



On The Wing

Volume 46 Number 2

Boulder County Audubon Society Newsletter

April/May 2016

BCAS Programs and Events

Tuesday, April 26, 2016

Dr. Diana Tomback: Clark's Nutcracker—The Bird that Builds Forests



Dr. Diana Tomback will be discussing the Clark's nutcracker and its coevolved, mutualistic interaction with whitebark pine. Beyond the whitebark pine, nutcrackers are keystone species that disperse seeds of several pines in Colorado as well as across the West. All may not be well in the world of the nutcracker. Its iconic relationship with

whitebark pine is threatened by an invasive disease, outbreaks of mountain pine beetles, and climate change.

Science Advisory Board member Dr. Diana Tomback is a professor and associate chair with the Department of Integrative Biology at the University of Colorado, Denver. She also serves as volunteer director for the non-profit Whitebark Pine Ecosystem Foundation, based in Missoula, MT. Dr. Tomback's area of expertise includes evolutionary ecology, with application to forest ecology and conservation biology. For her doctoral research, she found that Clark's nutcracker, a crow-like bird of high mountain forests, is the main seed disperser for whitebark pine. Her research over time has focused on the ecological and evolutionary consequences of seed dispersal by nutcrackers to whitebark pine and other pines. While working on her Ph.D. dissertation, Dr. Tomback was the first to discover the ecologically important commensal relationship between the nutcracker and the whitebark pine.

Visit our website for more program and field trip listings! <http://www.boulderadubon.org/>

May 24, 2016

Passionate About Water: Talk by Julene Bair, Author of *The Ogallala Road*

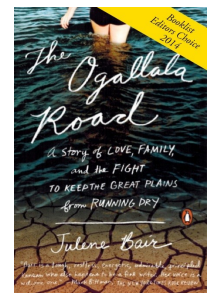


Boulder Audubon is pleased to have Julene Bair, author of *The*

Ogallala Road, join us for our May monthly program. Julene is the recipient of numerous book awards, including Booklist Editors Choice 2014, Reading the West 2014/Adult Nonfiction Finalist, 2015 High Plains Book Award Finalist, and the 2015 Kansas Notable Book Award. Julene, who lives in Hygiene, is one of the West's premier writers.

Julene Bair has been on the Ogallala Road since her birth in northwest Kansas. She grew up on a dry-land wheat and sheep farm that couldn't have existed were it not for the windmill that pumped water to her family, their garden, and their livestock. Like many farmers, her parents drilled their first irrigation well in the 1960s. By 2001, they had five wells. When her book begins, she has inherited part of the farm and with it, partial responsibility for the amount of water her family pumps each year: 200 million gallons on average. Having witnessed irrigation and its effect on the landscape close up, Julene will share her reasoning and insights on what has to happen if the Ogallala Aquifer is to be saved.

Boulder Book Store will be on hand to sell copies of the book.



Program Meetings are held at Unitarian Universalist Church of Boulder, 5001 Pennsylvania Ave. (west off 55th St. between Arapahoe and Baseline). Join us at 7:00 pm for socializing; programs begin at 7:15 pm.

2016 Spring/Summer Field Trips

Earth Day on Rabbit Mountain

Friday, April 22, 2016 - 8:00 a.m. -12

Free, no reservation needed.

Leader: Carl Starace

Join Carl for an early spring ramble about Rabbit Mountain. This County Open Space parcel is one of the best places to hear the haunting song of the Canyon Wren and to see Rock Wrens. Golden Eagles regularly soar overhead, as do other hawks and falcons. Say's Phoebes are early and expected, as are Mountain Bluebirds and often, Loggerhead Shrikes. Last spring, this trip witnessed the spectacular migration of dozens of Kestrels moving north. Meet at the trailhead located along North 53rd Street. There is a sign directing you to Rabbit Mountain on the north side of Ute Highway (Rte. 66) east of Lyons.

Roll and Stroll

Saturday, April 23, 2016, 6-7:30 p.m.

Free, no limit, reservation: marybalzer6@gmail.com

Sponsored by Boulder County Audubon and Open Space and Mountain Parks

Join us on a lovely spring evening to roll and stroll on the Bobolink Trail in southeast Boulder. We will look and listen for the birds, frogs, and wildlife that live along this South Boulder Creek corridor. This will be a slow-paced walk for those using legs, canes, walkers, wheelchairs, strollers, and baby joggers. We will stop along the way to share snacks and beverages. Meet at the front entrance of the East Boulder Community Center.

National Eagle and Wildlife Repository

Friday, April 29, 2016, 9 a.m. - 3 p.m.

Free, Limited to 20, Reservations: piombino.pam@gmail.com

Leader: Carol McCasland

This facility is located on the Rocky Mountain Arsenal and administered by the U. S. Fish and Wildlife Department. It is dedicated to accounting for all confiscated or otherwise forfeited wildlife items. It is here that parts and feathers of dead Bald and Golden Eagles, after a careful accounting process, can be distributed to Native American Tribes. You will learn about laws that protect wildlife and the challenges of enforcing wildlife regulations from illegal trade and possession.

