

Boulder County Nature Association



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

Volume 35, Number 4
Fall 2017

Burrowing Owls in Boulder County! **Sue Cass, Volunteer Coordinator** **BCPOS/BCAS Burrowing Owl Survey**

Holy Cow or, perhaps more appropriately, I should exclaim "Holy Owl"! The 2017 BCPOS/BCAS Burrowing Owl (BUOW) Survey had an amazing and totally unanticipated year! In recent survey seasons, our dedicated volunteers scoured thousands of acres on BCPOS public and leased agricultural properties locating a single nesting pair in the process. This year, by late April, we received reports of nesting activity by a total of seven (7) BUOW pairs on five (5) properties with multiple pairs observed on three (3) of those properties. We could hardly contain ourselves and knew we were in for a very busy season that would tax our monitors to the limit!



The final nest/fledgling count on BCPOS properties was sixteen (16) young fledged from four (4) nests on three (3) properties. The remaining three (3) nests failed with predated remains found at one of those nests. Whether the predator was mammalian or avian is unknown. We know BUOW show strong fidelity to their natal area and that yearlings are capable of reproduction, but rarely do successfully. Can we surmise that conditions on the wintering grounds in the deep Southwestern U.S. and Northern Mexico where our BUOW typically spend the winter months were better than usual and thereby enhanced the survival rate of Boulder County's yearling class? We'll probably never know for certain, but it's fun to speculate and wonder whether this is a trend that will carry into next year. When we add in the BUOW nesting success on OSMP properties, nine (9) young fledged from a total of three (3) nests with one (1) nest failure, we can't help being excited about the future of BUOWs in Boulder County!



This is a great opportunity to direct you to *The Second Colorado Breeding Bird Atlas*, published late last year after nearly two decades of competent field work by hundreds of ardent and accomplished volunteers! The BUOW species account authored by our very own Stephen R. Jones talks in depth about population increases, particularly in the eastern part of the state, and potential reasons for that uptick in breeding BUOW numbers. Whether they play out in Boulder County remains to be seen, but a 700% increase from one year to the next has us all searching for clues to this amazing season and fervently hoping it is not an anomaly!

We thank every volunteer who supported this season's amazing effort: Linda Andes-Georges, Bryce Bolton, Kerrie Bryan, Sue and Alan Cass, Jean Crawford, Reneé Haip, Paula Hansley, Brinda Henley, Tim Henson, Elena Klaver, Peter Kleinman, Lark Latch, Kristin Laubach, Sandra Laursen, Viki Lawrence, Maureen Lawry, Joe Lupfer and wife Karen Clark, Carol McCasland, Joe and Beccy Pem, Connie Redak, Joel Such, Marcel Such, Mort and Lysa Wegman-French, Ru and Bob Wing and Howard Witkin! Congratulations, all!

Photos by Kerrie Bryan

**Message From the President,
Sue Cass**



BCNA WANTS YOU

Thirty-five years ago, on August 23, 1982, BCNA was born! Incorporated as a 501(c)3 non-profit by local environmentalists and employees of the then fledgling Boulder County Parks and Open Space, BCNA's early calling was to research and educate about the amazing natural history of Boulder County! Early founders included naturalists Dave Alles, Mike Figgs and Nan Lederer, BCPOS Planners Dave Hallock and Rob Helmick and Resource Specialist Rich Coopman! One of BCNA's first tasks was to support the research and writing of the Environmental Resource Element of the brand new Boulder County Comprehensive Plan (BCCP), an important undertaking! In the intervening three and half decades, this all volunteer organization has maintained a steadfast commitment to fulfill its mission *"to educate, inform and inspire for the purpose of conserving and promoting resilient natural ecosystems in our region"*! The massive influx of the species *Homo sapiens* along the Front Range since BCNA's inception makes that *"mission"* more important and more challenging with each passing year! If only the Latin translation *"wise man"* proved true in all cases when we as a species interact with the natural world, BCNA's covenant would be self-fulfilling. Alas, it is not!

