



QUARTERLY

Spring 2018

AH, (WET) WILDERNESS! A TRAIL CREWS TRIBUTE by Joel Kaplow

"Hey, there's a mother moose and calf up ahead," a hiker shared as he passed. "Thanks, I'll keep an eye out," I responded, camera at the ready.

I was on the East Inlet Trail, camping permit dangling from my pack, headed east toward the Cat's Lair wilderness campsite four miles in from Grand Lake. It was raining on and off — not ideal conditions for a backpacking trip. But there's no way to know what Mother Nature has in store for August when reservations are made in March — it's a camping crapshoot. In fact, 2017's summer was the rainiest in my 40 years of hiking in the Rockies. Consistent with the North American Monsoon (no, that's not a joke), the forecast predicted a 30% chance of rain the next three days.

I first visited Grand Lake in 1977. With Mt. Craig as the backdrop, the view just knocked my socks off. Four decades later, I wanted to climb Mt. Craig and scratch it off my bucket list. Plan B was to bag nearby Mt. Wescott. My map showed a spur trail going south along Paradise Creek to Wescott's base.

About two miles in, expecting the trail junction and wondering where the heck those moose were, I encountered a park volunteer. I asked him if we were close to the Paradise Creek trail. "Oh, we obliterated it and returned the area to its natural state about 20 years ago," he said. Apparently, my USGS topo map from the Eisenhower Administration was a tad out of date. I thanked him

with my usual "They just don't pay you volunteers enough," and went on my merry way.

After that, the on-and-off rain stayed on. Rainsuit time. Hope for good weather, expect bad weather, but prepare for the worst weather. Trudging uphill with a 50-pound pack, including a now-mandatory-hard-to-squish-in-the-already-full pack bear-proof food canister rented from a Grand Lake retailer, the rainsuit soon became a portable sauna.

A turtle carries its home on its back, as does the backpacker, which is an apropos analogy, as I have a turtle's pace. Perhaps more like a turtle-snail hybrid — a *snurtle*? Where is that Cat's Lair sign, anyway?

The only thing dandier than pitching a tent in the rain is pitching a tent in the rain in the dark. After miles of dampness and no moose, I finally arrived. Cat's Lair has to be one of the most gorgeous of the 180+ wilderness sites in Rocky, complete with a babbling-brook sleep aid: East Inlet.

That first night, the rain fell hard, but all was well. For about five minutes. Then came a drip-drip-drip hitting the foot of my sleeping bag. I rustled up the towel I bring for such occasions, and placed it at ground zero. Death, taxes and leaky tents.

The next morning, Sol was shining down on Rocky (*cue the choir music*). Hitting the trail for Mt. Craig, I glanced west to see dark clouds looming, coinciding with the 30% forecast. Rainsuit time again. Trudging along, I stopped at

(**Tribute** continued on page 9)

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Dear Members and Donors,

I am greatly honored to serve as president of the board of directors of the Rocky Mountain Conservancy. Following Don Cheley, who successfully shepherded the Conservancy through a period of

leadership transition, will be a difficult task, and we are all very much in his debt.

As a historian, I am keenly aware of the footsteps in which I follow. As many of you know, the Rocky Mountain Conservancy traces its roots back to 1931 and the vision of Dorr Graves Yeager, the park's first full-time naturalist. Having redesigned and reinvigorated the park's interpretive program and opened its first museum, Yeager persuaded local hotel owner Joe Mills (his future father-in-law, as it turned out) to become president of a new park support group to be called the Rocky Mountain Nature Association. Dues were set at a dollar per year, and by the time of the Association's first annual meeting, 50 members had been recruited. "The effort," Mills explained in the Association's first Bulletin, "was an experiment to see how many folks ... [were] interested in the outdoors and wild-life." The response, he continued, had been "gratifying." The Association's first project was a 57-page mimeographed booklet, The Animals of Rocky Mountain National Park, authored by Dorr Yeager.

Today, 87 years later, the Association, now renamed the Rocky Mountain Conservancy, continues to carry on the important work on behalf of Rocky Mountain National Park and other public lands that Dorr Yeager and Joe Mills so well began. The organization has grown, both in size and complexity. But, so too has the need for the financial support that the Conservancy is able to provide. In the current year, the direct support to Rocky Mountain National Park alone will amount to more than 2 million dollars. And for this, of course, we depend in no small measure on the generosity of you, our members and our donors.

These are challenging times for Rocky Mountain National Park and its leadership, as it is for all of our public lands. This is particularly so as they try to maintain the ever-delicate balance between unprecedented use and access and the need to protect the integrity and meaning of the park experience itself — the "outdoors and wildlife" that Joe Mills spoke about in founding this organization nearly a century ago. The late historian Wallace Stegner was surely right when he wrote that "There is nothing so American as our national parks. The fundamental idea behind the parks ... is that the country belongs to the people, that it is in process of making for the enrichment of the lives of all of us. ... National parks are the best idea we ever had." That is precisely why our parks and public lands need our advocacy and our support. And today, they need it more than ever before.

Those of us who work on behalf of the Rocky Mountain Conservancy are ever-optimistic. But we are also realists. In reaffirming our mission, we know that that there is no standing still — and that the challenges of present and future ever and always beget new opportunities. Blessed with a strong and dedicated staff and guided by an engaged and committed board of directors, the Rocky Mountain Conservancy looks forward to continuing to do what we already do well, even while seeking out new and better ways to serve in 2018.

I am proud of the Rocky Mountain Conservancy and all it has accomplished since the days of Dorr Yeager and Joe Mills. And I am excited about moving forward with the important work that lies ahead. In the months to come I also look forward to meeting many of you in person. I look forward to thanking you for your generosity and your support. And I also look forward to hearing your ideas about how we can make the Rocky Mountain Conservancy an even stronger and more successful organization.

James H. Pickering

Mes H. FICKERING

President, Board of Directors, Rocky Mountain Conservancy

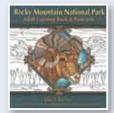


enny Longsworth

Get Outside!

Great New Products to Ignite Your Enthusiasm for Rocky!

from the Rocky Mountain Conservancy



RMNP Adult Coloring Book

by Dave Ember

44 intricate, beautiful and unique Rocky-themed illustrations for you to color, with informative text by Mary Taylor Young. Includes 8 postcards and 4 bookmarks to color. Softcover \$15.95; Member price: \$13.56

Best Served Wild

by Brendan Leonard & Anna Brones An outdoor cookbook with food

as exciting as your next adventure. This book shows how to make delicious meals and snacks in the backcountry without compromising on taste. Softcover. 7-1/2" x 9-1/2"; 207 pages. \$22.00; Member price: \$18.70

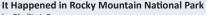


ANGLER'S GUID

Angler's Guide to Rocky Mountain National Park

by Les & Kimball Beery

A basic, waterproof, pocket-sized guide for recreational anglers. Includes maps, basic tackle guidelines, day hikes and overnight destinations, and greenback cutthroat trout regulations. Authors Les and Kimball Beery have fished this area for over 40 years. Softcover. 4.5"x8"; 60 pages. \$19.95; Member price: \$16.96



by Phyllis J. Perry

Containing tales from Rocky Mountain National Park, from the first ascent of Longs Peak to the raging Ouzel Lake wildfire. A total of thirty events from Rocky Mountain National Park history are relayed that reveal a host of intriguing people and fascinating episodes from the history of Colorado's largest national park. Softcover, 158 pages. \$12.95; Member price: \$11.01



