



ROCKY MOUNTAIN NATURE ASSOCIATION

Summer 2012

\$4.00

QUARTERLY



THE OVERLOOK

by John Gunn

Like most two year olds, she insisted on putting on her hiking boots all by herself when the three of us took our first walks together to a special place in the woods. She had a 50-50 chance of getting it right.

On occasion, we hiked the mile one-way on a snow-covered trail, obediently following tiny boot prints splayed outward in a very awkward fashion. Only when she was a little older would she accept some constructive criticism and lace up her shoes on the proper feet.

This past Memorial Day, the three of us once again awaited sunset at our favorite place in the forest, a spot we call the Overlook. The little girl who used to require a full hour to walk that mile now is a healthy young woman of 20. The years have been a bit less generous to her parents, having added a few lines to their visages. But happily, the Overlook and the expanse of mountain country it commands have changed relatively little through the years. The place is as timeless as it is sentimental.

The Overlook itself is a sizable rock outcrop in Arapaho-Roosevelt National Forest somewhere southeast

of Rocky Mountain National Park. The boulders are perched atop a north-south ridge populated by a mix of lodgepoles, Douglas-fir, high-elevation ponderosas and some limber pines that probably took root long before the pilgrims stepped off the Mayflower near Plymouth Rock.

A couple of seat-sized indentations in the granite have served as natural deck chairs for more than three decades. We have passed countless hours perched on our thrones of rock, enjoying nature's sights, sounds, solitude and some extravagant scenery encompassing about 75 miles of Front Range mountains.

Important family decisions have been made up there. Seated on the rocks at the Overlook we have celebrated victories, mourned losses or simply paused to talk, think and reflect. This past Memorial Day evening, as the sun began to sink below the Continental Divide ridge, the picnic menu included turkey sandwiches and family conversation with a view.

Before long, the last shafts of the setting sun backlit Longs Peak and Mount Meeker, signature mountain monarchs in Rocky Mountain National Park. As they did when two then-younger adults discussed the possibilities of marriage at the Overlook

(Overlook, continued on page 2)

(Overlook, continued)

more than a quarter century ago and anxiously pondered pending parenthood a few years later, the great peaks spanned southward seamlessly, joining up with the northernmost Indian Peaks at Ogalallah Peak.

Now, focusing on the spear-tip summit of South Arapaho Peak in the Indian Peaks Wilderness near Nederland, we reminisced about our daughter's first ascent of the mountain as an 11 year old, when we shared the summit with a wonderful gentlemen of 80 and a particularly aggressive marmot. Also remembered during our Memorial Day picnic was the evening her father briefly took his eyes off the six year old as she scrambled playfully across the Overlook's rocks and tumbled down a six-foot drop to an abrupt and frightening halt. The tone of this conversation would have been much different if the youngster hadn't jumped to her feet unhurt.

Further to the south, the few wispy clouds lingered above 13,294-foot James Peak. This impressive mountain, which has lorded over the mining and gambling mayhem of the Central City-Black Hawk mining camps through their histories, soon became tinged with hues of orange and pink. The assignment of the James Peak area to the protected list in 2002 completed wilderness designation's almost unbroken march south along the Divide from the Cache la Poudre River to Interstate 70.



Looking southwest from Pawnee Peak in the Indian Peaks Wilderness toward distant ranges, including Gore, Vasquez and William Fork Mountains.

Once threatened with ruin by thoughtless operators of four-wheel-drive vehicles, ATVs and dirt bikes, today's James Peak Wilderness frames the Overlook's southern vista. As we admired the prominent rounded summit of the wilderness' namesake, a tiny chipmunk almost as daring as the extreme skiers sometime seen descending a near-vertical crack on James Peak's sheer east face emerged from under a rock to contemplate a dropped crumb. We retrieved the tiny morsel, forcing the animal to retreat and feed itself, as it must.

The chipmunk is part of a pretty prolific wildlife community. Deer and elk graze early and late in the small meadows nearby. Black bears uproot rotting tree stumps as they forage for an insect meal. Moose sightings are increasingly common thereabouts. Their fearlessness and aggression while protecting their young compel local hikers and mountain bikers to proceed with their heads on a swivel. The barking and yipping of hunting coyotes often fill the air as we toast sunset at the Overlook. Mountain lions have been spotted on high rocks in the steep river canyon below, waiting for a mule deer to happen by. Watching gaggles of noisy Clark's nutcrackers

extract pine nut dinners from the cones of limber pines never gets old.

We wonder if any self-respecting Alaskan would consider thinly populated mountain country located within shouting distance of 3.5 million people and annually visited by millions of outdoors enthusiasts to be true wilderness. Probably



Noise from motorized recreation once reverberated throughout the James Peak area located immediately south of the Indian Peaks Wilderness. This photograph was taken in the mid-1980s. Conservation efforts backed by local citizens and government entities resulted in dedication of the James Peak Wilderness in 2002. Sale of educational materials in USDA Forest Service, Colorado State Park and Bureau of Land Management bookstores operated in partnership with the Rocky Mountain Nature Association support the 14,000-acre James Peak Wilderness and other public lands. Photo: John Gunn

not. But from the Overlook, the mountains, with their summer snow and forest ecosystems transitioning upslope from montane and subalpine to the high alpine tundra, seem wild enough.

Like ourselves, many friends, neighbors and visitors to public lands in the high country claim their own favorite places, their own Overlooks. They are out there to be discovered. Like ours, most locations remain closely guarded secrets.

This recent holiday evening, darkness came on quickly as we packed up for the walk home. A scattering of lights began to twinkle in the distant rural valleys. As we departed, the faint rushing sound of the stream that flows 600 feet below the Overlook faded into the night. We hiked home on a familiar trail, following footsteps first left behind 18 years ago by a small child learning her left boot from her right.

John Gunn, former publications manager for the Rocky Mountain Nature Association, is the author and publisher of many RMNA books.



ANNOUNCING THE ANNUAL

ROCKY MOUNTAIN NATURE ASSOCIATION

Membership Picnic

August 4, 2012

11:00 AM to 2:00 PM

at the Stanley Park Pavilion

Members \$10.00; Guests \$15.00

Kids 6-12 \$5; Kids 5 and under free!

11:00 - 12:00 Meet, greet and shop
 12:00 - 12:45 Picnic lunch
 12:45 - 2:00 Special Programs

Join us for a delicious barbeque lunch by Jubilations Catering of Estes Park, along with some musical entertainment from Cowboy Brad Fitch! Meet Charley Money, RMNA's new executive director, browse through the RMNA bookstore and receive a special 20% discount on retail items. As always, it's a great time to meet and mingle with other RMNA Members and to catch up on current RMNA activities.

~ RSVP by July 30 if you plan to attend ~

Make your reservation by calling 970-586-0108, or by visiting our website at www.rmna.org
 (Advance payment preferred)

If you need to cancel your reservation, please let us know.

We hope to see you there!

Cover photo credits

Cover photos (clockwise from lower left to upper right):

“Hope,” by RMNA Phyllis Holst, Longmont, CO; “Portrait of a Mountain Bluebird,” by Jack Glover, Fort Collins, CO; “Ute Trail Overlook” by RMNA Member Julie Klett, Estes Park, CO. Please send photos or high resolution scans to nancy.wilson@rmna.org by September 1 for publication in the 2012 Autumn Quarterly.

Photos are always appreciated! Scenery, wildlife and wildflowers greatly enhance this publication so take a hike and carry your camera with you! Think simple and high

Ask Nancy

[RMNA Quarterly Editor Nancy Wilson will attempt to unearth answers to any questions asked by RMNA members and park visitors. If you are curious about something in or about the park, write: Nancy Wilson, RMNA, PO Box 3100, Estes Park, CO 80517. Or email her at nancy.wilson@rmna.org]

My kids want to see an eagle nest. Do any eagles live year round in RMNP? If so, does the park reveal their nesting location? To our knowledge, there are no bald eagle nests in the park, but there are golden eagle nests, which are not easily seen and are located in remote areas that are difficult to reach. The park prefers not to give specific locations due to the sensitivity of these birds during nesting and fledging periods. In addition, the areas around the nest usually have closures to protect the eagles from disturbance. There are bald eagle nests along Colorado's Front Range but most of the eagles have already fledged. Here's a link for some live webcams in Colorado (<http://birdcam.xcelenergy.com/eagle.html>), but you can search for eagle webcams near you to view eagle nests in the spring. — *RMNP Resources Management Specialist Jeff Connor*

When jet planes fly rather low into Denver, I've noticed a reverse Doppler effect- the sound seems to drop and then rise as it goes further away. What is happening? This is a challenging question, but I will try to summarize a few of the physical processes that can change the perceived pitch, or frequency, of a noise source. Perhaps you can combine this information with your experience to deduce what the most likely explanation was.

1. Doppler effect: The pitch of a noise source will be shifted up when the noise is moving towards you, and down when it is moving away. This effect is the same regardless of how far away the noise source is. To get an upward shift, an aircraft that was moving away from you would need to:
 - a. reduce speed away from you
 - b. turn towards you regardless of changes in airspeed
2. Waveguide effects: When sound (**Jet sounds** continued on p.15)

Does any species of plant or animal live ONLY in RMNP?

