



On The Wing

Volume 45, Number 1 *Boulder County Audubon Society Newsletter*

Feb-Mar 2015

BCAS 4th Tuesday Program Series

February 24, 7:15 P.M.

Daly Edmunds and Alison Halloran

Sage-Grouse Conservation

Daly Edmunds and Alison Holloran will talk about the national and local efforts around Greater Sage-grouse. Hear about the bird that has become the focus of one of the highest level species recovery efforts in our country's history, which already looks to be changing the paradigm in wildlife management to a more scientifically rigorous and sustainable landscape-scale approach. In anticipation of federal listing decision in September 2015, state and federal decision-makers are actively pursuing development of unprecedented conservation plans that will have far-reaching impacts. Audubon Rockies staff will also briefly touch upon Gunnison Sage-grouse and Lesser Prairie-Chickens, both species also receiving federal attention.

Daly Edmunds, *Regional Policy Associate for Audubon Rockies*, received her Masters of Science in 2005 from the Univ. of Wyoming. She has a strong foundation in science and conservation, having worked for WY Game & Fish Department and National Wildlife Federation. At Audubon, she works to protect and improve sagebrush habitat and ecosystems through integration of science into sound policy decisions, most often energy-related. She is also serving as facilitator for the Grouse Coalition.

Alison Holloran, *previously Regional Science Director, is now Executive Director of Audubon Rockies*. She completed her Master's research investigating potential impacts of natural gas extraction on sage-grouse in Wyoming. Alison established the Important Bird Area (IBA) program across Wyoming. National Audubon Society selected Alison as the Central Flyway IBA Lead.



[NRCS SCI,

<http://tinyurl.com/m8au6xq>]

March 24, 7:15 P.M.

What Do You Really Know about Solar?

Join Boulder County Audubon as we host a panel discussion with representatives from two Colorado Platinum Level Solar Friendly Communities. Westminster and Boulder are the first two cities to receive this award through an innovative partnership between local governments and the solar industry. The certification focuses on those communities that adopt best practices in permitting, inspection, planning and public education to help their residents go solar. Often more than half of the costs of rooftop systems are "soft costs," including the local permitting process.

This interactive program will be enhanced by preparing questions for the panel in advance of the talk. Forward your questions to a program co-chair:

Steve Jones (curlewsj@comcast.net) or

Feel free to bring questions to the talk as well.

Program Meetings at Unitarian Universalist Church of Boulder, 5001 Pennsylvania Ave. (west off 55th St. between Arapahoe and Baseline)

Thanks to Retiring Webmistress

Amy Schlotthauer has done a superb job as the BCAS webmistress for ten years. She has decided that it's time to retire from that job and devote her time to her other activities

We thank her for her service and wish her well in her future activities.

Of course, this means that BCAS is now in need of a replacement webmaster. We need to find someone to take responsibility for the site. Contact Pam Piombino at piombino.pam@gmail.com, (303)776-1939 if you're interested.

Field Trips—March-April

Welcome Spring! Sunday, March 15, 7:30 a.m.

Meet leader Steve Jones at the Cottonwood parking lot by Walden Pond, off of 75th Street, Boulder.

Join Steve for his annual homage to the warming weather and returning birds. Expect to see ducks, raptors, herons and much more. Bring something sweet, spicy, nurturing or passionate (and portable) to share at a pot-luck breakfast along Boulder Creek.

Sage-Grouse Viewing

Boulder County Audubon will not be leading a formal trip this year to view grouse (other than our sold-out "Interludes with Nature" trip), but we want to pass on information to those who would like take independent trips.

To see the biggest gathering of Sage-Grouse in Colorado, join Conservation Colorado, which arranges brilliant and reasonably priced outings from Craig (Front Range birders, photographers and naturalists pay \$60-85). Reservations will be available this year from March 20 until April 12. At 4 a.m. on your reserved day, Conservation Colorado will transport you from Craig to a private ranch. While still dark, you will enter a specially constructed trailer truck with bench seating, then relax and wait for the spectacle to start at dawn. Mammal sightings are common, as are raptors. Great photo ops! This is the **LAST YEAR** that these outings will be run and subsidized by Conservation Colorado. For details and reservations, go to their website: conservationco.org The button for the trips is on the left side. Other possible Sage-Grouse trips can be found here: <http://www.sagegrouseinitiative.com/sage-grouse-lek-viewing-tours/>

Fowler Trail, Eldorado Mountain Park, April 25, 7:30-11:00 a.m.

Paula Hansley, leader.

Ph.: 720-890-2628; Cell: 303-263-1714 plhansley@gmail.com

Limited to 12 participants. Call or e-mail leader to reserve a spot.

