus held festivals on solstices and equinoxes using a calendar based on lunar cycles. In northern India, people greeted the winter solstice with ceremonial clanging of bells to frighten evil spirits.

The list of cultures that celebrated a winter solstice tradition is extensive. Virtually all ancient people realized that even though flora and fauna became dormant, the days grew short and the weather was cold, the sun would eventually return to warm the Earth. Perhaps this is where we get the saying, “It’s always darkest before the dawn.”

Agriculture and the 2013 Flood

by Jennifer Kemp

The devastating flood event of September, 2013 impacted many farmers and ranchers throughout Boulder County. For some, the expanded rivers washed away critical top soil or took pieces of property downstream. For others, extremely wet conditions delayed and compressed fall harvest schedules, resulting in a need to hire more labor or buy additional equipment to meet deadlines. While extensive damage to the county's complicated water infrastructure system will have long-term impacts on area food production, in the short term, flooding has required farmers and ranchers to add even more hours to their already full days.

Many open space properties adjacent to streams and leased to livestock operators suffered enormous impacts. Nearly five miles of fencing was lost or destroyed at a cost of \$150,000 to the county. During flooding and days immediately following, Boulder County Parks and Open Space (POS) staff worked with tenants to herd wandering cows off roads and build temporary fencing to contain animals while assessing the extent of property damage.

Feeding Strategies Change After Flood

While livestock tenants wait for fencing to be replaced, they are not able to move their herds to fresh pasture, so they are feeding their cattle hay much earlier in the year, and may need to continue to feed hay through the winter. Feeding hay earlier in the season can stress supplies in a normal year, but the flooding and extremely wet weather also extensively damaged area

hay harvests. Hay that was cut and laying in windrows in the field was either washed away or too wet to bale. Hay stacked in bales soaked through, sometimes all the way to the ground and quickly molded. Some bales were soaked from the bottom up as ground water levels increased, causing stacks of hay to fall over. After the flood, farmers hoping to cut more hay from their fields have to contend with continuing wet and cool weather that is not ideal for drying and baling hay.

Meanwhile, county-owned irrigated cropland fared relatively well, but continued wet weather and extensive road closures delayed the harvest and seeding of various crops. Area farmers were preparing to start their corn silage harvests on the day the rains began. As the rain turned into torrential floods, the prospect of getting the silage out of the fields and delivered to dairies in Weld County on time was looking less likely. This prompted three POS tenant farmers, Jules Van Thuyne, Famuer Rassmussen and Dan Lisco, to seek out a creative solution with POS and Front Range Dairy, resulting in a large tire-covered silage pile.

A Delayed Harvest

Silage is an easily digested, high-energy feed used for dairy cattle. Silage is made by fermenting wheat, barley, alfalfa hay or corn. In a typical year, silage is harvested then trucked out to dairies in Weld County. There it is weighed, tested for moisture content, chopped into ½ inch pieces and dumped into large silage pits. As the pits increase in size, a tractor rolls over the material to push out any excess air, thus creating an anaerobic environment that ferments the product over the course of two weeks. The piles are covered with large plastic sheets held down by tires to protect the silage until it is fed to cattle.

This year, as the rains delayed the harvest, the moisture content of the silage rapidly decreased. The concern was that if the silage didn't get out of the fields, it would be too dry and not ferment properly. Once the three farmers were able to get into their fields, they found that the amount of mud they had to contend with was slowing down cutting time. Likewise, damage on Hwy 52 nearly doubled the time needed to deliver silage.

After talking to POS, the decision was made to create a silage pit on the northwest corner of Hwy 287 and Hwy 52. Front Range Dairy further assisted by providing a silage chopper for the farmers to use and buying their silage as it was weighed and piled at the site. Now the silage can be delivered to the dairy over the winter as needed. Without these collaborative efforts, it is likely that POS tenants would have incurred further economic impacts from the September 2013 flood.



The silage pit created at the corner of Highway 287 and Highway 52 provides silage for the Front Range dairy farmers. Plastic covered with tires protects the silage until it is fed to cattle.

The silage pile is estimated to weigh 10,000 tons.

Partnership Program Fifth Anniversary

by Karen Imbierowicz

The Partnership Program involves diverse businesses and organizations in the long-term stewardship of our parks and open space land through annual participation in inspirational volunteer projects.

The program was conceived in 2008 after a visit from Brian O'Neil who was the General Superintendent of Golden Gate National Park in San Francisco. O'Neil gave an inspirational talk about the successful Partnership Program that Golden Gate has developed over a decade to help with the stewardship of public land. This visit motivated Boulder County Parks and Open Space to expand our community partnerships beyond one-day group volunteer projects or individual volunteer opportunities to more long-term, ongoing involvement of businesses and organizations.