We know of no species endemic only to RMNP. — *RMNP Wildlife Biologist Gary C. Miller*

As a semi-backcountry road, it would be really nice to be able to use Old Fall River Road in the off-season. Why doesn't the park leave this scenic road open all year round? Normally, past mid-October, there is such a volume of snow and ice above Chasm Falls on Old Fall River Road that is not safe for park personnel to work on the road. The road is very narrow, with almost no leeway for sliding, and when they tried years ago to plow it, trucks wound up in the ditch. In addition, since the road can't be plowed down to the ground, the layer of snow and ice left is just too treacherous for any vehicle. The other factor is that the road is one-way (going up) which means that Trail Ridge Road would also need to be open for this road to remain open (**Old Fall River Rd.** continued on p.15)

Does poison ivy occur in RMNP? Poison ivy is not listed on the vascular plants list for the park, which means that a sighting of it has not been confirmed in the park. Poison ivy is known to grow up to 8,500 feet, and with the lowest elevation in the park at 7,640 there is viable habitat in the park. In more arid climates the plant would most likely be found in wetter sites, such as hanging gardens, and along streams and seeps, and in deep canyons and ravines. — *Resources Management Specialist Jeff Connor*



RMNA Board
President Bill
Tindall

From the RMNA Board:

Dear Friends,

I'm very pleased to share some exciting news. The Rocky Mountain Nature Association has hired Charles A. Money as its Executive Director. Charley is currently Executive Director of Alaska Geographic. He brings extensive experience, proven success and a well-deserved reputation for helping build enduring relationships between individuals, communities and public land partners.

He has spent the last 14 years at Alaska Geographic, a nonprofit organization serving nearly forty distinct public lands under the jurisdiction of the National Park Service, U.S.D.A. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Geological Survey and Alaska State Parks. Their broad educational mission focuses on connecting people to their public land heritage to ensure the protection and enjoyment of those lands by future generations.

Prior to joining Alaska Geographic in 1998, he served as Chief of Operations and Chief Financial Officer of Golden Gate National Parks Conservancy for more than 10 years. Before that, he was Finance Director at Southwest Parks and Monuments Association (now known as Western National Parks Association).

He received a bachelor's degree from the University of Kansas and has served on various industry boards, including as Board President of the Association of Partners for Public Lands (APPL). Charley is married with 3 grown children.

As a Board, we conducted a national search that attracted many well-qualified candidates. Charley stood out because of his experience and success in similar organizations along with strong leadership credentials and business acumen. He brings all the tools to help the Rocky Mountain Nature Association continue to fulfill its mission. Curt Buchholtz accomplished tremendous things for our organization over the years and we're deeply indebted to him. In Charley, we feel we have a most able successor.

Charley is expecting to split time between Anchorage and Estes Park during the next few months as he transitions from his current responsibilities. We hope you'll have an opportunity to meet and welcome Charley in the near future.

Sincerely,

Bill

William L. Tindall
President, Board of Directors

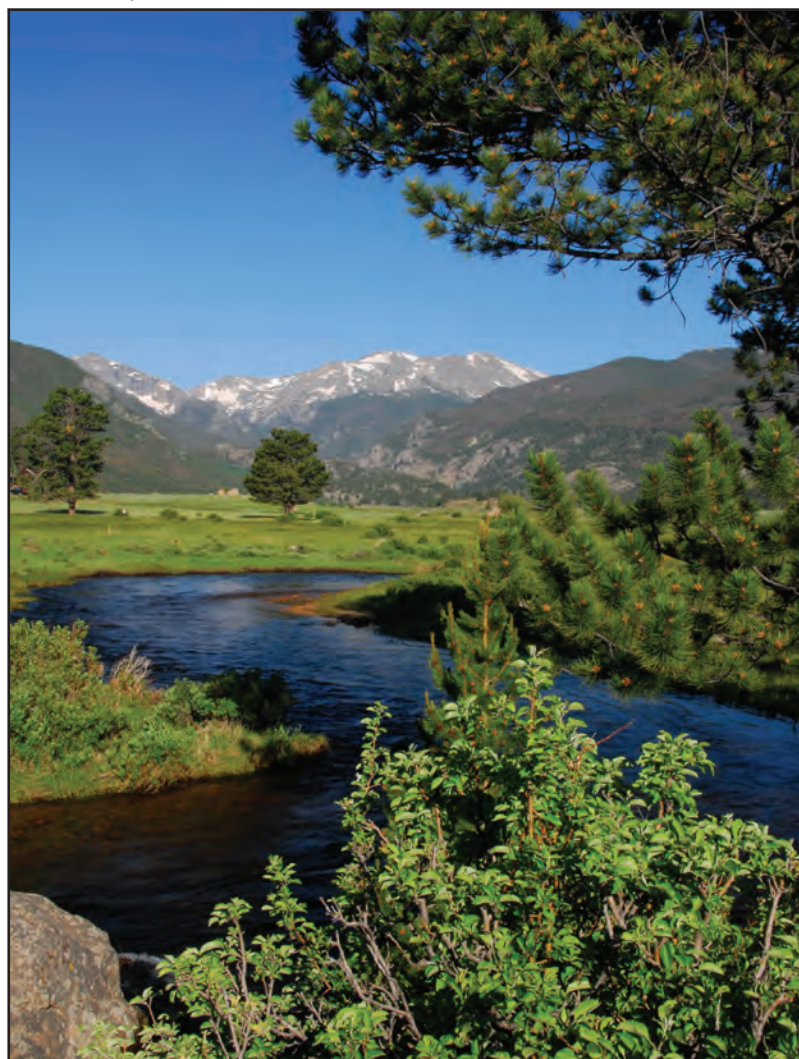
A Message From RMNA Executive Director Charley Money



To all my dear new friends,

I am extremely honored by this opportunity to serve as the executive director of the Rocky Mountain Nature Association, an organization known far and wide for its significant support of Rocky Mountain National Park and the other parks and forests it serves. I have long admired the many achievements of the Association, which have been made possible by the generosity of its members, donors and partners. I sincerely hope my past experiences gained working on behalf of public lands in the Southwest, California and Alaska will complement the already stellar staff, board and volunteers of the Rocky Mountain Nature Association. I look forward to working along with you for the betterment of these special places and in service to the people that treasure them. If you're in the area, be sure to stop in for a visit – I look forward to meeting you!

Charley



Summertime along the Big Thompson, Moraine Park
Photo by RMNA Member Ann Duncan

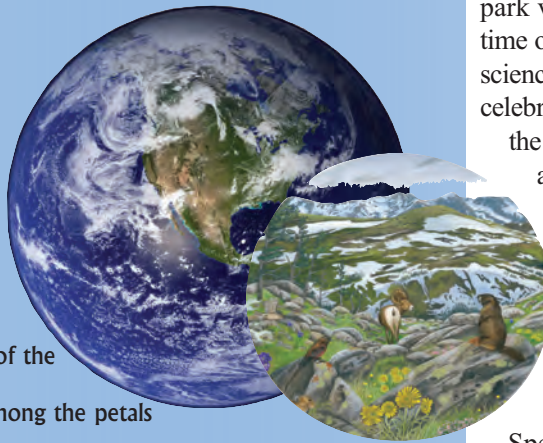
Taking a Closer Look: RMNP BioBlitz 2012

As you enter Rocky Mountain National Park, look around you. What do you see?

- A pine tree grows from a rocky hillside.
- A yellow flower sways in the afternoon breeze.
- A young elk dances playfully around its mother.

But look closer.

- A red squirrel is peeking out from behind trunk of the Ponderosa pine.
- A yellow Crab spider waits patiently for lunch among the petals of the Golden banner.
- A fungus clings to the bark of the Antelope bitterbrush that the mother elk slowly munches.



by Barbara Hoppe

Rocky Mountain National Park is alive with thousands of species of plants, mammals, insects, and birds. Some we can see. Some we overlook. Some so small we would need a microscope to study them. See them or not, all are protected as part of the national park. All are connected by a web of life that binds them to each other, and to us.

Biological diversity, or biodiversity, refers to all the different kinds of living organisms within a given area. Because they protect ecosystems, habitats, and processes, national parks are sanctuaries of biodiversity. Every year, millions of visitors come to Rocky Mountain National Park to catch glimpses of plants and animals they don't find at home.

Scientists, too, often choose the protected settings of national parks in order to study species in relatively undisturbed environments. In fact, because they are often the last strongholds for species that have disappeared from other parts of the world due to development, habitat fragmentation, climate change, or other threats, national parks provide a unique window into the rich variety of the natural world.

Since 1997, work has been conducted in various national parks around the country to document all the species found inside their boundaries. In Great Smokey Mountain National Park, an All Taxa Biotic Inventory, or ATBI, has yielded more than 850 species new to science and more than 6,250 species that are new records for the park. Other parks have focused on specific taxa, like invertebrates

at Boston Harbor Islands National Recreation Area and bacteria in the high alpine lakes of Yellowstone National Park.