We will start with a tour of this complex, and afterwards move onto a new display about Black-footed Ferrets that have recently been reintroduced to the Arsenal. After a brown bag lunch, participants will go on the Arsenal wildlife drive where Bison are almost certain. Meet at the northeast corner of the East Boulder Recreation Center parking lot to car pool at 9 a.m.



Photo of a Black-footed Ferret courtesy of USGS National Wildlife Health Center

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Teen Naturalists

Steve Jones

2016 Spring/Summer Field Trips, (continued)

Spring in the Foothills!

Saturday, May 14, 2016 - 8:00 a.m. – 1 p.m.

Free. No reservation needed.

Leader: "Davis"

Meet Davis at the Lyons park-n-ride (1 block south of downtown on 4th St). We'll bird around town and out east a bit, and then head up to the Davis's house to check out 35 birdhouses and his feeders. Among the birds we should see are osprey, eagles, herons, Bobolinks, and most of the foothills nesters, including wrens, bluebirds, swallows, nuthatches, chickadees, jays (with a good chance for the elusive Pinyon Jay), and a few sparrows and warblers. This is an easy trip with level walking on Old South Road and the Davis's house is handicap-accessible. Bring lunch to eat on the deck, or you can purchase great sandwiches at the Saint Vrain Market in Lyons. Bathrooms are available in Lyons and at Davis's. Call Davis at 303-823-5332 for details or questions, or just to shoot the breeze.

Fowler and North Spring Brook Trails

Monday, May 16, 2016 - 6:00 a.m. - 11:00 a.m.

Free. Limited to 10, reserve by emailing: burrowingowlsusan@gmail.com

Leaders: Susan and Maikel Wise

Join Maikel & Susan Wise aka the Two Wise Ones on a hike to a burn area where Lewis's Woodpeckers nested last year. We will hike slowly on an uphill trail/road through a range of habitats keeping an eye out for White-throated Swifts and Peregrine Falcons as we are surrounded by the loud wing buzzes of diving male Broad-tailed Hummingbirds. We will then drive into Eldorado Canyon State Park. If your vehicle does not already have a Colorado State Park Pass, the day use fee is \$7. Bring water, snacks, and binoculars. Limited to 10 people. We will carpool from the parking lot on the northeast corner of the intersection of Highway 93 and Eldorado Springs Drive.

International Migratory Bird Day

Saturday, May 21, 2016, 9 a.m. - 1p.m

Free. No limit, reservations not necessary

Brought to you by Environment for the Americas and Boulder County Audubon

Celebrate the return of these migratory "birds without borders" by bringing the family to this event at Walden Ponds in Boulder. There will be bird walks with Boulder County Audubon leaders on the ½ hour as well as other family games and activities.

Breeding Bird Survey and Butterfly Survey in Upper Gregory Canyon

Sunday, May 22, 2016 7-10:30 a.m.

Free, limited to 20, reservation: curllewsj@comcast.net

Leader: Steve Jones

We still have 3 spaces open for this eco-steward-led trip into upper Gregory and lower Long Canyons in the Boulder Mountain Park. We'll document breeding birds on the way up and butterflies on the way down. To register, contact Steve at:

curllewsj@comcast.net

Breeding Bird Survey in a Restored Prairie in Eastern Boulder County

Saturday, June 4, 2016, 7-10:30 AM

Free. Limited to 20 participants, reservations: curllewsj@comcast.net

Leaders: Steve Jones, Petrea Mah, and Keith Owen

This is the third consecutive year of our breeding bird survey in 65 acres of restored prairies on Keith Owen's former tree farm on Oxford Road. We'll search for raptors, singing orioles, sparrows, and other songbirds, while also examining the blossoming of these restored prairies. Afterward we will make a short stop at Boulder County Audubon's Dodd Reservoir Preserve, where we're in the process of converting three acres of smooth brome-dominated grassland to native prairie. To register contact

Steve: **curllewsj@comcast.net**.

Breeding Bird and Butterfly Survey at Crescent Meadows

Sunday, June 12, 2016, 7 a.m.

Free. Limited to 15, reservations: curllewsj@comcast.net

Leaders: Jannet Jamison and Steve Jones

Eco-stewards Jannet Jamison and Steve Jones will lead a leisurely 3-mile walk through beautiful Crescent Meadows, at the western end of Eldorado Canyon State Park. This area supports at least 70 breeding bird species, including Dusky Grouse, Cooper's Hawk, Lewis's Woodpecker, and Willow Flycatcher. If it's warm we should see a dozen or more butterfly species, along with spectacular wildflowers. Meet at the Crescent Meadows parking area, off Gross Reservoir Dam Road, at 7, or at the northeast corner of SH 93 and Eldorado Springs Drive at 6:30. To register contact Steve: **curllewsj@comcast.net**

(cont. p. 7)



Northern Checkerspot.

Photo courtesy of Stephen Jones.

Conservation Corner

By Ray Bridge, BCAS Conservation Chair

It has been a busy month on a number of fronts, but by far the most important for Boulder County Audubon has been the North Trail Study Area, which covers all city open space north of Linden and northwest of the Diagonal Highway, as well as some county open space properties that are included in the planning process.

