

### spring 2015



### **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:** Cover photo of Hall Ranch by Jack Ekin from his photography exhibit, "Open Spaces, Wild Places"

#### PHOTOGRAPHS & ILLUSTRATIONS

Walden Ponds Boardwalk Pascale Fried
Cottonwood Marsh Sally Wier
Hikers Corrie Brockman
Award Ceremony Jay DiLorenzo
Beetle Meaghan Huffman
Bumble bee Maggie Haseman
Volunteers Dave Hoerath
White Deer Russell Nanney
Hall Ranch Janet Cooper
Youth Corps Judy Wolfe
Frog Graham Fowler
Red Barn Jim Drew

#### **NATURE DETECTIVES**

Katherine Young and Deborah Price Illustrations: Michelle Durant

#### **DISCOVER BOULDER COUNTY**

Larry Colbenson and Sheryl Kippen

#### IN CLOSING

Jim Drew and Karen Imbierowicz

#### PRINTING

**Boulder County Printing Department** 

#### **EDITORS**

Rachel Gehr and Pascale Fried

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## Reflections on 40 Years of Open Space

by Ron Stewart, Director of Open Space



Boulder County's Open Space Department is 40 years old this year. And throughout Boulder County and nearby, more than 100,000 acres of land have been preserved as county open space. Agricultural land, wildlife habitat, riparian and wetland areas, scenic buffers and buffers between communities. Mountain land and land on the plains, land for trails, picnic sites and birdwatching—all are a part of the ethic of conservation that started in the 1970s and flourishes today. In fact, open space has become one of the signature features of Boulder County—county open space as well as open space preserved by each of the communities within the county.

Public opinion surveys indicate that the public is overwhelmingly in favor of the open space program; in 2012, 80 percent said they approve of the program. Open space (city and county properties) receive millions of visits each year. Thousands volunteer their time and talents to help with the management and improvement of the land. Was it always this way? Not at all. The beginning of the open space advocacy had many ups and downs. Two attempts to pass a countywide sales tax in 1978 and 1988 were defeated by the voters. There were groups and individuals who were strongly opposed to buying open land and they were a powerful force. It wasn't until 1993 that Boulder County voters approved an open space tax and a way for land to be preserved on a much broader basis than before 1993. Given the opposition, what made it happen?

First there was a group of residents who from the late 1960s on advocated for preserving open land. They asked that a Parks and Open Space Advisory Committee be formed, and it was in 1968. They then asked the County Commissioners to establish an Open Space Department, and 40 years ago, in January, 1975, it was.

They were the "people power" that advocated for open space funding in the two election contests where open space failed as well as in the 1993 contest where open space was successful. So persistence paid off.

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Second, the County Commissioners in 1992 established an Open Space Task Force to look at what should be done about open space funding. The task force included representation from every group in Boulder County that had an interest in open space (both pro and con): realtors, environmentalists, recreationists, city and town leaders, and Chamber of Commerce and League of Women Voters representatives. Ultimately the task force came up with a formula that county voters accepted and a quarter-cent sales tax and bond issue was approved.

#### A Need to Preserve

Third, the growth boom in the early 1990s was a wake-up call to many who felt that an open space program wasn't a necessity. Housing subdivisions and other development sprouting up in open fields around the county spurred a realization that unless something significant was done, all the county communities might blend into one continuous urban corridor. Concern about managing growth was a major impetus for the creation of the Boulder County Super Intergovernmental Agreement that identified areas near cities and towns that could be developed and areas that should remain rural. These rural preservation areas are the location of most open space parcels.



#### From 10,000 to 90,000 Acres

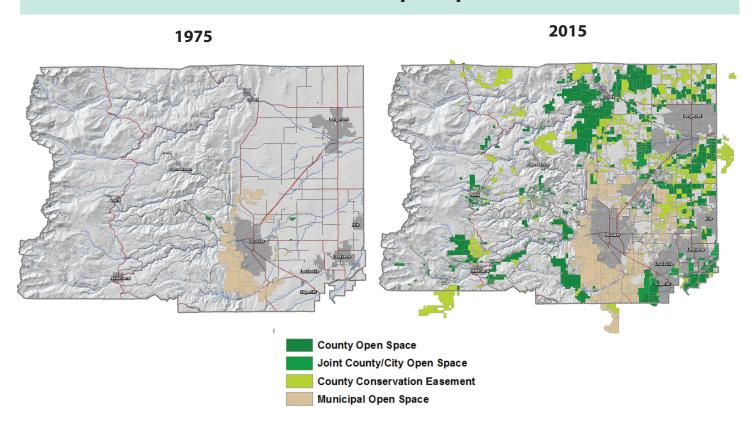
From the roughly 10,000 acres that had been acquired prior to the 1993 vote, an additional 90,000 acres or so have been preserved since then. Land has been preserved both by purchasing the total interest in the land as well as by purchasing conservation easements. About two-thirds of our open space is owned outright, and about one-third is preserved through conservation easements—where the county purchases the development rights on private property.

And with the acquisition of open space comes the responsibility of maintaining the land and continuing to involve the public in processes that determine how the land should be used: building trails and facilities for the public to enjoy; taking care of weeds and keeping land agriculturally productive; establishing wetlands and prairie ecosystems; monitoring wildlife and soil health; providing public education programs; and encouraging volunteers to help with the work on the land. That's the 40-year evolution of the open space idea.

Future years hold additional opportunities and challenges. Several key parcels remain to be protected. Land management issues will continue as we strive to protect wildlife, agricultural production and provide additional opportunities for recreation.

Boulder County's Parks and Open Space Department looks forward to these opportunities and challenges.

### **Evolution of Open Space**



## Wake up to Spring: Two Hikes to Enjoy

by Alli Fronzaglia

It's always exciting to observe the changing seasons in Boulder County, particularly when that change is from winter to spring. As our local flora and fauna awaken, so do we. Months of tiptoeing over ice and trudging through snow have worn us down. Mornings spent searching for lost gloves and strapping on foot traction have left us weary. And even though spring often roars like a lion here on the Front Range, signs of gentler, easier times begin to pop up. A crocus rises through the mud and melting snow. A well-rested chipmunk scurries among the brush. All the while, migratory songbirds provide the soundtrack.

Spring is upon us, and what better way to soak it all in than with a hike on our local trails? A spring hike is the perfect way to awaken your body and mind as you observe the wakening world around you. Below are two hikes that showcase this wondrous and transitional time in Boulder County.

