May 28, 7:15 p.m.

**Bees Needs: Citizen Science at CU**

Dr. Alexandra Rose and Virginia Scott

The University of Colorado Museum of Natural History has recruited 250 volunteers to help learn about native pollinator communities in the greater Boulder County region.

Did you know that there are more than 550 species of native bees in Boulder County alone? This astonishing diversity is comprised mostly of bees that are much like birds in their natural history—they are solitary nesters that take much time and care in the creation of homes for their brood, and different species even use different kinds of nesting materials. About one third of solitary nesting bees in Colorado use cavities excavated in dead wood by previous occupants much like secondary cavity nesting birds.

CU Museum Entomology Collections Manager and Colorado bee expert, Virginia Scott, and Citizen Science Program Manager, Alexandra Rose, will tell us lots of interesting facts about the biology and nesting behavior of our local bees. They’ll also tell us about *The Bees’ Needs*, which is a citizen science project that seeks to understand how landscaping decisions that we make as communities and individuals impact native bee and wasp diversity.

(Other local projects, such as monitoring nesting birds, are also citizen science projects.)

Dr. Alexandra Rose is the Citizen Scientist Coordinator at the University of Colorado Museum of Natural History and Science Discovery. Alex has a PhD in Ecology and Evolutionary Biology from UC Santa Cruz, where she studied Tree Swallows for her dissertation, relying on an entirely volunteer workforce of field assistants ranging in age from 17 to 67. After graduate school she taught for 3 years at the University of Wyoming. She and her husband moved to Boulder last summer. She is excited to learn more about our native bees alongside *The Bees’ Needs* participants.

Virginia Scott is the Collections Manager of the Entomology Collections at the University of Colorado Museum of Natural History. Her work with solitary wood-nesting bees began in 1983, in the meadows of Upper Michigan. She was a major contributor to *The Bees of Colorado*, the first compilation of the bee species that occur in Colorado, This compilation was published in September 2011. At that time, 946 bee species were documented from our state. Come learn about the incredible diversity of bees in Colorado, the history behind *The Bees of Colorado*, and the knowledge that has been gained since the publication. She collected bees locally by trap-nesting during the summers of 1994 and 1996. Those specimens serve as the basis for *The Bees’ Needs*, which will hopefully inspire others to learn more about native bees.

*Pictures provided by the presenters*
Spring-Summer 2013 field trips


Roll & Stroll, Sawhill Ponds, May 18, 9:00 a.m. Boulder Audubon birders team up with Topher Downham from OSMP to provide this bird-watching experience for people who use walkers, wheelchairs, strollers, or those who appreciate a slower pace.

Fort Collins Audubon/Boulder County Audubon Society birds & butterflies of Upper Beaver Meadows, June 22, 7 a.m. to 1 p.m.
Wayne and Dianna Johnston and Steve Jones will lead this joint trip with Fort Collins Audubon to the beautiful aspen groves of Upper Beaver Meadows in Rocky Mountain National Park. Meet to carpool at 7 at the North Foothills Trail parking area on North Broadway (a dirt road) just north of the intersection of Broadway and US 36. We will share the park admission fee. Limited to 10 participants. To register contact Steve at curlewsj@comcast.net; 303-494-2468.

Long Canyon—Sunday, June 16, 7-11 a.m. Join eco-stewards Steve Jones (303-494-2468) and Ron Butler for a bird, mammal, and butterfly survey in Long Canyon. They’ve documented more than 50 breeding bird species and 65 butterfly species in this secluded part of the Boulder Mountain Park. Meet at the Realization Point parking area (3.5 miles up Flagstaff Mountain Road opposite the summit turnoff).

Long Canyon—Sunday, July 7, 7-11 a.m. Join eco-stewards Steve Jones (303-494-2468) and Ron Butler for a bird, mammal, and butterfly survey in Long Canyon. We should see lots of fritillaries and other butterflies on this trip. Meet at the Realization Point parking area (3.5 miles up Flagstaff Mountain Road opposite the summit turnoff).