As we prepare to meet the challenges of the coming decades in partnership with Boulder County Parks and Open Space (BCPOS), City of Boulder Open Space and Mountain Parks (OSMP) and our sister organizations Boulder County Audubon Society (BCAS), Boulder Rights of Nature (BRON), Colorado Native Plant Society (CoNPS) and Sierra Club, Indian Peaks Chapter, we ask for your personal commitment by supporting BCNA with your time, your energy, your expertise and your love for the environment. Serve on the BCNA Board of Directors! Join the Education Committee or Grants Committee and oversee the distribution of thousands of dollars each year to worthy projects that further our goals of environmental education and conservation! Contact me at suecass@comcast.net and I will personally guide you to the fulfillment that is bestowed upon those who serve their communities and nature and the environment! You'll love it! Guaranteed!

1524 Henry Court
Longmont, CO 80501-2585
720-684-6922 (home)
303-641-4809 (cell)
suecass@comcast.net

**Grants Committee Seeks New Members
Megan Bowes, BCNA Vice President**

The BCNA Grants Committee is looking for one or more members to serve on the committee in 2018. The work of the committee entails reviewing, in late winter, up to ten or more grant submissions to determine one or more recipients. 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, among many others, 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. 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.

More information can be found on the website at <http://bcna.org/grantapplications.html>.

Special thanks to previous Chair, Michal Delaney, for strengthening our ties with local university research. If you have an interest in serving on (or questions about) the committee, please contact Megan Bowes: bowesm@bouldercoloado.gov 303-561-4881.



**Connect with nature:
nature-net-subscribe@yahoogroups.com**

What Birds Eat And Why We Should All Care About This Subject Dave Leatherman

Do you know your favorite dessert? Would you have any trouble writing out the food list for your upcoming 5-day camping trip? If you were a survivalist, with what food would you stock the basement? My guess is you readily know the answers to all these questions. You also know and care about birds. But would you be able to answer a similar set of questions related to them? Besides earthworms, what does a robin eat? What part of a House Finch does a Sharp-shinned Hawk eat first? What are the needs of the Western Tanager that graced your yard last May during its migrations to and from the Neotropics? The diet of birds has long interested me and I think it should interest all birders and other naturalists. Can we be more than emotional advocates for birds and other elements of the environment if we don't know the day-to-day details of local plant and animal life? This stuff is the muscle of advocacy, the meat and quinoa, if you will, of BCNA.

Basically, everything a bird does involves food or reproduction. Procreation is the driving force behind every living thing's existence. But without food, there can be no future generation.

This past summer BCNA offered a mini-course on the subject of bird food habits. We had an indoor session at Pam and Joe Piombino's home (thank you) and then enjoyed two field trips. While the subject could be the fodder for a graduate degree lasting year, we tried to concentrate on key "lessons". We stressed:

- 1) Migrant birds probably have restrictive diets that necessitate moving long distances twice a year to remain in locales where insects or other ephemeral food is readily available. Cold temperatures are not the direct reason for migration. Resident birds, that is, those that stay in our area year 'round, probably have the ability to switch from insects in summer to seeds or fruit in the winter.
- 2) Birds are opportunistic. They have their staples but are willing and able to take advantage of windfalls (spilled grain, a butterfly population explosion, a road-killed skunk, etc.).
- 3) A bird's anatomy, especially its beak, tells a lot about what it eats.
- 4) Some of the most interesting birds are those with special diets, like crossbills, hummingbirds, snail kites and shrikes.
- 5) Figuring out what a bird is eating is not always easy and often requires detective stealth, knowledge of habitat features, collecting samples and expert consultants.
- 6) Birds often find their food, particularly if it involves arthropods, by first identifying "defect". That is, if a bird can find abnormal plant growth, like leaves with chewed holes, webbing, feeding trails called "mines", swellings called "galls" or discoloration, it can often find the maker of these defects. Scrutiny of such situations often leads to the discovery of adult insects or spiders, caterpillars, inhabited cocoons and galls, or eggs.

On our June 17th field trip, we toured Green Mountain Cemetery. Much more than a graveyard, we found it to be an ecotone of urban and foothills plants and animals. Highlights including Violet-green Swallows cruising over the grassy hills to the west for dragonflies and midges. Leaf-folding Sawfly larvae and their inquilines appeared from the natural origami of cottonwoods.

Continued on page 6

On a Foray for Wild Mushrooms
Mary Stuber



When I signed up for BCNA's *Wild Mushrooms of the Front Range* class in August with Jennifer Frazer, I really didn't know what to expect. I thought we'd go out into the woods and find plenty

of little domed fungi hiding among the conifer needles in damp, dark places. But I just didn't get it. If you hit it just right, and if there has been adequate moisture at just the right time, your foray can become a real-time treasure hunt.

