Ann Henson: “Come and See!”  
The Wildflowers of Rabbit Mountain  
Megan Bowes

Boulder County’s Rabbit Mountain is located on a finger of mountain topography that extends from the easternmost limit of the Rocky Mountain foothills out into the western Great Plains. Two rare plant communities associated with this forest-grassland ecotone are well documented at Rabbit Mountain and are of both global and statewide significance: Mountain-mahogany - Skunkbush Sumac / Big Bluestem Shrublands and Ponderosa Pine / Mountain-mahogany / Big Bluestem Wooded Herbaceous Vegetation.

The area, roughly five miles northwest of Longmont, was once used by the Arapaho Indians as a winter home, as seven naturally-occurring springs and a variety of plants supported an abundance of game and edible vegetation. Christopher Columbus Weese later homesteaded an initial portion of the Dow Flats and “Rabbit Hill” area around 1865. Weese and subsequent generations of his family (including Jack Moomaw, one of the first rangers in Rocky Mountain National Park) farmed and ranched the lands until the acquisition of the Rabbit Mountain property by Boulder County Parks and Open Space in 1984.

During a five-year survey initiated in 2000, Ann Henson documented the presence and bloom times of 186 different vascular plant species along the Eagle Wind Trail. Ann’s field study began as a personal project to discover the flora of Rabbit Mountain. As soon as the soil warmed in the spring, she went in search of flowers. Ann visited every other week during the growing season and she required the use of a botanical field guide to identify things she was unfamiliar with. Both of these actions ensured Ann learned many new plants she might not have otherwise noticed.

Two species of particular note were pellitory (Parietaria pensylvanica) and tragia (Tragia ramosa). Pellitory is a small, green forb in the Urticaceae Family—but unlike its better known cousin, the nettle (Urtica gracilis), pellitory doesn’t produce stinging hairs. Conversely, the much overlooked tragia (also referred to as “branched noseburn” by the USDA-NRCS PLANTS Database) is a stinging spurge!

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When naturalist Denis Gale carried out the first comprehensive survey of Boulder County's breeding bird populations during the 1880s, he documented sharp-tailed grouse nesting in shrublands north of Rocky Flats, long-billed curlews breeding in the Boulder Creek floodplain, and mountain plovers rearing young in remaining expanses of shortgrass prairie. By the time the University of Colorado's Junius Henderson compiled the first checklist of Boulder County birds in 1908, these three prairie species no longer nested here. A fourth species, Barrow's goldeneye, appears to have been extirpated from the mountains, where pairs once nested in woodpecker holes in what is now the City of Boulder watershed.

From 1908 to the present, no additional breeding bird species appear to have been extirpated from Boulder County. But with urbanization chopping up remaining grasslands into smaller and smaller chunks, it appears that our run of good luck is about to end. Lark buntings, once considered abundant in Boulder County, have not been documented nesting here for more than a decade. Burrowing owls are struggling to raise enough young to sustain viable nesting populations; at least half of nesting attempts fail, and successful attempts produce few young. Northern harriers, described by Gale and Henderson as “fairly common summer residents” on the plains of Boulder County, are just about done for.

During 2012, 70 or more Boulder County Nature Association volunteers monitoring wetlands and prairie dog colonies in eastern Boulder County found no evidence of northern harrier nesting. A single nest discovered near Boulder Reservoir in 2011 failed. Since 2004, only 5 of 13 documented nests in the wetlands surrounding Boulder Reservoir, our only recently successful site, have fledged any young.

Birdwatchers often express surprise when we tell them that the northern harrier may be the most threatened nesting species in Boulder County. After all, we see harriers frequently, especially in fall and winter, when individuals glide low over wetlands listening for scurrying voles and mice. But during the late April through July nesting season, harriers become rare locally. Why would this be?

Those of us who have spent years watching northern harriers around Boulder Reservoir have seen them being harassed by red-tailed hawks and coyotes. Predatory great horned owls perch on telephone poles within sight of northern harrier ground nests, which are usually located in fragments of cattail marsh on the west side of the reservoir. These marsh fragments are so small that any self-respecting coyote, red-tailed hawk, or owl can quickly ascertain the most likely location of a vulnerable nest.

To make matters worse, we’ve constructed osprey nesting platforms in three locations around the reservoir. "Don't osprey each fish," people ask. Good question, but most raptors will take protein wherever they can find it. We’ve seen the ospreys flying within a few feet of northern harrier nests as they commute back and forth from their platform nests to the reservoir. Furthermore, ospreys didn't nest historically on the plains of Boulder County. Their introduction here, while a commendable reaction to threats to their North American populations posed by DDT poisoning and habitat destruction, may have failed to take into account delicate relations among nesting raptors in Boulder County.