Dodd for the Summer—Sunday, June 9, 10 a.m. (also July 14 and Aug 11) is the time when we are all impatiently awaiting the outcome of our work at Dodd Reservoir last year. Join us for answers to important questions: Will we have scones, brownies or croissants for a treat? Will the eagles be in the cottonwoods? Plan to join us for as many of the second Sundays as you can. Times will be announced depending upon the weather and treats will vary. The Youth Naturalists will be joining us at least two Sundays to run the bird and butterfly transects and do their annual damage to the Hoary Cress. Contact Petrea Mah (petreamah@comcast.net) for more information or just show up on June 9 or other second Sundays this summer.

EXCITING CHANCE TO WORK WITH YOUTH

It should be great fun to hang out with kids 10-13 for one to three mornings throughout the summer. Boulder County Audubon Society will provide science education for Boulder Reservoir Youth Aquatic Camps by leading 1.5 hours birding and butterfly monitoring trips.

These camps are offered in one week segments from the week of June 3 through the week of August 12. Each group will be 10 campers, one BCAS Youth Naturalist and one BCAS adult. The activity will include either bird or butterfly counts (as identified by the campers) and ½ hour of compilation and discussion. Participants will be provided with a pair of binoculars and bird field guide or a butterfly net and a butterfly field guide.

No special skills except basic bird and butterfly identification; we hope to let the campers sort it out from their field guides, and remember what great field people we have in our youth naturalists!

Contact either Steve Jones curlewsj@comcast.net or Petrea Mah petreamah@comcast.net if you can make time for this exciting joint project.
Walker Ranch, Regional Trails, and Comprehensive Planning

On May 7 Boulder County Parks and Open Space will hold a meeting to present the revised Walker Ranch Management Plan and accept public comments. The meeting will be held at the County Clerk and Recorders offices on 33rd street, beginning at 7 p.m. We expect a good number of mountain bikers, trail runners, horseback riders, birdwatchers, and naturalists to pack the meeting room. For many of us, the stakes seem high. Will one of our richest remaining wildlife concentration areas in the foothills west of Boulder become the nexus of a regional trail extending from Boulder to Nederland?

For years the Meyers Gulch area in the northern half of Walker Ranch has served as a refuge for birds and mammals and a quiet hiking area for nature lovers. The Boulder County Audubon bluebird nest box project began at Meyers Gulch, and nest boxes there fledge several hundred mountain and western bluebird young per year. Eco-steward Laura Osborn has documented 70 breeding bird species in Meyers Gulch, including Wild Turkey, Dusky Grouse, Williamson's and Red-naped Sapsucker, and Olive-sided Flycatcher. Jan Chu has found an equal number of butterfly species along the Meyers Homestead Trail, where legions of swallowtails gather early summer. Elk, Black Bears, Mountain Lions, and Bobcats frequent the gulch throughout the year.

Meyers Gulch lies within the Hawkin Gulch/Walker Ranch/Eldorado Canyon Environmental Conservation Area, one of several large natural areas designated in the Boulder County Comprehensive Plan. But it also sits in the path of one of two proposed routes for a regional multiuse trail. One route would follow the existing trail from Eldorado Springs to lower Walker Ranch and then proceed westward toward Gross Reservoir and the Peak-to-Peak Highway. A more northern route would parallel Flagstaff Mountain Road from upper Chapman Drive west to Meyers Gulch and then exit the north end of the gulch and proceed westward (speculatively) along the City of Boulder Aqueduct, which follows the south side of Boulder Canyon from Barker Reservoir to Kossler Lake.

For several years we've advocated for the southern route through Eldorado Canyon, since it mostly follows existing trails and wouldn't fragment habitat for Black Bears, Mountain Lions, and Northern Goshawks in remaining wild areas in Meyers Gulch and Boulder Canyon. However, talks among Eldorado Canyon State Park and other agencies to enable a mountain bike-accessible route through the park and up to Walker Ranch have yet to bear fruit.

So we're caught in a dilemma. Boulder County should have regional trails. But where can they go without further fragmenting precious wildlife habitat? In the draft plan, released to the public just as On the Wing went to press, Boulder County Parks and Open Space staff proposed deferring a decision on regional trail-routing through Walker Ranch pending discussion with various agencies of the desired Eldorado Canyon connection, along with investigation of the two potential routes west from Walker Ranch. So the Meyers Gulch-aqueduct connection is still on the table. County staff did express a preference for the southern route, citing potential fragmentation and threats to wildlife habitat along the Meyers Gulch route.

