

Boulder County Nature Association



"Our mission: To educate, inform, and inspire for the purpose of conserving and promoting resilient natural ecosystems in our region."

Volume 35, Number 1
Winter 2017

AUTUMN 2016 – WARM AND DRY

Steve Jones

Nearly every year we experience a time of unusually hot, dry, wet, or cold weather and exclaim, "This must be Boulder's (hottest/coldest/wettest/driest) (winter/spring/summer/fall) ever." And as you all know, we are usually wrong. It turns out that the extreme variability of our Eastern Slope climate tends to trump long-term trends, including even global warming (but not always--consider September 2013 and our recent record-setting December-February snows).

The other element of extreme variability in Boulder's weather data comes from the lack of consistency in the way that daily temperature and precipitation have been measured. You all know by now that during the 1950s, which was perhaps the warmest decade recorded over much of the Western Plains, Boulder's weather station was strategically located on the roof of the central downtown fire station.

No, we don't want to get too carried away here: I doubt that the fire department was actually setting off test blazes inside the building. But it's almost certain that daytime high temperatures would be warmer on the rooftop of a downtown building than on a green lawn 150 feet higher at the National Institute of Standards (where the weather station has been located since 1989). On the other hand, let's be completely sanguine: wouldn't we expect nighttime temperatures to be lower in downtown Boulder, due to the trapping of cold air along Boulder Creek, than at NIST, which often receives warm downsloping winds overnight?

So all we can say is that this past autumn (September-November) was the warmest and driest recorded at the present weather station (1989-2016). Overall, it was only the third warmest and seventh driest recorded since 1894. It was definitely warm out there. For example, we experienced a remarkable 61 days with temperatures above 70° F, the first 80° F temperature ever recorded in Boulder in November (on November 16!), and the latest first snow ever recorded (November 17).

Here are the numbers. Read them and/or weep. Steve. [<curlwsj@comcast.net>](mailto:curlwsj@comcast.net)

Boulder's 11 Warmest Autumns (September-November) Recorded Mean Temperatures, 1894-2016	
1953: 57.8	1963: 57.5
2016: 57.1	1933: 56.8
1956: 56.4	1949: 56.3
1914: 55.9	1954: 55.7
1950, 1962, 2015: 55.5	

Boulder's 10 Driest Recorded Autumns (September-November), 1894-2016	
1944: 0.78"	1901: 0.81"
1943: 1.00"	1977: 1.16"
1917: 1.18"	1964: 1.26"
2016: 1.30"	1932: 1.52"
1931: 1.58"	2003: 1.60"

Here's the website with all the information:

<http://www.esrl.noaa.gov/psd/boulder/data.daily.html#Nov16>

BCNA Annual Meeting
Save the Date: Saturday, February 25, 2017

BCNA will hold its Annual Meeting on Saturday, February 25th at 5 pm. This year we will return to the clubhouse of the Arapaho Ridge Homeowner's Association at 1750 Powell St. in Erie for another evening of tasty vittles, informative lecture and 2017 board elections. Bring a loved one and a dish to share. Hope to see you there to ring in the New Year!

Request for Research Proposals
 Deadline: March 20, 2017

BCNA is pleased again this year to offer research funding by giving small grants for projects consistent with our mission. Grants are available in two categories:

The Ken Evenson Memorial Grant, up to \$400, is available specifically for research on our native cats (mountain lion, lynx, and bobcat). One grant may be awarded.

General BCNA grants, up to \$3,000, fund projects that will add to our understanding of the natural history of Boulder County or will augment the existing documentation of the county's ecosystems. Past projects include a survey of butterfly species, a study of bat species and their ecological requirements, pika habitat and climate change, and a comparison of flora and fauna adjacent to trails that allow dogs and don't allow dogs, among many others. Exceptional proposals may be considered for funding at a slightly higher level. Proposals are judged on their scientific rigor, prudent use of resources, and the potential benefit to natural resource conservation and management along the Front Range.

Proposals should include a detailed methodology, timeline, a complete budget (including other funding sources if applicable), and be limited to five pages (not including the cover page). Note that no institutional overhead is allowed. Individuals at institutions requiring overhead can apply as independent scholars. Successful applicants sign a contract specifying that they will complete the project within the year, allow their written reports to be shared on the BCNA website, and agree if asked to make a brief presentation at BCNA's annual meeting.