So what do we do? I’d suggest that every Boulder County open space and wetland management/restoration plan should strive to:

1) Expand the acreage of wetlands while reducing fragmentation of existing wetlands.
2) Eliminate trees, telephone poles, and other perches within 400 meters of historic northern harrier (and burrowing owl) nesting sites.
3) Provide for monitoring of nesting populations to gain a better understanding of why nests are failing.

Why is this so important, especially if northern harriers are doing okay in other parts of North America? If we, the residents of Boulder County, with all our wealth, protected open space, and environmental awareness, can't retain our own native species populations, what hope remains for the rest of the world? And it isn't just the harriers—it's also the burrowing owls, lark buntings; extirpated bison, wolves, and pronghorn; the entire prairie ecosystem—a sacred place sometimes described as "the American Serengeti." The least we should do is to try to retain a small remnant of it in our human-dominated world.

"Love the Earth as a babe loves its mother's heartbeat."
- Chief Seattle
First Annual BCNA Summer Membership Meeting  
at Boulder Reservoir, August 24, 2013  

The marshes and grasslands around Boulder Reservoir support more nests of Boulder County avian species of concern than any other comparably sized area in the county.  
Boulder Reservoir Master Plan 2012

Join us on August 24, Saturday, 6:00 pm at the Boulder Reservoir for a potluck picnic, where we will review the progress being made with the City of Boulder Parks and Recreation Department’s newly updated Boulder Reservoir Site Management Plan and its impacts on wildlife and nesting birds. Bring your own drinks and table service and a summery dish to share. Watch for reminders in The BCNA Buzz!

Background: Since 1982 Boulder County Nature Association volunteers have monitored wintering raptor and nesting bird populations at and around Boulder Reservoir, which is managed by City of Boulder Parks and Recreation and the Northern Colorado Water Conservancy District.

In 1987 the City of Boulder and the Northern Colorado Water Conservancy District announced their intent to harden the Boulder Reservoir spillway, enabling them to raise the water level in the reservoir by approximately four feet. BCNA approached the City, pointing out that raising the water level by this amount would inundate much of the American Bittern and Northern Harrier nesting habitat on the west side of the reservoir. We asserted that under the Clean Water Act, they needed to apply for a 404 permit any time they anticipated disturbing an acre or more of wetlands, and that they would be required to mitigate for any disturbance by establishing two acres of wetlands for every acre disturbed.

The City, including City Council, reacted with open hostility to our petition, arguing that since they had created the wetlands in the first place (by creating Boulder Reservoir), they were not required to replace them. We pointed out that there is nothing in the Clean Water Act specifying how wetlands were “created,” and that aerial photos taken before the reservoir was built show dozens of acres of wetlands where there is now only water. Finally, after we threatened legal action, they agreed to replace the inundated wetlands. In 1988, check dams were installed in previously channeled Little Dry Creek and Dry Creek, creating sheet flows that led to establishment of several acres of wetlands west of the reservoir. Gravel pits west of Coot Lake were restored to create additional wetlands. American Bitterns and Northern Harriers have nested in these newly created and restored wetlands ever since.

In 2010 the Boulder Parks and Recreation Department undertook revision of the Boulder Reservoir Site Management Plan and solicited public input. We asked for the following:

1. Protection of all wetland and grassland areas surrounding the reservoir and west of Coot Lake from fragmentation by additional trails or other recreational activities.

2. Leashing of dogs being walked on the trail that skirts the Coot Lake wetland during the April to July American Bittern and Northern Harrier breeding season.

3. Better enforcement of recreational closures of wetlands and shorelines on the west side of the reservoir, especially during the bird nesting season.

4. Continued closure to boating (through buoy placement) of the inlet on the southwest side of the reservoir and a new closure (through buoy placement) of the inlet on the northwest side of the reservoir.

The adopted management plan incorporated some of these requests, with modifications.
BCNA Wintering Raptor Survey
Sue Cass

At the close of the 2012-2013 season on March 15, 90 volunteers had contributed over 600 volunteer hours toward the completion of BCNA’s 30th Wintering Raptor Survey. We thank you all and thank also all who have served during this important three-decade-long research project. Thirty years is a long time! In some cases the species trends rise and fall within reasonable parameters and with understandable predictability and in others the trends are only downward. Now the fun begins trying to make sense of it all and using what we have learned to inform future actions. BCNA’s Publication Committee will publish a monograph later this year that assesses species trends for wintering raptors in Boulder County and attempts to determine cause and effect for those trends. Stay tuned!