The trail-routing discussion now will play out over the next couple of years as Boulder County launches a major inter-agency effort to find one or more routes for regional trails from the plains to the high mountains. The kickoff meeting for this effort was held on April 18, and many more meetings will follow. We'd love to have more Boulder County Audubon members involved in this discussion, so please get in touch if you'd like to participate.

On another front, Boulder County is in the process of updating the Environmental Resources Element of the Boulder County Comprehensive Plan. This foresighted document guides the County's efforts to preserve natural resources. Throughout the years, County staff have openly involved local groups in discussing and proposing improvements to the plan.

This current plan review comes up just as several species that inhabit the plains of Boulder County are disappearing. White-tailed Jackrabbits have become rare. Northern Harriers have nested successfully only twice during the past eight years. Lark Buntings, once abundant locally, haven't been documented nesting for at least 10 years.

Many of us feel that the current plan, though meticulously prepared, is not strong enough to ensure that native species continue to survive in Boulder County. To that end, Boulder County Audubon and Boulder Rights of Nature have recommended including specific language in the Environmental Resources Element acknowledging "the right of naturally occurring ecosystems and their native species populations to exist and flourish in Boulder County." Santa Monica, California, just passed an ordinance that includes similar language. Ecuador, Bolivia, and 150 municipalities in the United States also have passed rights of nature laws.

While such language wouldn't be legally binding (the Comprehensive Plan is a planning document, not a legal one), it would give all of us stronger resolve to make ecosystem and native species protection a first priority when we draft new management plans. With our still-growing human population and rapidly accelerating uses of public lands, we're going to need that resolve to avoid losing more of the sacred gifts that surround us.

— Steve Jones, BCAS president
SPECIES OF CONCERN-A-THON
SUMMER 2013 FIELD TRIPS

As of April 10, just a few slots remain on the these specially crafted outings that will help support our Dodd Reservoir Prairie Restoration Fund, as well as provide teen scholarships to Audubon’s Hog Island Education Camp. Please email Pam Piombino at piombino.pam@gmail.com to reserve a spot and receive further information. Please include your name, phone number and email address.

SECRET GARDEN: SKUNK CANYON (3 slots) Leaders: Eco-Stewards Maureen Lawry, Elaine Hill, Carol Kaempert Join these dedicated women on an exploratory hike to see what species have returned to Skunk Canyon for the breeding season. We’ll have coffee in a secret riparian garden followed by a gourmet breakfast to end the morning. $40.00, limited to 10. Thursday, May 30.

BUTTERFLIES OF THE FOOTHILLS (3 slots) Leader: Jan Chu. Jan, who coauthored Butterflies of the Colorado Front Range with Steve Jones, will lead you on a slow paced observational journey. You will visit one of Boulder County’s foothills riparian areas for a look at the tremendous diversity to be found in the family Lepidoptera. Jan has a catch and release permit, so you will get to see the butterflies in hand and have an opportunity to photograph them. Limited to 8, $25.00. Monday, June 10, 9:30-1:30.

PUEBLO MOUNTAIN PARK (2 slots) Leader: Joyce Takamine. Pueblo County has the largest bird list in the state. This park, seldom explored by us northern front-rangers, consists of Ponderosa, mixed Conifer, Foothill Shrub, Aspen and Gambel Oak Groves. The delightful Acorn Woodpecker is the target species, as this is the only known nesting site outside of Durango. Grace’s Warbler is also a possibility. A gourmet lunch will be provided. Limited to 8, $40.00. Saturday, June 29.

HUMMINGBIRD WORKSHOP (2 slots) Leader: John Vanderpoel, videographer and co-author of Hummingbirds of North America DVD. This is a very special opportunity to learn from an expert every aspect of hummingbird identification, behavior and natural history. Join John for a special workshop on those most magical of all bird species. A gourmet lunch will be provided. Limited to 10, $40.00. Sunday, August 4.