Drip Embossed Ceramic Mugs

These bear and elk mugs are a lovely weight, and have a generous handle size. Dishwasher safe, they come in 4 colors: blue, tan, green and red. 16 oz. Measures 5" x 3-1/2". \$9.95; Member price: \$8.46

Greeting Cards: Seasons of RMNP

12 blank greeting cards and envelopes containing the fine art photography of Erik Stensland. Cards contain 3 each of 4 seasonal scenes within the park. Measures 5"x7". \$15.95; Member price: \$13.56



Call 970-586-0121, or visit our website at RMConservancy.org

Cover photo credits

(Upper) "Spring Plowing, Trail Ridge Road" by the NPS; (Lower) "Lion Lakes in Spring" by Madeline Wilson, Salt Lake City, UT

Photos are always appreciated! Scenery, wildlife and wildflowers greatly enhance this publication, so get out there and take a hike!

Please send high-resolution images to nancy.wilson@ RMConservancy.org by June 1 for publication in the 2018 Summer *Quarterly*.

Thank You!

Ask Nancy

Quarterly Editor Nancy Wilson attempts to unearth answers to any questions asked by Conservancy members and park visitors. If you are curious about something in or about the park, email nancy.wilson@rmconservancy.org or write: Nancy Wilson, Rocky Mountain Conservancy, PO Box 3100, Estes Park, CO 80517.

How is climate change and the resulting lack of snow in the Rockies affecting animals that molt to white? Snowshoe hares, white-tailed ptarmigan, and weasels (2 species) in our region are well-known for their color changes, from the cryptic browns and tans that match their summer surroundings, to stark white with the onset of winter. This adaptation to better camouflage the animal in its surroundings resulted from selective pressure over time that enhanced survival by countering predation and, in the case of weasels, likely improving predation success. As climatological changes occur, with the brown/ tan background periods lengthening, the animals' coloration will be increasingly mismatched with their surroundings. In a study of snowshoe hares, such mismatching decreased week-to-week survival rates by up to 7%. This is not a trivial matter, since long-term annual survival differences of only a percent or two can mean the difference between population stability or growth, and decline or even local extirpation. I've not found any similar studies of mismatch effects on ptarmigan or weasels. We may wonder (or hope?) that white individuals in areas where (Ask Nancy: Climate continued on page 15)

What happens on the ground level when the park is forced to shut down? While Rocky Mountain National Park is accessible to the public during the lapse in federal appropriations, we are unable to fully staff the operations of the park. Law enforcement personnel continue to patrol, and park regulations remain in effect, however. Services that require staffing and maintenance, such as entrance stations, the Beaver Meadows Visitor Center, the Kawuneeche Visitor Center, Moraine Park Campground, and most restroom facilities, are not provided. Roads that were already open remained open to vehicles, but **only** if weather and road conditions permit. Park visitors were advised to use extreme caution if choosing to enter Rocky Mountain National Park, as National Park Service personnel were not available to provide guidance or assistance. Emergency services were limited. Any entry to Rocky Mountain National Park during a period of federal government shutdown is at the visitor's sole risk. Park rules and regulations still apply. Rocky Mountain National Park staff did not issue permits, conduct (Ask Nancy: Closure continued on page 15)

What are saprophytic plants and are there any in Rocky?

A saprophyte is a plant, fungus or microorganism which gathers all of its necessary nutrients from decaying organic materials in the soil. They don't make their own food through photosynthesis, so they often don't have green coloration (chlorphyll) in their plant parts. Instead, they form a complicated and marvelous relationship with tiny soil fungi called mycorrhizae to extract what they need to survive. Many of Rocky's saprophytes are found deep in the shady, nutrient-poor soils of the lodgepole pine forest. Our beautiful coralroot orchids (Corallorhizza maculata) are saprophytes, showing us the beautiful reds and bronzes of their tiny orchids, but no green leaves. We also have a lovely white, gilled meadow mushroom (Agaricus campestris) dotting our open areas in the forests — another saprophyte. Word origins lesson: sapr = Greek for rotten; phyt = Greek for relating to plants. — RMNP Interpretive Ranger Kathy Brazelton



Burning woodpiles is part of fuels reduction treatments in Rocky Mountain National Park.

Photo: Christopher Kopek

While exploring Rocky Mountain National Park, you may have noticed large woodpiles scattered within the forest. If you explore the park regularly, you may see that these piles are replaced by circles of ash the following spring after being burned during the winter. We refer to those circles as pile burn scars, and they are the focus of my research under the guidance of Dr. Cynthia S. Brown at Colorado State University.

These piles are a step in the removal of hazardous fuels. After a century of fire suppression and recent tree mortality from mountain pine beetles, woody material has accumulated to unnatural levels in forests across the western U.S. This surplus can fuel larger and more severe wildland fires that threaten healthy forest ecosystems, buildings and human lives.

To reduce risks from these types of fires, crews in the park remove dead woody material in areas strategically chosen for fuels reduction. The dead wood is stacked, then burned during the winter when fire danger is low. Fire suppression is easier and safer for firefighters in areas that have received this management treatment. While fire is a natural disturbance that drives healthy ecosystem development and promotes habitat diversity, it is managed to protect park buildings and adjacent communities. The value of this was seen in 2012 when firefighters

Research Explores Effects of Pile Burning on Site Revegation in Rocky

by Ian Sexton,
Brown Lab, BSPM/GDPE, Colorado State University,
RMNP Vegetation Monitoring Program

utilized previous fuels reductions to halt the Fern Lake Fire before it spread to Estes Park.

One complication in managing fuel loads is disposing of unmarketable wood. Some

beetle-killed trees are used within the park as trail bridges, picnic shelters, or mulch in revegetation projects. But this is only a fraction of the material that must be removed from the landscape. The most cost-effective way to accomplish widescale reductions is piling woody material into structures that can be safely burned during the winter when snow cover minimizes wildfire risks.

After a century of fire suppression and recent tree mortality from mountain pine beetles, woody material has accumulated to unnatural levels in forests across the western U.S.

Looking even deeper into the science of all this, we find that burning piles of wood to reduce fuel loads has a number of environmental consequences.
Concentrating fuel produces more

heat in a smaller area. This intensifies the effect on the ground beneath pile burns, creating pile burn scars. The organic portion of the soil, which builds up over long time periods as plant litter accumulates and decomposes, is consumed by the fire. This exposes mineral soil that lacks the characteristics necessary for many plants to grow. Some nutrients, however, such as nitrogen and phosphorus, can actually become more available to plants directly after burning.

This may sound like a benefit for reestablishing plants that are consumed by the fire, but it actually may do more harm than good. Much of our native vegetation is adapted to lownutrient availability typical of soils in the Rocky Mountains. Alternatively, invasive plants that can push out native vegetation and negatively impact habitats are often better able than na-

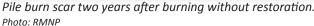


tive species to take advantage of the extra nutrients to establish quickly and spread in areas opened by pile burning. Growth of desirable plants is further limited by a water-repellent layer caused by the heat of the fire that restricts water from soaking into the soil. Instead of percolating into the ground, water will bead up and run off, diminishing the amount of water available for plants to grow.