#### Walden Ponds Wildlife Habitat (East Boulder)

Access the trailhead by taking 75th Street to Walden Ponds Road. The total distance of this network of trails is 3.5 miles (including the Heatherwood Trail) with negligible elevation gain. Several loop options are possible, with the shortest being less than one mile. Please note that wading, swimming, and boating are not allowed on this property.

These gentle trails encircle a wetlands habitat that was developed for both public recreation and wildlife protection

in the 1970s. Though the name conjures up images of Thoreau writing from his cabin in the woods, Walden Ponds was actually named after Walden "Wally" Toevs, the Boulder County Commissioner who led the development of the site.

With a mix of open fields, marsh and ponds, Walden Ponds is ideal for spring bird watching—especially warblers and waterfowl. Mammals such as fox and coyote are active here as well. Plant life is abundant, both in and out of the water. Look for a variety of grasses, wildflowers, and deciduous trees. Spring on the plains is perfectly encapsulated here.

**Top photos**: the boardwalk; a view from the trail at Walden Ponds Wildlife Habitat **Bottom photos**: a view from the Meyers Homestead Trail; and hikers enjoying the day

Meyers Homestead Trail at Walker Ranch Open Space (West Boulder) Access the trailhead by heading west on Flagstaff Road approximately 7.5 miles.

This is an out-and-back trail totaling five miles round trip, but it can easily be made into a shorter hike by turning around sooner. Elevation gain is roughly 600 feet.

The Meyers Homestead Trail is located on Walker Ranch, a 6,000-acre cattle ranch and homestead owned by James Walker and his family from 1882 to 1959. It is now listed on the National Register of Historic Places. Homestead ruins are visible from the trail.

Though close to town, this hike feels as though it's a 100 miles (and perhaps a 100 years) away from civilization. The trail ambles through a variety of habitats, from aspen and pine forest to mountain stream to open meadow. From leaf buds to wildflowers, signs of spring abound. The diverse landscape provides habitat for dozens of bird species. Woodpeckers, chickadees, and other insect eaters flit up and down tree trunks looking for their spring meals. For the hiker, the mountainous views are icing on the cake.

Be sure to visit www.BoulderCountyOpenSpace.org for maps and trail conditions before setting out.









# **Boulder County Receives Governor's Award**

by Carol Beam

At a ceremony on February 4, History Colorado (a charitable organization and an agency of the State of Colorado under the Department of Higher Education) presented Boulder County with the Stephen H. Hart Award and Governor's Award in recognition of its proactive consideration of historic buildings during disaster planning, response, and recovery.

History Colorado began the Stephen H. Hart Award in 1986 to recognize outstanding projects and individual achievements in archaeology and historic preservation throughout Colorado. The award is named in honor of Stephen H. Hart, Colorado's first state historic preservation officer.

From the small group of Hart awardees, one exceptional project is chosen every year to receive the Governor's Award for Historic Preservation. The Governor's Award recognizes a project or person that exemplifies the best in historic preservation, honoring historic design and craftsmanship, and adhering to proper preservation techniques and ethics.

#### **Considering Cultural Resources**

As a result of the lessons learned from Hurricane Katrina in 2005, and the subsequent recommendations put forth by the Federal Emergency Management Agency (FEMA), Boulder County formed a multi-agency coordinating system (MACS) in 2007 to participate in disaster response and recovery. Along with all the moving parts that formed the coordinating system to respond when a disaster strikes, cultural resources also held a



Left to right: Ann Pritzlaff, Chair, History Colorado Board of Directors; Carol Beam, Historic Preservation Specialist; Jessica Fasick, Land Use; Denise Grimm, Land Use; Cindy Domenico, Board of County Commissioners; Don Burd, Buildings and Historic Preservation Supervisor; Ed Nichols, President/CEO, History Colorado and State Historic Preservation Officer

seat at the discussion table. A cultural resource can be the physical evidence or place of past human activity that can manifest itself as a site, object, landscape, structure, object or natural feature of significance to a group of people traditionally associated with it. Most known cultural resources are the historic buildings and structures found in every part of the county.

During the 2010 Fourmile Canyon fire and again during the 2013 flood, Boulder County Preservation Planner, Denise Grimm served as an integral part of the emergency control team set up in the emergency operation center. Within one month of the 2013 flood, as a result of its two-decade historic building survey program, Boulder County provided to FEMA and the Office of Archaeology and Historic Preservation (OAHP) a list of all properties 45 years and older that received some level of damage in the flood. This was an invaluable tool for FEMA and OAHP during those early days of disaster response.

#### **Rescued Sites**

The county focused its resources on damaged and endangered historic properties. The county enlisted and managed volunteer engineers, provided county historic preservation grants, and processed landmark applications for properties to become eligible for local grants. Properties such as the Little Church in the Pines, the Wood-Cobb Cabin, and the Salina "Red Barn" might no longer be with us but for county intervention.

#### Credit to Many

As you can imagine in the wake of such a large natural disaster, it usually isn't one or two people who can take all the credit for the great work that occurred. The Parks & Open Space Buildings & Historic Preservation crew was also recognized for its efforts to reach each county-owned historic property right after the flood waters receded to assess and photo document the damage. In the case of the heavily damaged historic Ramey property, the Buildings & Historic Preservation crew assessed the damage to the buildings. They stabilized the barn which broke into two pieces and began planning on how to move the heavily damaged granary, which lost all the ground beneath it and then floated 100 yards to the east into a massive scoured out area. Within five months the Buildings & Historic Preservation crew moved the granary out of the scoured area to secure high ground. Planning efforts are being developed to restore the entire scoured area to pre-flood conditions.

# **Volunteer Opportunity: Help Pollinators (not just bees) Thrive**

by Meaghan Huffman

Native pollinators are not only responsible for a significant amount of the food we eat, but also are key to the balance of natural ecosystems. Flowering plants require pollination to complete their life cycle and most rely on help from outside agents such as wind, water or animals to do so. Pollination is the transfer of pollen from one flower to another, or from one part of a single flower to another part. When people hear "pollinators," they often just think of bees, but there are so many more pollinators. The Natural Resources Conservation Service estimates there are more than 200,000 species of animals (mammals and insects) in the world that act as pollinators. Bees play an important role as pollinators, but so do butterflies, birds, beetles and mammals.

Boulder County Parks and Open Space realizes the importance of native pollinators and it is focusing its efforts to find out what our native population of insect pollinators looks like and if there are things we can do to encourage thriving populations. One of the biggest issues our native pollinators currently face is loss of habitat. In 2014, we manufactured and installed pollinator houses with the help of volunteers, and we look forward to increasing our efforts and seeding pollinator-friendly plants to increase habitat.