Over the years, the ATBI has given birth to the idea of the BioBlitz. Part rapid biological survey, part public outreach event, a BioBlitz brings scientists, volunteers, park visitors and students together to record a snapshot of biodiversity in a designated area in a relatively short amount of time. School groups and "citizen scientists" of all ages are engaged to gather large quantities of data to highlight biodiversity discovery.

Recently, the National Geographic Society has partnered with the National Park Service to bring a large-scale BioBlitz to a different national park each year during the decade leading up to the National Park Service Centennial in 2016. Washington D.C.'s Rock Creek Parkway, Santa Monica Mountains National Recreation Area, Indiana Dunes National Lakeshore, Biscayne National Park, and Saguaro National Park have all hosted events which catalogued hundreds of new species and enlisted the help of thousands of scientists, volunteers, and students.

This year, BioBlitz is coming to Rocky Mountain National Park.

On August 24 and 25, BioBlitz 2012 will provide scientists, park visitors, and students with the opportunity to discover and experience the biodiversity of Rocky Mountain National Park. Whether it's a

park visitor seeing a magpie for the first time or a scientist finding a fungus new to science, discoveries of all kinds will be celebrated. Excursions with scientists into the park, interpretive programs, and activities at the Biodiversity Festival at the Estes Park Fairgrounds will all highlight the role of science in helping us understand the complex web of life of which all species, including humans, are a part.

Biodiversity is the glue that holds our society and our world together. Species biodiversity makes up the natural systems that help regulate climate, air quality, and cycles of carbon, nitrogen, oxygen, mineral elements and water upon which all life, including ours, is dependent. The air we breathe, the food we eat, the water we drink, the products we use, and the medicines we depend on all come from the natural environment around us. The economic value of biodiversity may only be rivaled by the aesthetic value, the awe and wonder, that come from appreciating something like the delicate hardiness of the Alpine forget-me-not or the quiet power of the mountain lion. Conserving biodiversity may have benefits we do not yet even realize. We do know, however, that our sustainable future is closely tied to understanding and preserving the richness of life around us.

To preserve biodiversity in our parks and in our own backyards we must first discover the variety of life that exists. A BioBlitz is merely the first step in that important process. The appreciation and preservation that must follow is up to you.

Barbara Hoppe is an Interpretive Park Ranger and hopes the BioBlitz will help people understand, appreciate and protect the amazing world around us - in Rocky Mountain National Park and in our own backyards.

The next time you drive into Rocky Mountain National Park, take a closer look.

Admire the Silvery checkerspot sitting placidly on the Spreading dogbane along the trail.

Delight in the Flammulated owl peering from its hole in a Quaking aspen near the picnic area.

Appreciate the colorful lichen that decorates the Yellow-bellied marmot's granite perch.

Take note of the pleasure and value that biodiversity brings to your life.



For more information, updates and volunteer opportunities, visit:
www.nationalgeographic.com/explorers/projects/bioblitz/



by Ryan Monello

Elk are an important wildlife species to study for the protection of habitats and biological diversity in Rocky Mountain National Park. As a result, elk with radio-collars have become a common sight in Rocky Mountain National Park during the past 15 years.

During this time, there have been three major elk studies conducted. The first study started in 1995 focused on learning about elk movement and population size to provide critical information for the Elk and Vegetation Management Plan that was implemented in 2008. The second study began in 2008 with two goals: 1) to test the effectiveness of a new fertility control drug; and 2) to test the accuracy of a new live-animal test for chronic wasting disease, with hopes that the proportion of infected elk could be estimated for the first time in the park.

Chronic wasting disease is caused by prions (abnormal infectious proteins) and leads to neurological disease and death. This second study found that the new test could accurately identify most elk with chronic wasting disease before clinical signs appeared, but it missed elk that were only recently infected or in an early disease state. Several findings from this second study also elicited new questions about the role of this disease in this elk population. In particular, chronic wasting disease appeared to

infect at least 10% of adult female elk in the park and was observed to cause relatively high rates of mortality during the study.

In response to these concerns, the National Park Service decided to initiate a third radio-telemetry study this past winter. Park managers decided that it was of utmost importance to gain reliable information about the effects of this disease. National Park Service veterinarians and researchers are leading this effort, sharing the goals to:



Liz Wheeler, Veterinary Technician for NPS Wildlife Health Branch, and NPS Wildlife Biologist Ryan Monello, attach a radio collar to a anesthetized elk in Rocky Mountain National Park.

- 1) determine if chronic wasting disease in this population is increasing or not, and 2) measure the impact of the disease on elk survival and population size. The study focuses on adult female elk because their survival and reproduction is the most important driver of population size.

To date, 67 female elk have been

RADIO-COLLARED ELK: A CURRENT RESEARCH PERSPECTIVE

captured, sampled, and adorned with a brown radio-collar as part of this new study. Eventually, a total of 100 radio-collared elk will be maintained for the duration of this study. Some of the collared elk will be recaptured each year to help assess the number of elk that succumb to the disease annually. Elk with radio-collars will be allowed to live out their natural lives and will not be removed for research or management purposes unless they appear very ill. The study is expected to conclude in 2016.

In addition to studies initiated in the park, Colorado Parks and Wildlife (CPW) is also conducting research on elk movement, survival rates and chronic wasting disease. They are using white radio collars with green or purple patches. Elk in these projects are being captured outside the park, but a portion of these elk are expected to move into the park during the summer. Park staff will be working collaboratively with Colorado State University and CPW to gather and use data from the radio-collared elk to better understand elk use of the park winter range related to frequent movements across the park boundary.

Ryan Monello is a Wildlife Biologist/Disease Ecologist for the Wildlife Health Team of the National Park Service. In addition to his work on elk, he is also currently working on chronic wasting disease in white-tailed deer, desert bighorn sheep population connectivity in the Southwestern U.S., deer and vegetation management plans in eastern U.S. parks, and water and wildlife management in the Mojave Desert ecosystem.

HIKING IN THE SEASONS' HIGH POINT

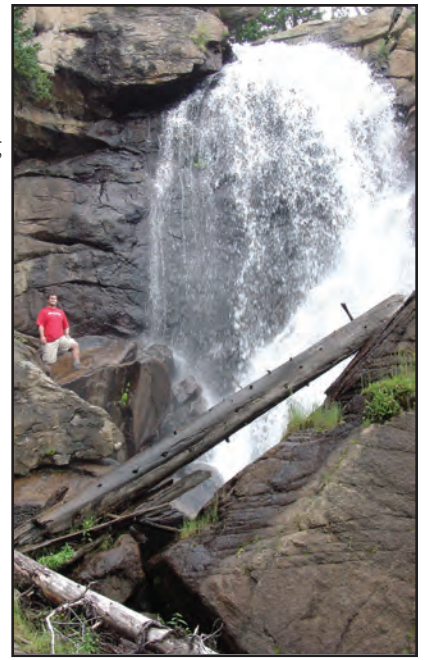
There's a reason that summer is the peak time for tourists in Rocky Mountain National Park. Beautiful blue skies, lots of sun and mild temperatures conducive to throwing on those hiking boots and hoofing into the high country. It's refreshing. It's invigorating. It's sublime. Need I say more?

Join Membership Manager Curtis Carman, and special park guests, for monthly hikes in Rocky Mountain National Park throughout the year!

This free hiking series was designed to give RMNA Members the opportunity to hike to various sites in Rocky Mountain National Park with a group of like-minded individuals while learning more about RMNA, RMNP, and each other. Limited to 15 people per hike, outings explore a different area in Rocky Mountain National Park each month. Come with your questions about current RMNA projects, park management issues and natural history stories.