Sadly, Brian O'Neil passed away in 2009. Upon his passing, Greg Moore, Executive Director of the Golden Gate National Parks Conservancy said of O'Neil, "He intrinsically knew that any aspiration, any special place, any worthy program – needs a community of people loyal to the vision and committed to one another and their common purpose."

We currently have 40 devoted groups committed to recruiting between 10 to 40 members for one or more projects each year to help us care for special places. Our expert volunteer coordinators work closely with members of the stewardship team to schedule projects involving tree planting, seed collecting, weed pulling, trail building and maintenance. The department provides tools, training, and guidance. In return for the stewardship team's involvement in the program, they are recognized with a sign acknowledging their organization's participation along with a framed photograph, an invitation to an annual Partnership Event and mention of their participation in the department publications and website.

A Long-term Commitment

Many current partners have been with us since the inception of the program, and a few groups volunteered on an ongoing basis before the program began. We have 16 partners celebrating their five year anniversary with us. They include: Amgen, Backpacker Magazine, Boulder Area Trails Coalition, Boulder County Horse Association, Boulder Mountainbike Alliance, Boulder Trail Runners, Boy Scouts of Boulder County,



Leisure Trends Group is a new 2013 partner. They volunteered at Betasso Preserve working on trails.

Corden Pharma, CU MBA, Eldorado K-8, Geocachers, Global Leadership Academy, New Vista High School, Redstone Cyclery, Smartwool and Stratus Consulting.

Over the last five years, we welcomed the following businesses and organizations to our stewardship family. Alexander Dawson School, Alpha Phi Omega, Boulder Climbing Community, CU – Program for Writing and Rhetoric, CU Upward Bound, Defenders of Wildlife, Environmental Chemical Corporation, Level 3, Merck Pharmaceutical, Qualcomm, Singletrack Mountain Bike Adventures, Vecchios

Biccliterra, Volunteers for Outdoor Colorado and Wildland Restoration Volunteers.

In 2013, we welcome Covidien, Lefthand Outdoor Challenge Program, Leisure Trends Group, Nederland Area Trails Organization, Only Natural Pet Food Store and Ultrarunners. This year we celebrated our partnerships with the community at the annual Partnership Event held at the Longmont Museum in advance of the exhibit opening of "Carve! Selected Works from the Champion Cottonwood." Representatives from our partner organizations gathered for savory and sweet appetizers provided by Guillaume's European Catering and were presented with a framed photograph by Michael Lohr. Boulder County Commissioners expressed their sincere thanks to our stewardship partners for their allegiance to our beloved open space and trails.

A Grateful Staff

Boulder County Parks and Open Space staff is extremely grateful for the capable help of partners in the challenging days following the epic flood in September 2013. It will take many months and even years to fully recover from this phenomenon. Having our steadfast partners ready to assist as we begin projects is extraordinarily beneficial to restoration efforts. When Brian O'Neil visited us back in 2007, he spoke about the many unexpected benefits that arise when partnering with local businesses and organizations. This community of partners helping us recover after the flood is another remarkable benefit of having heeded Brian O'Neil's encouragement to engage the community in partnership.

Discover Boulder County *calendar of events*

2014 Nature Hikes for Seniors



Join us the last Thursday of every month (except where noted) for a nature hike for seniors. These hikes are enjoyable and slow-paced!

- Programs begin at 10:00am and end by noon.
- Hikes include information about an area's history, wildlife and resource management projects.
- Meet at the park entrance kiosk, unless noted below.
- For more information and directions, call 303-678-6214.
- Please call in advance if you plan to bring a group so we can provide enough staffing.

January 30	Lagerman Reservoir Open Space (Meet at the parking lot/trailhead)
February 27	Carolyn Holmberg Preserve at Rock Creek Farm (meet at Stearns Lake parking lot on South 104th Street)
March 27	Agricultural Heritage Center at Lohr/McIntosh Farm
April 24	Walden Ponds Wildlife Habitat Area (Meet at the group picnic shelter at Cottonwood Marsh)
May 29	Mud Lake Open Space
June 26	Betasso Preserve
July 31	Caribou Ranch Open Space
August 28	Bald Mountain Scenic Area
September 25	Mud Lake Open Space
October 30	Walker Ranch Open Space (meet at the Meyers Homestead Trailhead)
November 20*	Walden Ponds Wildlife Habitat Area (Meet at the shelter at Cottonwood Marsh) *on the third Thursday due to Thanksgiving holiday.
December 18*	Rabbit Mountain Open Space *on the third Thursday due to Christmas holiday.