Not only soil is lost during highintensity fires, but also the organisms that live in the soil. While it is obvious that above-ground portions of plants burn, it is important to note that their below-ground organs (roots and rhizomes) also are destroyed specifically near the pile center where heating is greatest. During lowerintensity fires such as natural wildfires and prescribed fires where fuel is spread out, many plants are able to regrow from these underground bodies. This would also provide an opportunity for seeds to grow that have been lying dormant in the soil waiting for the right conditions. Pile burning, however, dramatically reduces the amount of viable seed in the soil, limiting the potential for unaided revegetation and requiring natural seeding from the surrounding area. This can alter the diversity and composition of the plant community for years after burning, especially if the scars are invaded by pest species.

Less visible organisms also are lost from the soil. There are fungi and other microorganisms in the soil that form close







Pile burn scar two years after restoration. Photo: RMNP

relationships with plant roots. These relationships are important to plants for nutrient uptake and actually help some survive drought conditions. Without these partnerships, plant regeneration is further limited to species that can live alone in the altered soil or to species that can migrate into scars with their partner microorganisms and survive in the altered soil together.

All of these effects together create conditions that are ripe for invasion by pest species. Burn areas can be compared to a cut in the skin that is open to bacteria that could infect the wound and spread to other parts of the body. The idea is to cover the site quickly before anything undesirable comes in. To minimize the potential for invasive species to become established and improve the aesthetics of pile burn scars, restoration is used to assist revegetation. Best practices include using hand tools to physically break up any water repellent layers so that water can infiltrate the soil. Desirable plants that can potentially block undesirable plants are introduced by adding native plant seeds that are successful at growing in disturbed areas. Finally, covering the site with mulch protects seed from animals or wind that could remove them, and increases water availability in the soil. Mulch has the added benefit of providing food for microbes in the soil. These soil organisms will act like a sponge to take up excess nutrients so they are less available to pest species as they decompose mulch to develop organic soil.

These methods are used in Rocky Mountain National park when time and resources allow. As a federal agency, it is our responsibility to ensure that we are utilizing resources efficiently and effectively to protect lands entrusted to us by the public. Success of restoration is therefore monitored to inform future management decisions. To quantify success, we have been comparing restored scars to scars that were left alone south of Lily Lake. In 2014, interns from the Public Lands History Center at CSU restored 14 of the 26 scars that were chosen to be monitored. Scars have been monitored each summer since then by estimating the percent of the area occupied by each plant species at the center, edge, and at a location outside of each scar. The areas occupied by rocks, litter and bare ground were also estimated.

By doing this, we can compare scars to see what effect restoration has had as the plant community develops. We are still in the process of developing a statistical model that is appropriate to analyze these data, so, at this time, decisive conclusions cannot be made. Initial observations, however, clearly show that seeded species have been successful at establishing quickly. What is less clear is whether or not restoration kept out invasive species. The invasive species that we are most concerned about at this site

is Canada thistle, but it is currently present in few scars regardless of restoration.

One important phenomenon that we noticed after the first few years of this study is that the vegetation growing in scars to which seed was added as part of the restoration treatment seemed to be limited to seeded species. The scars recovering unaided appear to have greater diversity of plants. The restored scars have much higher plant cover, but this exceeds what is found in the surrounding unburned area. The ground in this lodgepole pine forest is primarily covered in litter from fallen needles with sparse vegetation. The scars without restoration still have more bare ground due to lower litter cover, but the plant cover is comparable to the surrounding area. These trends suggest that our restoration techniques may prevent desirable native species that were not seeded from establishing in the first few years, and that vegetation can regenerate unaided in scars of the size produced in Rocky Mountain National Park.

We hope to continue monitoring these scars to follow how they change over time, but we are already developing recommendations about where restoration of pile burn scars is most appropriate, such as on steep slopes where bare ground left unrestored contributes to erosion and runoff, and areas where appearance is a concern.

Rocky Mountain Conservancy 2018 Summer Education Fellowships

The Olson Family Fellowship began partnering with Rocky Mountain National Park's environmental education department and the Conservancy's Field Institute programs in 2007. In 2013, the Justine and Leslie Fidel Bailey program extended their fellowship opportunity to include an Education Fellow in addition to the research fellowship originally sponsored under the program directive. With Next Generation Fund support, the success of park fellowships depends upon both the generosity of donors and the creativity of Fellows who address the evolving research and educational needs of Rocky Mountain National Park and the Field Institute programs.

Internship duties include: developing professional goals, teaching interactive nature activities and programs, assisting with program development, planning and implementation, completing basic advertising and marketing projects, presenting informational programs about educational activities at RMNP, drafting news releases and feature articles, and engaging in community outreach.



Mike Innes Olson Family Fellow

May 30 - November 2, 2018

Hometown: Cannonsburg, PA

College: Penn State

Career Goal: To work full-time in the National Park system to spend each day connecting people to the natural world.

Internship Goals: Mike hopes to continue to build

on his education and environmental interpretation skills and gain experience developing his own educational programs.



Featured Field Institute Programs

Here are some program highlights for the next few months — visit our website to learn more about these outdoor adventures in the park!

North with the Spring: Bird Migration — April 28 **100 Years of Environmental Change in RMNP** — May 4

Hawks in Flight: Birds of Prey — May 12

Life as an Owl — May 18

Orienteering for Beginners: Map & Compass — May 19

Life Signs: Tracking the Invisible — May 25 **Falcons: Streamlined for Speed** — June 2

Sketchbook Journaling: Wilderness in Watercolor — June 7-8

Orchids of RMNP — June 9

Birds of the Kawuneeche Valley — June 16

Family Astronomy (ages 5 & up) — June 16

Secret Places in RMNP — June 22

Primordial, Prehistoric & Hidden History of RMNP — June 23-24

Kids' Fly-fishing & Stream Ecology (ages 7-15) — July 6,20

Learn more at: RMConservancy.org Or, call 970-586-3262 for more information

Emily Ross Bailey Education Fellow

May 30 – November 2, 2018

Hometown: Folsom, CA

College: Colorado State University

Career Goal: To bring children into the outdoors and ignite their passion for the outdoors and to facilitate the potential of giving kids a

healthier life through outdoor activities and engagement.

Internship Goals: To continue learning more about the field of environmental education and growing to become an effective environmental educator. I also am looking forward to learning how a nonprofit works.



RMNP – Bailey Research Fellow Laura Scott to Study Antibiotic-Resistant Bacteria in Rocky

The RMNP - Bailey Research Fellowship was established in 1995 through the gift of an endowment to the Rocky Mountain Conservancy. The intention was to encourage interest in public service as a possible career choice for young scientists by giving graduate students access and exposure to the National Parks while encouraging science communication to park visitors.

Hometown: Midwest City, OK

College: B.S. Oklahoma State University (Zoology)

M.S. Tulane University (Epidemiology)

Career Goal: Laura is interested in doing outbreak and infectious disease surveillance at the federal level, particularly within the Department of the Interior. Particularly she is interested in antibiotic resistance and zoonotic disease.