Call Curtis Carman at (970) 586-0108. Or, email him at curtis.carman@rmna.org

- Summer Schedule:*
- July 27- Hike to Ouzel Falls**
 - August 23- Hike to Cascade Falls (West Side)**
 - September 28- Elk Rut Viewing**



Former Estes Park resident John Poland basking in the mist of Ouzel Falls. (Photo: Richard Youngblood)

Park Puzzler by RMNA Member Joel Kaplow

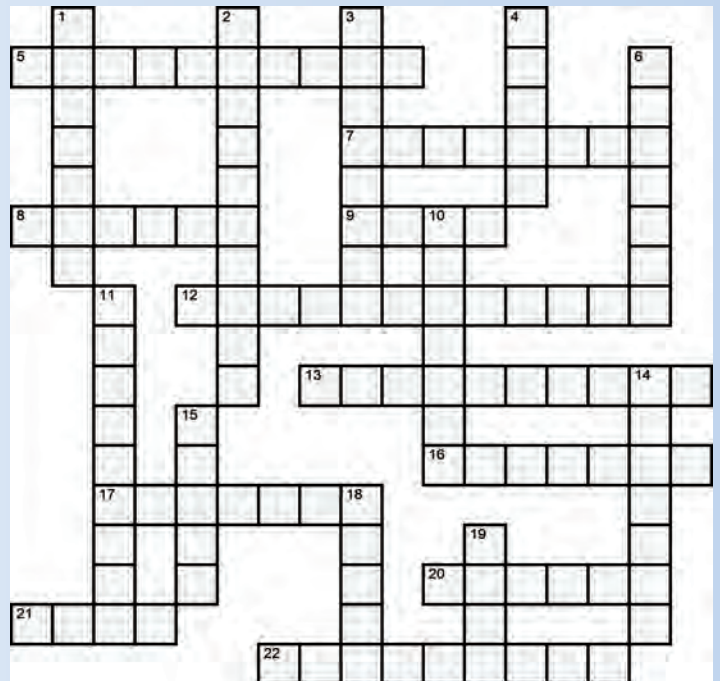
ACROSS

5. Departed RMNA executive director Curt Buchholtz is now settled in his new niche at the National Park ____, the official charity of America's national parks.
7. Several times in the park's ancient past, these rivers of ice acted as bulldozers and conveyor belts, grinding rock debris off mountains and pushing it to the sides and in front of them, leaving huge piles called moraines. Derived from the French word for "ice," what are these frozen rivers called?
8. Growing up to four feet in length, RMNP is home to the second-largest rodent on the planet, next to South America's capybara. Who is this engineer by a damsite?
9. The ____ Herd is group of volunteer citizen scientists who assist with the study of myriad goings-on in the park, and help keep visitors informed.
12. South America's jaguar is the largest cat in the Western Hemisphere. While in RMNP, you may get a glimpse of Felis concolor, the second-largest. What is one of its more common names? (2 wds)
13. Tough one: When an animal becomes locally extinct, such as the gray wolf, bison and grizzly bear that used to roam the area that was to become Rocky Mountain National Park, it has been ____.
16. In August, it will be RMNP's turn to host National Geographic Society's sixth BioBlitz. Experts and volunteers will take a two-day inventory of resident plant and animal ____ to help document the park's biodiversity.
17. Whimsically named by Ranger Jack Moomaw in 1921, ____ Egg Rock is a large outcrop on Mt. Meeker's south face that can be seen from many miles away.
20. The long-tailed ____ is RMNP's smallest resident carnivore. It can be found above and below treeline, changing its coat to match the season.
21. Most RMNP visitors are familiar with Estes Park, named for the cattle rancher who first arrived there in 1859. What was Mr. Estes' first name?
22. In 1929, a forest fire charred an area on the west flank of RMNP's Twin Sisters Peaks. It is shown on maps as the ____ Burn due to its shape that resembles a certain winged insect.

DOWN

1. Just before reaching the Keyhole when climbing Longs Peak, the trail will disappear and you will find yourself hopping from rock to rock in a small valley between Storm Peak and Mt. Lady Washington. You are in the appropriately named ____ Field.
2. Located above Odessa Lake and topping out at 11,586 feet, the park's Little ____ is dwarfed by its European 14,690-foot look-alike namesake.
3. ____ Lake, west of Terra Tomah Mountain, was named such due to its resemblance to a favorite nosh of police officers.
4. Due to improvements on Bear Lake Road, Glacier ____ Campground will be

- closed all year, and possibly all of 2013 as well.
6. A peak in the Mummy Range has gullies resembling the letter "Y" on its east face. ____ Mountain is all Greek to you!
10. Enos Mills, aka the "Father of Rocky Mountain National Park", was known to wander in the mountains carrying only a pocketful of ____ to munch on.
11. Can you name the large, broad saddle located between Hagues Peak and Fairchild Mountain in the Mummy Range? (Kind of a trick question.) (2 wds)
14. Abner Sprague thought this verdant peak deserved a classier name than "Green Mountain." So he dubbed it ____ Mountain.
15. The stretch of the Colorado River from its source near La Poudre Pass in RMNP to its confluence with the Green River in Utah was called the ____ River up until 1921.
18. A newborn deer fawn or elk calf may appear to be abandoned if its mother is not present. But it is normal for the young to be left alone, except for feedings, as it cannot keep up with the mother. It is relatively safe, as it's born with natural camouflage markings, and no ____ for a predator to detect.





Wild Bears Wanted!

by Cole J. Caldwell and Mary Kay Watry
RMNP Division of Resources Stewardship

We ask all visitors to help the park work toward zero bear incidents!

- Avoid bringing unnecessary food or trash with you into the park.
- Keep a clean camp.
- Clean up spills on grills and stoves after use and wash dishes promptly.
- In campgrounds, use food storage lockers when space is available.
- Never leave food items or coolers unsecured or unattended.
- When parking your vehicle, make sure all food and trash is stowed out of sight with windows closed and doors locked.
- When hiking, keep your backpack with you at all times.
- Latch doors on dumpsters and food storage lockers.
- If there isn't space in trash cans or dumpsters, take items with you until you find another receptacle.
- If you see a bear where it doesn't belong or in the process of getting a food reward, take action – yell, clap, honk your horn.



Ask most visitors: “Want to see a bear?” and the resounding answer almost always is, “Yes – that would be cool!” But few visitors want to see a bear in their tent, ripping into their backpack or destroying their car.

The purpose of bear management in Rocky Mountain National Park (RMNP) is to keep bears wild and prevent bear encounters that can threaten visitor safety, damage property, or provide food rewards to bears. Once bears get human food they can become more aggressive. Often these bears need to be killed. Although the park has not had to kill any bears for the last eight years, more than one hundred were destroyed in the State of Colorado in 2011.

In the park, there is a goal of zero bear incidents. This means that no bears will get a food/trash reward, no vehicles will sustain damage, and there will be no property damage associated with bears. Unfortunately, we are still far from attaining that goal. Between 2007 and 2011, there has been an average of 45 incidents per year and it appears that negative bear encounters are increasing (*Figure 1*).

In response to this trend, RMNP is actively working to reduce bear incidents during the next four years. We are increasing visitor education, providing additional bear proof facilities and increasing our attention to trash management. Park visitors can expect to see some changes in the park this year, and in future years, from these efforts.

Frontcountry campgrounds and the Wild Basin Area will have large signs installed to remind visitors to store their food properly. Campers are a key partner in our bear management effort because in 2011, campers provided 67% of all food rewards to bears. Bears also damaged four vehicles in the campgrounds. The Wild Basin Area is a focal area for visitor outreach because during the last three years a total of 15 vehicles (63% of all vehicle damage) have been battered by bears at the Wild Basin trailheads.

Food lockers are being installed at Longs Peak Trailhead and Fern Lake Trailhead for our backcountry overnight hikers. Bears typically damage vehicles during the night and it is hoped that these additions will prevent vehicle damage at these sites. In addition, more food lockers will be added at Longs Peak Campground, Aspenglen Campground and Timber Creek Campground to meet visitor demand.

All park dumpsters and trash cans will have stickers to remind people to “Latch the door – you can save the life

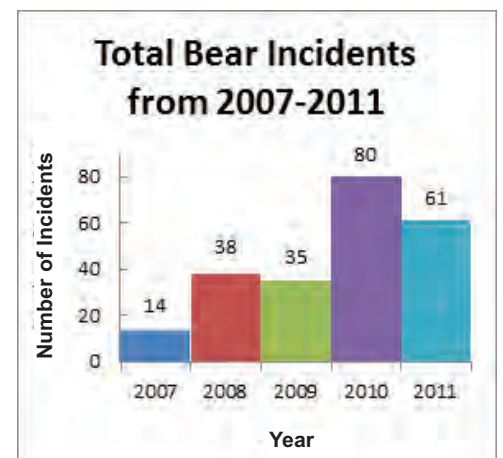
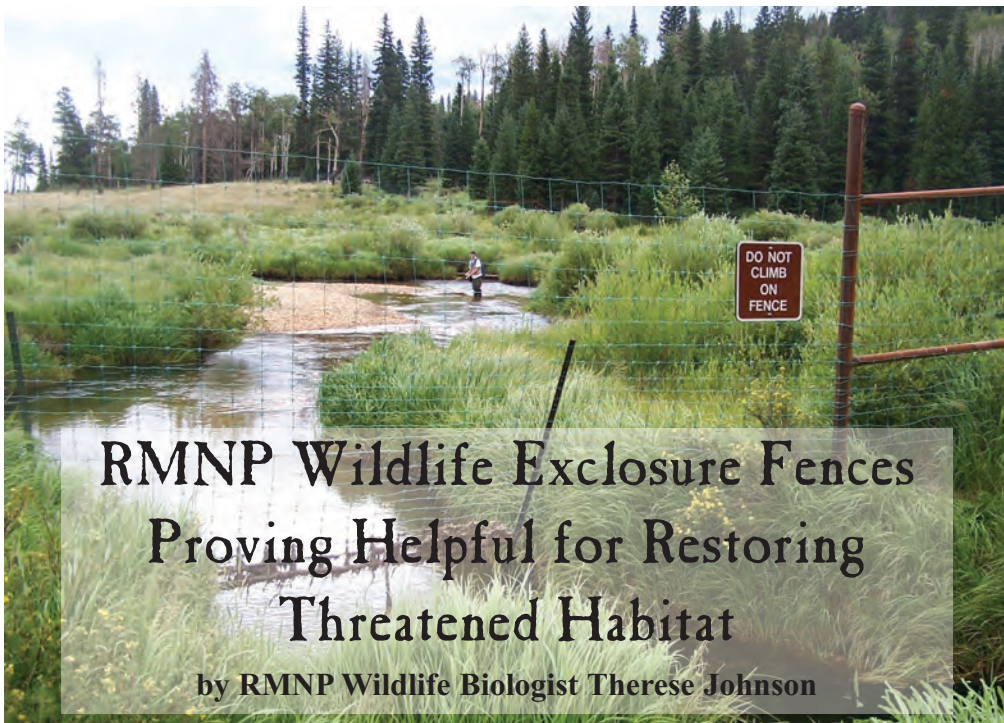


Figure 1: Total bear incidents in Rocky Mountain National Park, 2007-2011.