DAZZLING, DASHING, DRAGONFLIES (4 slots) Leaders: Ann Cooper and Scott Severs. Boulder County’s lush wetlands will be the setting for this outing with two of the Front Range’s most knowledgeable specialists in the daunting field of Odonata. Get up close and personal with these fascinating aerialists and begin to learn how to separate the dragonflies from the damselflies and the spread-wings. Photo opportunities abound. Limited to 8, $25.00. Sunday, August 11.

Dragonflies, Pretty and Deadly

Dragonflies are often grouped with butterflies and ladybugs on the very short list of “Insects People Like.” Yet they are also voracious aerial predators, and new research suggests they may well be the most brutally effective hunters in the animal kingdom.

When setting off to feed on other flying insects, dragonflies manage to snatch their targets in midair more than 95 percent of the time, often wolfishly consuming the fresh meat without bothering to alight. Dragonflies may be bantam, but their appetite is bottomless. Stacey Combes, who studies dragonfly flight at Harvard, once watched a laboratory dragonfly eat 30 flies in a row. “It would have happily kept eating,” she said, “if there had been more food available.”

Dragonflies are able to hover, dive, fly backward and upside down, pivot 360 degrees with three tiny wing beats, and reach speeds of 30 miles per hour, speedy for an arthropod. The four transparent, ultra-flexible wings are attached to the thorax by separate muscles and can each be maneuvered independently, lending the insect an extraordinary range of flight options.

Dragonfly eyes are the largest and possibly the keenest in the insect world, a pair of giant spheres each built of some 30,000 pixel-like facets that together take up pretty much the entire head. They can see you when they’re flying toward you and still see you when they’re flying away.

(King Soopers Certificates

Certificates are available at the monthly meetings.
BCAS receives a $5 donation from each $100 King Soopers certificate sold.
We have discontinued selling Liquor Mart certificates.
Bring your checkbook to the meetings.)
BOULDER COUNTY WILDLIFE INVENTORY, SEPTEMBER - NOVEMBER 2012

Gillian and Alex Brown, 4560 Darley Avenue, Boulder, CO 80305.

September usually sees the peak of fall bird migration, and this year was no exception. Fall migration never seems as obvious as spring migration with many drab looking immature birds rather than the crisp breeding plumages of spring which are by now well worn. Mountain breeding species such as Mountain Chickadee and Chipping Sparrow were being sighted on the plains; this may be a sign of drought as well as post-breeding dispersal. Shorebird migration was still going strong in September with Pectoral Sandpiper and Red-necked Phalarope being new species for the year. Other unusual shorebirds included Stilt Sandpiper and Short-billed Dowitcher. A Sabine's Gull was reported on Boulder Reservoir, another first sighting for the year. Three tern species, including our historically commonest Forster's Tern, as well as Least Tern and Black Tern, were reported for the first time this year in September. It is unclear whether this was a real absence over the summer, or a result of poor reporting. Eighteen Broad-winged Hawks were reported in September with one kettle of sixteen birds being seen over Longmont. Two Cassin's Vireos were reported; this is a species that is more typically seen in fall migration than spring. Warblers were well reported with Townsend's Warbler, Palm Warbler and Blackpoll Warbler being new for the year. An even more unusual warbler was Mourning Warbler, although one had been sighted in the spring. Other unusual September sightings included Red-necked Grebe, Eastern Wood Pewee, both Chestnut–collared and McCown's Longspurs, and Field Sparrow.

