

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 33, Number 3
Summer 2015

A Snapshot of Recovery and Restoration of Riparian Corridors After the 2013 Flood

Mac Kobza, Wildlife Biologist
Boulder County Parks and Open Space

As we head into our second summer following the 2013 floods, I wanted to give you an update about our efforts and observations at Boulder County Parks and Open Space (BCPOS). I'll be focusing on the St. Vrain Creek, as this is the area where I have committed most of my time, but similar attention has been paid to other waterways.

As soon as it was safe, our plant ecologists and wildlife biologists were on the ground surveying the impacts of the flood along the riparian corridors on Open Space, paying particular attention to the effects on critical wildlife habitat, rare plants and animals, nesting birds, and the general condition of the streams. We work as a multi-disciplinary team and were able to communicate directly with other resource managers and land owners to help mitigate further impact to infrastructure such as bridges and roads, and to find ways to minimize any further damage to the natural environment due to flood cleanup and repair.

Our next challenge was our involvement in planning the needed emergency repairs and long-term restoration goals. BCPOS wildlife and plant specialists were assigned to Stream Teams, and within these teams we acted to both meet the daily challenges of stream recovery, as well as communicate the natural resource values and provide data to the many consultants creating the individual Master Plans for all the county waterways. The resulting Master Plans include our extensive comments about the natural resource values of the BCPOS-owned lands along waterways and our technical recommendations for restoration and encouraging regeneration.

We also assisted in implementing the emergency repairs at major breaches along the waterways, such as occurred along gravel ponds in the St. Vrain Creek. The BCPOS stream teams continue to communicate and meet, particularly to assist the new Coalitions and Waterways Coordinators as they take on their roles in the next step of long-term recovery efforts, and to provide oversight of the many projects which are being developed around our master plan recommendations on Open Space.

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Gage Open Space, showing a diversity of post-flood habitats, including large wood habitat in the stream, backwater habitat and cobble bars.



BCPOS staff Steve Kirk and Chelsea Beebe electrofishing for native fish in the St. Vrain Creek.

2015 Land Conservation Award Winners
 BCNA Members Honored by Boulder County

Congratulations to BCNA President Sue Cass, Recipient of the Environmental Stewardship Award. This award recognizes those who make significant contributions in land protection and/or management. Sue Cass has volunteered for and helped coordinate a diverse array of environmental research and environmental stewardship projects in Boulder County for more than 15 years. Currently, she trains and works with more than 200 volunteers each year including Boulder County Audubon Society and Boulder County Nature Association burrowing owl monitoring program; Boulder County Nature Association wintering raptor surveys; Boulder County Nature Association President; Boulder County Parks and Open Space Advisory Committee; Boulder County Parks and Open Space volunteer naturalist; organizing committee, Boulder County Ecosystem Symposium; and volunteer field worker, Colorado Breeding Bird Atlas II. Sue has been an inspiring environmental leader to all involved in these very meaningful environmental programs.



Cindy Domenico, Elise Jones, Sue Cass, Stephen Jones

Raymond Bridge and Pat Shanks accepted the Land Conservation Award for PLAN-Boulder County. The Land Conservation Award honors individuals, families, and organizations whose contributions demonstrate notable achievements in preserving Boulder County's agricultural lands. Founded in 1959, PLAN-Boulder County has been one of the leading citizens' organizations working to ensure environmental sustainability in the city and county of Boulder. PLAN-Boulder County members have advocated for growth controls, comprehensive planning, flood plain regulations, and regional bike trails. PLAN-Boulder advocated for the county open space program, and members were among those first appointed to the Parks and Open Space Advisory Committee to help formulate a plan for preserving open space throughout Boulder County.

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REPORT FROM THE PRESIDENT
Sandhills Serenade
 Sue Cass

Those of us who feel blessed to live where we do often expound on the personal joy this blessing imbues. Rocky Mountains, azure skies, snow called "champagne" and wildlife large and small, wary and receptive, are high on all our lists I suspect. Another gift we so readily share and benefit from, perhaps more than any, is "each other" and my awareness of this bounty was palpable the evening of May 26th. I've attended many Boulder County Audubon Society (BCAS) presentations at the Unitarian Universalist Church, but never one so well attended or eagerly anticipated.



The program, *Sandhills Serenade*, had an interesting and unassuming beginning, originating as the masterfully recorded resonance of the vast and empty Sandhills of Nebraska through the artistry of Stephen R. Jones and Shelley Schlender. Paired with Steve's beautiful photography and love of prairie, we were privileged to glimpse the soul of a man we have all come to love and respect. That Steve chose to unselfishly share *Sandhills Serenade* with BCAS and BCNA, two worthy and right-minded organizations whose very existence is impossible to imagine without his presence, that we shared the experience with mutual expectation and appreciation and that BCAS honored Steve with a lifetime achievement award on this propitious evening raised the aura even further.