North Trail Study Area

At the February meeting of the Open Space Board of Trustees a couple of dozen environmentalists attended and urged the board to make a regional trail connection east of Highway 36, **not** to the west of the highway, where a trail would fragment critical wildlife areas and rare plant habitat. Every local conservation group was well represented: BCAS, BCNA, PLAN-Boulder County, CoNPS, and Sierra Club; the recreational lobby was mainly represented by paid staff from Boulder Mountainbike Alliance and Open Boulder.

OSMP ecologists made it clear that a route west of the highway would have far greater ecological impact and would require wetlands permits for the 11 drainage crossings that would be required for the western route, and two of the trustees (Molly Davis and Frances Hartogh) argued that the Open Space Charter clearly mandates resource protection. Nonetheless, the board voted 3-2 to request that staff prepare a plan using the western route, because the trail there would be more “fun.”

The board is scheduled to vote on a plan at its March meeting, and it would go to City Council in May or June. BCAS will continue to press for making this connection to the east of the highway, based on the resource inventory, the Boulder County Comprehensive Plan, and the OSMP Charter.

State Legislature

Much of what is going on in the state was covered in the Audubon Legislative Forum. Linda Andes-George has a column covering the forum elsewhere in this issue.



Ray Bridge, courtesy photo

PRINT VS ONLINE???

By Carol McCasland

It's a little known fact that it costs Boulder Audubon over \$2 to print and mail out each copy of our newsletter to our wonderful supporters. Currently we are spending over \$500 a year to mail out copies to those who request printed copies. Think of the lost opportunity to put that money to good use in our community! And beyond that, think of the trees that are being harvested to make those printed copies! Yes, it might seem a drop in the bucket, but why shouldn't an environmental organization such as ours try to put our desire for conservation of our forests into action!

Ok, we admit it! It's easier to pull out that printed copy that comes in the mail, than to go online and read the expanded, color version of

our newsletter! Our supporters who provide us with an email get notification when the newsletter is available online. The online version usually has more articles, the photos are in color, and no trees were killed in the process of putting it online. With newer computers, you can even enlarge the print with just a swipe of your fingers. And if you DO want a printed copy, you probably have a printer handy and hopefully are recycling your computer paper, and hopefully using paper made from recycled paper anyway. (You DO use recycled paper, don't you?)

Try it! And let us know how it works! We'd love to spend that \$500 on habitat conservation within our community!



Photo: Sea Glass Beach, Ft Bragg CA, thanks to Green Renaissance

The next issue of *On the Wing* will be our Sept./Oct. issue! Have a great summer! Contact the editor at sharona_974@yahoo.com with questions and/or material to share for the issue. Thanks!!

Teen Naturalists Document Majestic Raptors and Rare Waterfowl

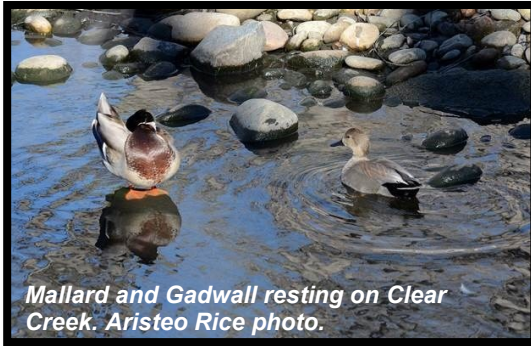
On January 10 Boulder Audubon's teen naturalist group documented a survey record nine raptor species on the South Rabbit Mountain survey route, including 2 Northern Harriers, 4 Bald Eagles, a Sharp-Shinned Hawk, a Golden Eagle, a Rough-Legged Hawk, 19 Red-tailed Hawks, a Prairie Falcon, 6 American Kestrels, and a Great Horned Owl. We found the owl when we heard the falcon screaming as it dive-bombed a large cottonwood tree near Lagerman Reservoir.

On February 14 we visited Wheat Ridge Greenbelt, where we got close-up images of Gadwalls, Northern Shovelers, Ring-necked Ducks, Common Goldeneyes, a first winter male Barrow's Goldeneye, and Hooded Mergansers in Clear Creek and adjacent ponds.

Our March 6 trip was a comprehensive waterfowl survey at Walden ponds, led by Petrea Mah.

Eight students have participated in teen naturalist trips so far this year. Trips generally take place the second Sunday morning of each month. An exception will be our April 1-3 trip, a planned camping expedition to Western Nebraska to photograph migrating Sandhill Cranes and dancing Sharp-tailed Grouse. Please spread the word among middle and high school students you may know. Adult drivers are always welcome.

—**Steve Jones** (curlwsj@comcast.net). Teen naturalist participants: Astha Adhikari, Johanna Bream, Jasey Chanders, Marda Kirn, Carol McCasland, Topi Martinez, Elisa Maxwell, Holden Maxwell, Petrea Mah, Aristeo Rice, Rosabelle Rice, Joel Such.



Mallard and Gadwall resting on Clear Creek. Aristeo Rice photo.