Though mushrooms can be found in every Colorado life zone, their favorite haunts are among full-size trees and their associated mycorrhizal fungi. Mycorrhizal fungi colonize the roots of many plants. They don't harm the plant but develop a "symbiotic" relationship that helps the plant be more efficient at obtaining nutrients and water. In return, the plant provides energy to the fungus in the form of sugars. The term, mycorrhizae, refers to the role of the **fungi** (myco-) in the plants' rhizosphere, or its root system.

The montane forests, with their variety of both moist and dry environments and a predominance of conifers, all of which depend upon mycorrhizal fungi, produce a bounty of all forms of mushrooms throughout the collecting season. The season begins in April or May for some species and ends about mid-September when snow covers the leafy debris. In between, moist litter and a humid atmosphere send scores of mushroom hunters and mushroom clubs into the woods to collect the harvest.



Photos by Mary Stuber

We're all used to seeing these many-hued caps, often with gills on the underside. But did you know that some have teeth hanging down, or round pores instead of the familiar gills? And the fascinating "bird's nest" fungus looks just like a tiny nest with a round cup facing upwards, and may even have egg-shaped spore cases sitting inside. Instead of releasing its spores downward, as conventional caps do, these fungi wait for a raindrop to hit, and then the spores explode upward and outward. Probably all of us have found a puffball of some kind. When fresh and new, they are firm and white inside. But after maturing, they become filled with brown, powdery spores waiting to be released.

Mushroom hunters disperse through the woods carrying a basket or bucket. They dig the whole mushroom up, popping the stem from below with a knife or hori-hori, because the stem's base can sometimes be crucial for identification. Cutting the mushroom in half to expose it to air can cause almost instant color changes that mark a particular species. A little brush is handy to dust off any soil. Smell can be important too. The intoxicating matsutake has a cinnamon scent that is unmistakable. At \$100 per pound, this was one species that produced quite a bit of excitement when found. They were delicious grilled with a little olive oil and salt and pepper! We also found a whole basket full of king boletes, better known as porcinis. Mine have been cleaned, sliced, and dried under a heat lamp for use in sauces. Edible mushrooms can also be diced and frozen for easy future use.

Does it make you nervous to think about eating a mushroom you've found? Me, too. The Colorado Mycological Society meets at the Denver Botanical Gardens, typically on the second Monday of each month, from March through October. They have speakers, recipes and tastings, will help you positively identify what you've found, and take you on a foray during the season, if you become a member. I enjoyed this class immensely. The excitement of each discovery was infectious. Edible or not, it was a very fun endeavor I'd never tried before. But it certainly won't be my last!



The Front Range Pika Project- A Volunteer's View
Viki Lawrence, Volunteer Naturalist
BCNA Board Member

This article is being reprinted with apologies to Viki Lawrence, due to printing errors in its original publication.

Was that alarm call a whistle from a marmot, or, was it a snarky pika?

These two mammals often live in the same habitats and their calls are similar, but with a little practice an observer can distinguish one from the other. While marmots are happy to let you see them, pikas are often more reticent and more camouflaged. So, recognizing the pika call while volunteering for the Front Range Pika Project (FRPP). is very useful in seeking them out.

I have been volunteering for the FRPP since 2011, going into the field in late summer to specific sites checking for the presence of pika, those adorable little fur balls that one can't help but love. The Front Range Pika Project is using citizen scientists (trained volunteers) to visit sites and look for the presence of pika. Sites are chosen based on documentation of the historical presence of pika. A comparison of the new data with the old is being used to assess if climate change is having an impact on their population here in the Front Range.

Volunteers look for the presence of pikas and assess the value of the habitat, take photos in all directions and sometimes place temperature recorders deep into the talus (*a slope formed by an accumulation of rock debris*). Before volunteers go into the field, they receive training and education about pika and how to carry out their observer duties. At the end of the season, they can attend a dinner and discussion about some of the research.

Pika presence can be determined by seeing them, hearing their snarky calls, finding fresh hay piles, or fresh scat. Their scat consists of small BB sized pellets often on top of rocks tinged with orange lichen. The bright orange lichen grows where the scat and urine provides the extra nitrogen it needs.