Legacy of a Champion Tree: History and Habitat **Thursday, December 5; 7:00pm to 8:00pm** **Longmont Museum & Cultural Center; 400 Quail Road, Longmont**

This is a story of greatness, longevity and strength. In 1967, a Plains Cottonwood tree near Hygiene was designated a national champion, the largest of its species, by the American Forests organization. This "Gentle Giant," as it came to be known, held that title until it died in 2012. Fallen limbs from the tree have found new life in beautifully carved artwork created by local artists. Join volunteer naturalists to celebrate the story of this remarkable tree, and learn about the diverse plant and animal communities supported by cottonwood ecosystems.

Wildlife and Winter Hike **Saturday, December 7; 1:00pm to 3:00pm** **Betasso Preserve; Boulder Canyon (Highway 119) to Sugarloaf Road; meet at group picnic shelter**

Join volunteer naturalists for a fall hike to observe seasonal changes and discover how wildlife in the foothills prepares for winter. Learn about behavioral and physiological adaptations to the shortening days and cooling temperatures, and also look for signs of wildlife that are active year-round. Be prepared for a slow-paced hike of about 2 miles and dress for the weather. Wear hiking shoes or boots, and bring drinking water.

The Nature of Snow **Saturday, January 18; 10:00am to noon** **Mud Lake Open Space; 2 miles north of Nederland on County Road 126; meet at parking lot kiosk**

Snow is an amazing substance! It changes form, it's sculpted by the wind into beautiful shapes, it insulates, it fractures into deadly avalanches, and also makes winter survival possible for many plants and animals. Join volunteer naturalists on a winter hike to explore the many properties of snow, and examine the snowpack and learn how some plants and animals have adapted to life in the cold. Bring drinking water, and clothing and boots suitable for cold and windy weather. Ski or hiking poles are also recommended due to icy trail conditions. Be prepared to hike about 2 miles in snow, at 8,500 feet in elevation.

I Spy Wildlife in Winter **Wednesday, January 22; 4:30pm to 5:30pm** **Lafayette Public Library, 775 west Baseline Road, Lafayette**

Join volunteer naturalists to learn about the many ways that animals prepare for and survive winter in the Rocky Mountains. At this indoor program, we'll talk about animals that hibernate, migrate, and are active during winter. We will also look for signs of wildlife in winter, including tracks, scat, nests, and more. This program is for families with elementary-age children.

Discover Boulder County *calendar of events*

Birds of Prey Slide Shows

Wednesday, December 11; 7:00pm to 8:30pm
Lafayette Public Library, 775 west Baseline Road, Lafayette
—and—

Tuesday, January 7; 7:00pm to 8:30pm
Longmont Public Library, 4th Avenue and Emery Street,
Longmont, Meeting Room A & B
—and—

Monday, February 10; 7:00pm to 8:30pm
Meadows Branch, Boulder Public Library, 4800 Baseline
Road (behind Safeway), access from Mohawk Drive

Learn how to recognize birds of prey, or raptors—hawks, eagles, falcons, and owls—in the winter. During this slide presentation, you'll 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 14; 10:00am to 1:00pm
Saturday, January 11; 10:00am to 1:00pm
Saturday, January 25; 9:30am to 2:30pm (extended tour)
Saturday, February 8; 10:00am to 1:00pm
Saturday, February 22; 9:30am to 2:30pm (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, or raptors. 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 or a snack, binoculars, spotting scopes, and a bird field guide if you have them. Older children are welcome. Register by calling 303-678-6214, or emailing icolbenson@bouldercounty.org no later than the Thursday before each scheduled Saturday tour.

Winter Heritage Day at Walker Ranch Homestead
Sunday, January 26; 1:00pm to 3:00pm
Walker Ranch Homestead; 8999 Flagstaff Mountain
Road, approximately 7 miles west of Boulder on
Flagstaff Road

Learn about typical winter chores of pioneer ranch families at Winter Heritage Day. Tour the ranch, see a working blacksmith, or stay cozy in the ranch house playing Victorian board games.

Be prepared for cold, windy weather, and to walk in snow.

For more information, contact Sheryl Kippen at 303-776-8848 or skippen@bouldercounty.org.

This program is free and open to all ages. Please note that dogs and bicycles are not permitted on the site.