Applications should be submitted not later than Monday, March 20, 2017, either to the BCNA post office box or electronically (preferred) to michael.delaney@colorado.edu, the chair of the Grants Committee.

Save the Date: March 18th, 2017

ANNUAL BCNA ECOSYSTEM SYMPOSIUM

The annual BCNA ecosymposium, **Finding the Science in Citizen Science: Front Range Environments**, will be held from 9 am to 3 pm on Saturday, March 18, 2017. Since many BCNA members work as citizen scientists doing raptor monitoring, checking rainfall, looking for invasive plants, keeping track of wild bees, or recording butterfly sightings, we are planning to examine the factors that make citizen science projects successful, that give them value for both scientific and citizen stakeholders. Thus, we hope to examine the science behind citizen science, the role citizens play in conducting scientific research, and the value of this collaboration. In addition to speakers working on citizen science projects, we will have a wide range of projects for you to look at and learn about. This year the ecosystem symposium will return to the University of Colorado's new Sustainability, Energy and Environment Complex (SEEC), 4001 Discovery Drive, Boulder, CO 80303.



Looking for raptor nest activity on Boulder County Open Space.

Connect with nature:
nature-net-subscribe@yahogroups.com

Education News & Changes and 2017 Classes Announced

WHAT'S NEW? We're excited to announce that this year we will use Eventbrite, an online registration site, for our 2017 classes. Signing up will be even easier! Simply go to our website, <http://www.bcna.org>, and click on the BCNA classes link, or skip a step and go directly to the classes page at <http://www.bcna.org/education.html>. Selecting Current class offerings for 2017 will take you to specific information about each class, along with its own link. Clicking on it will take you directly to that class on Eventbrite. You can sign up there when the registration for that class opens. "Wait! Can't I register right away?"

One of the things you've told us is that registering so far in advance of actual class dates is difficult. In the past we've released our new class schedule in January's newsletter and you could register within a few days. Many people signed up right away since available spots often filled up quickly. Sometimes people found that they needed to cancel months later, and occasionally those last-minute openings went unfilled. For this reason *we will now open registration for each class six weeks before its actual starting date*. These dates are provided in the schedule, along with the class dates. Be sure to mark the opening registration dates for the classes you want to take on your calendar for the best chance of getting a spot. If a class does fill up, you'll be able to add your name to a waiting list.

In the past, we could offer members a small discount and a two-week head start on signing up before non-members could register. With the switch to Eventbrite you'll see just one price (the old member price) for each class and everyone can begin registering on the same day. Since most who sign up are already members of BCNA, the impact should be minor.

You can still contact us directly with any questions at www.bcnaclassesreg@gmail.com.

And now for the 2017 line-up!

Our first class is coming up quickly, in February, so don't delay in marking your calendar to register, beginning on January 6th. **Bill Schmoker**, birder extraordinaire, returns with a redux of his popular class, **Demystifying Gulls**, but this time we will travel down to Pueblo for the field session. The site Bill has chosen typically offers one of the state's best collections of wintering gulls, so it should be "target-rich" and a lot of fun.

Heather Swanson is Boulder OSMP's Senior Wildlife Ecologist. She has offered to teach a new class, **Little Dogs of the Prairie**, on the much-

requested topic of prairie dogs. Well-versed in the city's OSMP's Grassland Ecosystem Management Plan, Heather assisted with the recent relocation of the Armory prairie dogs to open space. She understands this special creature and its needs, and has a unique grasp of the emotional issues and conflicts around its presence here. Heather is a new addition to our instructor corps.

Next, we break the mold of our usual format by offering a one-day class, with a combined tour and presentation by another instructor new to BCNA, **A.R. "Pete" Palmer**, on **The Geological Story of the Front Range**. This tour has it all, and you'll leave it with the knowledge you need to interpret what you see in other landscapes and regions as well.