Meet at RTD parking lot (dirt), NE corner of the intersection of highways 93 and 170 in Marshall and carpool to trailhead on Boulder County Rd. 67, which takes off from hwy.170 near Eldorado Springs. Bring a snack and water. We will hike south on the Fowler Trail parallel to the hogback and the burn area where Lewis's Woodpeckers nested last year. This trail is unique for its wide variety of habitat -- from dense shrubbery to open ponderosa forest. As we bird, we will enjoy fantastic views of the grasslands and mesas south of Boulder. Early migrants will be skulking in the bushes while swifts and falcons fly overhead. Will we be lucky enough to have the Grace's Warbler return again this year? Difficulty: Easy, Distance: 2.8 miles round trip to the Boulder Canal and back.

Audubon/Sierra Club Legislative Forum

Feb 28, 8:30a.m.—1:00 p.m. — First Plymouth Church, 3501 S. Colorado Boulevard, Denver (SW corner of Colorado and Hampden)

Meet like-minded conservationists and activists both old and new.

Current hot environmental topics in this year's State legislature will be outlined. You will never get this depth of information from the newspaper. Participating legislators are invited to speak during lunch and stay for further discussions, which gives you a chance to meet and engage them.

Cost: \$12 in advance and \$15 at the door. You can register and pay on line at www.denveraudubon.org/programs/localfieldtrips.

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Christmas Bird Count Coordinator

Bill Schmoker (303-702-9589)

Wildlife Inventory

Alex and Gillian Brown (303-494-3042)

Crossbill email account

Cindy Maynard

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Boulder County Audubon Society

Next issue deadline:

(April 2015 issue) March 16

Contact editor via link at:

www.boulderaudubon.org/newsletter.htm

April 28, 7:15 P.M.

Colorado Carnivores — Wow! Lynx, River Otters and Wolverines

Eric O'Dell of Colorado Parks and Wildlife will describe efforts undertaken by CPW biologists to restore carnivore species to the state. The talk will focus on the processes, applications and measure of success of managing non-game carnivore species in Colorado with a lot of great pictures of these iconic animals. The talk will highlight the river otter and lynx projects, with a brief mention of wolverines.

Eric grew up in Colorado and gained a strong appreciation of the outdoors from an early age. He attended Middlebury College in Vermont, traveled extensively for a variety of field jobs, then went to Colorado State University where he completed his Master's degree in Wildlife Biology. He began working for Colorado Division of Wildlife in 2000. He has worked for that agency, now Colorado Parks and Wildlife, in a variety of capacities since then - as a Habitat Biologist based in an NRCS field office, Conservation Biologist, Grassland Coordinator and now as the Species Conservation Program Manager for Carnivores. In this role he directs conservation and management programs to aid in the establishment and protection of native, non-game carnivore species in the state .



River Otter in Boulder—April 2013

"It actually sat in front of the camera for several more minutes, munching on the fishtail," Christian Nunes, a wildlife ecology technician for Boulder Open Space, said in an interview with The Daily Camera newspaper.



Boulder County Audubon Society Joins with Boulder County Parks and Open Space to Monitor Aquatic Fowl on County Lakes and Ponds

BCAS/BCPOS kicked off another monitoring project in October 2014. Aquatic fowl monitoring will be added to already successful Burrowing Owl and Bluebird monitoring projects. 18 monitors and substitutes are doing weekly counts at 5 sites including Western Mobile/Braly, Pella, Walden, Bailey/Kenosha/Wittmeyer, Walden Ponds and Hodgson- Harris Reservoir.

These hardy souls are at the sites before sunrise and sometimes spend up to 3 hours identifying and counting all waterfowl. Count results are added to an electronic database that can be accessed by species, location or date. These results are used to help monitor changes in migration patterns and times, changes in numbers and species present in Boulder County, and diversity patterns at different sites. Volunteers also participated in the annual January Center Flyways Duck Count.

Thanks, volunteers, for all your hours and frozen noses and toes. (See picture above.)