Louisville and Its Coal Mining History in Old Photos
Tuesday, January 28 6:00pm to 7:30pm
Parks and Open Space Headquarters; 5201 St. Vrain Rd.
Longmont

Boulder County's Louisville may have been a struggling coal mining town for decades, but it was "always a happy place," according to a 101-year-old resident. Bridget Bacon of the Louisville Historical Museum explores this seeming contradiction through historic photos that illustrate Louisville's mining heritage and its vibrancy as a community.

Prairie Winter Hike
Saturday, February 1; 1:00pm to 3:00pm
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 Colorado Front Range. Volunteer naturalists will lead this easy walk to explore and learn about winter strategies employed by wildlife that migrate through or live year-round in prairie ecosystems. Dress for the weather, wear hiking boots or shoes, and bring drinking water.

Discover Boulder County *calendar of events*

Where the Wild Things Live!

Saturday, February 8; 2:00pm to 3:00pm

Louisville Public Library; 951 Spruce Street, Louisville

Where do wild animals live? Everywhere! Come join volunteer naturalists and hike across a HUGE map of Boulder County, from the grassy plains to the highest peaks, looking for signs of wildlife. Everyone will be a nature detective and help discover where different animals find the food, water, shelter, and space they need to survive. This program is geared to early elementary-age children accompanied by an adult.

Signs of Life – Wildlife in Winter Hike

Sunday, February 9; 10:00am to 1:00pm

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

Join volunteer naturalists for a hike to learn about the ways that wildlife survives winter in the Rocky Mountains. We'll talk about hibernation, dormancy, migration, and strategies for animals that are active all winter long. We will also look for signs of wildlife activity, including tracks, scat, and browse marks on trees. Bring drinking water, and clothing and boots suitable for a moderate 2-mile hike in snowy, cold and windy weather. Ski or hiking poles are also recommended due to icy trail conditions.



The Crusty Rocks of Rabbit Mountain

Saturday, February 15; 9:30am to noon

Rabbit Mountain Open Space; 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. We'll learn about the unique location and orientation of the rock layers, as well as what lichens are made of and why the sandstone and other resistant rocks support their growth. Wear hiking shoes or boots, bring drinking water, and dress for the weather.

Trickster Tales

Sunday, February 23; 10:00am to noon

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

Coyotes live throughout most of North America and coyote tales are found in many native cultures. Sometimes coyote has the power of creation, other times he battles supernatural enemies, and sometimes he's a trickster, outsmarting people and animals alike. Join volunteer naturalists for a moderate 2-mile hike to learn about this clever, adaptable character. Dress for the weather, wear hiking boots or shoes, and bring drinking water and your sense of humor.

Junior Ranger Adventures

Saturday, March 1; 11:00am to 1:00pm

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

Calling all Junior Rangers! The Boulder County Parks and Open Space Rangers discovered evidence that Bigfoot is living at Mud Lake! Bigfoot has no problem surviving the cold winter months outdoors because he's an expert at winter survival skills. Bigfoot wants you to be safe and prepared for winter weather, too. As an Official Bigfoot Investigator, you will help the rangers search for Bigfoot. Follow his footprints and become an expert at winter survival just like him!

Junior Ranger Adventures is perfect for kids aged 5-12, but all family members are welcome. A parent or guardian must be present.

Pre-registration is required. To register, please visit www.BoulderCountyOpenSpace.org/register.

Be prepared for the winter weather by wearing warm clothing, boots, hat and gloves. Sunscreen, water and snacks are also recommended.

If you have questions, contact Ranger Erin O'Leary at 720-352-7041 or eoleary@bouldercounty.org.



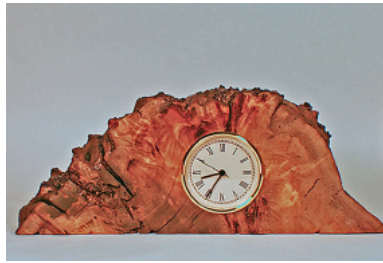
All Programs

All ages are welcome unless otherwise noted.

NO PETS PLEASE! Be prepared for winter temperatures.

For information about these programs, or to arrange a volunteer-led program for your group, please call 303-678-6214.

Carve! Selected Works from the Champion Cottonwood



These two works carved of wood from the Champion Cottonwood tree were created by Tim O'Brien

Boulder County Parks and Open Space is proud to present Carve! Selected Works from the Champion Cottonwood exhibit. The historic tree in Hygiene will live on through the creations of Colorado woodworkers.

Exhibit opens November 22, 2013 from 7:00pm to 9:00pm and runs through January 20, 2014. Longmont Museum and Cultural Center, 400 Quail Road Exhibit opening entry fee is \$5.