RMNP Wildlife Exclosure Fences Proving Helpful for Restoring Threatened Habitat

by RMNP Wildlife Biologist Therese Johnson

Rocky Mountain National Park is now in its fourth year of managing elk and vegetation under the Elk and Vegetation Management Plan (EVMP) that was approved in 2008. Research conducted from 1994 through 2002 showed that the elk population in the park and Estes Valley was larger, less migratory and more concentrated than it would be under natural conditions, resulting in declines in important aspen and willow habitat that many species of wildlife depend on.

The EVMP relies on using a variety of conservation tools including fencing, vegetation restoration, culling, and elk redistribution to reduce the impact of elk on vegetation and to restore the natural range of variability in the elk population and affected plant and animal communities.

An important part of implementing the plan during these first several years has been installing temporary elk exclosure fences to restore aspen and willow habitat by protecting it from elk

browsing. After only one to three growing seasons, vegetation response has been impressive inside many of the fences. Young aspen suckers are now six to ten feet tall in some areas. Willow that have been suppressed for many years are emerging through tall grasses. New growth on existing willow is beginning to transform short-hedged plants into taller plants that provide excellent habitat for birds and butterflies.

The fences also incorporate gates to allow access to park visitors, with fishermen and birdwatchers already frequenting some of these areas. The fences were designed with wildlife in mind and constructed with a 16-inch gap along the bottom of the fence and a height just greater than six feet so that all species, except elk and moose, are able to access areas inside the fences.

From fall 2008 through 2010, park staff focused on protecting critical habitat on the elk winter range on the east side of the park, installing fences to protect approximately 45 acres of aspen and 145 acres of willow.

In 2011, resource managers began to look at how fencing might also benefit habitat on the west side of the park, in the Kawuneeche Valley, with an exclosure to protect approximately 16 acres of willow habitat.

(Fences continued on p.10)

(Wild Bears, continued)

of a bear” and “Do not overload the trash can – your actions can save the life of a bear.” Every year, bears get into trash cans and dumpsters that have simply been left unlatched or have trash sticking out of the opening. That’s all it takes for a bear to become habituated to human food.

Campgrounds, trailheads, and other high-use areas are considered exclusion zones for bears. Park staff will haze bears (yelling, honking, clapping, throwing rocks/pine cones at the back end of a bear), if found in these areas, back into their natural habitat. Low level hazing is an effective strategy for changing bear behavior (Figure 2). Over the last five years, hazed bears retreated

from campsites, picnic tables, backpacks and people 78% of the time (88 of 122 cases).

For the first time, a bear technician, Cole Caldwell, has been hired for the summer. He will travel throughout the park talking with visitors about food storage and what to do if they see a bear. Cole will also track whether food lockers are adequate for visitor demand and whether they keep out inquisitive bears. He will be checking trash and recycling volumes, providing emergency emptying and clean-up of trash, and hazing habituated bears.

Keep our bears wild. It takes all of us to save the life of a bear!

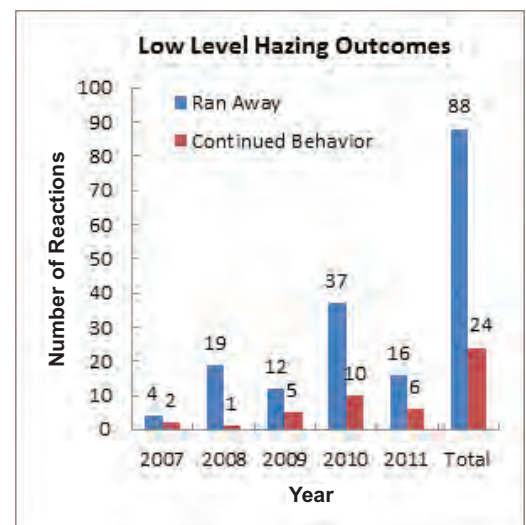


Figure 2: Numbers of bear reactions when human response was hazing in Rocky Mountain National Park, 2007-2011.

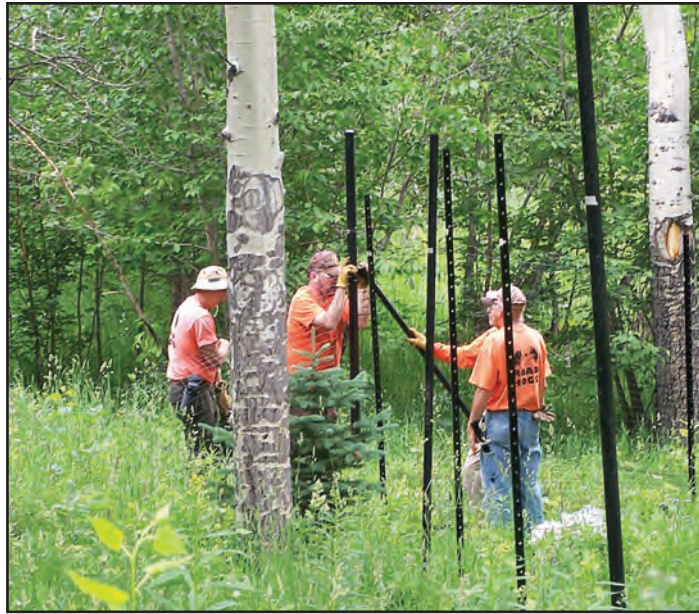
(Fences continued from p.9)

Areas to be fenced are selected based on the best available science and in consultation with aspen and willow experts, focusing on high elk-use areas where the need for ecological restoration and the potential for restoration in the shortest time are greatest. These areas often coincide with areas of high visitor use near roads. As a result, many fences are quite visible; however these same areas will be easily accessible once restoration is achieved.

To many park visitors, fences may seem abundant on the elk winter range, just over 5% of the open habitat types (non-forested) of the winter range have been fenced.

While most of the fences are built by contractors using heavy woven steel mesh, park staff is also experimenting with using a polypropylene net material which is much easier to install and may be appropriate for fencing relatively small areas more cost-effectively and with less construction impact. Net fencing is less sturdy than woven wire and can require more frequent repair, however, it can be installed without the use of mechanized tools or machinery, which can reduce the impact on wilderness.

Last summer, a group of park volunteers (the Road Hogs!) successfully installed an experimental net-fence enclosure to protect one acre of aspen habitat near Horseshoe Park. The park is hopeful that net fencing will prove to be



Road Hogs working on fence in Horseshoe Park

successful over the long term and be useful for fencing additional aspen stands to reduce costs and wilderness impacts.

Although excellent vegetation restoration is occurring inside fences in many locations without any additional management actions, in other areas, additional vegetation restoration methods may be needed to facilitate regeneration of vegetation. These could include actions such as planting willow and using prescribed fire or mechanical methods to stimulate aspen suckering. In 2011, park staff worked with Wildlands Restoration Volunteers to experimentally plant willow cuttings in a fenced area in Moraine Park. About 40 volunteers spent two days harvesting and planting more than 2000 willow cuttings. Early monitoring suggests excellent survival, and monitoring will continue to determine long-term success in establishing new plants and the potential for future applications of these techniques. Monitoring vegetation progress is important to guiding management actions. Beginning in 2007, park staff established a network of more than 200 vegetation monitoring plots in aspen, willow

and upland shrub habitats. Every year, the amount of grazing and browsing pressure on vegetation outside fences is measured to ensure that these levels meet the criteria established in the EVMP.

Every five years, the park will be measuring parameters that respond more slowly, such as willow growth and total cover, as well as aspen reproduction and growth. These aspects will be measured during the summer of 2013 for the first time since fences were installed. Monitoring data will be used to determine how many acres of willow or aspen on the primary elk range need to be protected with fences and what additional vegetation

restoration methods might be needed.

The fences are temporary and will be removed when monitoring results indicate plants can withstand browsing, potentially 10-20 years.