Thank you volunteers: John Adams, Larry Andersson, Bev Baker, Dale and James Ball, Jean Bettenhausen, Pat Billig, J. D. and Bradley Birchmeier, Megan Bowes (data entry), Liza Boyle, Barbara Brandt, Kerrie Bryan, Ron Butler, Sue and Alan Cass, A. D. Chesley, Al and Kevin Clark, Karen Clark, George Coffee, Sue Cornick, Pat Cullen, Paul Culnan, Michael and Jean Delaney, Fern Ford, Sheila and Robert Frost, Linda Gathany, Bernard and Marilyn Gay, Caroline Gidden, Sallie Greenwood, Bill Gumbart, Renee Haip, Ed Hall, Brinda Henley, Jennifer Hyypio, Shirley Jin, Steve Jones, Will and Sean Keeley, Elena Klaer, Kristin Laubach, Viki Lawrence, Maureen Lawry, Skye Lewis, Cat Luna, Joe Lupfer, Topiltzin Martinez, Cindy Maynard, Carol McCasland, George and Marti Oetzel, Joe and Beccy Pem, Mark and Sue Ponsor, Alex Posen, Emi Roberts, Lyle, Rosbotham, Carol Sazama, Jean Sobolik, Jerry Spangler, Gary Stevens, Levi Stone, Joel and Marcel Such, Wendy Sydow, Laurel Temmen, Darin Toohey, Claudia Van Wie, Tom VanZandt, Mark Venzke, David Waltman, Mort and Lisa Wegman-French, Maribel Williams, Nan Wilson, Kristi and Kevin Winseck, Howard and Pattiann Witkin, Jane Wolbier, George Young, and Greg Young.

Congratulations to BCNA Award Winners!

Steve Jones, one of the founders of BCNA and a member of our Board, has received the prestigious Ron Ryder Award for outstanding contributions to Colorado ornithology from the Colorado Field Ornithologists. The award is given to individuals who have “performed distinguished service to the Colorado Field Ornithologists and its goals, made scholarly contributions to CFO and Colorado ornithology, and shared knowledge of field ornithology with the people of Colorado.”

The Boulder County Commissioners and Parks and Open Space staff presented their annual Land Conservation Awards in April. Several members of BCNA received awards this year: George and Marti Oetzel received the Environmental Stewardship Award for “outstanding achievement in environmental stewardship exemplified by the coordination and supervision of the Boulder County Audubon/Boulder County Parks and Open Space nest box monitoring program.” George manages BCNA’s website.

Megan Bowes, Vice-President of BCNA, was awarded the Outstanding Volunteer award for her contributions as a Native Plant Master Program volunteer. She’s been a CSU Extension Native Plant Master Instructor for five years and is also a volunteer with the Colorado Native Plant Society.

Joyce Costello, a member of BCNA, was also awarded an Outstanding Volunteer award for her contributions as a Volunteer Naturalist.

Have you renewed your membership for 2013? The strength in BCNA lies in active membership support!
This year’s Boulder County Ecosystem Symposium was held on Saturday, March 16, in the Ramaley Auditorium at the University of Colorado. The title was “Song of the Alpine: Climate Change and the Resilience of High Elevation Ecosystems”, in honor of long-time BCNA member Joyce Gellhorn who died last summer.

The series of presentations began with a special tribute to Joyce Gellhorn. Cal Whitehall, Maddie Estin, and Jim and Kathy Snow showed slides and videos of Joyce and her work. Dr. Bill Bowman followed with a talk on atmospheric nitrogen effects on alpine vegetation, soils, and surface waters with future implications for biodiversity. Scott Ferrenberg gave a summary of his research findings from Colorado’s high elevation forests which haven’t previously been affected by bark beetles. Scott suggested that weaker defenses in high elevation trees could promote future bark beetle epidemics in subalpine forests as global temperatures continue to rise.

Tommy Detmer gave a rather humorous talk on how fish introductions into historically fishless lakes can sometimes affect macro-invertebrate communities and thus algae production. Dr. Chris Ray returned to speak about her beloved pika and the challenges this “cold-adapted” species faces as habitat becomes scarce across the American West. And Dr. Mark Williams and Glenn Patterson closed the day with two talks on mountain areas as sentinels of climate change and how future changes in snowpack amounts and timing will affect snow and ice melt contributions to the runoff of lowland areas.