#### **Growing a Successful Monitoring Program**

Last year was the inaugural year of the Pollinator Natural Resource Volunteer Monitoring program, and we are excited to expand it this year. In 2014, three volunteers collected data for us, and this year we hope to recruit 16 volunteers. The purpose of this program is to determine the types of native pollinators present on Boulder County Parks and Open Space properties. The majority of the monitoring will be on restored grasslands and near agricultural areas on the plains.

**Program Details**: Volunteer monitors will be trained in pollinator identification, receive a monitoring location on open space and will be responsible for visiting the site monthly throughout the growing season to observe and record pollinator presence. This is a great opportunity to visit an area closed to the public due to agricultural use, enjoy the peace and tranquility of open space, and contribute to the larger effort of learning more about native pollinators and how to help them thrive.



### **More Ongoing Volunteer Opportunities**

For information about other opportunities, contact Michelle Bowie at 303-678-6219 or mbowie@bouldercounty.org or visit www.BoulderCountyOpenSpace.org/volunteer.

#### **Abert's Monitors**

Monitor squirrel populations in ponderosa pine forests to assist in forest treatment planning and post-treatment effects on squirrel populations.

**Application deadline March 13** 

#### **Invasive Plant Monitors**

Monitor invasive plants along trail corridors utilizing photo points.

**Application deadline April 11** 

#### **Forestry Sort Yard Hosts**

Collect data from visitors at Allenspark and Nederland sort yards and educate people about forest ecology, wildfire mitigation and forest restoration.

**Application deadline April 30** 

#### **Conservation Easement Stewards**

Conduct site visits of conservation easements to monitor properties for adherence to conservation easement terms and prepare monitoring reports.

**Application deadline May 1** 

#### **Pollinator Monitors**

Help us determine the types of native pollinators present on restored rangeland properties.

Application deadline March 15

#### **Native Plant Monitors**

Monitor native plants at ecologic restoration sites utilizing photo points.

**Application deadline May 15** 

#### **Wildlife Shrub Monitors**

Track shrub health relative to climate, browsing, and fire interval on North Foothills Open Space properties.

**Application deadline September 25** 

Volunteers for the Abert's squirrel monitoring program use GPS to locate monitoring plots at Heil Valley Ranch.



### 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 2014 study conducted by Rick Adams of School of Biological Science, University of Northern Colorado. His project focused on the effects on bats of forest structure changes caused by fire and human manipulation, dietary and heavy metal contaminant analyses.

Abstract: In 2014 we worked at Heil Valley Ranch and Hall II properties owned by Boulder County Parks and Open Space. We mist netted and used SM2BAT+ and EM3 sonar recorders to quantify bat foraging patterns. For the third year were gathered sonar calls from the Overland Burn area, Geer and Plumely canyons, and thinned area near Ingersol Quarry and more than 25 sites at Hall II property. We captured 74 bats of seven species at 14 netting sites distributed across Heil Valley Ranch and Hall II properties and gathered more than 40,000 sonar call sequences. The foraging activity of bats at the Overland Burn sites were similar to that found in 2012 and 2013. The flood of September 2013 had major effects on both Geer and Plumely canyons resulting in a very large number of drinking pools established in each canyon. In Geer Canyon, bat activity increased by 45%, whereas in Plumely Canyon bat activity increased by greater than 75%. For the first time ever since working in Plumely Canyon, we heard and recorded audible communication calls between individuals of the Mexican free-tailed bats indicating that a colony of this species has taken up residence in the area. We also heard and recorded these communication calls at Hall II property. We continue to record definitive sonar calls of tricolor bats (Perimyotis subflavus) at Hall II, but have not been able to capture any individuals. The most common species recorded at Hall II property were hoary bats (*Lasiurus cinereus*), small-footed myotis (*Myotis ciliolabrum*) and little brown myotis (*Myotis lucifugus*). A large maternity colony of M. lucifugus was found along the St. Vrain Canyon from an individual radio-tagged at Hall II property. Although this colony does not roost on Hall II property, this location provides a major drinking site and foraging areas for this species. In fact, the large maternity colony drank from the Pool 1 site in the gravel pit. Three sites tested in the gravel pit showed relatively high levels of dissolved calcium. Although the M. lucifugus maternity colony drank from Pool 1 which had the lowest dissolved calcium (although still higher than other sites tested), Pool 1 also had the least amounts of potentially harmful chemical compound load.

**Conclusions**: All four of my hypotheses were supported. Bats showed a increase in activity based upon sonar call recording in both canyons. Plumely Canyon, a normally dry canyon, showed a significant increase in activity. Geer Canyon also showed a large increase in activity, but the change was not significant due to high variation in nightly activity patterns. In both canyons, activity by MYCI and MYLU doubled or tripled. Species Evenness increased in Geer Canyon in 2014, but was highly variable over the years in Plumely Canyon, including in 2014. Assemblage structure shifted with increases in some species and decreases in others. Thus changes in water availability appear to have significantly positive effects on bat activity. Because the West is cited to become hotter and drier with increases in the frequency of severe droughts, providing water for bats near roost sites may be a way to mitigate some of the effects of climate disruption on local and regional bat populations. Future study will look for further changes and stabilization around a new normal.

Visit www.BoulderCountyOpenSpace.org/research to read the full report and other research articles.

### White Deer: The Legend and the Science

by Sally Wier

Ponderosa pine trees, juniper, yucca and bitterbrush cover the red, rocky hillsides along the Antelope Trail at Hall Ranch. Red-tailed hawks circle in the sky, spotted towhees chatter in the trees, and Nuttall's cottontails hide in the shade of desert shrubs. A herd of mule deer graze quietly amidst it all. One of these deer draws the attention of passing hikers and bikers as they, too, wander through the foothills. This deer stands out. Rare and striking, this deer is white.

White animals are rare in the wild. The occurrence of white fur, skin or plumage in animals depends on individuals having specific mutations in their genes, and this is quite uncommon. An animal's lack of color can be caused by one of two genetic conditions, making it either albino or leucistic, the latter being much more common.

#### White, yet not Albino

Albinism, the condition that results in an "albino" animal, is perhaps the most well-known genetic state that renders an animal white. However, true albinos are enormously rare in nature. Unable to produce any melanin pigments in their bodies at all, albino animals are pure white in color, and their eyes are pink or red. Leucistic animals, however, can produce melanin but are unable to deposit it properly in their skin, fur or feathers. Leucistic animals often have patches of color somewhere on their bodies, and the color of their eyes remains dark.