Fellowship Goals: Laura hopes to quantify the presence of antibiotic-resistant bacteria in soil and water within the park, and determine what anthropogenic and physical factors predict the presence of antibiotic-resistant bacteria. She will also be looking to assess human health risk from resistant, pathogenic bacteria in soil and water in the park. She will also be helping to disseminate her findings and general microbial stewardship information to park staff and visitors.



RMNP Chief of Interpretation Rich Fedorchak and Conservancy Conservation Director Geoff Elliot celebrate the Honorable Mention Award for Outstanding Public Engagement for the organization's Conservation Corps program.

Conservancy Corps Programs Recognized at Spring **Public Lands Conference**

The Rocky Mountain Conservancy is excited to announce that its Corps programs (Conservation Corps and High School Leadership Corps) were recognized at the Public Lands Alliance Conference in Palm Springs, California, with an Honorable Mention for Outstanding Public Engagement.

The Corps programs provide opportunities to youth ages 14 - 25 to

learn and serve on Colorado's public lands through immersive internship experiences. In both programs, young people complete on-the-ground conservation work, learn about public lands, and develop valuable job skills and career resources for their professional careers. Find out more about these programs on our website at RMConservancy.org.

Park Puzzler

by RM Conservancy Member Joel Kaplow

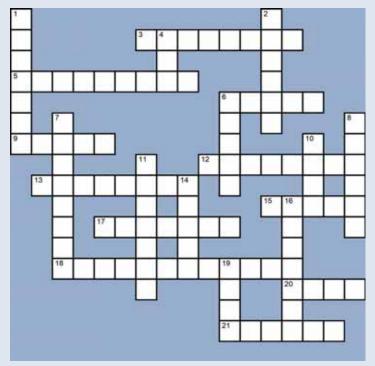
Across

- 3 The emerald ash borer will eventually make Dutch elm disease look bush league. Fortunately for RMNP, its ____ ashes are safe, as they're not of the genus Fraxius, which is what the borers like to bore.
- 5 The beak of the red ____ has evolved to open pine cone scales to access the seeds in a unique way. By closing its mouth, the beak acts as dual pry bars.
- 6 Rocky's tiger salamander likes to dine on insects, spiders and
- 9 There is hefty geological evidence that glaciers were once hard at work in RMNP during the ice ages, e.g., U-shaped valleys, cirques, tarns, aretes and moraines all over the place. The last ice age, aka Pleistocene ____, ended around 12,000 years ago. 12 The park is home to both mule and white-tailed deer. A deer fawn is defined as
- a youngster under 12 months old, while a is between 12 and 24 months old. 13 RMNP has four fee-free days in 2018: MLK Jr.'s Birthday (1/15), first day of
- National Park Week (4/21), National Public Lands Day (9/22) and ____ Day (11/11).
- **15** Naturalist Col. John James ____ was honored with an eponymous squirrel. It's mostly black with tufted ears, and if you see one, you can bet there are ponderosa pines nearby.
- __ Egg Rock, a large outcrop on Mt. Meeker's southern flank, was named by Ranger Jack Moomaw, and can be seen from many miles away.
- 18 A topo map of RMNP shows that most west-facing slopes along the Divide are smooth as a baby's behind, but on the east side it looks like a giant steam shovel chomped away at them. This is the result of ____ glaciation. The Divide acts as a snow fence, and over millennia, snow coming in from the west piled up on the east side and solidified into glaciers, which scoured out the east-facing cliffs we see today. **20** The ____ is a lingering snowfield between The Keyhole and Longs' summit that can be easily viewed from Beaver Meadows.
- 21 We all know about a murder of crows, but what is the appropriate-sounding term for a group of squirrels?

Down

- 1 We all know about a gaggle of geese, but what is the appropriate-sounding term for a group of porcupines?
- 2 Confirmed by the 2012 BioBlitz, a new critter has been added to Rocky's resident reptiles: the Eastern fence
- 4 The American dipper, named for the incessant bobbing of its head into the water while looking for lunch, can swim downward several feet. Its feathers stay dry due to an ___ gland above its tail.
- 6 On the park's west side, west of Sprague Mountain, you'll find Haynach Lakes, the name derived from Arapaho meaning "snow ____."

- 7 In Wild Basin there is a moraine, lake, falls and mountain named for John B. ____, who homesteaded in the area starting in 1889.
- 8 In August 2017, the cost of the America the Beautiful Senior Pass increased 700%, from ten dollars since 1994, to ____ dollars.
- 10 Rocky's lone resident serpent, the Western terrestrial garter snake, is very unusual for a garter. It constricts its prey, and skips the hassle of laying eggs by giving ____ birth.
- 11 If you think you've seen a colorful parrot flying around RMNP, it's more likely a male Western ____, with a bright yellow body, black wings and red face.
- 14 Splitting McHenry's Peak and Chief's Head above Glacier Gorge is Man Pass, named for a 40-foot pinnacle there that looks like a petrified dude if you squint your eyes just right.
- 16 The first stretch of off-trail hiking on the Keyhole Route for Longs Peak is just before the Keyhole, where there is an area of gigantic rocks to negotiate: The Field.
- 19 Most of Rocky's woodpeckers are zygodactyl; they have two forward-facing and two backward-facing ____ which help in climbing up and down tree trunks.





(Above) High School Leadership Corps learns how to restore native plants from NPS staff (Right) Program Manager Geoff Elliot by Geoff Elliot, Rocky Mountain Conservancy -Conservation Corps program director

My phone alarm vibrates under my sleeping bag. It is 5:45 a.m. on the last day of the Conservancy's High School Leadership Corps (HSLC), and the crew leader, Tommy, and I have been camping with 10 Colorado high school youth for the past 11 days. Some self-encouragement is required before I can wiggle myself out of my warm, comfortable sleeping bag, slip on my unwashed work uniform, and crawl out of my tent at Moraine Park Campground.

As I poke my head out of the tent, I revel at this campsite that has become home in the last 10 days. The tents circle our pop-up canopy, tarp shelter and picnic tables. The layout feels like a living room and kitchen surrounded by a set of small brightly colored bedrooms. To my delight, I notice the "leaders-of-the-day" from the HSLC already emerging from their tents and running to gather the cooking supplies and breakfast food, boil water, and wake up the rest of the crew. After a few minutes of people emerging from their tents, groggy and stretching, with untied boots and severe cases of bed-head, everyone is out grabbing their personal toiletries and sitting down around the picnic tables to enjoy another morning of toast, eggs and oatmeal. As we eat our last breakfast together, conversations bounce between the memories created over the past two weeks, and everyone's plans for the rest of the summer. The memories include humorous anecdotes about car-ride sing-a-longs, trail-related feats of strength, and myriad "inside jokes" established during our short time together.

As a few individuals speak about their plans of returning to the Conservancy in 2018, I become aware of the transformative power this HSLC experience has had on these young people. They arrive ust 12 days earlier, and many of them struggled to assemble their tents, balked at the idea of waiting six days before a shower, and had minimal understand-

A Peek Into the Conservancy's High School Leadership Program

ing of public lands or conservation work.