Pikas are not able to cool themselves by sweating or panting and depend on retreating deep into talus to avoid the heat of the day. Thus, they are only found where the talus is large enough for them to scurry about below the surface, and also deep enough to stay cool. They generally prefer talus with water under it or nearby. Warming temperatures mean fewer habitats will be suitably cool in the heat of summer for them to survive.

Unlike marmots, pika do not hibernate, but spend their summer days gathering grass and herbs, building hay piles under large rocks as food storage

for the winter. While summers may be becoming too hot for them, climate change is also making winters more difficult. In the winter, pikas depend on good snowpack to keep the temperatures under the talus (and snow) relatively warm. As snow packs decrease due to climate change, their homes under the rocks without the insulation of snow can become too cold for them to survive. There is evidence that pikas do better where marmots also live. Some scientists think this may be because the hibernating marmots unintentionally provide warmth for the pikas during harsh winter spells.

The FRPP began with a pilot season in 2010, and the data indicate pika may have disappeared from up to 17% of their historical sites here in the Front Range. This continuing study will document how the pika are faring as climate change marches forward.

Boulder County Nature Association has supported the FRPP with grants as well as encouraging volunteers to participate. A report of their 2016 season can be found on the BCNA website.

Pika are fascinating mammals and I have enjoyed learning more about them.

Viki Lawrence is a wildlife monitor for FRPP as well as BCPOS.



Photo by Craig Whitehead

FREE BOOKS!

George Johnson, a long-time BCNA member, has generously offered to give a treasure trove of nature guides to BCNA members.

He will make them readily available for you to pick up at his home. Please call first to let him know you are coming.

George Johnson
 3320 13th St
 Boulder, CO 80304
 303-443-7092

Continued from page 3



Cottonwood leaf with characteristic deformation caused by poplar leaf-folding sawfly (*Phyllocolpa bozemani*) at left, sawfly larva inside fold at right.

Meandering elm leafminers revealed the DNA-driven plan for their lives. Spotted willow leaf beetles lived dangerously among the robins.



Spotted willow leaf beetle (*Chrysomela knabi*) adult. Both adults and larvae were observed feeding on crack willow leaves and being fed upon by American robins.

Switching to the macabre, our merry band visited the prairies north and east of Fort Collins on June 24th. There we exhibited morbid curiosity at the unique prey-impaling habits of Loggerhead Shrikes. Right before our eyes, skewered on barbed wire, were dragonflies, crickets, bird gizzards, lesser earless lizards and their oviductal eggs, grasshoppers, an entire Grasshopper Sparrow and even a small rattlesnake.



Female lesser earless lizard impaled by shrike. Yellow objects are oviductal eggs, which shrikes often pull out and impale separately. Lastly, we puzzled over a weathered “Winnie the Pooh” stuffed toy. Was this the work of a shrike or easily amused cowboy?

I think all involved will admit we learned a lot and had fun doing it. Long live curiosity.

BCNA BOARD OF DIRECTORS

President Sue Cass 720-684-6922
 Vice-President Megan Bowes 303-561-4883
 Treasurer Claudia Van Wie 303-494-2250
 Secretary Peter Kleinman 303-554-5320
 Kerrie Bryan 303-834-8151
 Viki Lawrence 303-913-2534
 Vicki Braunagel 303-746-6039
 Cindy Maynard 720-203-8211
 Mary Stuber 303-720-9547
 Claudia Van Wie 303-494-2250

BCNA COMMITTEES

--**Conservation** (chair position open)
 --**Education Committee**
 Mary Stuber, Chair 303-720-9547, Megan Bowes, Vicki Braunagel, Mary Ann Hartigan, and Bev Postmus. Sue Cass-ex officio member.
 --**Ecosymposium Committee**
 Claudia VanWie, Chair, 303-499-3001, Sandra Laursen, Timothy Seastedt, Deborah Price, Sue Cass, Cindy Maynard, Viki Lawrence, Michelle Durant, Kerrie Bryan Peter Kleinman
 --**Publications Committee**
 Sue Cass, Chair 720-684-6922; Steve Jones, George Oetzel, Lysa Wegman—French
 --**Research Grants Committee**
 Peter Kleinman, Chair 303-554-5320; Megan Bowes, Kerrie Bryan, Michael Delaney
 --**Finance Committee**,
 Treasurer Claudia Van Wie 303-494-2250
 --**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 dheldora@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 303-258-3672
 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
 Terry Escamilla
 303-888-1510
 --**Nature Net Moderator**
 Scott Severs, scottesevers@gmail.com
 --**Newsletter**
 Kerrie Bryan (content editor) aussee@comcast.net
 Cindy Maynard (layout) cmaynardre@gmail.com
 --**Website and Support for Newsletter**
 Claudia Van Wie 303-494-2250, webmaster@bcna.org
 George Oetzel 303-543-3712