Hall Ranch's white deer is leucistic with some small bits of brown fur, as well as dark eyes. The resident ranger, Denny

Morris, first remembers seeing the deer as a fawn in 2011. He has seen her about four times since. Visitors to Hall Ranch have a chance of seeing her from early fall through early spring as the herd she travels with moves higher into the mountains in the heat of the summer.

#### **Loss of Camouflage**

Some animals, such as polar bears or snowshoe hares, are intentionally white or change to a white coat seasonally, and have the advantage of being camouflaged in snowy environments. Many leucistic animals, however, do not live in such habitats, and they no longer have the coloration that allows them to camouflage themselves for safety in their homes. For this reason, leucistic animals are often caught as prey or hunted down by humans far before they reach the end of their natural lifespan.

Female mule deer generally do not live beyond 14 years. The white deer of Hall Ranch is already three to four years old. If she is to live out the next 10 years of her life she will have to successfully avoid the area's mountain lions that rely on mule deer as one of their primary food sources. Luckily for the deer, she lives through winters and the corresponding hunting seasons on an open space property where hunting is prohibited.

#### Lore of the White Deer

Not only unusual to see in the wild, this animal also serves as a reminder of a rich history of legend and myth associated with white deer. In European and Celtic mythology white deer are believed to be supernatural, and the Arthurian legends include a magical white stag. Native American tribes, including the Chickasaw and Lenape, have stories and prophesies associated with white deer and seeing them in the wild. Given the rarity of these animals, it is no wonder that we respond to them with a sense of awe.

Does the presence of this deer at Hall Ranch signify anything special or powerful about the landscape? Each person should answer that question for themselves. Yet it is also curious that within the last 10 years a "white" red-tailed hawk nested in the same area. Perhaps there is something extra in the air at Hall Ranch, and not just different genes.



Only on rare occasions has the white deer at Hall Ranch been seen.

# NATURE DETECTIVES.

### **Leaping Leopard Frogs & Croaking Chorus Frogs**

Leopard frogs and chorus frogs hop, jump and leap around Boulder County during the warm seasons of the year. With camouflage coloring of greens and browns, they blend into their surroundings and try to avoid getting snatched up and eaten. Usually guiet and alone, they hop and hide and look for food. In winter they hibernate.

Spring is special because now is frog-calling time. Yahoo! Warm spring days prompt the male frogs to begin to sing. On the plains, that means March or April. Up in the mountains where warm days arrive later, frogs won't call for another month or more.

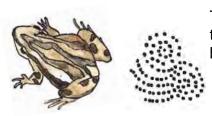


When winter is over, male frogs leave their hibernation shelters and group together in calm, shallow water. It is time for frog dudes to belt out their frog songs. Leopard frogs make leopard frog calls and chorus frogs make chorus frog calls. Loudly!

Leopard frog guys have an air sack on their throat in front of each front leg. The much smaller chorus frog

guys have just one air sack under their chin. It takes a lot of energy to make such loud sounds. The air sacks are inflated through holes in the frog's mouth. The frogs make the sounds with their mouths closed.

Frog calling jump-starts the frog life cycle. Female frogs hear the calls and instinctively hop toward the sounds made by males of their species. Leopard frogs are attracted to leopard frog calls and chorus frogs to chorus frog calls.



The female frogs will lay masses of eggs in the water where the males are waiting to fertilize them. Each frog's life cycle begins as an egg laid by a female frog.



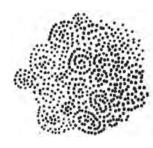


Leopard Frog

Spring 2015



**Chorus Frogs** 



#### **Egg to Polliwog to Frog - Metamorphosis**

Female frogs lay hundreds to thousands of eggs in clear, still water. Neither leopard frogs nor chorus frogs ever stick around to guard them. Egg survival is simply a matter of luck. Animals such as ducks and fish find slimy frogs' eggs tasty so out of hundreds of eggs very few will survive to hatch.

What hatches after a few days is not a four-legged frog but a wee tadpole. Tadpoles, or polliwogs as they are sometimes called, look more like fish than frogs. They breathe underwater with gills like fish. They have a long, sort of fish-like tail and no legs. They use teeny teeth to scrape food off rocks and other surfaces, and they also snap up minuscule food particles in the water.

They hide from bigger tadpoles, salamanders, ducks, snakes, turtles, fish and even large insects in the water, and all other predators hungry for baby tadpoles.

As the tadpoles get large, they start to change shape. Four tiny legs appear and lungs develop. As the legs

grow, the tadpole's tail gets shorter, used up for energy by the frog's body. The almost-frogs start to gulp air at the surface and one day, they hop out of the water. The little animal has completely changed from a tadpole that had to live under water into a long-legged frog that can hop around on land or dive back into a pond. Frog metamorphosis is complete.

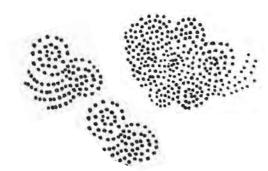
#### **New Enemies and New Foods**

Out of the water, there are new dangers. The frogs look and listen for snakes, raccoons, herons, jays, hawks and other predators. Frogs are great at sensing ground vibrations and seeing danger. Then they zig-zag jump and hide.

Like tadpoles, adult frogs will eat almost anything that fits into their mouth. Their sense of smell helps them find food. When they spot prey, their sticky tongue whips out in a flash to catch flying insects, ants, beetles, spiders, slugs, snails and worms.

Frogs gulp food whole without chewing. They can push their eyeballs down to their mouth when they swallow big prey to help cram the food down their throats.





#### **Bodies Made for Life In and Out of the Water**

Chorus frog adults are only about an inch long from nose to rear end. Leopard frog adults are about four inches, not counting their long legs. Both kinds of frogs can be found from the plains to the mountains. They like ponds, marshes, shallow areas of lakes, and even big puddles. Frogs are amphibians, animals that spend their lives both in and out of water. During mild rainy weather they sometimes roam far from water.



Actual size!

The leopard frog and chorus frog's skin is moist and smooth. It isn't protected with hair or feathers or scales, but slick mucous helps shield and moisten the skin. The mucous is made in glands under the skin. The slippery skin makes it hard to hang onto a frog and just might keep a frog from becoming another critter's dinner.

Frog skin also allows oxygen to move through it. Oxygen goes directly into the frog's blood to aid the lungs in breathing. Frogs renew their outer skin by shedding it periodically. Shed skin is food not to be wasted so the frogs usually eat it.