Two Teens Receive Hog Island Scholarships

Boulder County Audubon awarded two full scholarships to the National Audubon Society's Coastal Maine Bird Studies for Teens camp, June 12-17, 2016, at Hog Island, Maine. The camp is organized and led by nationally-renowned bird researcher and writer Scott Weidensaul and includes ornithologists and other experts from throughout North America.

Astha Adhikari is a 16-year-old student at Centaurus High School who has participated in Boulder County Audubon teen naturalist activities for two years. An avid photographer and observer of nature, she has assisted with wintering raptor surveys, duck surveys, and other bird counts, and helped create a beautiful book profiling urban wildlife in Lafayette.

Mayrene McCoy is a 16-year-old high school student and bird enthusiast from Strasburg who attended the Rocky Mountain Bird Observatory summer birding camps in 2013-15, helping out with bird banding and other conservation activities. "Two years ago," she writes, "I was introduced to birds, and it has changed my life. I can't go through my day without listening, watching, teaching, or thinking about birds."

Your generous support through annual dues and contributions makes it possible for us to send these exceptional students to Hog Island, and for many of them the experience changes the direction of their lives. Thank you so much for supporting this program.

—**Steve Jones, Mary Balzer, Maureen Lawry**, education committee

From NoImpact Man blog:

I sometimes despair that our state religion is consumption and our main prayer is for more.

<http://www.noimpactman.typepad.com/>

Joel Such, Holden Maxfield, and Eliza Maxfield photograph ducks in Clear Creek. Photo courtesy of Stephen Jones



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on Facebook:

<http://tiny.cc/8s2b8x>

Boulder County Audubon Society is a voice for birds and wildlife conservation through habitat protection, advocacy, and nature education.

Utah Wildlands Up for Grabs

By Georgia Briscoe

Eastern Utah, sometimes known as West Boulder, has some of the most unusual and gorgeous wildlands in the United States. But “Wilderness” has never been popular with Utahans. Indeed, the 1964 Wilderness Act provided no areas in Utah and even today Florida has more wilderness acres than Utah.

In recent years, as energy production, mining, and other extraction industries eye the resources of the nearly two-thirds of Utah lands that the federal government manages, a “Grand Bargain” is in the works. U.S. Congressman Rob Bishop from Utah, who chairs the House Committee on Natural Resources, has worked hard for years on a draft proposal to decide which lands to preserve and which to develop. His proposal was revealed on January 20, 2016, and as you can imagine, no one is happy. One of the most disturbing sections to me is that his Wilderness designations allow use of ATVs, chainsaws, and predator control from helicopters; a most dangerous precedent.

According to a recent article in an *Outside Magazine* by Christopher Solomon, “the old battle lines are being drawn again, pitting cowboys against Native Americans and environmental groups. On one side are the counties, supporting a flawed grand bargain. On the other, tribes and greens pushing a monument that county officials hate. This time, however, the Great White Father in Washington, D.C. has declared or expanded more national monuments than any previous president.” The top priority for Obama’s next National Monument is Bears Ears in Utah.

Bear Ears is a nearly 2 million-acre triangle of land covering all of Cedar Mesa with 40 mini Grand Canyon systems. It is the ancestral grounds of Navajos, Hopis, Utes and Zunis. Twenty-five Native American tribes have overcome historical animosities to unite around the National Monument proposal. If you want to ask President Obama to save Bears Ears now, go to:

<http://www.bearscoalition.org/action/>



The Bears Ears, photo from <http://www.scenicusa.net/122807.html>

Errata: In our Feb. issue on page 9 we incorrectly labeled two swans seen at Pella Crossing as Trumpeters. They are not; they are Tundra Swans. We apologize for this error.

ECOTOURISM AT WORK IN TANZANIA

By Carol McCasland

Several BCAS members traveled to Tanzania in November 2015 for a photographic safari, highlighting the birds of East Africa. Of course, we saw many wonderful mammals and reptiles along with the magnificent birds.

One of the places we visited was the “Lark Plains” of northern Tanzania, near a Maasai village. Our target bird was the Beesley’s Lark, a critically endangered bird endemic to Tanzania; there are about 40 of this species in the world in this very spot.

The local population of Maasai people are pastoralists, and they count their wealth in the number of cattle they own. Obviously, cattle and ground-nesting birds such as the Beesley’s Lark don’t exactly complement each other! But the local people have discovered that tourists will pay to see this bird, and so they have set up a conservation program to keep their cattle off the plains where the birds nest. And tourists pay to see the birds! A win-win for both groups of people!



Photo courtesy of Carol McCasland

We visited one morning, and were delighted to see 2 Maasai men in full local dress standing out in the field with cell phones and bicycles nearby. We got out of our vans; the Maasai pointed to the birds close by on the ground; we enjoyed seeing the birds; our guide paid them about \$20; we got back in our vans and left! Ecotourism in action!