Always entertaining, **David Leatherman** will treat us once again to his well-received class, **What Birds Eat**. The two field sessions will take us to see new territory and birds in both the Loveland and Fort Collins areas. Want a "taste" of what to expect? Check out his column called "The Hungry Bird" on the CFO website. <http://cobirds.org/CFO/ColoradoBirds/Archives.aspx>.

Another new name this year is **Amy Yarger**, the Horticultural Director at Butterfly Pavilion in Westminster. She will share one of her passions with us in a new class called **Pollinators and their Plant Partners**. The impact that native plants and restored habitats can have on pollinator diversity will be featured. At Amy's field session we will search for pollinators in the Pavilion's gardens and in an adjacent open space.

Jennifer Frazer last taught for us in 2011 before moving away. But she's back, and will offer her "fun"-gi class, **Mushrooms of the Front Range**. We'll make a trip to the national forest west of Boulder to find and identify wild mushrooms. And she'll train us in the little-known skill of the mushroom hoot, a lost art used to stay found in the woods.

Tina Jones will share her considerable knowledge of **Colorado Hummingbirds**, with tips on their ID and natural history. She will also tell us about their behavior and the plants that attract them. Then she'll take us to see her six hummingbird gardens in Littleton where we can observe and identify hummers up close.

The incomparable **Steve Jones** has outdone himself this year with his class on **Grasslands Ecology**. While he'll first lead us in search of the prairie experience close by, he'll top it off with an

Continued on page 4

(Courses, continued from page 3)

opportunity of a lifetime to join him in the middle of nowhere, camping for two nights in the Nebraska Sandhills. If you've never spent the night in a wild, dark prairie, be prepared for a quiet so loud that it rings in your ears. To wake to the gathering light in such stillness is sublime. This may be Steve's favorite landscape. If you are ever going to see it, you should see it with him.

There you have it. From near to far, from the largest rock formations to the tiniest bird, from what's below us, around us, and above us, we've searched for and assembled an array of diverse subjects and presenters for your learning enjoyment. We hope you'll join us for some or all of them. Your continuing support for BCNA makes these classes possible.

In this newsletter, you'll find a schedule of our 2017 Field Ecology Classes with complete descriptions and dates/times that you can pull out and save for reference. You can also find it on our website, www.bcna.org, under Activities/Classes.

If working to bring these classes together sounds fun and you would like to help with next year's planning, or with upcoming events, please contact Mary Stuber, at canoemary@comcast.net, or call **303-720-9547**. Your Education Committee Members are Megan Bowes, Kerrie Bryan, Cindy Maynard, Bev Postmus, and Mary Stuber (Committee Chair).

Thanks to everyone who had a hand in making our 2016 season such a success: instructors, committee members, and each one of you who attended our classes. We appreciate your enthusiastic interest, suggestions, and participation so much. **Thank you!**

All of Us Together

I should have felt a loneliness close to despair, there, in the night, in the rain, a thousand miles from home. What I felt instead was uncommon joy. What was there to long for, where all I wanted was what I suddenly had?—to be fully part of the night, joined by a song, by a simple shared song, to the loon, to the wolf, to the keening of all humankind, all of us together in this one infinite night, all of us floating in the same darkness, each of us, as we howl our loneliness, finding that we are not alone after all.

~Kathleen Dean Moore,
"The Pine Island Paradox" ~

MOUNTAIN WEATHER IN ALLENSPARK 2016

Dr. William Rense

The six-month period from May through October of this year was the driest May – October that I have observed since I began keeping records here in 1960, 57 years ago. On average a total of 12.87 inches of moisture should fall during this six-month period. This year I received only 7.23 inches, 56% of normal and 5.64 inches less than average. Of these six months, only August had above average rainfall and that by only about a half inch.

October ended up with 0.40 inches of moisture and a half inch of snow. That makes October of 2016 the third driest October since 1960 with only 28% of normal precipitation (1.41 inches). October was not only dry, it was very warm. The average temperature in October this year was 46.8 Fahrenheit, almost six degrees warmer than the mean of 41.0 degrees. This made it the fourth warmest October since 1960. In total, 20 days during October had a high temperature of 60 degrees or higher.