By October diving ducks were beginning to appear in greater numbers with the commonest diving duck being Lesser Scaup. Observers should always scan Scaup carefully to ensure that there are no Greater Scaup present; just one Greater Scaup was reported in October. October and November are usually the best months for spotting Scoters. A Surf Scoter was seen on Union Reservoir and a White-winged Scoter on Boulder Reservoir, both being new sightings for the year. Shorebird migration was continuing well into October with Black-bellied Plover and Dunlin being new species for the year. We had reports of two very rare birds in the county in October. A Pomarine Jaeger seen on Macintosh Reservoir was a first record for the wildlife inventory. All Jaegers are rare in Colorado, and Jaegers are probably the most challenging group of birds to identify as to species in the state. Historically, it was considered that inland Jaegers were regularly Parasitic Jaegers, but with the advent of more sophisticated observing, this has proved to be a myth. (Leukering 2003) Leukering goes on to state that between 1993 and 2003, the commonest Jaeger in Colorado was Pomarine Jaeger. He also states that Long-tailed Jaegers are not as rare as previously thought. However, there are not enough reports, and particularly reports with confirmed identification, to make definitive predictions about abundance. Since 1979 the wildlife inventory has received five reports of Parasitic Jaeger and three reports of Long-tailed Jaeger, all seen on our larger lakes. The second unusual sighting of October was an Anna's Hummingbird seen in Longmont. Fortunately, it hung around for just long enough (about 24 hours) to be seen by several observers. This is only the second report of this species for the wildlife inventory. The previous report in north Boulder was in 1997, when one was seen in early December, a highly unusual time of year to see any hummingbird. Another October sighting that was new for the year was a Rusty Blackbird. A Palm Warbler was an unusual sighting; this is one of the few warblers that are often seen in November and December.

— continued on next page
Wildlife Inventory—continued from p. 5

Both September and November 2012 were record months making this an exceptionally exciting fall. Altogether 181 bird species were reported in September; the previous record was for 178 bird species in September 2000. 132 bird species were reported in October, a respectable total but a long way off the record 149 species seen in October 2002. Finally 125 bird species were reported in November, tying the record number of species with November 2006.


CONTRIBUTORS TO THE SEPTEMBER-NOVEMBER 2012 INVENTORIES


The Cranes of Lewellen

Marcel and Joel Such’s blog:
http://tinyurl.com/brftfkc (slightly edited)

For the Apr 6-7 weekend, Boulder County Audubon Teen Naturalists travelled 3-1/2 hours northeast to the Nebraskan panhandle. Our group mentor, naturalist Steve Jones, guided us around a place he’s studied for the past twenty-five years. Also on our trip was the photographer and filmmaker, John Weller—Check out his work on the Ross's Sea at johnbweller.com; it's amazing and relevant!

Our primary mission was to see cranes . . . lots of them, in fact. 15,000 to 20,000 Greater Sandhill Cranes stop over on the North Platte River near Lewellen, several miles upstream from Lake McConaughy. Additionally, thousands of ducks and geese also use the river and surrounding cropland to gather on their journey north in the spring. It was an amazing trip full of opportunities to photograph and record birds, hike through historically and biologically rich landscapes, and hang out with others interested in the natural world.

Prior to meeting up with the rest of the group in Nebraska, we stopped at Jumbo Reservoir in Northeastern Colorado. Wind was blasting our faces as white caps raced across the water through immense numbers of waterfowl. The biggest spectacle was a massive flock of Snow Geese clustered tightly in the center of the reservoir. Suddenly, a Bald Eagle passed overhead and the geese began to lift and shift like specks in a freshly shaken snow globe only to resettle when danger had passed.

Once at Lewellen, a small, friendly town of 226 or so people, we wandered back roads and came across cranes lifting off from a nearby field and flying right over the top of us at fairly close range. The birds in the accompanying photos are all Greater Sandhill Cranes.
BCAS Board for Fiscal 2014

Officers: Vote for one in each category

President:  
____ Steve Jones

Vice-President:  
____ Petrea Mah

Secretary:  
____ Carol McCasland

Treasurer:  
____ Kitty Brigham

Directors: Vote for up to eight  
____ Dale Ball
____ J.D. Birchmeier
____ Raymond Bridge
____ Sharon Daugherty
____ Kristen Marshall
____ Chris Petrizzo
____ Pam Piombino
____ (Write-in)_____________________________

Cut out and fill in the ballot and mail to BCAS, P.O. Box 2081, Boulder, CO 80306. Ballots will also be available at the May 28 program meeting.

Boulder County Audubon Activists Receive Environmental Stewardship Award

BCAS activists George and Marti Oetzel will receive a Boulder County Environmental Stewardship award at the April 23 Boulder County Parks and Open Space Land Conservation Award ceremony. George and Marti were honored for their eight years of work coordinating and rebuilding the BCAS bluebird monitoring program at Walker Ranch, Betasso Preserve, Heil Ranch, Bald Mountain, and on City of Boulder Open Space. More than 100 nest boxes at these locations now fledge several hundred mountain and western bluebirds each summer. Prior to their renewal of the bluebird nest box program, western bluebirds were listed as "rare and declining" in the Environmental Resources Element of the Boulder County Comprehensive Plan.