#### **Surviving Winter Ice**

Chorus frogs shelter under logs, piles of leaves or in animal burrows when temperatures fall. Temperatures below freezing can put icicles in their blood. Their heart stops beating and they stop breathing, but a kind of antifreeze in their cells keeps the frogs alive.

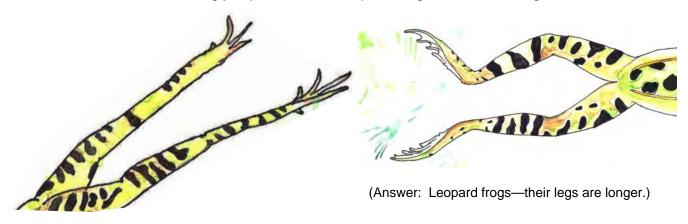
Leopard frogs cannot survive freezing temperatures so they winter under debris at the bottom of ponds or lakes where temps stay above freezing.

#### **Frog Troubles**

Frogs absorb moisture through their skin from wet grass, damp ground or in water. They absorb so much water in ponds, they have to urinate a lot. If frogs are in dry air too long, they dry out and suffocate.

Invasive bull frogs, water pollution and loss of clean wetland habitats are all hard on leopard frog and chorus frog populations. When conditions are favorable, the frogs can survive as long as five to nine years.

**Trivia Question:** Which frog jumps farther, a leopard frog or a chorus frog?



#### Ribbit and croak? It's more like creeeek, chuckle and snore!

Different frogs make different types of calls. Chorus frogs are very tiny—only about one inch long—but you can hear their calls from half a mile away.



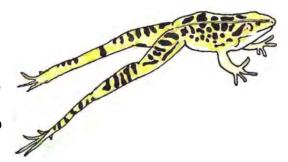
To imitate a chorus frog, get a plastic comb and strum your fingernail across the tips. That's pretty much what chorus frogs sound like.

Leopard frogs aren't named for the sounds they make—they are named for how they look. Their spots made people think of the large wild cats that sport a spotted coat.

See if you can imitate the call of a leopard frog—it's kind of like a snore and a soft little chuckle!

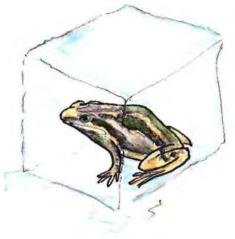
#### How do frogs stay warm?

People are mammals. The energy made inside our bodies keeps us at a constant temperature. Frogs are amphibians. They depend on outside temperatures to change their own body temperature. If a frog needs to get warm, it has to sit out in the sun to absorb the heat. If it gets too hot, it finds a cool, shady place to cool down.



#### **Check Out Your Body's Temperature Control**

Get a thermometer from your mom or dad. Have them show you how to use it. On a warm, sunny day, go outside and sit in the sun for about five minutes. Feel your skin—is it warm? Take your temperature and write it down. Now go inside an air-conditioned building. Stay there until you are nice and cool. Take your temperature again. Aren't you glad you're not a frog?



#### Frogsicle Freeze!

Since frogs can't stay warm in winter, it is hard to survive. Chorus frogs do something very "cool." They have a type of anti-freeze in their bodies that protects them. Their whole bodies become frozen like "frogsicles" and the antifreeze protects their organs.

In the spring, they thaw out and start jumping and calling. But don't try to freeze a frog yourself! They can only do this all by themselves.

Listen for Frogs – To learn more about leopard frogs and chorus frogs, see the frog program listed in the *calendar of events* near the end of this IMAGES spring issue.

### Behind the Name: Trails at Hall Ranch

by Francesca Giongo



A view from the Bitterbrush Trail at Hall Ranch

When it was time to name trails at Hall Ranch Open Space, the department could not have picked two more appropriate names than bitterbrush and nighthawk, a plant and a bird that really define Hall Ranch.

The bitterbrush, a member of the rose family, is the dominant shrub at Hall Ranch. Its Latin name, *Purshia tridentata*, has historical and botanical origins. Purshia comes from Frederick Traugott Pursh, the German-American botanist that first described this plant in 1814. *Tridentata* refers to the three prominent indentations, or "teeth" at the end of the leaf (*dens* is Latin for tooth).

#### Bitterbrush—a Good Provider

A native of the Western mountains, the bitterbrush (also called antelope bitterbrush) is an important browse plant for livestock and wild ungulates such as deer and elk—especially in winter and spring. Its seeds are an important source of food for small animals, and the plant provides cover for small animals and birds. According to the open space management plan, "Thickets dominated by mountain mahogany, skunkbrush and bitterbrush are rich breeding bird habitat and support a number of species of concern including scrub jay, bushtit, gray catbird, and others."

In addition to providing food and shelter for wildlife, the bitterbrush also has human uses. It is an ideal plant for restoration projects, given its extensive taproot system. The long roots are an adaptation to desert environments, as are its leaves that are covered with dense hair on the underside to prevent water loss. Historically, Native Americans used all parts of the plant to treat respiratory and digestive ailments.

#### The Nighthawk: Not Really a Hawk

The common nighthawk (*Chordeiles minor*) is a confirmed breeder in the Hall Ranch area. The name nighthawk is actually a misnomer since this bird is neither a hawk nor strictly nocturnal, but crepuscular, which means active at dawn and dusk. The "hawk" part probably comes from the fact that its flying silhouette with rather long, pointed wings resembles that of falcons. This medium-sized bird with speckled brownish feathers makes for excellent camouflage during the day and a distinctive white band on its wings, very visible in flight.

Nighthawks feed almost exclusively on insects, hunting on the wing. Oftentimes flocks of these birds are spotted in urban areas, feeding on clouds of insects that are attracted to streetlamps, stadium lights, and other bright lights.

Many factors make the nighthawk worthy of having a trail named after it. To start, it has one of the longest migration routes of all North American birds, flying from South America (primarily Argentina) to as far north as Greenland. In our area, it is one of the last species to reach its nesting grounds. Also, it does not build a nest, but lays eggs on the ground.

The bird's most distinctive feature, however, is the male's courtship display. The male starts flying high, then dives for the ground. As he comes out of his dive (sometimes just a few yards from the ground) he flexes his wings downward. The air rushing across his wingtips makes a deep booming or whooshing sound, akin to having a race car zoom by. These dives may be directed at females, territorial intruders, and even people.

According to the resident ranger at Hall Ranch, nighthawks are a rather common sight in the park during the summer months. What better opportunity than taking a walk at sunrise or sunset to look (and listen) for this fascinating bird?