Also opening: Around the World in 80 Dolls and a photography exhibit by Julie Cardinal

Ski Pass for Open Space

As winter settles in, our local trails are covered with snow. If you haven't made the transition yet, it's time to trade hiking boots for a pair of cross-country skis. If you are ready to strap on your skis there is no need to travel far—Boulder County Parks and Open Space has miles of trails for cross-country skiers to enjoy.

The easy 4.5 mile (round trip) trail system at Caribou Ranch Open Space is a favorite destination for winter recreation. Not only will you experience a beautiful and diverse landscape, you will also have the opportunity to travel along the historic Switzerland Trail railroad route, pass through the DeLonde Homestead, and visit the Blue Bird Mine Complex. Extend your trip, by adding on 2.5 miles with a visit to the connecting trails at Mud Lake Open Space.

You may also want to take a trip up Flagstaff Road to visit the Walker Ranch Meyers Homestead trail. This moderate 2.6 mile trail (one way) travels across open meadows and through pine forests and ends with exceptional views of the Continental Divide.



Check current trail conditions before you go!
www.BoulderCountyOpenSpace.org/trailconditions

2014 Artist-in-Residence Program at Caribou Ranch

The Boulder County Parks and Open Space Department is accepting applications for the 2014 Artist-in-Residence Program at Caribou Ranch Open Space.

The program provides an opportunity for artists to pursue their work in the inspiring landscape and history of Caribou Ranch.

Musicians, painters, illustrators, photographers, visual/film artists, sculptors, performers, poets, writers, composers and crafts/artisans are all welcome to apply.

Each year, from July through September, selected artists will stay in the historic DeLonde Barn at Caribou Ranch Open Space for up to seven days.

By sharing their art with Boulder County, artists can add to residents' enjoyment of their open space lands and create a legacy of art preserved for future generations.

The open space property offers a variety of landscapes to explore including streams, waterfalls, forests, and beautiful vistas. Moose, elk, black bears, beavers, bats and nearly 90 species of birds live within or pass through the area. Also found on the property is the Blue Bird Mine complex where miners from the 1870s to the 1960s extracted silver ore. In the early 1900s, the site was a whistle stop for the Denver, Boulder & Western Railroad.

The application deadline is February 15, 2014. For more information, program guidelines and an online application, visit the department's webpage at www.BoulderCountyOpenSpace.org or contact Pascale Fried at 303-678-6201.



NATURE DETECTIVES

Winter 2013

A Red-tailed Hawk Named Kaya

Red-tailed hawks are our most common hawks. They can often be seen perched along highways or soaring over open fields. Kaya is a resident red-tailed hawk that can no longer fly free.

Kaya lives outdoors in a huge flight cage with other hawks at the Birds of Prey Foundation. Kaya came there as a young hawk, less than a year old. She had a severe head injury that blinded her in one eye. She even had to learn how to eat again.

Each year over 500 birds arrive from all over Colorado and other states to receive nursing care at the Birds of Prey Foundation. The dedicated staff members work hard treating injured or orphaned birds. When the birds are healthy and strong enough to survive on their own, they are released back into the wild.

Kaya can fly, but because of her injuries, she cannot hunt and could not survive in the wild. She now works at the rehabilitation facility, too. When orphaned, baby red-tailed hawks arrive, Kaya immediately takes over as their foster mom. She is a good mother so humans do not need to care for the babies. They will grow up wild and can go free, thanks to Kaya.