Evaluation comments were generally favorable. Many commented that the speakers communicated well to the (largely lay) audience and that the suite of presentations was cohesive. Many people appreciated the tribute to Joyce. Registration recorded 104 participants. The organizing committee attempted to increase attendance by CU students. Janet Prevey posted copies of the poster in and around the Biology buildings which seemed to be somewhat effective. The committee should decide if additional efforts are warranted in the future. Sue Cass continued to organize the lunch and other food items. She reports that the expenditure this year was $323.80, very much in line with the past several years. She will continue to explore alternate menu items and their feasibility and report back to the committee.

The organizing committee was comprised of members of the BCNA board, Boulder County Audubon Society, the Boulder chapter of the Colorado Native Plant Society, and faculty and graduate students of the University of Colorado. The University donated the room and AV equipment, while the Boulder chapter of the Colorado Native Plant Society paid for the design and printing of the program brochure. Additional sponsorship in the form of $100 donations came from BCAS, Boulder Open Space and Mountain Parks and Boulder County Parks and Open Space. The organizing committee followed up on last year’s attempt to highlight the BCNA Research Grants Program and formally asked for donations for this purpose. This year participants donated $242.

The theme of the 2014 Ecosystem Symposium will be Endangered Species in Boulder County and their Management with a focus on research being conducted in the County and the surrounding area.

Call for Research Proposals
Peter Kleinman

The Boulder County Nature Association has supported several research grants for many years that deal with the natural history of Boulder County. From its outset, this has been an important mission of the Nature Association and a unique contribution to community participation in local science activity. Grants are available in two categories again this year.

First, the Evenson Memorial Grant offers up to $400 and supports research on our native cats. Second, general BCNA grants up to $1000 (or more if funds allow) fund projects adding to our understanding of the natural history of Boulder County or documenting the County’s ecosystems. For examples of research projects that have been funded by BCNA, go to http://www.bcna.org/publications.html.

Proposals should include a detailed methodology and a complete budget and be limited to five pages. No institutional overhead will be allowed. Successful applicants sign a contract specifying they will complete the project in 2013 and share results with the Nature Association. We ask for electronic submission of a final report. Applications should be submitted by Saturday, June 29, 2013, either to BCNA, P.O. Box 493, Boulder, Colorado 80306, c/o Peter Kleinman, Chairman, or by e-mail to peterk218@gmail.com.
Ann also found that Rabbit is a wonderful place to learn native grasses, since the prairie and foothills species mingle amongst each other. Other interesting observations were made over the drought years of 2000 and 2002. During the 2000 to 2004 survey timeframe, annual rainfall ranged between 17 and 41 inches, occasionally well below the previous ten-year average of 15.5 inches. (This earlier timeframe is often referred to as “the wet nineties”!) In spite of these supposed set-backs, Ann made note of how the most common species grew and bloomed. Her data suggest that while the height and frequency of any one species may have been diminished during those drought years, many still maintained their presence over both the short-term and long-term. Ann recognized that “our native flora has evolved in drought as well as better times. So, the wildflowers of Rabbit Mountain continue to bring us joy.”

At the culmination of her five-year study, Ann compiled a list of the most common plants and grouped them by flower color and approximate bloom chronology. She published this data as a wildflower checklist which can be obtained at the Colorado Native Plant Society’s website (http://www.conps.org/pdf/Plant_Lists/Wildflowers%20Rabbit%20Mtn.pdf). This list details two-thirds of the complete list of 186 species identified. Ann then went on to become a Boulder County Parks and Open Space “weed warrior.” After coming to know and love the area so well, she recognized the need to conserve the native plant communities which were threatened by weed populations. Her expertise in lichens is also well-known.

Ann has entered another chapter in her life and would like to reach out to someone to revisit her bloom survey. She recognizes that others can learn from this type of a phenological study in much the same way she did. In a brief forward to her wildflower checklist, Ann wrote, “All kinds come and go during the season. Only the frost of fall stops the show. Come and see.”

For more information about Ann Henson’s Rabbit Mountain Field Study and to find out how you can get involved in continuing the data collection, contact Megan Bowes at bowesm@bouldercolorado.gov or 303-561-4883.