If you are interested in participating in this project please contact Petrea Mah (petreamah@comcast.net) or Michelle Durant (mdurant@bouldercounty.org)



Wigeon pair—Bill Schmoker (<http://tinyurl.com/lwes6hg>)

BOULDER COUNTY WILDLIFE INVENTORY, JUNE AND JULY 2014

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

June is often an extremely rewarding month in which to bird, with the possibility of some late migrants and lots of evidence of breeding birds. This June's highlight was the singing male **Grace's Warbler** found in the Eldorado Mountain Open Space. This bird stayed around nearly all month and was seen and heard by numerous birders. This was only the second report of this species in the county. The first sighting was in 2003 of a nesting bird at Heil Ranch. This month's bird did not seem able to find a mate, however hard he sang. Other good sightings included a **Cassin's Kingbird**, and a **White-winged Crossbill**. June is normally a good month for seeing and hearing small owls and this June was no exception with both **Flammulated Owl** and **Northern Saw-whet Owl** being new for the year. A **Barn Owl**, a **Long-eared Owl**, some **Burrowing Owls**, and several **Great-horned Owls** rounded out the number of owl species seen. Both **Rufous Hummingbirds** and **Willow Flycatchers** are often late to arrive in the county, and first sightings in June for these species are not unusual. A few birds that we would normally expect to see in May were not seen until this month. In this category were **American Bittern**, **White-tailed Ptarmigan**, **Canyon Wren** and **Indigo Bunting**. **Canyon Wrens** breed in the county, and although their habitat is somewhat limited, their easily identifiable loud song usually gives away their presence. More data would be needed to find whether this species is really declining. Altogether 182 bird species were reported in June. This is a very respectable total, although slightly less than the record of 187 species seen last year.

July was a poor month for birders with a marked absence of reports. As a result many common species were either not reported at all or reported in very small numbers. There were just three new species for the year: **Black Swift**, **Sage Thrasher** and **Dickcissel**. None of these species are particularly surprising. The **Black Swifts** were seen in flight, but are known to breed in the mountains in small numbers. **Sage Thrashers** are most common in August when they can be found in fair numbers in suitable habitat. For the last few years **Dickcissels** have been found in the late summer by those who look for them in their grassland habitat. Shorebird migration should have started by the end of the month but there was no evidence of it. Altogether only 125 bird species were reported in July, reflecting the low number of reports.

CONTRIBUTORS TO THE JUNE AND JULY INVENTORIES

Linda Andes-Georges, , Mele Avery, Virginia Baer, Scott Baron, Gary Baxley, , J. D. Birchmeier, Maureen Blackford, Ron Bolton, Maggie Boswell, Kat Bradley-Bennett, Kitty Brigham, Gary Brower, Alex & Gillian Brown, Bob Bucknam, Eric DeFonso, David Dowell, Ted Floyd, Lonny Frye, Peter Gent, Carson Grogard, Bryan Guarente, Paula Hansley, Philip Henson, Indian Peaks Breeding Bird Count, Candice Johnson, Steve Jones, Bill Kaempfer, Noam Klotz, Chris Knight, Catherine Labio, Steve Larson, Petrea Mah, Lynn Monroe, Sharon Norfleet, Christian Nunes, Jessi Oberbeck, Laura Osborn, Richard Pautsch, Josh Russell, Ira Sanders, Natalie Schultz, Scott Severs, Cathy Sheeter, Randy Siebert, Bob Spencer, Carl Starace, Laura Steadman, Russ Thompson, David J. Waltman, Tom Wilberding, Wild Bird Center, Gail Yanowitch.

Saturday, March 14: BCNA Ecosystem Symposium

Recovery and Resiliency! Preparing for the Future

The 2015 Boulder County Ecosystem Symposium will be held on Saturday, March 14 between 9 am and 2:30 pm at the Boulder County Parks and Open Space offices (5201 St Vrain Rd in Longmont). As usual, registration will begin at 8:30 and a complimentary lunch will be provided. Donations will be accepted in support of BCNA's Research Grants program. Following on the heels of the last Ecosystem Symposium which examined extinctions and species in peril, the 2015 symposium will feature success stories of species recovery and habitat restoration. Come learn about Colorado's lynx reintroduction program, the change in bald eagle populations, the conservation of greenback cutthroat trout, Front Range grassland restoration and much more. The Boulder County Ecosystem Symposium is supported by BCNA, Boulder County Audubon, the Colorado Native Plant Society, and city and county open space departments. Contact Megan Bowes at megan.bowes@yahoo.com or 303-561-4883 with questions.



Library of Life: DMNS Field Trip Report

Sandra Laursen

On November 2, a dozen curious people gathered at the Denver Museum of Nature and Science (DMNS) for an Audubon field trip to the zoology collections. Backstage of the famous diorama exhibits, the museum's hidden halls house a major resource for researchers worldwide.

DMNS' zoology collection holds nearly a million specimens, including some 900,000 insects and over 50,000 birds, nests and eggs, some over a century old. In the old part of the building, Ornithology Fellow Andrew Doll pulled out drawer after drawer full of dried bird skins. A slim drawer housed two dozen Northern flickers or a rainbow of hummingbirds, while a deep one might reveal five snowy owls or two flamingos. Their cotton-stuffed abundance was both eerie and inviting, as we admired how the flickers' feathers subtly varied from bird to bird. Voices spontaneously quieted in the aisles of this library of life.