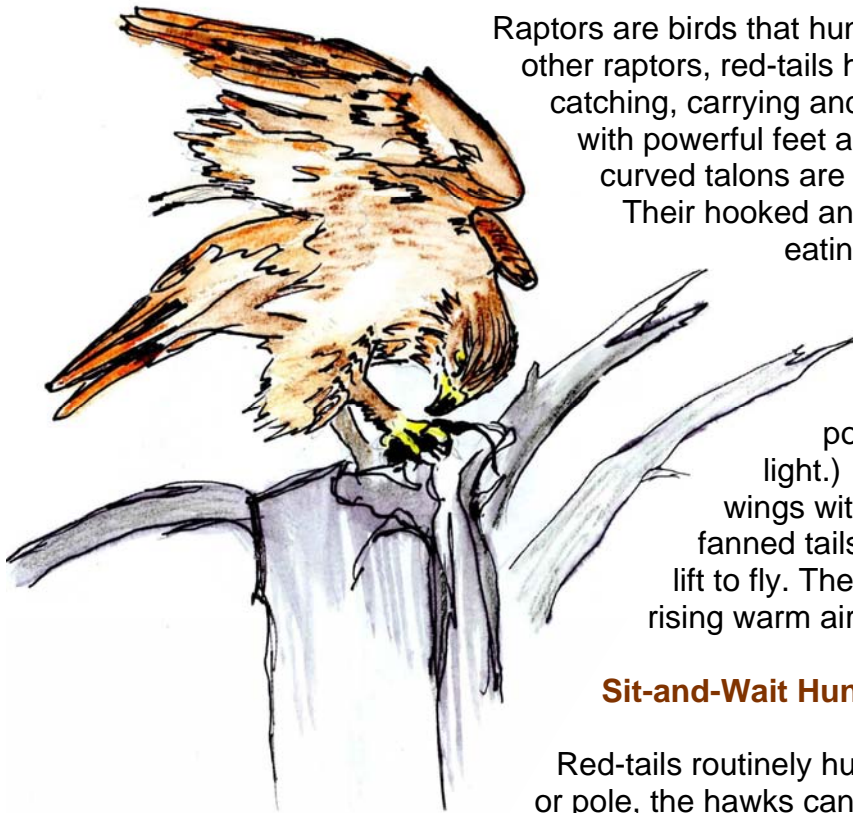
For more information on the nonprofit Birds of Prey Foundation check out their web site: www.birds-of-prey.org

Lucky Hawks Get Rescued

Birds need rescuing for many reasons. Baby hawks sometimes fall out of their nests. Juvenile red-tails are clumsy fliers and have a hard time catching prey. They instinctively know how to hunt and kill, but catching is tricky and dangerous. The young hawks often get injured or starve. Birds of all ages collide with windows and cars. Hawks are poisoned when they eat prey containing pesticides or lead shot. The average hawk lives to age 7 or 8. The luckiest might survive 20 years.



Red-tailed Hawks Are **Raptors**



Raptors are birds that hunt other animals for food. Like other raptors, red-tails have sturdy bodies built for catching, carrying and eating prey. They are big hawks with powerful feet and large talons. The sharp, curved talons are perfect tools for seizing prey. Their hooked and sharp-tipped beaks are ideal for eating meat.

Red-tails can weigh up to 3 pounds. (A little dog the size of a red-tailed hawk might weigh 30 pounds, but for flight you need to be light.) Red-tails have rounded, broad wings with a 4-foot wingspan and wide, fanned tails to give their large bodies enough lift to fly. They save energy by using wind and rising warm air currents to give them a boost.

Sit-and-Wait Hunting Saves Energy Too

Red-tails routinely hunt from perches. From a tall tree or pole, the hawks can easily see more than 100 yards. A red-tail could sit on a goal post and watch a mouse scurry under the opposite goal post on the far end of a football field. Their eyes are the size of ours, but we need binoculars to see what a red-tailed hawk can see. Gliding a mile above the ground, they can spot prey two miles away. Red-tails excel at soaring on the warm updrafts, but they are not built for speed.

Hunting from the air is usually done with a slight wind to help them hover over the ground. They actively hunt prey within a hundred feet so they can dive down in seconds to seize their unsuspecting catch before it can scamper off. The hawks' eyes adjust very quickly from seeing long distance to seeing up close as they grab their prey.

Secrets to Success: No Picky Eaters and Adapt to Any Habitat

Rodents are favorite red-tail menu items, but a hungry hawk will settle for almost any meal. They will eat frogs, snakes and even insects when prey is hard to find. Small animals like mice are eaten most often, but animals as big as rabbits can be quarry. Sometimes they catch birds.

Red-tails inhabit the plains to the mountains. They favor open country with scattered trees, but they have been known to nest in cities. Our red-tailed hawks live here throughout the year. That doesn't mean they don't move around a bit. Some red-tails migrate further south when they can't find food easily. Others just shift around trying to find a place with lots of prey. The hawks that migrate are likely to be younger hawks that haven't staked out a good territory.

Flying Feathered Acrobats

The bond between male and female red-tails is life-long. Before spring, pairs that haven't wintered together meet again near their old nest. They sometimes put on a spectacular spiraling display with the male circling a thousand feet into the sky before swooping down toward the female. She and he may clutch talons and tumble through the air. They are slow but beautiful flyers.

Nesting pairs patrol the area around their nest for intruders. They often chase off other hawks, owls and even eagles. They do not want other raptors hunting in their territory. They are most on-guard during the nesting season and more tolerant of wanderers in the winter. Mature hawks secure the best habitats with plenty of space and food.