Other award recipients included Keith Bateman, Land Conservation; The Little Church in the Pines Board, Historic Preservation; Geocaching Colorado, Partnership; and Megan Bowes and Joyce Costello, Outstanding Volunteers.

- Steve Jones

Bad News about Pesticides

Pesticides are made to kill something somewhere — it says it in the name and there is always a trade-off, says Pierre Mineau, Ph.D., co-author of a new study published in PLOS One that found that pesticides are the leading cause of grassland bird deaths.

The study was conducted from 1980 to 2003 and focused on the effects of acute pesticides organophosphate and carbamate on grassland birds. These pesticides affect the nervous system of an insect by disrupting the enzyme that regulates acetylcholine, a neurotransmitter. Developed in the 19th century, these chemicals were used during World War II in chemical warfare against humans, according to the Environmental Protection Agency’s website.

Grassland birds are most likely exposed to chemicals through food supply — contaminated seeds or insects — combined with skin exposure, mostly through the feet or feathers. Chemical absorption into the bird’s body poisons the bird.

"The period we just went through with the organophosphates and carbamates was particularly bad for birds," Mineau says. "Although I’m concerned about new compounds coming out, there is no doubt that those two were killing a lot of birds."

Other studies implicate systemic insecticides such as neonicotinoids in the collapse of honeybee colonies.

Maintaining healthy populations of honey bees and other pollinators is essential for the future of the world’s agricultural markets and for global food security. Over the past decade, we have seen an alarming decline in honey bee populations around the world with many colonies collapsing mysteriously. Commonly referred to as "colony collapse disorder", this phenomenon is typically characterized by rapid loss of the adult worker bee population in what should otherwise be healthy colonies.

Specifically, the pesticides that are being linked to pollinator declines are a group of insecticides called neonicotinoids. Unlike traditional pesticides that are typically applied to the surface of plants, neonicotinoids are systemic, meaning they are absorbed and transported through all parts of the plant tissue—and are therefore present in the nectar and pollen.

The primary use of neonicotinoids is as a seed treatment for corn. Production of corn for food, animal feed, and ethanol is the largest single use of arable land in North America. Almost all of the corn seed planted in North America, except for 0.2% used in organic production, is reportedly coated with neonicotinoids, primarily clothianidin and its closely related compound, thiamethoxam.

Extracted from a bulletin of the Center for Food Safety and an article by Erica Lindberg in Boulder Weekly, March 7.
First 2013 Dodd Work Day

Petrea Mah

On Sunday morning, April 14, 5 teen and 14 adult volunteers bent their backs in the cold wind to plant 25 Privet and 25 Chokecherries on the south slope of Dodd Reservoir. The young shrubs were covered on tax day with a moist, insulating blanket of snow. While working we were treated to an Eastern Bluebird pair, Wood Ducks, Green-Winged Teal, Wilson's Snipe; and the regular denizens Canvasback, Red-winged Blackbirds and Western Meadowlarks. In a month's time we will be returning for weeding, watering, and to check the growth on the experimental plots.

We would welcome more help over the summer, June 9, July 14 and Aug 11. If you have never been to Dodd Reservoir, it's worth the visit. Then contact petreamah@comcast.net to join the fun this summer! (See the field trip note on page 2.)

The new plantings aren't immediately obvious on visiting Dodd, but nest boxes and bee blocks are.

Winter in April, 2013

Back yard shots Apr 9-16, by G. Oetzel

Coopers Hawk

Chickadee box

Become a Supporting Member of Boulder Audubon

We get very little return from National Audubon dues and have to rely primarily on local funding to support Boulder County Audubon society activities. Supporting memberships are just $20 annually. You can join online or download a printable form to send with your check. Visit http://www.boulderaudubon.org/about.htm#membership.

Paper copies of the Nov-Dec, Jan-Feb, and Mar-Apr issues of On the Wing are mailed only to BCAS Supporting Members who request them. The electronic edition, available online, has color pictures and usually includes extra articles.