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Photo courtesy of Carol McCasland

“Beesley's Lark Conservation Program of Engikaret (BLCPE) is a small community conservation project by Engikaret Village to preserve

the only known habitat of a critically endangered bird species endemic to Tanzania. The program's mission is to use income from ecotourism to generate a community development fund and help further motivate villagers to help conserve the Beesley's Lark.” More info:

<http://tinyurl.com/gv2jlv5>

2016 Field Trips, cont'd from P.3

Interludes with Nature: This is Not Your Grandparents Zoo Anymore

Thursday, June 23, 2016

“Interludes with Nature” \$50 per person, reservations: piombino.pam@gmail.com

Leaders: Docents, Carol McCasland and Brinda Henley

3 SPOTS LEFT: If you think zoos are just places to house animals, think again! Zoos today focus on helping endangered animals by breeding selectively and by helping to conserve habitat in the field. Exhibits are designed to give the visitor an ‘immersive’ experience as well as to better meet the animals’ needs. We’ll explore award-winning exhibits and look back at some historic exhibit spaces dating from the early 1900’s, seeing how those ‘old’ spaces can still be used today. We’ll take a stroll through the zoo, highlighting some critically endangered animals, and talk about how YOU can help them in the wild. A gourmet catered picnic lunch will be included. \$50 per person. Limited to 10.

Annual 4th of July Butterfly Count

Monday, July 4, 2016

Free, no limit

Organizer: Jan Chu: 2chuhouse2@gmail.com

This annual event, held at the sublime Cal-Wood Education Center, brings butterfly aficionados out to count and document the many species thriving in the varied habitats within this count circle. Modeled after the Christmas Bird Count, different teams cover different areas and then meet at the end of the afternoon to do an official tally. All ages and abilities welcome!

Heil Valley Ranch

Thursday, July 14, 2016, 8 a.m.-12

Free, no reservation needed.

Leader: Carl Starace (cont. next column)

Heil Valley Ranch contains diverse foothills birds, from Wild Turkeys to flocks of Pygmy Nuthatches. We’ll likely see Western Tanagers, Western Wood Pewees, Steller’s Jays, Virginia’s Warblers, Brown Creepers, 2 species of Bluebirds, empidonax flycatchers, and perhaps Dusky Grouse. The lovely tufted Abert’s Squirrels can be encountered. Meet at the upper parking lot at the trail head.

Butterflies at Caribou Ranch: Skippers and White Sulphurs

Saturday, July 23, 2016 9:00 a.m.-12:00

Free, no reservation necessary

Butterflies at Caribou Ranch: Skippers, White Sulphurs and So Much More

Leader: Amy Chu

Join Amy for a morning of high elevation butterfly viewing in the verdant meadows of Caribou Ranch. Butterflies abound amongst the flowering shrubs and plants in this exceptional parcel of BCOS. Expect to see Queen Alexandra’s Sulphurs, Blues and Coppers, various Checkerspots, Northern Crescents, Fritillaries, Wood Nymphs, Common Ringlets, and perhaps a late Parnassian. Meet at the Nederland free parking lot (after the roundabout and on the right side). Participants can opt to stay after the outing and enjoy the buffet lunch at Katmandu Nepalese Restaurant.

Night Butterflies: Lighting Up For Moths

Saturday, August 20, 2016, 7 p.m.-late Free, limited to 15, reservation required:

piombino.pam@gmail.com

Leaders: Barb Bartell, Dr. David Bettman, Rachel Williams and Dr. Mike Weissman

We are all enchanted by the beauty of butterflies, order Lepidoptera. Included in this order are moths, which outnumber butterflies by an estimated factor of twenty to one. Join Barb Bartell, a premier moth collector and preparer for the Denver Museum of Nature and Science (DMNS), along with DMNS entomologist David Bettman (whose passion is micro-moths), for an evening class using mercury vapor and black light traps to attract these fascinating night denizens.

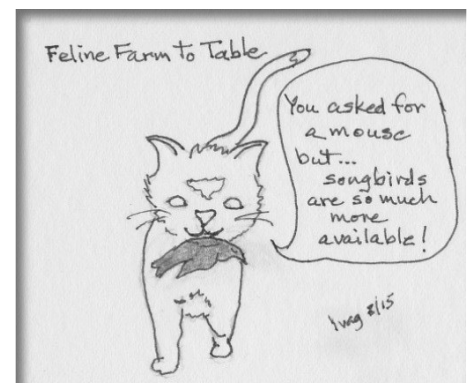
A further bonus will be having entomologist Mike Weissmann and wife, Rachel Williams, (founders of the Butterfly Pavillion), along to talk about other insects that will come to the lights. These experts should be able to identify up to 100 species!

Meet at 7 p.m. at Pam and Joe Piombino’s home for a potluck. Lights go on at 8:30. Wear long pants, sleeves, and bug dope. Be aware that we will be collecting some of the insects to add to the DMNS collection.

NEW!! LAFAYETTE BIRDS

An ongoing bird-watching opportunity for beginning birders (families & adults)! 1-3 p.m. on Sundays May 8, June 5, July 3, Aug. 7, Sept. 4, Oct. 2, and Nov. 6. Boulder Audubon leads walks May 8 and July 3.