Nests with a View

High nests are built by both parents on any suitable tree, cliff or manmade structure where the birds have a wide view of their territory. By late winter the hawks break off big sticks to begin nest construction or to repair an old nest. The female uses her wings, beak, feet and body to shape the inner nest bowl made of soft bark and plant material.

Newly hatched babies are completely helpless with bobble heads and weak bodies. The parents must shelter them from cold, rain, snow and too much sun. When they are about 6 weeks old, the young birds make their first clumsy flights to nearby perches and back to the nest. They are not confident flyers for weeks, and they noisily beg for food wherever they have landed.

Camouflage-Colored Feathers Aid Hunting

Young red-tails have dark stripes on their tails and won't get reddish tail feathers before they are two years old. Color can vary quite a lot among mature red-tailed hawks. Most have brown backs, pale undersides speckled with brown and the characteristic russet-red tails.

The tail feathers that give the birds their name are sometimes hard to see. If sunlight is shining through the feathers, the cinnamon-red color shows when the hawks fly overhead.

Despite their name, not all red-tailed hawks even have rusty-red tail feathers. Since many show up with different coloring, it can be tricky to positively ID red-tailed hawks.



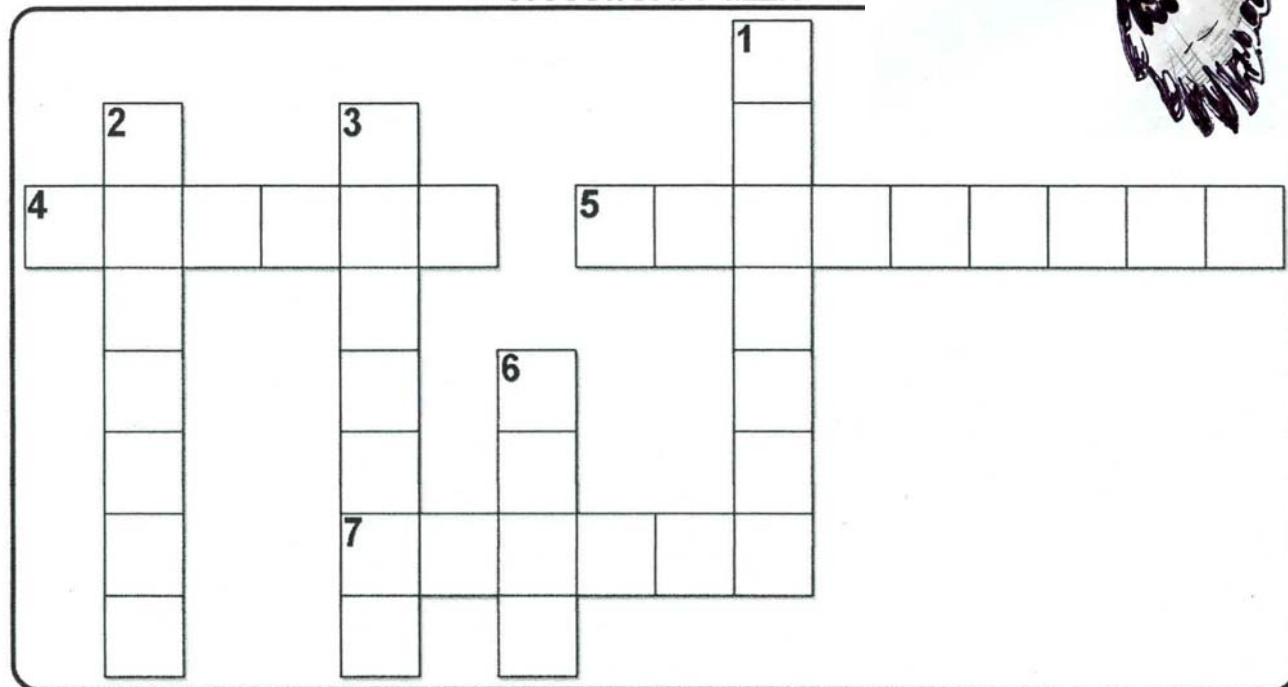
Red-Tail Count, A Car Ride Game

Make it a game to see how many red-tailed hawks you can spot. Look for them sitting on power poles, fence posts or tall trees next to the road. Also watch for them soaring high over open fields. When you see a hawk, chances are very good it is a red-tailed hawk.

Why look for red-tailed hawks in the **winter**? There are more of them around as hawks from mountain habitats or areas far north of us move down to join our year-round residents. Also it is easier to spot big birds perched in tall trees during the season when trees have no leaves blocking our view.