Jump ahead 11 days, and all 10 of the crew have developed a greater understanding of the outdoors, an evolving

In just 12 days, these

Colorado high schoolers

transformed from kids

casually interested in na-

ture — but disconnected

from it — to bona fide

public land stewards.

awareness of public lands, and a heightened respect for the importance and role of conservation work. During the program, these youth completed more than 40 hours of on-the-ground stewardship with the National Park Service (NPS) and USDA Forest Service (USFS) on projects ranging from fire fuel management and habitat restoration to trail-building and litter cleanup. These energetic young people also attended educational programs offered by both NPS and Conservancy staff to learn about public

land management and the natural and cultural resources of the park. In the process, they laid a fertile foundation for skills related to outdoor leadership, communication methods, and professional development, through formal training and informal practice throughout their day-to-day life in the HSLC program.

In just 12 days, these Colorado high schoolers transformed from kids casually interested in nature — but disconnected from it — to bona fide public land stewards. This was a huge success for this pilot program of the Rocky Mountain Conservancy, which established the program to engage local high school youth, connect them to public lands, and bridge the gap between the youth educational programs and young adult internship opportunities. Across all of these initial goals for the HSLC, the Conservancy had achieved success.

Program assessment did not stop with this anecdotal evidence. All HSLC participants completed post-program evaluations to recognize their personal growth across a number of conservation psychology metrics. These included: individual attitudes toward the outdoors, involvement in stewardship activities, feelings about outdoor recreation, and day-to-day decision-making related to the environment. Each of these metrics has been identified as helpful indicators of conservation-based behavior. Across these four metrics, HSLC participants indicated at least a 50% and up to a 250% growth (on a 10-point scale).

Numbers and goals aside, as the program leader, the program felt empowering, genuine and regenerative. Stepping back from the program planning and research, curriculum development, and evaluation metrics, I can honestly say that the experience was life-changing. Even for me. Waking up every morning to the crisp Rocky Mountain air filling my tent, living and working outside on public lands, and developing a community centered around learning, personal development, and service is truly unlike anything else.

For me, this was a step away from the of-

fice, management, and the hustle and bustle of an Estes Park summer. It allowed me to be in the present, and experience the program as these young people were. For them, it was a step away from their everyday lives along Colorado's Front Range, into a world dominated by the natural resources of Rocky. This immersion allowed for even the most disconnected among

them to develop some kind of connection with the natural world. Whether the new relationship is one of cautious respect or passionate commitment, the seed has been planted.

And so, alongside these young people, I'm delighted to report that as the program manager, my experience with the HSLC invigorated my passion for working for public lands and engaging the next generation of conservation leaders. It allowed me to intimately experience the effect of the Conservancy's programs on young people, and demonstrated the critical value of this work. In 2018, the Rocky Mountain Conservancy plans to expand the program to accommodate multiple sessions and host additional Colorado high school youth. I couldn't be more excited!

2018 Conservancy Volunteer Event Calendar

Please Note: All dates and projects are subject to change. See individual event announcements for details at RMConservancy.org

May 19

Colorado Public Lands Day

Project: Litter Clean-Up Time: 10 a.m. – 12 p.m.

June 2

National Trails Day

Project: Trail Construction

(Flood Recovery) Time: 9 a.m. – 2 p.m

June 26

Project: Habitat Restoration/ Invasive Species Management

Time: 9 a.m. – 1 p.m.

July – Westside Project

Time & Project: TBD

August 25 – Founders Day

Time & Project: TBD

September 11

Day of Service and Remembrance

Project: Fire Fuels Reduction

Time: TBD

September 22

National Public Lands Day

Project: Litter Cleanup Time: 10 a.m. – 12 p.m

October

National Trails Act 50th Anniversary

Project: Trails Time: TBD

Contact Geoff Elliot, director of conservation at geoff.elliot@rmconservancy.org for more information, or to register.



Meandering East Inlet with a backdrop of Mt. Craig and increasing clouds. Photo: Joel Kaplow

(**Tribute** continued from page 1)

Lone Pine Lake for a munch break, contemplating my options: try to climb a difficult mountain in the rain, or return to the campsite in the rain. I chose Door Number Two, Monty. Enjoyment is hard to achieve while miserable.

So, what are the upsides of rainy campouts? Extra time for philosophizing, for one: With thousands of peaks around, why isn't it Rocky Mountains National Park? Extra time for reading a Stephen King novel, for another. And, mushrooms galore in all shapes, sizes and colors — truly a mycologist's surreal paradise. Oh! And a new song germinating in my head: After a rain, when everything is clean, the mosses and trees are greener than green

The next day on the way down, I encountered another park volunteer coming up the trail, Diane, from Michigan. We were both delighting in the mushroom explosion. Turns out she was headed to Cat's Lair for campsite inspection. <Gulp!> Did I leave only footprints and take only pictures? She told me to watch for a mother moose and calf on the way down. I told her I missed them on the way up, but I'd be vigilant. I left her with another "They just don't pay you volunteers enough."

And then more rain. Hiked down to the Adams Falls junction and stopped for a munch break, patently pooped. A wet pack filled with wet everything weighs more. After a while, I recognized a familiar uniform on the trail. I flagged Diane down. "Did you see the mother moose and calf?" she asked. Dang, another moose miss! We compared mushroom photos on our cameras.

After she left, I started thinking about all the volunteers and paid staff who keep RMNP rolling, especially the trail crews. Entropy affects all things, and given enough time, rain washes away entire mountain ranges. So how can a mere trail endure? There would be no maintained trails without trail maintainers, and I had just spent three days benefiting from the fruits of their labor. How many bridges had I crossed? That's architecture. How many dozens of water-diversion systems had I encountered? That's engineering. How many hundreds of downed trees crossing the trail had been cleared? I had a hunch it wasn't the work of beavers, as they leave tooth marks, and they definitely don't have the opposable thumbs which are handy for operating saws — all of the downed trees were cleanly cut with expertise. So, who are these mostly unseen and unsung miracle workers?

Starting in 1933, FDR's Civilian Conservation Corps (CCC) created many of Rocky's trails that are still in use. Fastforward to today. RMNP's Trail Supervisor is one Kevin Soviak. This season he will lead a paid staff of four crews on the park's east side, two on the west,

(Tribute continued on page 11)

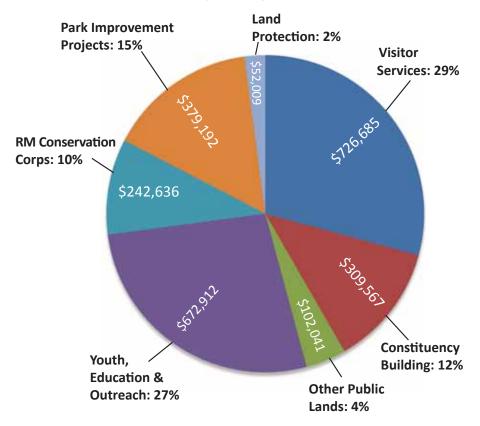


Rocky Mountain Conservancy Statement of Financial Health as of December 31, 2017

(With summarized financial information as of December 31, 2016)