Yes, we are truly blessed to live where we do and equally blessed with whom we share this paradise, be it Sandhills or Rocky Mountains! Thank you, Steve! Thank you, BCAS! Thank you, BCNA! What a Team!

To order a copy of the Sandhills Serenade CD, go to <http://www.bcna.org/booksales.html>

Don't Miss Out on the BCNA BUZZ

If you are not receiving the BUZZ, send a quick email to cmaynardre@gmail.com and she will add you to the list!

SUMMER CALENDAR

Thursday, July 9th: **Birds and Butterflies of Upper Gregory Canyon** 7AM to 11 AM

Join Steve Jones to savor the songs of two dozen forest bird species, and then observe fritillaries, crescents, sulphurs, and skippers nectaring on blooming mints and sunflowers. This ecosteward-led trip will provide information about how you can adopt your own wild area for study and protection. Limited to 15 participants. Contact Steve (curlewsj@comcast.net; 303-494-2468) to sign up. For more information about the Ecostewardship program see www.bcna.org.

Friday, August 15th: **Birds and Insects of Boulder's Tallgrass Prairies**

Join ecostewards Steve Jones and Janet McLachlan on Saturday, August 15, for a leisurely stroll through the tallgrass and mixed-grass prairies of the South Boulder Creek State Natural Area. We should see monarch and wood nymph butterflies, along with blue grosbeaks, waxwings, milkweed beetles, mantids, and lots of other insects. Meet at the South Boulder Creek west trailhead on South Broadway one mile south of Greenbriar Blvd. at 7:30 AM. We will finish up around 10:30 AM. Limited to 12 participants. To reserve a space contact Steve at curlewsj@comcast.net; 303-494-2468.

Check www.conps.org for info on the field trips listed below.

Tuesday, July 7th, 5:30pm to twilight. **Caribou Ranch – Conifers and Colorful Wildflowers**

Friday, July 10th, 8:15 am sharp to mid-afternoon: **Rocky Mountain National Park— Cub Lake/The Pool Loop**

Sunday, August 2nd, 8:15 am to early afternoon (time will depend on weather). **Rocky Mountain Alpine Plants—Ute Trail**

Thursday, August 27; 5:30pm until dusk. **Boulder Open Space Mountain Parks, South Boulder Creek Floodplain**

Links to Other Local Nature Programs

Audubon Society, Boulder Chapter, www.boulderaudubon.org

Boulder County Parks and Open Space, www.bouldercounty.org/os/events/pages/default.aspx

Colorado Native Plant Society, www.conps.org

City of Boulder Open Space and Mountain Parks, <https://www.bouldercolorado.gov/osmp/nature-hikes>

Thorne Nature Experience, www.thornenature.org

(Award Winners, continued from page 2)

A Volunteer Award was presented to **Todd Van Dyke**, who has volunteered as a raptor nest monitor at Rabbit Mountain for over 20 years. Van Dyke became a volunteer for the Raptor Nest Monitor program in the 1990s when he established the Friends of Rabbit Mountain group helping the county secure and protect the top of the mountain with open space purchases in 1993 and 1994. Van Dyke provided consistent, meticulous, and thorough documentation. Through his long-term commitment, he has helped the department understand the relationship between enduring places and how the department manages them.

See <https://bouldercountyopenspace.org/i/news/land-conservation-awards-2/> for additional information.

North Trail Study Area

Karen Hollweg

Are you Interested in the wonderful diversity of wildflowers, birds, butterflies and other wildlife that live north of Boulder?

Planning for the future of the area from Olde Stage Road to Boulder Reservoir and up to Hygiene Road – i.e., the North Trail Study Area -- has started. You can find the City Open Space & Mountain Parks' Inventory Report describing the rich resources in this area at <https://bouldercolorado.gov/osmp/north-tsa> .

The fabulous array of natural resources found there will be undermined by lots of trails unless you and others who care about the preservation of unfragmented, large tracts of riparian, grassland, shale barrens, and shrub nesting habitat speak up. To show you care about the future of this area, please sign up for updates at <https://bouldercolorado.gov/osmp/north-tsa-email-list>, come to the workshops and expert panels over the next few months, and submit your comments at <https://bouldercolorado.gov/osmp/north-tsa-comments> .

Organized groups that want all of the lands in this area covered with trails have already created maps and are pushing for changes that would reduce important habitat conservation areas. Nature-lovers who care about the preservation of habitat for our native species must speak out to convince decision-makers that many people value the species that have lived here much longer than we have!

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

(Recovery, continued from page 1)

After planning, we moved to the work of restoration and encouraging nature's innate ability to regenerate. Our ecologists recognized that some areas can be allowed to re-grow habitat and re-build their species populations on their own time scale, while other areas need more of an active approach to restore. Some of our staff were trained on the natural channel design concepts of Dr. David Rosgen, others have fish ecology and aquatic ecology backgrounds, and many of our plant ecologists have extensive experience restoring the native species components of our riparian and associated wetland habitats in and around creeks.