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### **Helping Community with Youth Corps**

by Krishan Patel

As a kid growing up in Colorado I spent a lot of time outdoors and always wondered what it would be like to be a park ranger. It fascinated me that they got to spend all their time off in a remote area, working with nature and explaining how nature works to others. When I first heard about the Boulder County Youth Corps (BCYC), I was ecstatic to get the chance to work outdoors for a summer. After spending one summer with BCYC, I was extremely glad I had found this opportunity because it is so much more than an outdoor work experience.

My family often spends summers traveling, but that was not true my last summer of high school. So when I became free, I decided I wanted a job. I was introduced to the Youth Corps at a job fair in 2009 and found out that it was the last year I was eligible to be a Corpsmember being 17 years old. It turned out to be a spectacular summer and I wanted to come back, but during college I spent my time following my passion for engineering. I was lucky to find another free summer and I was able to be in the Youth Corps again as a Team Leader this past summer.



Krishan with corpmembers in 2009.



Krishan works with a corpsmember to replace light bulbs in the summer of 2014.

#### **Lightbulbs and Weeds**

My first year as a corpsmember, I was placed on the Longmont Power & Communications (LPC) team. I was a little surprised that our project for the summer was to change light bulbs—this did not fit my expectations of the Youth Corps. This was the first challenge that showed me that BCYC was going to be more than I expected. At its heart, the Youth Corps strives to help the community through its projects. Not only was I able to help maintain street lamps as a benefit to walking and driving at night in Longmont, my team's project was also to upgrade the light bulbs to be more efficient and save more energy. My team leader was great at explaining how our work benefited the community, and now when I go around Longmont I feel immense satisfaction to say I have been in that neighborhood and changed those lamps.

In the end, I was not able to completely get away from typical BCYC work and did my fair share of weeding. On a few occasions my team went out to different LPC facilities to help maintain the land. Finally, we were able to get our gloves and shins dirty as we went about the never-ending work of pulling out weeds. The best part of these experiences was being able to tour the LPC facility after getting the work done—we got to see a transformer and a hydroplant. This was super cool as I wanted to study engineering in college. Another benefit to the Youth Corps is helping yourself as you are helping others.

#### Returning as a Leader

After a few years spent gaining engineering experience, I returned to BCYC as a team leader this past summer. I was glad to be asked back since it was a chance to grow as a leader and give back to my community once again. I was delighted to return to the LPC team and get another opportunity to learn more about Longmont. The repetitive work was not boring because the residents of Longmont are spectacular in the way they decorate their street lamps. Some had intricate paintings while others had funny signs like, "Beware of Security Squirrel." The best part about coming back as a team leader was watching my corpsmembers grow.

#### **Improve Yourself and Community**

The BCYC is one of the best work experiences I have ever had, even with my short time with them. As my first job, it went a long way in teaching me how to be a successful member of the workforce. I am really thankful for all the leaders and the sponsors for making the Youth Corps a welcoming, fun place to work. If you have ever wanted to help your community and improve yourself, the Youth Corps is for you and there is the additional benefit of working outside in great Colorado.

Applications will be accepted through March 27. Visit www.BoulderCounty.org/ycfor more information.

#### **Discover Boulder County**

# calendar of events

**Birds of Prey Driving Tours** Saturday, March 7; 10 a.m.-1 p.m.

Saturday, March 21; 10 a.m.-1 p.m.

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 working on our observation and identification skills. Please bring lunch. drinking water, binoculars, a spotting scope, and a bird field guide if you have them. The tour is geared for adults and older children.

Register by emailing lcolbenson@bouldercounty.org, or calling 303-678-6214 by March 5.



**The Hidden World of Bird Nests** Saturday, March 14; 10 a.m.-noon Walden Ponds Wildlife Habitat; 75th Street between Valmont Road and Jay Road; meet at the group picnic shelter at Cottonwood Marsh

Bird nests range from a scrape on the ground to intricately woven hanging nests. Join volunteer naturalists for an easy end-of-winter walk in search of some of these diverse structures created by amazing avian architects. Bring binoculars and a bird field guide if you have them.

#### On the Wing: A Birds-Eye View of Boulder County Weather Tuesday, March 17; 7-8:30 p.m. Longmont Public Library, Meeting Rooms A & B, 4th Avenue

and Emery Street

Join volunteer naturalist Phil Ecklund for a look at Boulder County's weather from the perspective of a glider pilot. From soaring thunderheads to "flying saucer" clouds, the weather is anything but predictable along the Front Range. Phil will share his years of experience flying through Colorado's changeable weather with inflight and time-lapse images.

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



**Spring Has Sprung!** Saturday, March 21; 10 a.m.-noon Heil Valley Ranch Open Space (south trailhead); north of Boulder off Lefthand Canyon Drive; meet at group picnic shelter

Join volunteer naturalists on a leisurely 2-mile hike and celebrate spring by looking for signs of new life. Learn the importance of the sun at equinox in linking and timing these displays of new beginnings.

Whoo are the Owls? Monday, March 23; 7-8:30 p.m. Louisville Public Library, 951 Spruce Street, Louisville

Owls have been regarded with fascination throughout history and across many cultures. More than half of the owls recorded in the U.S. have been seen in Boulder County, and most of those owls nest here. Join volunteer naturalists to learn about the adaptations that make owls such expert hunters.



Spring Awakening—Bears in our Backyard Saturday, March 28; 10-11:30 a.m. Betasso Preserve; Boulder Canyon (Highway 119) to Sugarloaf Road; follow signs to Betasso Preserve; meet at group picnic shelter

Black bears are part of our landscape. In spring, as daylight hours grow and temperatures warm, bears and their cubs emerge from winter dens. Join volunteer naturalists to explore how bears survive the winter and become active again in the spring and learn how to live safely in bear country.

**Rattlesnake Hike** Saturday, April 11; 10 a.m.-12:30 p.m. Rabbit Mountain Open Space; northeast of Lyons on North

55th Street; meet at group picnic shelter

Enjoy a moderate 2-mile hike to learn about this reptile found in the plains and foothills. Volunteer naturalists will share information about the western rattlesnake, including habitat, ecology, behavior, and how to be safe in rattlesnake country.

#### **Discover Boulder County**

# calendar of events

#### Wildflower Hikes

Wildflower Hike at Legion Park
Saturday, May 2; 10 a.m. - noon
Legion Park Open Space; east Boulder on Arapahoe
Road; 0.5 mile west of 75th Street

Join volunteer naturalists for a leisurely spring stroll through the pinyon and ponderosa pines at Legion Park. Besides having a great view of the Continental Divide, this park is a wonderful place for early season wildflowers.