Crossword Puzzle



Across:

- 4 A bird of prey with sharp, curved beak and claws used to catch and eat other animals
5 A large space red-tails guard to keep out competitors
7 Sharp, curved claws used to catch and carry prey

Down:

- 1 High places where hawks can stand to look for prey
2 Where animals find food, shelter, water and space
3 Red-tailed hawks' favorite foods; includes mice, voles, squirrels, prairie dogs, chipmunks and others
6 What birds do to replace their worn old feathers with new ones

Possible Answers:
habitat, molt, perches, raptor, rodents, talons, territory

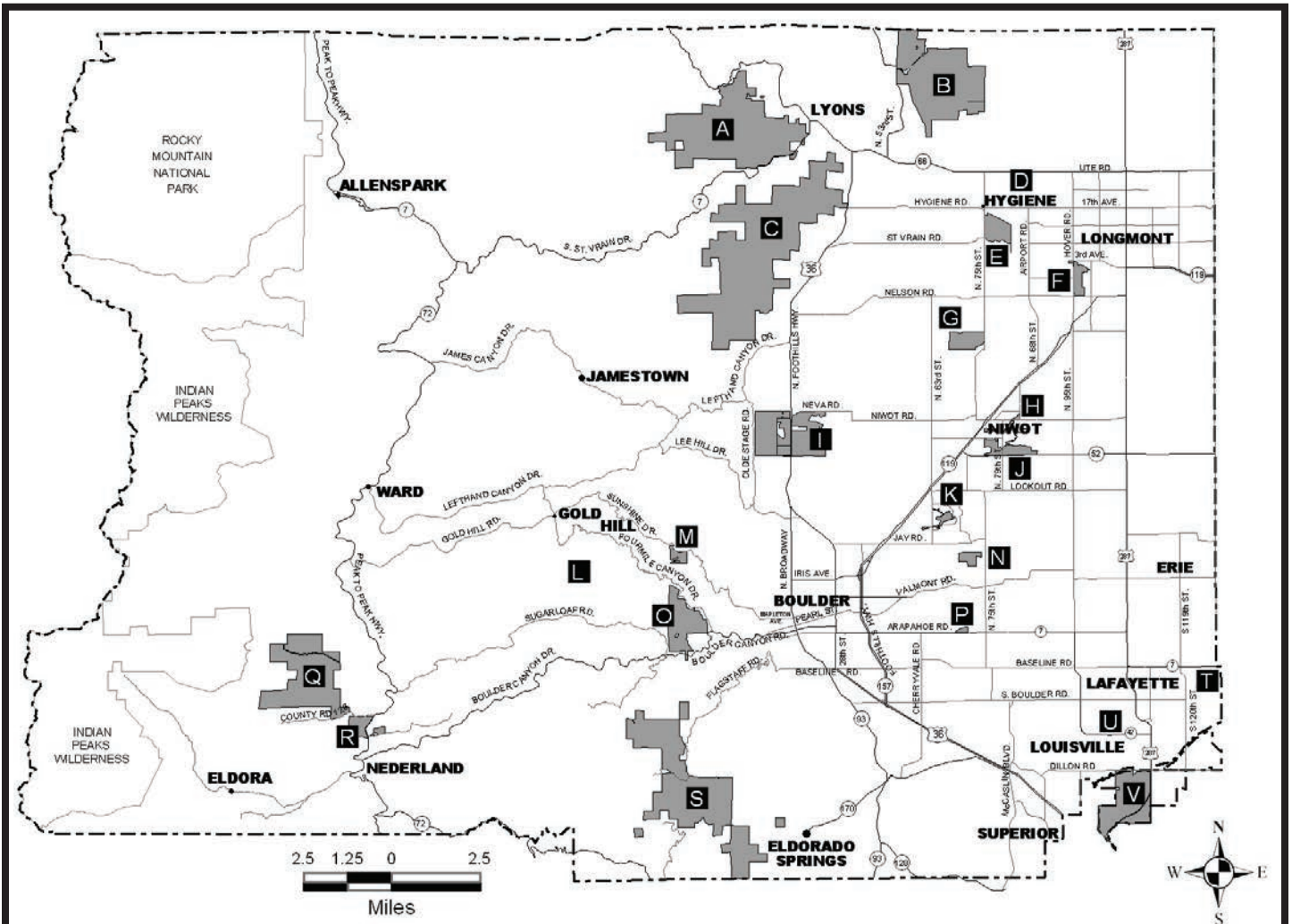


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303-678-6200

www.BoulderCountyOpenSpace.org

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NOTE: Please visit www.BoulderCountyOpenSpace.org/trails for the latest information about properties that may be closed due to the flood.



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