These and other skills of staff have allowed many projects to be jump-started and we have made great strides in planting native seeds in the right places, avoiding critical habitat when working, funding and constructing native fish passages, retaining and placing riparian habitat structure such as downed woody debris, and in guiding the designs which protect habitat from a multitude of road, water and other repair plans. Much more work is left to be done as we see additional projects implemented, including the final designs of emergency FEMA projects along our roads and waterways.

I am gratified to see so many of the nature-like and soft-engineering concepts we promoted, such a whole-tree root wads and natural channel design, being put into place on our BCPOS Open Space lands, as well as the adoption and acceptance of these concepts by the many other land owners which are adjacent to the County Open Space creek lands. Community support is vital for many of these nature-friendly restoration projects to be implemented as they generally require additional funding for consultants and materials that is not included in the work to repair roads, bridges and other infrastructure.

Another major effort was coordinating and monitoring flood debris cleanup within the waterways. Preble's meadow jumping mouse is a federally listed *threatened species* which occurs throughout Boulder County waterways, and in particular on BCPOS-owned riparian lands on the St. Vrain Creek. We collaborated with the USFWS to put in place the Emergency Conservation Measures which act to protect the remaining PMJM habitat. This primarily involved planning how debris cleanup operations would operate in and around our streams. Our staff was on the ground every day directly observing and coordinating these efforts and minimizing the footprint and after-effects on these sensitive lands.

We have also implemented a new Preble's jumping mouse monitoring program. This long-term program has our staff tracking the occurrence of these mice along BCPOS creeks, using a rigorous sampling

program, thanks to the training by people such as Carron Meaney at Walsh Consulting and Lance Carpenter with Mike Sherman at Colorado Parks and Wildlife (CPW). The results include the rediscovery of PMJM at all their historical locations on St. Vrain Creek, plus the addition of two new sites on the St. Vrain Creek at Gage and Golden-Fredstrom Open Space. The PMJM appear to have survived and adapted positively after the flood, and I would like to believe the continued presence of PMJM on Open Space was due in part to our constant and consistent efforts to enact the PMJM Conservation Measures during post-flood debris removal and emergency repairs.

In addition, staff has developed a long-term aquatic bio-monitoring program, in cooperation with CPW, which includes fish, benthic macro-invertebrates and habitat assessments along St. Vrain Creek. Results so far indicate that a good contingent of native fishes continues to be well-established on Open Space in patterns that are expected and similar to those prior to the flood, with some concerns about game fish intrusion and in some cases loss, or addition, of habitat in the creek. The results of our fish monitoring are directly used to inform our restoration planning.

We also had an eye toward in-stream habitat preservation, and were successful in leaving large, stable wood habitat and cobble bars in and around the waterways that serve as vital habitat to fish, invertebrates, plant life and other species. We also saved many whole trees for later use in restoring the stream banks using nature-like engineering. We consulted with stream expert Dr. Ellen Wohl at CSU, aquatic wildlife researcher Matt Kondratieff at CPW, and native fish biologist Boyd Wright at CPW, to gain the local knowledge needed to guide our monitoring and preservation work.

Initial results from macro-invertebrate sampling found a wide variety of stonefly, caddis and mayfly species, and a diversity of other species, which indicates good water quality and in-stream habitat. We are working with Dr. Boris Kondratieff at CSU, along with other experts, to aid in determining our species and indicator scores. Our habitat surveys include methods developed by the EPA and BLM and local researchers, and the surveys are taken at the same time and location as our fish and invertebrate sampling.

Additionally, we take water quality samples to determine the amount of dissolved oxygen, as well as sampling for toxins or other elements. Results so far for habitat are mixed, with some regions receiving poor marks, while others showing a fairly high level of function.

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40th Anniversary of Boulder County Parks and Open Space

The county's open space program became a reality in January 1975, and the first two properties, Betasso Preserve and Walker Ranch, were purchased in 1977. Today, Boulder County residents can be proud that their tax dollars have protected more than 100,000 acres of land and built 117 miles of trails. Boulder County has also protected working farms and ranches, wildlife habitat, riparian and wetland areas, scenic buffers and buffers between communities.

Visit BoulderCountyOpenSpace.org/40 for additional information.



Betasso Preserve

Request for Grant Proposals for 2016

Peter D. Kleinman

BCNA's mission is *to educate, inform, and inspire for the purpose of conserving and promoting resilient natural ecosystems in our region*. We are pleased to offer research funding by giving small grants for projects consistent with our mission.