And this warmth continued into November. It was the 17th before there was a minimum temperature in the teens—*this season (!)*—and it was the 18th before a minimum fell below 10 degrees. Almost unheard of to go so late in the season as the teens are usually first observed in October. On the 15th the minimum temperature was 51 degrees, a minimum typical of July and some 10 degrees or so warmer than the normal *maximum* temperature for the middle of November.

Early in the month of November I recorded 0.12 inches of moisture, rain not snow! By the middle of the month, Mt. Meeker was essentially bare with only a few small patches of snow. Nothing else fell in Allenspark until the 17th when we finally had a decent storm. I recorded 0.51 inches of moisture and seven inches of snow. The moisture was badly needed and this was the first storm of the season leaving an inch or more of snow. Still, as of the 19th, when I am writing this column, November has only had 0.63 inches of moisture, well below the month's 30-year mean of 1.31 inches.

Printed with permission of the Allenspark Wind

We invite you to report your sightings
to

www.coloradofrontrangebutterflies.com

Boulder Rights of Nature Film Series 2017

The Boulder Rights of Nature Film Series returns! This year BRON and Boulder County Audubon will be presenting films in a different format from our two inaugural film festivals: Every three months or so, there will be a showing of one or possibly two films at a time, with no admission charged and allowing more in-depth discussion after the films. By using a low- or no-cost venue and keeping the event small, BRON can keep expenses down to only the cost to rent the films and to provide nibbles and refreshments at each showing.

To help support the series, BRON would like to invite sustaining donors to make a \$40 annual contribution. In the past, we've found that the rights of nature-oriented films generated a strong response, with some film-goers subsequently contributing many thousands of dollars to support the organizations in the films and making a direct, measurable difference in those organizations' ability to continue their mission. These contributions have made a significant difference in the lives of orangutans, elephants, and other threatened species.

To become a film series subscriber, send a check made out to BRON to: Steve Jones, 3543 Smuggler Way, Boulder CO 80305. Please let us know if you'd feel comfortable with our listing your name as a supporter on film series mailings and brochures. Thanks so much for your support!

The first film, "Unlocking the Cage," about the heroic and inspiring effort to give chimpanzees legal rights - such as the right to be free from cages and experiments - will be on February 8th at the East Boulder Community Library, Baseline and 47th. Doors will open at 5:30 pm, with the film starting promptly at 6:00. Refreshments will be provided. Seating will be strictly limited to the first 68 participants. After a short post-film discussion from 7:30 – 7:50, those who wish will retire to Fate Brewery for drinks, food, and further discussion.

Thanks so much for supporting this effort and contributing your recommendations and thoughts.
Cindy Cornelius, Steve Jones, Cindy Maynard, Yan Chun Su, Boulder Rights of Nature Film Series coordinating committee.

LAND USE CHANGES FOR CU SOUTH

The Boulder Valley Comprehensive Plan (BVCP) is currently being updated. The update will include changes in the land use designation for the "CU South" property owned by the University of Colorado, including annexation of the site by the City of Boulder. The 308-acre property is located south of Table Mesa Drive and west of U.S. 36 in unincorporated Boulder County near South Boulder Creek. Current CU facilities on the property include tennis courts, a warehouse building with office space, a cross-county running course and a public trail.

Public concerns about possible land use changes on CU South include maintaining current use of parts of the property for recreation (including hiking and skiing), preserving wildlife habitat and open space, possible residential development, and implementing plans for flood mitigation on the site. Recommendations for land use designation are tentatively scheduled for March 2017 and public comments are still being accepted.

For information about the update of the BCVP, visit: <https://bouldercolorado.gov/bvcp>

For info about CU South, visit: <https://bouldercolorado.gov/bvcp/cu-south>

For info about upcoming public meetings, visit: <https://bouldercolorado.gov/bvcp/calendar>

A new citizens group, Save South Boulder, is working to protect the open-space values of the area. Several important meetings are approaching. To receive updates on this issue, email savesobonow@gmail.com

*Practically speaking, a life that is vowed to
simplicity,
appropriate boldness, good humor, gratitude,
unstinting work and play, and lots of walking brings
us close to the actually existing world and its
wholeness.*
Gary Snyder

A Tale of Two Osprey Continues

By Jason Beason
Bird Conservancy of the Rockies

Migration is a mysterious thing.