Wildflower Hike at Rabbit Mountain
Saturday, May 16; 10 a.m. - noon
Rabbit Mountain Open Space; northeast of Lyons on
North 55th Street; meet at group picnic shelter

Join volunteer naturalists for a moderate 2-mile hike to learn about the variety of wildflowers at Rabbit Mountain.

Wildflower Hike at Bald Mountain Scenic Area Saturday, May 30; 10 a.m.-noon Bald Mountain Scenic Area; 5 miles west of Boulder on Sunshine Canyon Drive (Mapleton Ave. in Boulder city limits)

Ioin volunteer naturalists for a wildflower hike in the

beautiful foothills west of Boulder. We will hike about 1.5 miles through forest and meadows in search of spring wildflowers, enjoying some beautiful vistas along the way.



#### **Nature Hikes for Seniors**

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

Thursday, March 26; Walden Ponds Wildlife Habitat Area; meet at the picnic shelter at Cottonwood Marsh

Thursday, April 30; Walker Ranch Open Space (meet at the Meyers Homestead Trailhead—lower parking lot)

Thursday, May 28; Agricultural Heritage Center

### The Mystery of Bird Migration Slide Program Wednesday, April 15; 6-7:30 p.m. Lafayette Public Library, 775 West Baseline Road

Some birds are seen year-round in Boulder County, some only in summer or winter, and some birds visit only briefly in spring or fall. Learn why birds make seasonal journeys, how they know when and where to go, how they find their way, and what brings them back year after year. Join volunteer naturalists Larry Arp and Vicki Braunagel to explore these mysteries surrounding the world of bird migration.

Spring Skies and Jupiter

Friday, April 17; 7:30-10 p.m.

Beech Open Space Shelter (Neva Road and Hwy. 36—look for signs on road)

(Note: weather backup date is April 18—call 720-526-9154 or 303-906-7391 for updates)

Enjoy the open space in the sky! Dave Sutherland (City of Boulder Open Space) and Deborah Price (Boulder County Parks and Open Space) are teaming up to help you explore the spring constellations and discover fun facts about Jupiter and its moons at a brief program, followed by sky-gazing with telescopes provided by the Longmont Astronomical Society.

The Mystery of Bird Migration Bird Walk Saturday, April 18; 8-10 a.m.

Walden Ponds Wildlife Habitat (75th Street between Valmont Road and Jay Road; meet at the group picnic shelter at Cottonwood Marsh)

Join volunteer naturalists Larry Arp and Vicki Braunagel to explore the joys of bird watching during prime migration season! Learn tips for recognizing different types of birds, including songbirds, ducks and waterfowl, wading birds, raptors, and more. Please be prepared for a slow-paced walk of up to 2 miles. Bring binoculars and a bird field guide if you have them.

Dyeing Fabric 'n' Eggs Saturday, April 18; 11 a.m.-12:30 p.m. Walker Ranch Homestead; 8999 Flagstaff Mountain Road, approximately 7.5 miles west of Boulder on Flagstaff Road

Plunge into the world of natural and simple manufactured dyes. What plants make what colors for fabric and eggs? See dye being prepared on the wood stove. Make a little something to take home. Registration opens approximately two weeks before the event at www.BoulderCountyOpenSpace.org/register.

## calendar of events

#### **SOMETHING JUST FOR KIDS!**

Nature Detectives in the Field: Join the Frog Chorus! Thursday, April 23; 10-11 a.m.

Walden Ponds Wildlife Habitat; 75th Street between Valmont Road and Jay Road; meet at the group picnic shelter at Cottonwood Marsh

It's fun to listen to the call of frogs in the spring. Frogs also use special tricks to survive. Young children and their parents/guardians will experience stories, activities, and exploration while learning more about western chorus frogs

and northern leopard frogs from Katherine Young and Deborah Price, authors of "Nature Detectives" in *Images*. This program is geared to children ages 3-7, but other siblings are welcome.



#### **Senior Fish-off**

Friday, April 24th; 6:30 a.m. - 10 a.m.
Wally Toevs Pond at Walden Ponds Wildlife Habitat;
on 75th St, between Valmont Rd. and Jay Road, Boulder

Prizes will be awarded for heaviest rainbow trout, most experienced (oldest) angler, best fishing hat, and best fishing joke. The trout have fattened up and are biting!

- Open to all Boulder County seniors 64 years and older
- All anglers must sign in—no fishing before 6:30 a.m.
- Valid 2015 Colorado fishing license required
- Live bait and artificial flies/ lures permitted—bring your own fishing gear
- Wheelchair-accessible fishing pier is available

For more information, contact
Michelle Bowie at
303-678-6219 or mbowie@bouldercounty.org



Let's Talk Chickens Saturday, April 18; 1-3 p.m. Agricultural Heritage Center; 8348 Ute Hwy 66, Longmont

Join volunteer Jessica Brunecky as she shares lessons learned from raising her own chickens. Learn why chickens are popular as pets and livestock, and how they are suited to your backyard today. Bring your stories and questions about the lifecycle of chickens, different breeds, and living arrangements.

# Spring Heritage Day at the Walker Ranch Homestead

Sunday, April 26; 10 a.m. - 3 p.m. Walker Ranch Homestead; 8999 Flagstaff Mountain Road, approximately 7.5 miles west of Boulder on Flagstaff Road



Spring is a new beginning—planting gardens, repairing buildings and bringing baby animals into the world. That was also true for local ranch families in the 1880s. Join us at the Walker Ranch Homestead for a peek into pioneer living in springtime. Smell what's cooking in the log house, chat with the blacksmith, and experience hands-on traditional activities with costumed volunteers.

For more information contact Sheryl Kippen at skippen@bouldercounty.org.

# calendar of events

# Lions and Abert's and Bears Saturday, April 25; 10 a.m.-noon Bald Mountain Scenic Area; 5 miles west of Boulder on Sunshine Canyon Drive (Mapleton Ave. in Boulder city limits)

Join volunteer naturalists for a moderate one-mile hike to learn about how some of the critters live at Bald Mountain, including a handsome squirrel that lives only in ponderosa pine forests. Also see evidence of the 2010 Fourmile Canyon fire and learn a little about the natural role of fire in this ecosystem.

#### Wildflowers of Boulder County Slide Program Tuesday, May 5; 7-8:30 p.m. George Reynolds Branch Library, Boulder Public Library, 3595 Table Mesa Drive

Join volunteer naturalists for a slide program to kick off the spring wildflower season! You'll learn about the variety of wildflowers found in Boulder County, where and when to look for them, and some interesting facts about native plants.