Education News– 2018 Class Planning Underway

2017 has been quite a year for BCNA's Education program! We used Eventbrite to handle registrations and your response has been very positive. The process is fast and easy, and reminders are automatically sent out shortly before each class. It was much easier for me to keep up with your questions and individual needs. The fact that I receive notifications of each registration in real time on my phone enables me to know where things are at any given time and to respond promptly when needed. And by announcing the opening of registration for each class on Nature-Net, we are able to let you know just when to act to be sure you get into your favorite class.

A recap of 2017's classes –

We travelled far and wide for our classes this year. Bill Schmoker took us to Pueblo Reservoir to work on our gull identification skills. Pete Palmer showed us examples of the area's geologic wonders on a day-long auto tour outside Boulder, and David Leatherman unlocked the mysteries of the "butcher bird" north of Fort Collins. Heather Swanson introduced us to cute groups of local prairie dogs, while Tina Jones shared her hummingbirds in Littleton. Amy Yarger enthralled us with pollinators at the Butterfly Pavilion, and Jennifer Frazer took us on two fun forays for wild mushrooms near the Peak to Peak Highway. Steve Jones led us on local hikes to identify native grasses and then ushered us around some of his favorite spots in the Nebraska Sandhills for three days, leading us to hidden lakes where we saw almost thirty Trumpeter Swans as a bonus. A good time was had by all, and you must have agreed, because most of our classes were "sold out" while others were nearly full. Thank you so much for your continuing support of our education programming. It wouldn't happen if not for you.

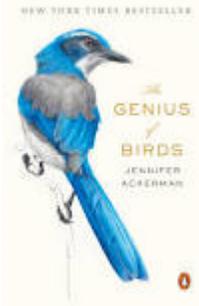
And now, looking forward to 2018 -

The Education Committee held its annual planning meeting in late August. Our spirited talk resulted in many fun ideas and, along with your invaluable suggestions (thanks for filling out those evaluations!), we are now contacting prospective instructors and working on our 2018 offerings. Stay tuned for the announcement of our 2018 classes in the January newsletter. It will also appear on our website, www.bcna.org at that time. I know you'll be pleased. Our classes began as an idea shared by Steve Jones and Joyce Gellhorn. They've continued for more than twenty years through hours of effort by a handful of dedicated volunteers who've picked up the task for a time and then moved on.

Thank you to each one of you who has helped keep this program thriving throughout all these years. It's been no small task and really is a labor of love.

Thanks, too, to everyone who had a hand in making our 2017 season such a success: instructors, committee members, and especially each one of you who attended our classes. We appreciate your enthusiastic interest, suggestions, and participation so much. **Thank you!**

If you would like to help with our classes and activities, please contact Mary Stuber at canoemary@ecentral.com, or call **303-720-9547**. Your Education Committee members include Megan Bowes, Vicki Braunagel, Mary Ann Hartigan, Bev Postmus, and Mary Stuber (Chair).



November 2, 2017

Jennifer Ackerman

Science writer and author of [The Genius of Birds](#) (named one of the ten best non-fiction books of 2016 by the Wall Street Journal)

Birds are astonishingly smart creatures. Like humans, many have enormous brains relative to their size. Jennifer Ackerman explores our newly-discovered appreciation for the brilliance of birds, and the scientific research producing a revolution in our understanding of avian intelligence.

Tickets are \$15 Non-Members or \$12 for Bird Conservancy of the Rockies or Denver Museum of Nature & Science members. Please [contact us](#) to request a member discount code to use at time of purchase.

For more information or to purchase tickets, visit <http://www.dmns.org/learn/adults/after-hours/>

Support the Boulder County Nature Association

Name _____

Address _____

Email _____ Phone _____

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.

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

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