Park managers understand that enclosures can detract from the natural setting and scenic views in some areas. But it's important to keep in mind that they also provide many significant beneficial outcomes, such as improving degraded riparian habitat and providing for a diversity of other species dependent on willow, such as beaver, Wilson's warblers, Lincoln's sparrows, fox sparrows and butterflies. Because the enclosures protect aspen and willow in high elk-use areas, the park is able to manage for a larger elk population (600-800 during winter), decrease the overall number of elk that need to be culled to maintain that population, while still provide visitors with ample opportunities to see elk throughout their range.

To date, just over one-third of up to 600 acres identified in the management plan have been fenced. It is expected that an additional 1-3 fences totaling 10-20 acres will be constructed to protect and begin restoration of willow habitat in Upper Beaver Meadows this coming fall.

In the meantime, the park encourages visitors to explore fenced areas as progress toward restoring vegetation and biological diversity continues.



Spending Time in the Forest: Who Maintains These Trails, Anyway?



Trees similar to this must be cleared from miles of trails in the park and National Forest.
(Photo: NPS)

by Julie Klett, RMNA Development Associate

This past weekend, I had the opportunity to visit the Rawah Wilderness, a prime recreation area in Colorado, north of Rocky Mountain National Park. This region encompasses 73,868 acres of conifer forests, subalpine meadows, lakes and roaring rivers, and is managed by the United States Forest Service. It was a quick day trip, but beyond this area's spectacular scenery, abundant wildflowers and wildlife, what struck me most were the dead standing and fallen trees.

Like many places in Colorado, this area has been hit hard by the mountain pine beetle, which can kill off a forest much like a very slow motion wild fire. Entire hillsides are brown with dead lodgepole pine, spruce and other conifers. Between the beetle-kill and the fierce windstorms we had this winter, the Rawah Wilderness trails are tangled with uncountable numbers of fallen and hazardous trees.

"Who takes care of this? Who clears all these trees? Who repairs the erosion?" my companions asked. I was proud to tell them that RMNA's very own American Conservation Corps (ACC) has a six-person crew stationed at Stub Creek in the Rawah Wilderness again this summer, helping the U.S. Forest Service staff and volunteer groups to clear the damage and free up the trails for the enjoyment of the rest of us. It is one thing to read about the work these crews do—it is quite another to see the tremendous scale of the task in person! Daunting, to say the least!

All of our four ACC crews are toiling hard this summer to do work that might otherwise go undone—in the Rawah Wilderness, at Red Feather Lakes, at Shadow Mountain, and here in Rocky Mountain National Park. The ACC is funded entirely by donations. If you have given to this program, or to our Next Generation Fund, which helps to fund it, then you can take pride in knowing you are helping to make a real difference on the ground in these public lands.

The next time you are on a trail and see work that needs to be done, do your part by supporting the American Conservation Corps. It's almost like doing some of the work yourself – but without the bug bites and callouses! To learn more about this important program, and to make a gift, please visit www.rmna.org.



2012 American Conservation Corps

(Bottom Row: Left to right: Kari Lanphier, Gabby Bailado, Emilia Lewis, Delaney Garvin, Anna Burke, Anna Arbisi. Middle Row: Sarah Windsor, Lindsay Anderson, Tessa Kuenker, Nora Sponaugle, Chris Young, Tyler Bodlak, Zach Windsor, Alysse Brice. Top Row: Ben Uecker, Jeff Bauer, Carol Skelton, Ross Haugberg, John Ballantyne, Clark Graffeo, Emma McVey, Grady Anderson, John Brennan. In the back: Torrey Schneider

by Steve Coles, American Conservation Corps Manager

"I've seen them, but, who are they?" A year ago, a hiker on the trail above Nymph Lake in Rocky Mountain National Park asked me this after I'd inquired if he'd noticed a trail crew working in the vicinity.

We were referring to one of the four American Conservation Corps crews – six of the twenty-four young adults competitively chosen to spend their summer working harder than they had ever worked in their lives to improve the trails of Rocky Mountain National Park for us all to enjoy.

With their matching tee-shirts, work pants and backpacks stuffed with lunch, raingear, all-weather clothing, first aid kits, radio, snacks, water bottles and carrying tools such as Pulaskis, McLeods, rock bars, sledge hammers, saws buckets and pruning hooks, these kids are quite a sight on the trail.

This year, beginning in mid-May, a host of new recruits arrived in Estes Park for the 2012 summer season. After a week of training and orientation, these eager, energetic college students began their service-learning experience in earnest, dividing into four separate crews working in 4 different areas: The Estes Park crew in Rocky Mountain National Park, The Shadow Mountain crew in Arapaho-Roosevelt National Forest, The Rawah Wilderness crew and the Red Feather Lakes crew. Over the course of the eleven-week season, working under the supervision of Rocky's talented Trails and Resource Management teams, crew members are transformed from individual, high-achieving college students into a strong, confident and productive team. No small task – this end result requires significant sacrifice of personal comfort and preferences for the task at hand and the good of the crew.

In addition to repairing eroded trails and water-control structures, this year's Estes Park crew is harvesting plant material for re-vegetation projects and has already spent a week assisting the staff at Bandelier National Monument in Los Alamos, New Mexico, recovering from the effects of 2011's devastating wildfire. The Forest Service's Shadow Mountain crew is removing beetle-killed hazard trees that would otherwise require trail closures. The Rawah Wilderness Crew operates autonomously in the back-country repairing trails degraded by erosion and trims brush that encroaches on the trails. The Red Feather Crew is repairs and constructs new trails that link favorite destinations in the Red Feather Lakes area.

As you wander the trails in Rocky Mountain National Park and in nearby Forest areas, keep your eyes peeled for these hard-working kids - they can be spotted in their light blue tee-shirts and brown work pants, and may be discussing the best way to move a giant rock, or cooling off in a clear mountain stream. If you see a pile of backpacks tucked under a tree, off the trail and almost out of sight, they can't be far away. They're having the best summer of their lives, working harder than ever before. Say hi to them for me.



RMNP-Bailey Research Fellow Profile

The RMNP-Bailey Research Fellowship was established for the park in 1995 through the gift of an endowment to the Rocky Mountain National Park Fund. The intention was to encourage interest in public service as a possible career choice for young scientists by giving graduate students as

broad of an exposure to the National Parks as possible, and encouraging science communication to park visitors.

Katie Renwick

May-August 2012

Hometown: Ithaca, NY

College: Colorado State University

B.A. from Colby College

Career Goal: Job in natural resources management

Research Goals: My research project is focused on understanding how the mountain pine beetle outbreak and climate change may interact to affect forest composition. The ultimate goal is to create predictive models of forest change that can help park managers plan for the future.

Research Duties: This summer I am collecting vegetation data at 10 field sites located throughout the park.



As an avid hiker and all-round lover of the outdoors, I find myself very fortunate to now be spending the summer conducting research in Rocky Mountain National Park. I have always been very interested in ecology and conservation, and since graduating from Colby College in 2007 I have had several fantastic opportunities to develop these interests. I completed a one-year AmeriCorps internship with the Medomak Valley Land Trust in Waldoboro, Maine, where I worked with a dedicated group of volunteers to monitor conservation easements, plan educational hikes and seminars, and develop interpretive guides for our trail system and preserves. I have also held several research positions, and my interest in working with the Park Service began while working as a science technician studying forest health in Acadia National Park.

My love of mountains led me west, and I am now pursuing a Ph.D. in ecology at Colorado State University. My dissertation research focuses on understanding how subalpine forests may be altered by both climate change and mountain pine beetle outbreaks, which will become increasingly critical if land managers are to plan for adaptation and resilience in an uncertain future. I am also very interested in science communication, and look forward to sharing the results of my research with both park managers and visitors. 🌲

Meet Rachel Brooks, Summer 2012 Olson Family Fellow



Welcome to Rachel Brooks (“Brooks”), a recent graduate of Colorado State University and the new 2012 Olson Fellow.

Since 2006, the Olson family of Boulder, Colorado has been funding this fellowship to enable students and recent graduates to serve in a national park while exploring career options in environmental education and the nonprofit sectors.

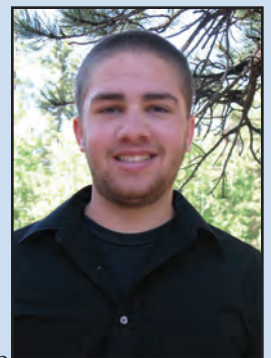
Brooks is an Allenspark, CO, native and recently earned a Bachelor of Science degree in the area of Environmental Communication. She grew up riding the bus from Allenspark to go to school in Estes Park and have fond memories of visiting the park and growing up close to nature.

After high school and two years of college she joined AmeriCorps National Civilian Community Corps as a volunteer for a year during which she helped provide disaster relief to people after Hurricane Katrina, performing prescribed burns in Georgia, and teaching English to immigrants in South Carolina. She returned to Colorado and completed another year with AmeriCorps with the I Have a Dream Foundation of Boulder County, mentoring and teaching at-risk youth in Longmont and discovered a passion for teaching.

As the Olson Fellow, Brooks will be creating lesson plans and leading educational programs in the field, developing and distributing promotional materials for the Rocky Mountain Field Seminars and learn about the different facets of a nonprofit organization.