Rare specimens occupy special locked cabinets: a mounted brace of ruddy passenger pigeons, three ivory-billed woodpeckers, an enormous fossil egg of the Madagascan elephant bird. The startling tropical hues of Carolina parakeets evoked a pang of melancholy for the lost beauty of these once-rowdy flocks and their lost contributions to the ecological web of eastern North American forests. DMNS also houses several "type specimens," the physical prototypes that represent what the taxonomist had in mind who first described the species—such as the Gunnison Sage-grouse, first characterized in 2000. Some are species first described by DMNS scientists, while other type specimens were entrusted to the museum by their describing authors.

Frozen DNA specimens, a growing part of the collection, are used to understand species relationships and map population variation. DNA can also be collected from dried bird skins by scraping a bit of skin from the toes. The museum will accept the wild birds, mammals and herps you find dead, but only if you can provide detailed data about the time and place of collection. (For details, see <http://tinyurl.com/ohqua4n>.)

Entomologist David Bettman then took us to the new wing of the museum to see the splendid collections facilities being installed there. Rank upon rank of tall cabinets slide on tracks to maximize the use of floor space; their metal doors seal snugly to protect specimens from fire and flood; dazzling white floors give curators a fighting chance to spot another nemesis, bugs that eat feathers, fur and skin. In contrast with the dim clutter in the old space, the new quarters gleam like an operating room and provide room to gather another million specimens. In the work room, David arranged glass-topped

trays full of glossy butterflies and delicate moths. Each tray marked a different stage of curation, from collecting through pinning, labeling, sorting, and identifying. Though they try to be comprehensive, museum collections represent only a best guess at what is really out there. For example, one tiny nondescript moth was thought to be rare and endangered in Colorado, until an avid amateur collector discovered how to capture it. Like other moths, it is lured by a light at night—but because it lurks in the bushes several feet away instead of coming directly to the light source, its presence had been missed by standard moth collection methods. As the butterfly enthusiasts peppered David with questions, I explored the perimeter of the room, where mounted teaching specimens kept a watchful eye: a bison, a wolverine, a lemur forever scampering up a branch.

Later in the parking lot, a flicker glided in for a landing and fussed at us from a bare tree. After a morning in life's fascinating archives, it was good to see a vital reminder of life here and now.

18TH ANNUAL
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Black-capped Chickadee by 2014 GBBC Participant Missy Mandel

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Passenger Pigeon Centenary

The photo by Carl Hansen of the Smithsonian (1985) shows "Martha," the last known passenger pigeon.

This year marks the 100th anniversary of the passing of the last known passenger pigeon. Can studying its extinction, which happened rapidly despite the birds' relative abundance, inform today's conservation efforts? A modeling study showed that the main causal factor was unmanaged overharvest for food and sport. Furthermore, they found that if current monitoring and risk categorization had been in place, the rapid decline would have identified this species as endangered in time to protect it. More than just sad history, this study emphasizes that rapid declines suggest impending extinction, even if local abundance persists.

Science Magazine, Nov 2014, <http://tinyurl.com/odccp3d>

Monarch Butterflies

When evidence emerged that monarch butterflies were losing the milkweed they depend on due to the spread of herbicide-resistant crops in the United States, people across the country took action, planting milkweed in their own gardens. But a new paper shows that well-meaning gardeners might actually be endangering the butterflies' iconic migration to Mexico. That's because people have been planting the wrong species of milkweed, thereby increasing the odds of monarchs becoming infected with a crippling parasite.

The problem is that tropical milkweed—at least when planted in warm environments like southern Texas and the U.S. Gulf Coast—doesn't die back in the winter like native milkweed does. When presented with a place to lay their eggs year-round, many monarchs don't bother making the trip to Mexico at all. Tropical milkweed hosts a debilitating parasite that leads to weak offspring, so it should be avoided. In Boulder County, common milkweed (*Asclepias speciosa*) and swamp milkweed (*A. incarnata*) serve as good host plants for monarchs.



Science News, Jan 2015: <http://tinyurl.com/ok4qjik>

Global Warming News

— From *Earthweek*, Dec 5 (slightly edited)

Earth has already undergone significant climate and environmental changes since world leaders first gathered to try to solve global warming more than two decades ago.

Diplomats from more than 190 nations met in Lima, Peru Dec 1-12, to prepare for a new treaty slated to be signed next year to finally reduce greenhouse gas emissions—albeit many years from now.