Birds continue to confound scientists with this behavior, even when it seems like we're starting to figure it out. Although extensive knowledge about migrating birds has been gathered over the centuries, the scientific community is still relatively in the dark about the details of this process. Efforts continue to better understand migration, and so birds are banded and tracked all over the world. Oftentimes while migrating birds become lost or killed and valuable data is lost. Then sometimes, there comes a bird like Shadow.

In the summer of 2013, Bird Conservancy of the Rockies alongside US Forest Service and Rocky Mountain National Park scientists went out to Rainbow Bay at Lake Granby and the shore of Shadow Mountain Reservoir to give two Ospreys the chance to help solve the mystery of migration. The team proceeded to capture two birds who were named according to their summer nesting sites: Rainbow and Shadow. After the team took measurements and other data, Rainbow and Shadow were then released back to their chicks.



Over the next several months, transmissions came in as the Ospreys tended to their young and prepared for migration. When the two birds took off toward Mexico for the winter, the first thing they did was cross the Continental Divide, and head down the Central Flyway. The tracking data revealed that both birds decided to stay for the winter, Shadow landing at Laguna Madre Biosphere Reserve just south of Texas, on the Gulf of Mexico and Rainbow further south near Tamuin.

Those tracking the pair of travelers were thrilled at how much new information was coming in about Osprey migration and excited to learn more from the return flight.

That's when Shadow suddenly *disappeared*. In the spring of 2014, Shadow's transmitter stopped sending. Rainbow also went quiet around the same time. No one knew what had happened to them. Birds that are tracked often become "lost" and go silent, so it was not something to be very alarmed about. Often a transmitter simply comes off. Over the next two years, the teams following Rainbow and Shadow had all but given up on them.

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BCNA BOARD OF DIRECTORS

Interim President Megan Bowes 303-561-4883
Vice-President Position Open
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Secretary Peter Kleinman 303-554-5320
Kerrie Bryan 303-834-8151
Dot Fears 720-204-0010
Cindy Maynard 720-203-8211
Mary Stuber 303-720-9547
Claudia Van Wie 303-494-2250

BCNA COMMITTEES

--**Conservation** (chair position open)

--**Education Committee**

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--**Ecosystems Committee**

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--**Finance Committee,**

Howard Witkin, Treasurer 303-789-4950

--**State and Regional Wildlife Issues**

Gerry Kelly, 720-839-5210

BCNA RESEARCH PROJECTS

--**Allegra Collister Bird Banding Project**

Maggie Boswell, Coordinator picab@qwest.net

--**Avian Species of Special Concern**

Dave Hallock, Coordinator eldoradh@rmi.net

Steve Jones, Coordinator curlewsj@comcast.net

--**Burrowing Owls Survey**

Sue Cass, Coordinator 720-684-6922

--**Butterfly Surveys**

Jan Chu, Coordinator 2chuhouse2@gmail.com

--**Ecosystem Stewardship Project**

Steve Jones, Coordinator 303-494-2468

--**Indian Peaks Bird Count**

Dave Hallock, Coordinator eldoradh@rmi.net

Bill Kaempfer, Coordinator 303-954-8998

--**Wintering Raptor Survey**

Sue Cass, Coordinator 720-684-6922

OUTREACH

--**Facebook Moderator and BCNA Buzz Editor**

Cindy Maynard, 720-203-8211 cmaynardre@gmail.com

--**Membership Committee**

Cindy Maynard, Chair, 720-203-8211

cmaynardre@gmail.com

--**Nature Net Moderator**

Scott Severs, scottesevers@gmail.com

--**Newsletter**

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Carol McCasland (layout) 303-635-6433