Beginning birders are invited to experience the fun and discovery of bird-watching at Greenlee Wildlife Preserve the first Sunday of each month, May-Nov., 2016. Knowledgeable birdwatchers will be on hand each Sunday with binoculars, spotting scopes, and learning tools to bring the world of birds alive. View ducks, herons and other water birds as well as a variety of songbirds. Learn how to use binoculars and field guides and even how to recognize birds by sound! Greenlee Wildlife Preserve, a marsh adjacent to Waneka Lake, is a property of Lafayette Open Space. This program is also made possible by Boulder Audubon, the Boulder County Nature Association, and Environment for the Americas. **Please note:** Children and youth must be accompanied by parents. If you have questions, please contact Martin Ogle at Martin@EntrepreneurialEarth.com



Cartoon by Linda Andes-Georges

(Boulder County Audubon Society offers two full scholarships to a summer ornithology camp for Colorado students ages 15-17. The Audubon Camp includes field identification, bird song recognition, conservation practices, and participation in Audubon's seabird conservation field research. Aysha Horn attended the Hog Island camp last summer.)

Hog Island Remembrance

By Aysha Horn

My time at Hog Island was a unique experience that I will remember for the rest of my life. I made new friends, new memories, and discovered new things about myself. And I can't be more thankful to have enjoyed this experience.

Hog Island was originally purchased by Mable Todd, apparently because she wanted to save the island from having its forest harvested for wood. Mable Todd is well known for rescuing Emily Dickinson's poetry and editing it, mostly while at Hog Island. When she passed away in 1932, her daughter donated the camp to Audubon.

While attending the camp I stayed in the crow's nest with 14 other campers and two counselors. At first I was a little apprehensive; I didn't have as much birding experience as some of the other campers and I was afraid that they wouldn't be very accepting of me. Instead it was the opposite! Everyone was extremely nice and we all became very close friends. They all were very excited to help the less experienced birders learn and help them find birds, especially lifers. (You wouldn't believe how excited I was when my friend Adellyn helped me spot the Eastern Towhee I had been longing to see.)

I think the most amazing part of the trip was when we spent time on Eastern Egg Rock. It was amazing to speak with the people who stayed on the rock and learning how they caught and tagged the puffins. We also got to spend time in the blinds so we could get a fairly close up experience with the puffins. We also had close up experiences with the Terns and Gulls, which attacked us with wings, beaks, and poop.

Overall my time spent at Hog Island was wonderful, and I am extremely thankful to the Boulder Audubon Society for giving me the opportunity to learn and make new memories, and friends.

Several BCAS members who like flowers as much as birds dashed across the Great Basin in March to visit the Big Bloom in Death Valley, which occurs sometimes in El Nino years. Hooray for water!

Photo courtesy of Paula Hansley



Raptor near Gold Hill (no ID), sunrise, photo courtesy of N. Toutenhof.



Bushtit, photo courtesy of Woody Green.



The good, the bad and the ugly: State legislation being proposed this session**By Linda Andes-Georges**

Please note: to track any of the bills mentioned below, see the General Assembly website:

www.leg.state.co.us

Folks who have never attended the annual Legislative Forum organized jointly by the Sierra Club and the Denver Audubon chapter have truly missed some interesting sessions.

In February of each year, an update—bill by bill—from our two lobbyists (Audubon's, shared with Trout Unlimited, is Jen Boulton; Sierra's is Sol Malick) always begins the morning session, and it is lively and specific.

A series of short presentations by notable experts usually follows. This year the focus was on state and worldwide water issues. We were honored to hear a presentation by Dr. Kevin Trenberth, of NCAR—and most famously of the International Panel on Climate Change. His Powerpoint was amazingly up-to-the-minute relevant, with photos, videos, and of course charts of storms in the past few months, as well as long-term trends. Abby Burk of Western Rivers Outreach reviewed the strengths and weaknesses of the new State Water Plan; Bill Levine (Budget Director of Colorado DNR) gave an entertaining and informative explanation of the state (Oil & Gas) severance tax and its impacts on us all; and Aaron Citron (Environmental Defense Fund's water issue man) offered a different perspective on farmers, ranchers, and what defines an "environmentalist."

The post-lunch short talks by legislators is always also an intimate peek into the hallways of the Capitol. This year, soon-to-retire Pat Steadman charmed us with his stories and hopes about getting good legislation passed in the Partisan Era.

This year the House party composition is 34-33 (Democrats). The Senate is 81-17 (Republicans). As in the National Congress, this makes passing effective legislation difficult, but there is always no shortage of bad ideas. Furthermore, the national election is coloring everything that is said and done in the State Legislature, so all ideas (good and bad) will be subject to partisan bickering.

Here are a few bills to keep an eye on (you can always check on who your current representatives/senators are by consulting www.votesmart.org); our (via lobbyists) position on each is noted. But again, nothing really useful is likely to pass this year!

HB 1010 Prairie dogs: would forbid relocating prairie dogs (or other animals classified as "pests") within counties. This is already forbidden between counties without permission of the County Commissioners in the receiving area. Filled with obstructions for humane p.d. management. We need to defeat this and build a better bill for this species of concern.

HB 1005 Rain barrels: a re-run of a bill proposed last year, permitting capture of precipitation using up to two 55 gallon rain barrels. We are supporting this, but it has an unfriendly amendment.

SB 44 Conservation easement "reform:" Most legislation needed to reform this program has already been passed. This one would wipe the slate clean and leave us with no program. We oppose.