“I find it very exciting to have the chance to teach others about this beautiful place while taking them into the field. I hope that the Olson Fellowship will help me become a better teacher, interpreter and leader,” she said.

Bailey Intern Joins RMNA for Summer Learning Experience



As part of the Bailey Fellowship endowment originally donated by Leslie Fidel Bailey, and as a first this year, RMNA welcomes Joseph Zappone from Peabody, Kansas, to experience the inner workings of a nonprofit organization while assisting to promote RMNA and its activities.

Joe recently completed his junior year of college at Kansas State University in Manhattan, KS. “I hope to learn how the day-to-day operations of how a nonprofit operates during my internship, as well as contribute to the growth of the organization,” he said.

In August, Joe will return to Manhattan to finish his last year of college to obtain a bachelor’s degree in mass communications. He hopes to return to Colorado after school and work for a public relations firm.

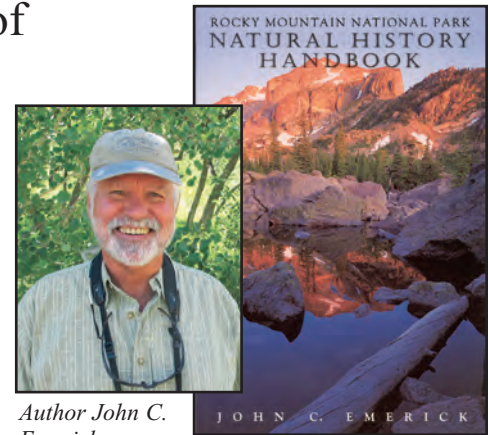
“I am very happy to be here and am looking forward to a summer of new experiences!

Your Help is Needed to Print the 2nd Edition of *Rocky Mountain National Park: A Natural History Handbook*

RMNA's Publications Fund still seeks \$15,000 to update, rebuild and reprint the highly regarded *Rocky Mountain National Park: A Natural History Handbook*, by the preeminent ecologist John C. Emerick of Boulder, CO.

Considered the bible of park natural history for park managers, naturalists and researchers, this is the most comprehensive guide to RMNP's flora, fauna, geology and ecology ever written. It has been in continuous demand by park visitors seeking in-depth information and a greater understanding of the ecosystems of Rocky Mountain National Park. Yet it has been out of print since 2005.

Help us make this highly sought-after resource available to visitors and park managers once again. With current park science and updated information throughout, this book will be a park classic for years to come. For more information, please contact Julie Klett at 970-586-0108 x 11.



Author John C. Emerick

RMNP FUND SUPPORTS LILY LAKE PIER PROJECT



RMNP Superintendent Vaughn Baker, Trail Foreman Kevin Dowell, and RMNA Executive Director Charley Money test out the new pier.

Recently, the Rocky Mountain Nature Association and park staff celebrated the completion of the reconstruction of the new Lily Lake Accessible Fishing Pier. The pier is a popular spot and has been used by hundreds of accessibility-dependent visitors and their families, as a fishing pier, a lookout point and a wedding photo site.

The original pier was built as part of the Lily Lake Wheelchair Accessible Trail project in 1995. Funded entirely by donations to the Rocky Mountain Nature Association, total funds raised for this project came to \$225,000.

Over time, winter conditions and frost-heaving caused the pier to become unlevel and no longer fully accessible. In late April, the old pier was deconstructed and a new and improved model with galvanized steel and helical piers was constructed. The piers were drilled to bedrock to allow for a solid foundation to minimize any future frost-heaving and warping. The decking and railings were constructed using sustainable material.

This new pier, also funded through donations to the Rocky Mountain Nature Association, cost approximately \$30,000. Thank you, Donors!

ROCKY MOUNTAIN FIELD SEMINARS TO EXPLORE THIS SUMMER!

Journey to the Top!

A Trail Ridge Road Bus Adventure



Wednesdays and Thursdays through early September (TBD)

View the majesty of the park without needing to watch the road! Experience this breath-taking tour, Beginning at the Fall River Visitor Center and traveling past Sheep Lakes to the Alluvial Fan and on up Trail Ridge Road. Be prepared to stop along the way at Many Park's Curve, Rainbow Curve and Rock Cut, and, after a complimentary lunch at the Trail Ridge Store, to Milner Pass. Introduce your out-of-town guests to the beauty of Rocky and let us do the driving this summer!

Celebrating 50 Years with RM Field Seminars!

Join veteran field seminar instructors in exploring the park in this commemorative series of seminars taught by favorite instructors from past programs (1985-2006)!

Mountain Ecology July 13-15 with Dr. John Emerick

Exploring Green Mountain Trail with an Ecologist,

July 28 with Dr. John Emerick

The World of Wapiti, September 23 with Dr. Mel Cundiff

Tundra Pioneer: The Life and Legacy of Bettie Willard,

July 15 with Leanne Benton and Jan Robertson

Explore Your Inner Artist!

Look for the unexpected in nature...

Paint Your Prose July 15 Mary Taylor Young

Advanced Watercoloring Landscapes

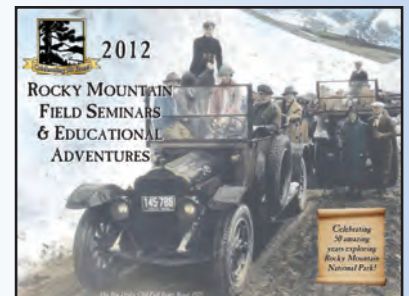
Techniques August 2-3, Karen Ramsay

Finding Fine Art in Nature (Photography),

August 9-11 with Eli Vega

Sketchbook Journaling August 13-14 with

Sherrie York



Visit www.rmna.org for more information,
or to sign up for a seminar today!



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expresses special thanks to the following people for their donations to RMNP projects:

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In Honor of His Father Robert's Birthday
 Loveland Mountain Club, Loveland, CO:

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On Behalf of Bob's Colleagues at USAO Wyoming

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On Behalf of Bob's Colleagues at USAO Wyoming

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On Behalf of the Parents of Judy Mydans' 6th Grade Class

Robin Fender, Denver, CO:
On Behalf of the Sand Creek Elementary School Staff

Cynthia Medicott, Highlands Ranch, CO:
On Behalf of the Sand Creek Elementary School Staff

Carol Rogers-Burns, Larkspur, CO:
On Behalf of the Sand Creek Elementary School Staff

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All in Memory of Robert "Bob" Harold Schnurr:

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 Darwyn Herbst, Niwot, CO

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 Trails, Gen F101:

On Behalf of Jana Rea and Family, Mary Kay Bartlett and Family, and Linda Waterman and Family

All in Memory of Vernon Jordan, Sr:

Jerrold Jordan, Knoxville, IA
 Gerald Nolin, Altoona, IA

Gary Crecelius, Ankeny, IA



(Ask Nancy, continued)

(Jet sounds continued from page 3)

propagates through a layered medium, some modes of propagation can only work at higher frequencies. In this situation, low frequency sounds may be audible at close ranges, and get filtered out as the source moves away. This effect would be most pronounced when there is a strong temperature inversion.

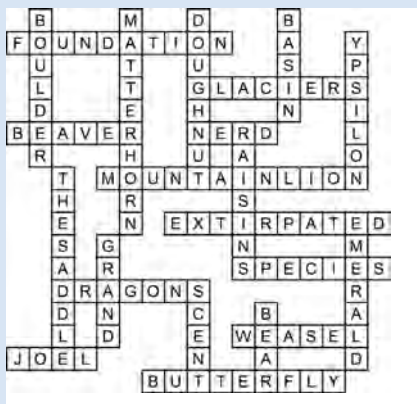
3. Source operating characteristic: The previous two explanations presume the source is radiating the same noise at all times. However, it is plausible that aircraft maneuvering near Denver International Airport may change their power settings, shifting their noise up or down in pitch. (For an additional theory about this phenomenon, see page) — *Senior Scientist, NPS Natural Sounds and Night Skies Division, Kurt Fristrup, Fort Collins, CO.*

Alternate theory: It's possible that the sound you are hearing as planes fly over the Estes Valley like a spaceship dropping out of warp are planes "hitting the brakes." Airplanes drop their flaps and quickly lose speed in order to hit a point just east of town called TOMSN - a geographic point near the Jellystone campground on Hwy 36. From that point the planes turn into an approach path to DIA. The FAA is changing to a new system where they will use computers to guide planes over the park following a new route, and they will begin slowing the planes much farther west, so there should be less of that obnoxious 'braking' noise in the future. — *RMNP GIS Systems Manager Ron Thomas*

(Old Fall River Rd continued from page 3)

year round. With more than 11 miles above treeline, and high winds creating phenomenal drifts, Trail Ridge Road cannot remain open. It's not unheard of to have just 1" of snow that has blown to a concentrated area creating drifts 2-3 feet deep! At the end of May we had 4" of snow which caused drifts 4-feet deep within 12 hours! Crews often find 8-10-foot drifts above treeline after just a few fall snowstorms. In addition, an avalanche chute crosses the road at about As a final concern, avalanches also are a concern on Old Fall River Road since an avalanche chute crosses the road. — *RMNP Roads and Auto Shop Supervisor Chuck Stalker*

PARK PUZZLE ANSWERS



Quick Fix Science

BEHIND THE SCENES WITH PARK RESEARCH

For the park visitor at Rock Cut along Trail Ridge Road, the antics of the American pika (*Ochotona princeps*) running among the granite boulders with a mouthful of wildflowers opens a door of curiosity about how animals survive the harsh environment of the alpine tundra. Yet the cold and dry environment of this ecosystem is not the greatest challenge facing the smallest member of the rabbit family, which has been identified as a climatic indicator species. In fact, the pika is the focus of important research in Rocky Mountain National Park and 7 other Western national parks regarding the vulnerability of this high elevation species to climate change.