	Unrestricted	Temporarily Restricted	Permanentl Restricted	•	Total 2016
	<u> </u>	Restricted	Restricted	2017	
Sales Cost of Goods Sold Gross Profit	\$3,658,913 (1,737,993) 1,920,920	\$-	\$-	\$3,658,913 (1,737,993) 1,920,920	\$3,698,918 (1,791,966) 1,906,952
Contributions Membership Contributions In-kind donations	497,803 163,610 2,750	412,531	100	910,435 163,610 2,750	1,314,457 216,058 5,591
Interest and Dividends Field Institute Revenue Other Income	119,842 100,827 32,610	15,628		135,470 100,827 32,610	130,527 113,248 41,787
Total Revenues	2,838,362	428,159	100	3,266,621	3,728,620
Net Assets rReleased From Restriction: Satisfaction of Program and Time Restrictions	540,633	(540,633)		-	-
Total Revenue, Gains and Other Support	3,378,995	(112,474)	100	3,266,621	4,397,442
Expenses Program Services Visitor Services Constituency Building Field Institute Other Agency Support RMNP Programs & Projects Total Program Expenses	726,028 309,567 206,088 102,041 			726,028 309,567 206,088 102,041 1,141,317 2,485,042	727,425 348,299 193,141 87,734 2,879,811 4,236,410
Supporting Services Fundraising General and Administration Total Supporting Services Expenses Total Expenses	191,673 340,357 532,030 3,017,072			191,673 340,357 532,030 3,017,072	205,063 360,191 565,254 4,801,664
Changes in Net Assets Before Gain on Investments Transfers Realized /Unrealized Gain on Investments	361,923 397,708 900,522	(112,474) (397,708) 137,102	100	249,549 - 1,037,625	(1,073,044) - 42,570
Changes in Net Assets Net Assets, Beginning of Year Net Assets, End of Year	1,660,154 11,102,311 12,762,465	(373,080) 2,488,382 2,115,302	100 277,917 278,017	1,287,074 13,868,610 15,155,784	(1,030,474) 14,898,149 13,868,610

2017 Support to Rocky Mountain National Park & Other Public Lands \$4,236,410



(**Tribute** continued from page 9)

with three volunteers tossed in.

A "crew" is comprised of five or six workers — the number dictated by how many warm bodies and tools can be squeezed into one truck. They all go through preseason and on-the-job training for everything trail-maintenance related. One example of their prowess: Last year they cleared more than 4,000 downed trees from Rocky's 300+ miles of trails. Normally, chainsaws are restricted in Rocky starting in July (Wilderness rules), however, in these days of bark beetle fallout and other natural events resulting in a plethora of dead trees, logic has a say, and a hiker may hear a purring chainsaw in the distance. Kevin's goal is to have their work naturally blend in with the surroundings, enabling hikers to immerse themselves into the wilderness experience without being distracted by human-created trail

improvements. Well done, Kevin and crew!

In 2003, the RMNA-Conservation Corps (now RMC-CC) was begun with one seven-member volunteer crew.

After more than a decade of growth, the 2018 season will host six crews comprised of 34 conservation-minded college kids. And a new program will keep a batch of high schoolers busy in the park this summer as well, all under the watchful eve of Conservancy Director of Conservation Geoff Elliot (see Geoff's article, page 8). These kids will be doing countless good deeds in Rocky and adjacent Arapaho and Roosevelt National Forests, including very-much-appreciated trail maintenance, at times alongside RMNP's crews. These interns get housing of various kinds, work-clothing and gear, training for all manner of tools, and a stipend. Geoff says their goal is to "improve recreational access by keeping water off the trail, and people on the trail." Well done, Geoff and crew!

An informative/entertaining blog by Conservation Corps youth can be found at: rmconservancyconservationcorps. wordpress.com/. It includes a list of last season's accomplishments, replete with jargon/argot used by trail crews everywhere. The raised trail portions that cut through wet, squishy areas to keep hiking boots dry? Those are turnpikes. When downed trees crossing a trail are cleared, usually with person-powered crosscut saws? They have been bucked out. When tree branches growing over the trail have been pruned back? The trail has been brushed. Who knew?

So, after 40 years of taking and not giving back, it's time for this hiker to volunteer on a trail project somewhere this year. How is this done? See Geoff's how-to-volunteer info on page 9. Who knows ... maybe I'll run into a mother moose and calf when I do.

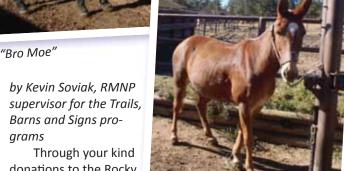
Joel engages in his pursuit of happiness by climbing in his backyard — the Rockies. He's summited over 100 peaks in RMNP, some of which have provided inspiration for his amateur songwriting. A self-described word nerd, he proofreads the Quarterly and creates the newsletter's Park Puzzler crossword.



A stunning crop of Amanita muscaria Photo: Joel Kaplow

Conservancy Augments Rocky's Livestock Program with

Gift of Service Animals



supervisor for the Trails, Barns and Signs programs

donations to the Rocky Mountain Conservancy, "Little John" in the fall of 2017, the

Rocky Mountain National Park Livestock program was able to purchase one new horse and three new mules. These purchases met a significant need of the park, as the current herd is rapidly aging out, with about two to three head being retired annually for the last five years.

Although some of the park horses and mules do work until they are 24 years old (typical age of retirement), some need to retire earlier as a result of the difficult work they perform, carrying heavy loads up to nine miles into the backcountry on steep and rocky trails. These challenging conditions make purchasing work animals difficult to contract out, as we have strict specifications to ensure the horse or mule can handle the work.

The purchasing process is initiated with herd evaluations in the spring and fall. The spring evaluation occurs at the livestock's winter pasture at the Fort Laramie National Historic Site. Typically, we call in the local veterinarian to evaluate the health of the stock who looks for any blindness, foundering or lameness that might have appeared throughout the winter. A farrier is also on-site to evaluate the condition of the hooves while trimming. The same thing happens during the fall when the vet performs a more in-depth medical examination and gives various health services to the stock, such as 4-way shots, floating of

teeth (smoothing or contouring the teeth with a file), eye examinations, and more.

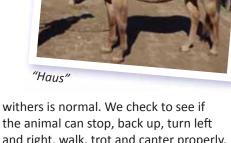
Once a horse or mule is determined to be unable to perform their duties without fear of endangering themselves or visitors, we immediately start lookreplacement. This can

ing for their be a long, drawn out process and it usually begins with the park's animal packers or the Trails program supervisor perusing several websites dedicated to livestock sales or adoptions. Sometimes we get lucky and either our vet or farrier knows someone who is looking to sell one of their head.

The park's specifications are necessarily strict to ensure that the animal can work in the environmental conditions of RMNP. Some of the specifications include:

- Must be at least 15.2 hands high so the loads will clear the handrails on the park's multi-use bridges
- Must be at least 1,000 pounds to ensure that they are strong enough to carry the loads
- Must have a gentle demeanor so they will not get startled around visitors or other wildlife
- Must be between the ages of 3 to 10
- · Must be neutered or gelded
- · Must be able to stand for the farrier without being sedated

Once a good horse or mule meets these specifications, we will begin our on-site evaluation. The first step of this process is to make sure the horse/mule can safely be loaded and trailered. We also check to see if the animal is wellbalanced, muscular with good carriage, is straight, has good feet, and that the



the animal can stop, back up, turn left and right, walk, trot and canter properly. Once the animal passes these tests we will then saddle them or tie them into a string and lead them into the park.