--**Website and Support for Newsletter**

Claudia Van Wie 303-494-2250, webmaster@bcna.org

George Oetzel 303-543-3712

Trends emerge for Butterfly Populations in Boulder County Open Space Properties

Janet Chu and Daniel Ziskin

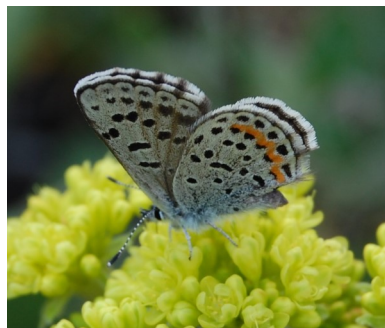
For twelve years (2004 to 2016) the butterflies in eight properties were inventoried. Although at the site with the highest elevation (Caribou Ranch), some marker species, such as Queen Alexandra (*Coleus alexandra*), Rocky Mountain Dotted Blue (*Euphilotes enoptes ancilla*), and Small Wood Nymph (*Cercyonis oetus*), showed a slight increase in numbers over time. When all eight properties and all species are combined there is a downward trend in butterfly abundance. For instance, in 2004, on average, a researcher could count about 42 butterflies per hour. Each year he or she would count approximately one less per hour. By 2016, that same average researcher would count only 30.

Small Wood Nymph
(*Cercyonis oetus*)
by Dan Fosco



Queen Alexandra
(*Coleus alexandra*)
by Dan Fosco

Rocky Mountain
Dotted Blue
(*Euphilotes enoptes ancilla*) by Dan Fosco



(*Osprey, continued from page 6*)

Rainbow continues to be missing in action, but Shadow's story isn't done yet. On June 16th of this year, Bird Conservancy and our partners were trapping and outfitting Osprey at Lake Granby near Shadow's old nesting spot. There was a large female Osprey rearing several chicks. When the team captured the bird, they discovered that this was none other than Shadow herself! She had returned to the same nest where she'd been rearing her chicks for years. The team concluded that her transmitter had simply fallen off two years ago when she went "missing."

The team refitted Shadow with a new transmitter and again returned to her nest. Shadow was seen feeding three nestlings before beginning her migration journey south. By September 4th, she was on the move! Her last location fix on September 7th revealed she was not following the Arkansas River toward Texas as she did in 2013. Instead, she had taken a hard turn to the East near Sun City, Kansas. That is about 300 miles from her previous location on September 5. Osprey can cover huge distances very quickly. In 2013, Shadow didn't begin migrating until September 15th and it took her nine days to travel 1,100 miles to her wintering site just south of Texas in Mexico on the Gulf of Mexico coast at Laguna Madre Biosphere Reserve. It will be very interesting to see if she eventually goes to the same place this year to spend the winter!

With the help of birds like Shadow, as well as the teams of people that make this research possible, we are gaining tremendous amounts of information about not only their migration habits, but also nesting behavior. For instance, we learned that mothers rarely left their nests until the chicks matured and became independent. We look forward to seeing Shadow's return trip north in 2017, and unlocking more secrets about the migratory habits of the magnificent Osprey!

THORNE SUMMER CAMPS

Kids ages 3 to 15 spend the summer in Thorne Summer Camps catching frogs, getting muddy, biking down mountain trails, and exploring Colorado's wild places! Our experienced CPR and first-aid trained instructors help facilitate student learning and appreciation for the outdoors while keeping them safe. Students complete the program with a newfound respect and awe for nature, increased understanding of the environment, and a desire to get back outside. For more information about Thorne summer camps, visit



www.thornenature.org, call (303) 499-3647, or please email us at info@thornenature.org.

Support the Boulder County Nature Association

Name _____

Address _____

Phone and/or E-mail (optional) _____

Type of Membership:

_____ Student/Senior (65 or over)	\$15
_____ General Member	\$20
_____ Family or Household	\$30
_____ Supporter	\$40
_____ Founder	\$100
_____ Life Member	\$300
_____ Corporate	\$500
_____ Donation to General Research Grants	
_____ Donation to Evenson Big Cat Research Grants	
_____ Donation to General Research Fund	

The membership year is January 1 to December 31. Those who join after October 1 are considered members in good standing through the following year. All members receive this quarterly newsletter. Supporter-level members and higher also receive a complimentary copy of each BCNA publication.

There are two ways to join BCNA:

By check: Please make checks payable to "Boulder County Nature Association" or "BCNA" and mail to: Boulder County Nature Association P.O. Box 493 Boulder, CO 80306

Online: Go to <http://bcna.org/member.html> You can then pay for your membership online using a credit card or PayPal. You do not need a PayPal account to use this option.

Boulder County Nature Association
P.O. Box 493
Boulder, CO 80306