HB 1174 Conservation easement Cheaters: In addition to almost destroying the program, these lawbreakers would be protected from the consequences of their crime. We oppose!

HB 1220 Shoot more bears: according to Jen, every year we have to beat back a bad bill about bears. This one would extend the hunting season, endangering sows with young cubs. These bills are always an effort to get around the citizens' initiative of 1992 protecting sows until cubs are old enough to be independent. We oppose.

SB 1256 South Platte storage: Or, "build a dam somewhere." Proposes to fund a study to find a storage site on the river; no sidebars oh what is advisable of feasible. We oppose.

SB 117 limit agency fines: Or, "strangle the government wherever possible." Prohibits the State from imposing penalties for violation of State Law or Agency rule unless the agency first provide written notice of the violation, and the violator fails to remedy the problem in 20 business days. Nothing useful there. We oppose.

SB 7 Biomass incentive: The problem is that with legislators opposing funding renewables in general, this is a bad place to start, since burning large amounts of carbon (pellets or wood) is not a priority for switching energy sources. We oppose.

**Kenyan proverb:** "Treat the Earth well. It was not given to you by your parents. It was loaned to you by your children."

(Excerpted from the *New York Times Sunday Review*
March 12, 2016)

The Global Solution to Extinction, by E. O. Wilson

“The metaphor I offer for biological diversity is the magic well: The more you draw, the more there is to draw.

But today the dream is at risk. Civilization is at last turning green, albeit only pale green. Our attention remains focused on the physical environment — on pollution, the shortage of fresh water, the shrinkage of arable land and, of course, the great, wrathful demon that threatens all our lives, human-forced climate change. But Earth’s living environment, including all its species and all the ecosystems they compose, has continued to receive relatively little attention. This is a huge strategic mistake. If we save the living environment of Earth, we will also save the physical, nonliving environment, because each depends on the other. But if we work to save only the physical environment, as we seem bent on doing, we will lose them both.



So, what exactly is the current condition of the living environment, in particular its biological diversity and stability? How are we handling this critical element of Earth’s sustainability?

Except for the vertebrates (consisting of 63,000 described species of birds, mammals, reptiles, amphibians and fishes) and the flowering plants (with approximately 270,000 species), relatively little is collectively known about millions of kinds of fungi, algae and most diverse of all, the insects and other invertebrate animals. And that matters, a lot: These least understood minions are the foundation of the living world. They are the little things that run the Earth.

In short, we live on a little-known planet. E.T. and other alien biologists visiting Earth would, I suspect, be appalled at our weak knowledge of our homeland. They would be mystified by the scant attention humanity gives to the life-forms on which our existence depends. Unless we wish to pauperize the natural world drastically and permanently, believing that later generations will be smart enough to find a way to bring equilibrium to the land, seas and air, then we, the current inheritors of this beautiful world, must take more serious action to preserve the rest of life. There is only one rational way to accomplish this goal, and that is to bring the extinction rate back to the level that existed before the worldwide expansion of human populations. The disappearance of natural habitat is the primary cause of biological diversity loss at every level — ecosystems, species and genes, all of them. Only by the preservation of much more natural habitat than previously envisioned can extinction be brought close to a sustainable level.”

Complete article at: <http://tinyurl.com/zzkwarg>

2016 Ecosystem Symposium

Sustainable Agriculture: Food for Thought, sponsored by the Boulder County Nature Association

By Cindy Maynard

When the topic for this year’s symposium was first announced, I must admit I was a little bewildered. How did agriculture relate to our higher purpose of supporting native ecosystems? By the end of the day I had no doubts whatsoever. Not only did I learn more than I ever bargained for, I was also entertained, enlightened, and invigorated. The following is a “bird’s eye view” of some of the interesting insights the symposium offered.

Aptly enough, the day started with David Bell’s comprehensive overview of the history of agriculture in Boulder County. David is the Natural Resources Manager for the City of Longmont, and prior to that, spent nineteen years with Boulder County Parks and Open Space. Boulder County started with no locally-farmed food at all. Most of the first settlers were miners. Soon enough local farmers and ranchers learned how to turn our high prairie, once deemed “wholly unfit for cultivation” (Edwin James) into productive farms and fields. I learned that Boulder County leases 25,000 acres of publicly owned land to local farmers, who are working to support our community’s emphasis on locally-grown food. Agricultural lands do more than just maintain our scenic views; they also maintain an agrarian life in Boulder County.

The discussion of history dovetailed nicely into Heather Swanson’s highly relevant description of how she, as Wildlife Ecologist for Boulder Open Space and Mountain Parks, is striving to maintain and enhance biodiversity on the 14,000+ agricultural acres it manages. City open space encompasses three types of prairie regimes, in addition to those in riparian, foothills areas. Her group carefully monitors, measures, then re-monitors these communities to preserve habitat for threatened species like the Preble’s meadow jumping mouse, Bobolink, Ute’s ladies tresses, and the Northern leopard frog. By managing for these threatened species, they are working for the “preservation of . . . wildlife habitats, or fragile ecosystem.” (OSMP Charter)

Virginia Scott, Collections Manager of the Entomology Section of the CU Museum of Natural History, presented a delightful summary of the diversity of bees in Boulder County. Who knew, for example, that only 12% of Colorado bees live in colonies? Most of the rest are solitary, and some are nest parasites, like cowbirds! I learned that “no mulch zones” are very important for ground-nesting bees, and that the material used to plug the holes of cavity-nesting bees can help indicate which species are using the nests.