This pika research was among more than 50 presentations and posters at the 6th Biennial Rocky Mountain National Park Research Conference, March 28-29, 2012, on research related to the park's wildlife, water, air, soil, vegetation, social science and international conservation. From research studies dating back decades to new projects just getting started, the conference afforded the public a glimpse of the valuable data which is being gathered to better understand, protect, and manage the resources of Rocky Mountain National Park.

An example of long-term research in the park has been conducted by Dr. Jill Baron, with the U.S. Geological Survey and Colorado State University, on the effect of air pollutants on the alpine lakes park visitors flock to during the summer months. To the untrained eye, these high country jewels appear unpolluted. And yet, Dr. Baron's conference presentation, "Empirical Critical Loads of Atmospheric Nitrogen Deposition for Nutrient Enrichment of Mountain Lakes," revealed that the nitrogen critical load is exceeded in some east-side lakes in the park. As a result, the kinds of algae in the lake have shifted to a greater abundance of "weedy" species. Productivity has increased which means that lakes are slightly less clear. Although these changes are small, they mark the beginning of changes that, with continued atmospheric nitrogen deposition, will alter alpine plant communities, forests, and make lake conditions too acidic or nutrient rich for frogs and fish.

The effect of Mountain Pine and other beetles on the park's forests is a topic of great current interest to both local residents and land management agencies throughout the west. Several conference papers were presented about the impacts of the recent outbreak, including on the different host pine species, soil and water chemistry, and the potential benefit to aspen.

A conference session on International Conservation highlighted the sister-park relationship between Rocky Mountain National Park and the Tatra National Parks in the Carpathian Mountains of Poland and Slovakia, exploring shared issues and collaborative research, as well as on Rocky Mountain's involvement in the sister city relationship between Estes Park, CO, and Monteverde, Costa Rica, developing research strategies for shared migratory bird species.

A full list of the Research Conference presentation abstracts can be found at: www.nps.gov/romo/



Photo: Linda Wold



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Summer superlatives at Emerald Lake
 Photo by RMNA Member Ann Duncan

NATURE ASSOCIATION NOTES...

It's that time of year again, when aspen trees glow with spring green foliage, bunnies are hopping with great purpose and elk are looking sleek in their shiny coats and velveted antlers. It's also when people need to be sensitive to the wildlife that lives around and amidst us, especially when it comes to animals and their young. The Denver Post reported that an elderly Estes Park woman stepped out of her apartment in late May and was trampled by a cow elk that she startled. The elk was protecting a young calf which most likely explains her extreme reaction. The woman was flown to a medical center for treatment....Resources Management Specialist **Jeff Connor** suggests that folks might want to be on the lookout for peregrine falcons. They've been seen quite frequently in various areas of the park and in the Estes Valley, especially around Lake Estes. Jeff is happy to report that peregrine nesting is occurring in the park for the third consecutive year after many, many years of being absent....RMNA *Quarterly* editor **Nancy Wilson** spotted a badger in her neighborhood in Estes Park that was undisturbed by her as it wandered from hole to hole in search of a likely ground squirrel snack. The low-slung animal was fascinating to watch and resembled an undulating carpet on the move....RMNA Bailey Intern **Joe Zappone** reported seeing a cow moose on the Cub Lake Lake trail with the RMNA Member hiking group in late May....He was also delighted to return to the RMNA Braun Haus in Estes Park one morning to find a newborn elk calf curled up on the cement step near the door with the mama nearby in the back yard....RMNA staff watched a bobcat hunting ground squirrels near the office. It treated its viewers to a most delicate rump wiggling in the manner of a domestic kitty on the hunt....Did you know that a Steller's jay has a call that sounds like a soaring hawk? It's uncanny....Colorado River District Systems Specialist **Debbie Mason** was blown over by a wildlife week on the westside of the park. There were sightings of all 5 hoofed natives: deer, elk, moose, pronghorn and bighorn (mostly outside park boundaries), and pine marten as well. To cap it off, a black bear showed up on the scene. Debbie tried to get a photograph, but as she emerged from behind the trees and bushes behind which she had hidden the bear started running. No photo, but it's always a good thing when a bear acts like a natural bear....Westside seasonal interpretive ranger **Kris Bowline** was excited to report the sighting of a beautiful, healthy 200-pound bear sporting a handsome coat of rich dark brown/black fur. Luckily, for all the gawking rangers inside the Kawuneeche Visitor Center, the bear exhibited good bear behavior when it realized what a ruckus it was causing amongst the viewers and hightailed it to the woods. For Kris, the best part of this event was observing Ranger **Barb King**, someone who has grown up in the area and is considered a veteran naturalist, get so excited when the bear first approached the visitor center door. She was like a kid in a candy store, rushing back to tell all of the other people in the visitor center "...THERE'S A BEAR RIGHT OUTSIDE...THERE'S A BEAR RIGHT OUTSIDE!"....University of Wyoming Research scientist/professor **Merav Ben-David** announced the most successful otter survey to date. He reported the finding of more than 100 latrines with multiple feces in each, which, apparently, is a clear indicator that otter activity is high. Yay! Some of this success could be attributed to great weather, no snow, and no sprouting vegetation, all of which can seriously affect otter surveys. Many of the sites that were abandoned after 2003 have been heavily re-used and they actually saw 3 otters!

(Keep in mind that they'd only reported seeing 2 otter in all the 11 previous years)....Okay, here's a wild one. Estes Park Bird Rehabilitator **Scott Rashid** tells this story: Oftentimes, when you find a dead rabbit with its head missing (!), that is a tell-tail sign that a Great-horned owl has killed the rabbit. Apparently, several years ago in New York City's Central Park, people found several headless rabbits and thought, perhaps, that some cult was killing these poor animals. They put up cameras to monitor the site and discovered the culprit — the local Great-horned owls were living it up, eating only the brain because it is such a choice nutritional morsel. It is clear that these persnickety owls were well-fed in Central Park....Not too long ago, an RMNA staff member was chatting with a tourist in town. The woman was appalled and aghast at the shaggy, unkempt appearance of the elk shedding their heavy winter coats. "The elk in Estes look just terrible!" she exclaimed. "Who's responsible for brushing them out?!" The RMNA employee told her that no one actually brushes the elk, that they are wild creatures and shed out on their own. But she refused to hear reason. "These elk are kept in a terrible state. It is an outrage and I intend to do something about it!" she bristled, and dashed off to find the responsible parties....Wildlife Biologist **Gary C. Miller** reported that a young bull moose and a young short-tailed weasel (no small distinction, that) have been spotted in Hollowell Park recently....not necessarily together, mind you....An Estes Park resident had a hankering for brownies one evening, so she made a batch and left it on the counter to cool while she waited for a friend to arrive. She was curled up with her dog on the couch when she hears a knocking sound at the window. She headed downstairs to open the door but found that it's not her expected friend at all — it's a fairly large bear just inches from her! The thought flashed through her brain how wonderful it was to be surrounded by nature — that is, until the bear ripped through the screen and started opening the unlocked window! At this point, the dog jumped in and barked like crazy, saving the brownies (not to mention the person who made them!) for their intended audience. The moral of this story: Don't make brownies at night lest you inadvertently invite questionable guests!....Another Estes Park resident had made a picnic basket of goodies for a family outing and left it on the counter to prepare for the picnic. She rushed back to the kitchen when she heard crashing noises and watched in shocked amazement as a bear was exiting the kitchen through the broken screen at the window through which it had entered. It was actually absconding with the picnic basket. To her surprise, another bear was out in the yard, and when the thief emerged from the window, the second bear tried to get the basket from the first bear. Thus ensued a sad, yet comic struggle over the proverbial picnic basket....Wildfire from the High Park fire is burning west of Fort Collins, northeast of the park and just south of the Poudre Canyon area. Predominantly southwesterly winds have kept the Estes Valley free of smoke and imminent threat, but all depends on the winds at this moment in time....Make a plan to go hiking in the park today - summer will be over before you know it!.... Don't forget to make your reservation for the RMNA Member Picnic! (see p. 3)



Great-horned owl with owlets, Fall River corridor.
 (Photo: Jack Glover, Fort Collins, CO)