#### I Spy Beaks and Feet! Wednesday, May 6; 10-11:00 a.m. Walden Ponds Wildlife Habitat Area; 75th Street between Valmont Road and Jay Road; meet at picnic shelter near Cottonwood Marsh

Birds eat a lot of different foods: seeds, insects, fish, and other animals. Join volunteer naturalists to learn how a bird's beak and feet help them find and eat their favorite foods. We will watch for local birds and find out where they live, eat, and have babies. This program is for preschool children and their families.

#### Geology of Rabbit Mountain Saturday, May 9; 9 a.m.-noon Rabbit Mountain Open Space; northeast of Lyons on North 55th Street; meet at group picnic shelter

Volunteer naturalists Dick Pratt and Roger Myers will lead a moderate 2-mile hike where you will learn about the unusual geology of the area. We'll also watch for wildflowers, raptors, and other wildlife. Bring lunch, water, and binoculars if you have them. This program is geared for adults.

### Fossils and Flowers Sunday, May 17; 9:30 a.m.-noon Meeting location will be provided to registered participants

Join volunteer naturalists Megan Bowes and Sue Hirschfeld for a short, moderately strenuous hike to explore a landscape created by folding and faulting as the Rocky Mountains uplifted 65 million years ago. You will see fossilized evidence of the Cretaceous seas that once inundated this area, as well as some of the earliest blooming wildflowers. Register by contacting Larry Colbenson at lcolbenson@bouldercounty.org or 303-678-6214 by Thursday, May 14.

#### Birding Boulder County through the Seasons Wednesday, May 20; 7-8:30 p.m. Longmont Public Library, Meeting Rooms A & B, 4th Avenue and Emery Street

Join volunteer naturalists to learn about birding year-round in Boulder County. This program will explore where to find and how to identify some of our local birds, from the plains to the alpine. You will also learn about the many challenges birds face and how they adapt. This seasonal story of birds takes you through an amazing range of ecosystems and habitats, and you will also learn about some of the migratory birds that return to or pass through Boulder County during the year.

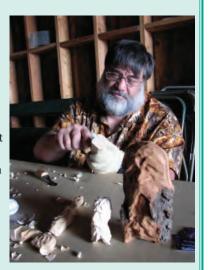
#### Let's Talk Chickens Saturday, May 23; 1-3 p.m. Agricultural Heritage Center; 8348 Ute Hwy 66, Longmont

Join volunteer Jessica Brunecky as she shares experiences and lessons learned from raising her own chickens. Learn why chickens have been popular as pets and livestock for centuries and how they are suited to your backyard today. Bring your stories and questions about the lifecycle of chickens, different breeds, and living arrangements.

# **Crafts and Trades of Olden Days**

Sunday, May 31; 10 a.m. - 3 p.m. Agricultural Heritage Center; 8348 Ute Highway 66, west of Longmont

If you were a pioneer settler and there were no stores in the area, how would you get the things you needed for your family? Learn about old-fashioned jobs and the traditional arts and crafts that went into making what was needed for life down on the farm. See a blacksmith in action, try your hand at candledipping and working with a drop spindle!



### Big Quilt on the Big Red Barn

Have you ever driven through the countryside and spotted what looks like a big quilt block on the side of a barn or hanging in the window of a local merchant? These places are participating in the Colorado Quilt Trails, which goes up and down the Front Range.

Many people credit the start of this quilt trail movement to a family farm in Ohio in 2001 and it has now spread throughout the country. Small, rural communities that embraced barn quilts have developed driving tours to attract tourism.

Barn quilts give owners the opportunity to spruce up their barns and share a bit of their personalities through this folk art.

The Agricultural Heritage Center jumped on the opportunity to become the first barn quilt in the Boulder County Quilt Trail. The Prairie Sunrise pattern is mounted on the historic Stroh-Dickens Barn, ca 1900. For information about the Colorado Quilt Trails visit www.coloradoquiltcouncil.com.



Driving east on Colorado Highway 66, you will pass the quilt square on the back of the big, red barn at the Agricultural Heritage Center. The quilt square is painted on plywood and measures 4 feet square.

The Agricultural Heritage Center opens for the season on Friday, April 3rd. It will be open Fridays – Sundays from 10 a.m.–5 p.m. Please visit www.BoulderCountyOpenSpace.org/ahc for information about special events and arranging guided tours.

# **40th Anniversary Watercolor Print for Sale**

A limited edition print of Anne Gifford's watercolor, "After the Rain at Stearns Lake" is now available to the public. In October of 2014 a Plein Air Art Exhibit featuring Boulder County Parks and Open Space was held to celebrate the beautiful place we call home.

Anne Giffords' bright watercolor, "After the Rain at Stearns Lake" (pictured at right) was chosen by Boulder County Parks and Open Space staff to celebrate the department's 40th Anniversary. The painting represents the many facets of why we treasure the county's parks and open space system, depicting the joy residents experience while using our 100 miles of trails, celebrating our over 25,000 acres of agricultural land and capturing the diversity of our publicly owned lands by illustrating the foothills and high peaks in the distance. All profits will benefit the Boulder County Parks and Open Space 501(c)(3) Foundation www.preservebouldercounty.org.

Prints (350) and a set of 6 notecards that will include an image of a 2nd painting created by the artist, "Three Thirsty Robins," can be purchased by visiting www.BoulderCountyOpenSpace.org/40.



Painting by Ann Gifford

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#### Prices are as follows:

7 ½" x 10" print, unframed - \$34 13" x 16" print, framed and matted - \$95 14" x 19" print, unframed - \$69 21 ½" x 26" print, framed and matted - \$195 Set of 6 notecards (blank inside) - \$6.00

### Submit Photos for "Land through the Lens" Exhibit

We are excited to announce the 2nd juried photography exhibit to be held at The Great Frame Up in Longmont from Friday, August 14 through Thursday, September 3. Submit your photographs to be considered for exhibit at the "Land through the Lens—Photographs Featuring Boulder County Parks and Open Space." For information on how to apply, visit BoulderCountyOpenSpace.org/photoshow.

Up to 5 photographs may be submitted for consideration for a \$30 entry fee. Entry fee proceeds will be used to award cash prizes at the show opening. Previously published images are eligible except those chosen for exhibit in the 2013 "Land through the Lens" exhibit. We hope photographers will venture onto our properties to capture images up until the deadline of Friday, June 19th.



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www.BoulderCountyOpenSpace.org

#### **NOTE:** Please visit www.BoulderCountyOpenSpace.org/trails for information about properties that may be closed due to the 2013 flood.