Angela Dwyer is a Grassland Wildlife Coordinator for Bird Conservancy of the Rockies, a very long job title that reflects the far-reaching scope of her stewardship program for Mountain Plovers. As ground-nesting birds, they are especially vulnerable on agricultural lands where farming equipment can decimate them. I learned that direct human contact with private farmers on the land can produce impressive results, improving nest survival to a whopping 87%.

The day flew by. When it was over, I had a much better understanding of the role of agriculture-related issues in Boulder County.

WHY LIKE LICHENS

By Cindy Maynard

On a recent hike in the foothills I took a short break, sitting on a flat rock. It was an ordinary rock, but what's ordinary when you really take a good look at it? Idly I started counting the types of lichens I could distinguish. There were five! As I continued my walk, I couldn't stop looking at the lichen diversity around me. They seemed to be the most common, prolific and ubiquitous part of the ecosystem. I started wondering about this often-ignored life form. As the tabloids say "Inquiring minds want to know," so I started investigating.



Photo courtesy of James Lendemer and Erin Tripp

Lichens are fabulously interesting. They are a little like a three-layer cookie. The outer layer is a fungus, the middle layer is either a green or blue-green algae, and the lower layer helps it adhere to whatever surface it's on. And it can grow on nearly any surface you can think of, even some you'd never think of. They grow on rocks, trees, soils, even glass, metal, an insect or two and one species of tortoise.

Lichens grow in nearly every terrestrial environment from pole to pole. They grow in extreme conditions that preclude most other life forms. How do they accomplish this extreme biological feat? The complex relationship between the lichen's fungus and its algae provides the answer. The algal component photosynthesizes food for the lichen. The outside fungal layer shields the algal layer from too much sun exposure, filters water down to it and provides a habitat in which the algae can live.

This makes the lichen pretty self-sufficient. Lichens can colonize habitats that are too extreme or barren for any other organism, even the rocks themselves. They are able to survive without water for long periods, and can attach to almost any substrate. Lichens carry their own food with them. They can reproduce sexually, asexually, or both. Some lichens can live up to four thousand years. No wonder they are everywhere!

Though lichens fly entirely below the radar of most people, they nonetheless provide crucial benefits to the environment. They contribute to the first stage of weathering the rocks on which they live, creating tiny crevasses into which water's freezing/thawing action can permeate. Rock disintegration provides the raw material for building soil. In cryptobiotic soils, lichens bind soil particles together. These fragile, crusty soils trap blowing dust, prevent erosion, and add nutrients. The decay of dead lichens contributes nitrogen to the soil. Some even host nitrogen fixing bacteria.

Caribou, mule deer, mountain goats, moose, and pronghorn all use lichen for forage, especially in winter. Birds incorporate them into their nests. Some native tribes, especially in boreal areas, have concocted many ways to prepare lichens for human consumption. Lichens have been used to make dyes for thousands of years. They can be used in making perfume. Some have medicinal qualities. If that were not enough, scientists can even use lichen growth patterns for dating, similar to dendrochronology.

Lichens absorb whatever is in the air around them, including common pollutants like sulphur dioxide (produced by burning coal), fluoride, ozone, hydro-carbons and some heavy metals. This ability makes them very sensitive to changes in air quality and important indicators to what is in the atmosphere. Their sensitivity to air quality makes them the canary in the coal mine for atmospheric degradation.

Human activities have had devastating effects on lichen health. The usual culprits—urbanization, other types of development, habitat fragmentation, and pollution—destroy their environments. Hiking, over-grazing, even rock climbing can have severely detrimental effects on lichens. In some areas lichens have been almost completely eliminated.

Next time you're out hiking, open your eyes and notice them. Take your hand lens with you on your next hike. Pause to examine them up close. They are colorful, beautiful, and wondrous. There are so many reasons to like lichens.

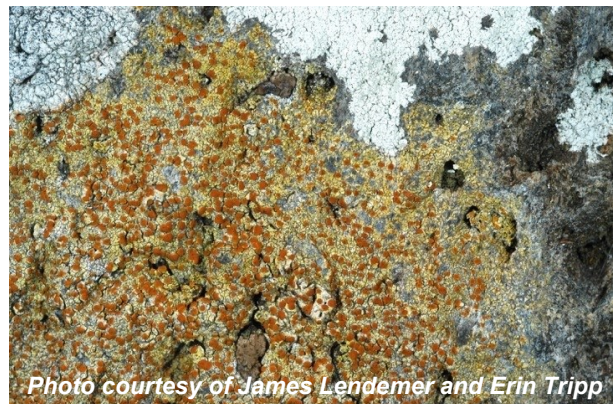


Photo courtesy of James Lendemer and Erin Tripp