Knowledge of plants and their landscapes is too often taken to be a territory of specialists. Yet such knowledge has been, over most of human history, a wonderfully intimate and common information, shared with families and villages, and as such often is strikingly detailed and accurate. Common knowledge is a measure of knowing and loving a place. Acquaintance with the primary ecological systems is a first step in becoming authentic inhabitants of any landscape on earth. – Gary Snyder

Connect with nature:
nature-net-subscribe@yahooogroups.com
SUMMER CALENDAR

July 7, Sunday, 7 to 11 am. Join eco-stewards Steve Jones (curlwelsj@comcast.net; 303-494-2468) and Ron Butler for a **bird, mammal, and butterfly survey in Long Canyon**. We should see lots of frigitillaries and other butterflies on this trip. Meet at the Realization Point parking area (3.5 miles up Flagstaff Mountain Road opposite the summit turnout).

July 11, Thursday; 5:30 pm to twilight. **Caribou Ranch—Conifers and Colorful Wildflowers Galore**. Colorado Native Plant Society Leader: Megan Bowes. Visit the spectacular Caribou Ranch Open Space with its significant wildlife habitat and very diverse montane plant communities. We’ll go on an easy hike to see seven of Boulder County’s conifer species as well as wildflowers in the mountain meadows. And if there’s time, we’ll see the historic DeLonde homestead and barn. For more information contact Megan at bowesm@bouldercolorado.gov or call 303-561-4883 or go to www.conps.org.

August 8, Thursday; 5:30 pm to twilight, **South Boulder Creek Riparian and Floodplain Restoration**. Colorado Native Plant Society leader Marianne Giolitto will lead this trip along the South Boulder Creek Trail to talk about the riparian and floodplain ecosystem, as well as ongoing restoration in the area, which is part of the South Boulder Creek State Natural Area that supports the vast majority of critically imperiled mesic bluestem (tallgrass) prairie, as well as two federally threatened species -- the Preble’s meadow jumping mouse and the Ute ladies’-tresses orchid. Meet at South Boulder Creek Trail, access To register and for more information contact Megan Bowes, bowesm@bouldercolorado.gov or call 303-561-4883.

August 10, Saturday; 9 am to 12 pm. **Front Range Wetland Plants and Dragonflies**. Join Colorado Native Plant Society leaders Megan Bowes and Ann Cooper to review wetland plants and plant associations and discover dragonflies and damselflies that rely on these wetlands for their well-being. Come learn more about these masterful hunters. Along the way, we’ll be sure to identify many of the wetland plants used by dragonflies. Meet at Walden Ponds, one mile north of the intersection of 75th and Valmont. Bring snacks, water, close-focus binoculars if you have them, and your favorite key or field guide. For more information and to register contact Megan at bowesm@bouldercolorado.gov or call 303-561-4883.

Natural History Summer Workshops for Children.

Engage in fun, hands-on, and stimulating science activities. Enjoy expeditions through museum exhibits and collections. Participate in entertaining activities and games. For full descriptions, please visit our website http://cumuseum.colorado.edu/education-tours/summer-workshops. Each workshop meets from 9:00 am to noon at the CU Museum of Natural History on the CU-Boulder Campus. Snacks will be provided. The fee is $25 per workshop. Advance registration and payment required (cash, check, or credit card). Please contact us about reduced rates if your children qualify for free/reduced lunch at school. Call 303-492-1666 or email museumed@colorado.edu.

September 25, Wednesday, 3:00 pm until dusk, **Autumn Hike at Caribou Ranch Open Space** led by Megan Bowes and Steve Jones. We’ll hike about 1.5 miles to the old homestead area, where we’ll enjoy a potluck picnic around sunset. We’ll look for late flying butterflies and the changing colors of the aspen leaves. If we’re lucky, we’ll hear the elk bugling! Bring your own drinks and plates/utensils and a portable dish to share. Meet to carpool at 3:00 at the Settlers Park parking area just off Canyon Boulevard near the mouth of Boulder Canyon. Return around 9. For information contact Megan Bowes: bowesm@bouldercolorado.gov or call 303-561-4883.

ALL ABUZZ ABOUT BCNA!

_The BCNA Buzz_ is a new way for us to communicate more frequently with our members, keeping you up-to-date on all of BCNA’s activities and informed about conservation issues in Boulder County. It will be emailed periodically during the months you don’t receive our newsletter (which is mailed the first week of January, April, July, and October). If you haven’t received the June issue of _The Buzz_, email your address to Cindy Maynard at: cmaynardre@gmail.com. And send us your thoughts and suggestions on what you would like to see in _The BCNA Buzz_.

We invite you to report your sightings to www.coloradofrontrangebutterflies.com
Support the Boulder County Nature Association

Name __________________________________________________________
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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
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