While in the park, the animal packer will walk them across bridges and through streams, along trails with visitors, and up and down steep trails to see how they handle the various conditions. They will also trot the livestock or leave them tied together for a significant amount of time to see if they are prone to biting, kicking or striking at the other animals in the string. If everything checks out, we will then call in the vet to do a pre-purchase examination of the animal. This vet will check on the animal's heart and its digestive health, perform an eye examination, evaluate the animal's conformation and joints, and confirm their height and weight.

If everything passes muster, and if the animal packers are comfortable with the animal, we will then make a purchase. The animal is put into quarantine for two weeks until it is confirmed that they do not carry any diseases, such as strangles, which is a highly contagious infection of the upper respiratory tract caused by the bacteria Strep. equi (Streptococcus equi subspecies equi). After the two-week quarantine ends, the animal is then brought to the barn and put in a separate corral close to the main corral so that the herd can become familiar with the new animal(s). Finally, when the new animal is acclimated and ready, we introduce it to the rest of the herd in the main corral.



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In memory of Janet Richard Campbell, Colorado Springs, CO Gerald and Elizabeth Caplan, Boulder, CO Peggy Carr, Denton, TX Cynthia Cassens, Johnstown, CO Leigh Conover, Lakewood, CO John Cox, Longmont, CO Rev. Kim M. Cran, Meridian, ID Marlene and Thomas Detman, Allenspark, CO

William and Mary Eberle, Boulder, CO Gregory Elliott, Wheat Ridge, CO Sherri Finley, Aurora, CO Steven M. Fishburn, Austin, TX Richard J. Flynn, Boulder, CO Teri Gadd, Fort Collins, CO Jodi Galloway, Colorado Springs, CO Jennifer Gerding, Woodland Park, CO Angela Goad, Pulaski, VA:

In honor of Bradley Hutchison Kara Godebu, Longmont, CO Glen Goeke, Cedar Park, TX Paul Gomez, Parker, CO

Rosemary and Daniel Gruber. Belleville, IL:

In memory of Michelle Schwoebel William Guiot, St. Louis, MO:

In memory of Robert Hill Sarah Hambrick, Round Rock, TX Brian and Rebecca Hansen, Boulder, CO

Donald and Joann Harris, Greeley, CO Ian Harris, Aurora, CO Linda Harvey, Denver, CO Beverly Henderson, Estes Park, CO Ruth Hess, Loveland, CO: In memory of Willette Hill

Donna Hill, Golden, CO Jonathan Hill, Fort Collins, CO Carolyn Hilliard, Belton, TX: In honor of Mike

and those who follow him Andrew Hosier, Cedar Falls, IA

J. Mac Howard, Wichita, KS: In memory of Robert Hill Jean Howell, Scottsdale, AZ: In memory of Rudy Knauer

George Hutchinson, Estes Park, CO Claudia Irwin, Estes Park, CO Linda Israel, Grand Lake, CO Jennifer Iversen, Castle Pines, CO Robert M. Ives, Jr., Houston, TX Yolanda Jasso, Lakewood, CO Nicholas Johnson, Colorado Springs, CO Richard K. Johnson, Kenosha, WI Sandra Johnson, Cordova, TN: In memory of Barney Polk William Johnson, Denver, CO Keith and Mariane Jolly,

Angels Camp, CA

Craig Jones, Boulder, CO

Inez Kelley, Houston, TX: In honor of her sister, Ruth Hess, on her birthday

Katrina Kiefert, Highlands Ranch, CO Martha and Barklay Kirk, Littleton, CO Marguerite Klocksiem, Austrell, GA Sandra Kuhn, Naples, FL:

In memory of her husband, Steve Kuhn

Casey and Christopher Kwilecki, Colorado Springs, CO Judith A. Lance, Boulder, CO Diane Lane and Rebecca Martens, Berthoud, CO Trinette Langner, Ramsey, MN:

In memory of David Ulmer

Michael Ley, Parker, CO Linda Loomis, Wheat Ridge, CO April and James Lusk, Aurora, CO Mary and Larry Lutz, Cincinnati, OH Arthur Malcolm, Grand Canyon, AZ:

In honor of Charles A. Jerden
Ann and Paul Martinson, Hudson, WI
Ian McKnight, Boulder, CO
Randall and Pat McNeely,
French Lick, IN:

In memory of

Bill and Mary Jane Chasteen

Guy Miller, High Rolls, NM Jerry S. Moore, Estes Park, CO Don and JoAnn Mueller, Greeley, CO Rebecca Neal-Beevers and Chris Beevers, Austin, TX

> Theresa Nelson, Castle Rock, CO Paul Neufus, Westminster, CO Philip and Elizabeth Nicholson, Boulder. CO

Daniel Niedzwiecki, Ashland, MA:

In memory of Sean Caldwell
Michael and Leah Noble,
Westminster, CO

Duayne Nyckel, Glendale Heights, IL Tyler Patzel, Colorado Springs, CO Rebecca Pirtle, Kingston, WA:

> In memory of her parents Richard Pounds, Barrie, ON:

lichard Pounds, Barrie, ON

In memory of

Dorothy and Elmer Pounds

Randolph and Naomi Reece, Loveland, CO

Phillip and Margaret Reinaas, San Antonio, TX

Josh Roberts, Eaton, CO Brian and Debby Ross, Denver, CO Sherol Roy and Roger Baldwin,

> Grand Lake, CO Robert and Sharon Schick, Duncan, OK

Pam and Douglas Schnetzler,

Vero Beach, FL: In memory of Gene Iserman

Grant Schoon, Urbandale, IA:

In honor of Carly Schoon Sloan Emery Schwindt, Boulder, CO

John and Patricia Shearer, Johnstown, CO Herman and Kathryn Sievering, Boulder, CO

Davis Smith, Denver, CO
Larry and Sue Sonner, Urbandale, IA
Erick Spong, Colorado Springs, CO
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William Strouse, Colorado Springs, CO Christopher and Caroline Stull, Los Alamos, NM Richard Switzer, Parker, CO Nancy P. Thomas, Estes Park, CO Lee and Richard Tillotson, Nederland, CO Joel Tjjornehoj, Poolesville, MD Betty and Christian Trummel, Harwich, MA

Carl and Christine Tubbs, Franktown, CO Nancy Tuck, Morris, OK Sean Tucker, Loveland, CO David Way, Fort Collins, CO Eric Weiss, Miami, FL Oliver West, Tampa, FL

Oliver West, Tampa, FL
Stephen G. Whisner, Oak Park, CA
Lawrence and Linda Williams,
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Network for Good/Irene Cooke, Washington, DC YourCause/Jane Stout, Plano, TX Fidelity Charitable/Jennifer Wood,

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Colorado Gives: Community First
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JPMorgan Chase Foundation, Employee Giving Programs/ Larry S. Conley, Andover, MA

American Endowment Foundation/ Leslie Alexander, Hudson, OH Community First Foundation/ David Van Tassel, Denver, CO Network for Good/Mary Esienbeis,

Washington, DC
Strada Education Network/Mary Lutz,
Indianapolis, IN

Greater Kansas City Community Foundation/Susan Walsh, Kansas City, MO:

In memory of John D. Holden

High Country Beverage, Johnstown, CO:

In honor of Angelo Martinez

Network for Good, Washington, DC: In honor of Gage Shoup Network for Good, Washington, DC:

In memory of Alois Wustner
Wes Parker Agency, Inc.,

Longmont, CO: In memory of Ferne Smith

All In Memory of Richard M. Prucha

Richard and Barbara Blane,
West Des Moines, IA
Robert and Luann Davis,
Westminster, CO
Patti and Richard IaFond, Erie, CO
David and Alice Pictor, Glenview, IL
Robert Marta, Geneva, IL
Helga Stober, Wimauma, FL

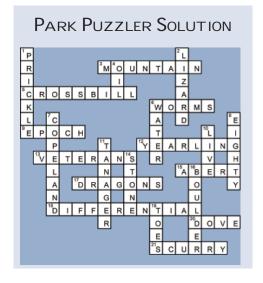
(Ask Nancy: Climate continued from page 3)

patches of snow persist might select for those areas, to match their background. However, in another study, researchers found that snowshoe hares did not change their behavior to accommodate this camouflage mismatch — that is, white individuals did not select for white backgrounds when fleeing or hiding. However, a study of rock ptarmigan in the arctic found that males retain their white plumage (which is important for mating success) even as their habitat becomes snow-free, but have acquired the common behavior of soiling their white plumage with dirt and mud, thereby becoming less conspicuous, after the time of mating but before their white-to-brown molt occurs. In a nutshell, then, as snow-free areas expand due to climate change, we will not be surprised to see fewer and fewer snowshoe hares in areas where once they were common as mismatch frequency increases (certainly to the detriment of Canada lynx). This will no doubt occur first, and most significantly, at the periphery of their range and overall, as the southern/elevational limits of snowshoe hares contract northward and upward. However, over a longer time-frame and barring other as-yet-unknown stressors, our great (or great-great) grandchildren might observe the outcome of a race between climate change and natural selection. They might see weasels that no longer change to white in winter, as now occurs in the southern part of their range. They may observe snowshoe hares that remain brown, as seen in largely snow-free areas of the Pacific Northwest, or turn white later and brown earlier. As for our white-tailed ptarmigan — will they evolve the adaptive behavior of their northern relatives? We can hope ... and we can try to make a difference in the stability of our climate. — Retired RMNP Wildlife Biologist Gary Miller

Word of the day: *Crypsis* – the ability of an organism to avoid detection by having color, pattern and/or shape that blends into the surrounding environment.

(Ask Nancy: Closure continued from page 3)

educational programs, collect trash, operate or provide restrooms, maintain roads or walkways in the event of snow or ice, or provide visitor information or update the park's website, social media channels or information lines. Roads or areas in Rocky Mountain National Park may be closed to vehicles during a government shutdown if conditions warrant. Most staff at Rocky Mountain National Park are furloughed during a lapse of appropriations. Once a lapse in appropriations occurs, employees have a maximum of four hours to support an orderly shutdown, including, but not limited to, completing time and attendance, securing files, securing work station and government property, and setting an out of office message on email and telephone. Furloughed employees are not allowed to use government cell phones, laptops or other communication devices for the duration of the federal government shutdown, and are unable to conduct any projects or activities tied to their work. — *RMNP Public Information Officer Kyle Patterson*









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Nature Notes

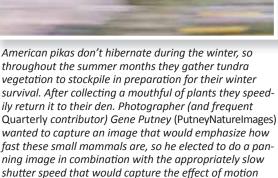
It's been hinting at spring in the high country, with off-and-on balmy days, a little wet snow, and an early influx of visitors to the park, taking advantage of the clear roads for driving. C Retired RMNP Wildlife Biologist Gary Miller found a road-killed gray fox just east of the Fall River entrance. He identified it as such because it was smaller than the more commonly seen red fox. Did you know that the gray fox is the only New World canid that climbs trees? Red foxes have different color phases, including shades of gray; gray foxes have some red on the side of their neck and legs. So if you see a gray-colored fox, notice: Does it have black stockings? (red fox); Does it have a white tail tip? (red fox, although sometimes lacking this feature, a gray fox definitively does not have a white-tipped tail); Does it have a white underside, especially noticeable at the throat and hind legs? (gray fox); Does it have a black strip running down the top of the tail? (gray fox). AND (drum roll please) ... are its pupils slits (red fox) or oval (gray fox)? If you can answer this last one, you're definitely too close. C While skiing at Hidden Valley in the park, Erik Murdock caught sight of two winter mammals that exhibit crypsis (see new vocabulary word, page 15): two white weasels, and a snowshoe



A collection of intrepid Conservancy staff ventured out to Palm Springs, California, to attend the Public Lands Conference in late February. Who knew they would be lost in time? (From left to right: Mary Morgan, membership manager, Estee Murdock, executive director, Chris Wenzel, sales director, Nancy Wilson, publications director, Geoff Elliot, conservation director and Rachel Balduzzi, education director)

hare in January at Hidden Valley. C RMNP Public Information Officer Kyle Patterson reported that a decision document has been signed by the Intermountain Regional Office, National Park Service, that will enable the park to permanently close the one-mile-long Crater Trail, on the park's west side, to protect sensitive natural and cultural resources. For the past three years, the Crater Trail has been closed year-round pending the outcome of public input and a decision on the Environmental Assessment. Prior to that, the trail was typically closed annually from May to August 15, during the bighorn lambing season, and only open two months from mid-August through mid-October. Park staff will remove the existing footbridge near the trailhead and place signs informing visitors of the closure. The abandoned trail sur-

face will be stabilized and revegetated with native vegetation to help restore natural conditions, C Estes Park visitor Karen Almquist observed a red-tailed hawk that had precariously landed on the very tip of a spruce tree in Estes Park. Needless to say, the spindly branch was struggling to stay upright, rather akin to placing a star-shaped rock on the tip of a Christmas tree. Add to this the extra



challenge of 50 mph wind gusts that rocked the bird and all its feathers into fluffy indignation before it flew off in search of a more stable perch. C RMNP Woodcrafter **Cory Johnson** was walking to work on the east side of the park in late January when he spotted a big, healthy-looking bobcat prowling around the park housing cabins on Marmot Circle. It had a beautiful, thick coat and was marking the corners of some of the cabins, sniffing around for a tasty breakfast. It didn't seem to mind him watching from about 30 feet away for a few minutes before he continued his walk to work. Oh, that we all should have such a nature-illuminated experience on our way to work in the morning! C Early one morning in March, Estes Park visitor Ron Martinson watched two coyotes out in a grassy meadow as they hunted for their breakfast. One of the coyotes sat it out as an observer about 20 feet away while the other hunted more actively, listening to the sounds near the ground, pausing, then pouncing, rising with a vole or shrew clamped in its mouth. In two sleek moves, the coyote then flipped the tasty morsel up in the air, catching it in its waiting jaws. C In early February, at noon in Horseshoe Park, park visitors Dave and Pat Basch spotted three huge moose browsing together in the meadow. Two of them had smaller antlers and one sported a full set. Thrilled to see three at once, much less on the east side of the park, they were more than content to watch them forage. C As you plan your trips to Rocky this summer, be sure to strategize your experience to reduce frustration and maximize the good times — and keep in touch!

and speed.