Grants are available in two categories: (A) The Ken Iverson Memorial Grant provides up to \$400 available specifically for research on our native cats. One grant is awarded each year. (B) General BCNA grants of up to \$1000 to \$2000 will fund projects adding to our understanding of the natural history of Boulder County or will augment the existing documentation of the County's ecosystems. We currently have up to \$4000 available for such grants. BCNA is proud to support local research. For descriptions of research projects we have funded, see <http://bcna.org/grantapplications.html>

Proposals should include a detailed methodology, timeline, a complete budget (to include other funding sources), and be limited to five pages. No institutional overhead is allowed. Individuals at institutions requiring overhead can apply as independent scholars. Successful applicants sign a contract specifying they will complete the project in the current year, will share results with the BCNA, and will allow BCNA to share written reports of results on the web. Reports will be due by March 1, 2017.

Applications should be submitted no later than February 15, 2016, either to the BCNA post office address: PO Box 493, Boulder Co 80306, or to peterk218@gmail.com.

CONGRATULATIONS TO BCNA MEMBERS

Boulder County Audubon Society this year awarded a Lifetime Achievement Award to both Janet Chu and Steve Jones. The Community Conservation Award was given to Carol McCasland. We are grateful to all for their contributions to BCNA and BCAS! See the Autumn issue of the newsletter for additional information.

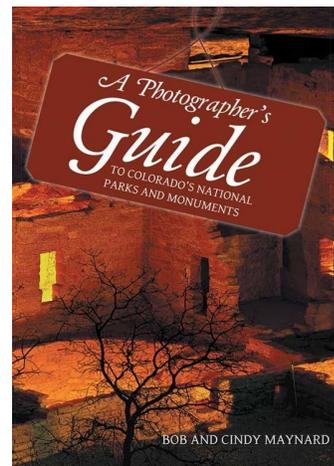
A PHOTOGRAPHER'S GUIDE TO COLORADO'S NATIONAL PARKS AND MONUMENTS

By Bob and Cindy Maynard

Cindy Maynard (naturalist and BCNA Board member) and her husband, professional photographer Bob Maynard, have just published a guide book to Colorado's four National Parks and seven National Monuments. For photographers this book provides all the information you will need "to be in the right place, in the right season, with the right lens, and at the right time." The insightful descriptions of the archeology, geology, history, plants, and wildlife will entice you to visit these remarkable places.

As Steve Jones writes, *Far too often, visits to our national parks and monuments consist of driving around, pulling off at a few turnouts, and taking short nature walks. This beautiful, engaging book opens our eyes to the unique characteristics and origins of protected forests, dunes, grasslands, and marshes, gently guiding us ever deeper into the landscape. Spectacular photos and directions to photo destinations lead us to one wondrous place after another.*

To purchase the book, go to <http://www.coloradoplateauphototours.com/pages/a-photographers-guide-to-colorados-national-parks-and-monuments.php>



(Recovery, continued from page 4)

These habitat monitoring results also include measures of tree shading and other features which affect aquatic life, so again these results feed directly into planning for areas which need restoration or that can be allowed to regenerate. The water quality results to date have been, in general, fairly good.

Although the flood removed many trees and other riparian components, the rarely occurring sediment flushing action from the flood exposed a wealth of habitat and created flow characteristics that have increased oxygenation, reduced the effects of excessive nutrient inputs, and acted to kick-start many riparian and aquatic biological processes that consume and convert organic and inorganic waste.

My final word is about looking for opportunities as we head into the next several years of flood recovery and ecological restoration. Long-term monitoring is vital in order to track the current state of our Open Space stream habitats and species, particularly our listed and critical species, such as the Preble's mouse and many state-listed native fish species. We plan to continue this work into the future, and appreciate public support of these efforts.

In addition to ecological monitoring, our staff of ecologists and biologists will continue to look for grants to complete the much needed work to keep and rebuild our stream habitats. While we are implementing some grants, such as restoring a washed out pond at Pella Crossing into a healthy shallow wetland that can support the recovery of threatened native fish like the Redbelly Dace, there are many other small and medium-size projects that will need funding to implement habitat and species recovery.

We will also continue to work with our state and federal partners as projects to rebuild infrastructure such as roads and dams are put into place. Although the 2013 flood created a great deal of impact to our Open Space lands and creeks, and with it a complication of work projects and concerns about habitat, please know that the biologists and ecologists at BCPOS continue to be vigilant and resourceful in protecting what remains, encouraging what is coming back, and mindfully replacing what we believe cannot recover on its own.

And as always, we thank the membership of BCNA for their continued support of our efforts and as active partners for moving forward as a community with the goal of stewarding ecologically healthy, biologically sustainable, and highly bio-diverse stream habitats and riparian corridors on Open Space.

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Support the Boulder County Nature Association

Name _____

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Email _____ required if you wish to receive the BCNA BUZZ

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.

For online renewals, please visit <http://bcna.org/member.html>

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