An Associated Press survey found that:

- • Worldwide CO₂ emissions are up 60 percent, sea level has risen 3 inches and the average global temperature is up 0.6 degree Fahrenheit since 1996.
- • Almost 5 trillion tons of ice that once covered Greenland and Antarctica also have melted during the period.
- • The number of climate, water and weather disasters each year has more than doubled, compared to the period from 1983 to 1992, according to Belgium's Center for Research on the Epidemiology of Disasters.

"Simply put, we are rapidly remaking the planet and beginning to suffer the consequences," Michael Oppenheimer, professor of geosciences and international affairs at Princeton, told the AP.

Peregrine Parrot? Genetics of Bird Evolution

An international collaboration that has been underway for four years has assembled, sequenced, and compared the full genomes of 48 bird species to learn more about how the birds arrived at a diversity of more than 10,000 species.

According to M. Thomas P. Gilbert of the Natural History Museum of Denmark:

"Although an increasing number of vertebrate genomes are being released, to date no single study has deliberately targeted the full diversity of any major vertebrate group. This is what our consortium set out to do. Only with this scale of sampling can scientists truly begin to fully explore the genomic diversity within a full vertebrate class."

The numerous papers resulting from this study are not easy reading. Some highlights may interest BCAS readers, however

- Grebes are closely related to flamingos, but not closely related to ducks.
- Falcons are closely related to songbirds and parrots but not closely related to hawks.
- Swifts are closely related to hummingbirds and not closely related to swallows.
- Closest descendants from the dinosaurs are the Common Ostrich, White-throated Tinamou, turkeys, and chickens.

'Big Bang' of Bird Evolution Mapped by International Research Team

NSF Article: <http://tinyurl.com/nbfnarb>

Probing the Big Bang of Bird Evolution

Earthsky.org article with a nice video:

<http://tinyurl.com/l8cmze7>

Science Magazine (12 Dec 2014) has 8 articles about the study.



Peregrine, from the NSF article

An Ant, a Plant, and a Bear

In a mountain meadow in Colorado, ecologists have come across yet another example of the amazing interconnectedness of nature's flora and fauna. Black bears, by eating ants, help one of the meadow's key plant species thrive. The bears' influence is indirect, but may be significant enough that land managers should take a broader perspective when making decisions about bears in their territories, says Joshua Grinath, an ecology graduate student at Florida State University in Tallahassee who discovered this connection.

Grinath came upon the predator-plant connection while studying the partnership between ants and treehoppers on rabbitbrush. These tiny sap-sucking insects secrete a sugary liquid the ants eat in return for taking care of the treehoppers. One summer, a bear moved into Grinath's study site and started digging up the underground ant nests, eating both larvae and adults. So he decided to see what effect the bears had on his study subjects.

Over 4 years, he and his colleagues monitored 35 ant nests in this subalpine meadow for bear damage. During that time, bears damaged or destroyed 26% to 86% of the nests. He soon realized that plants lacking ants grew better and produced more seeds.

Grinath and colleagues concluded after a series of field experiments that the presence of the ants scares off predatory insects, in turn enabling treehoppers and other plant-munching insects to thrive and take a serious toll on plant growth. "The ants are providing an enemy-free space for all these herbivores," Grinath says. Where bears have eaten the ants, predators return and help protect the plants, he and his colleagues reported.

"The study really highlights the complexity of effects that a predator can have on a whole community of species that are interacting with each other," says Corinna Riginos, an ecologist at Teton Science Schools in Jackson, Wyoming, who was not involved with the work. "Most likely, other big predators also have just as many surprising and complex effects on the many species they live with."

(Reference: <http://tinyurl.com/kbybrwx>)



J. Grinath: Science News article referenced above

Undaunted Gardens Water Workshop

During a warm break in a cold month, BCAS members and friends gathered to soak in hopeful thoughts of running brooks, gentle spring breezes, and designing our next garden projects to adapt to a much dryer climate as the earth warms.

For those of you who missed this popular forum—attended by 125 January 17—there will be sequels.

We began with a Colorado (and Western) surface water law review by specialist Jo Bolton, which bored a few and highly excited the others. Paradoxical concepts like owning our water but often not the right to use it, and legally channeling rooftop rainfall—but not “hoarding” it in containers—stretched our brains a bit.

We learned more from Ken Neubacker about in-stream flow and water quality, which directly affect our ability to maintain wetlands and living streams with native fish (not to mention the birds interested in those streams, for food, water and shelter). Abby Burke of Audubon Rockies coached us in thinking big: watershed protection, and what the future holds for that value.

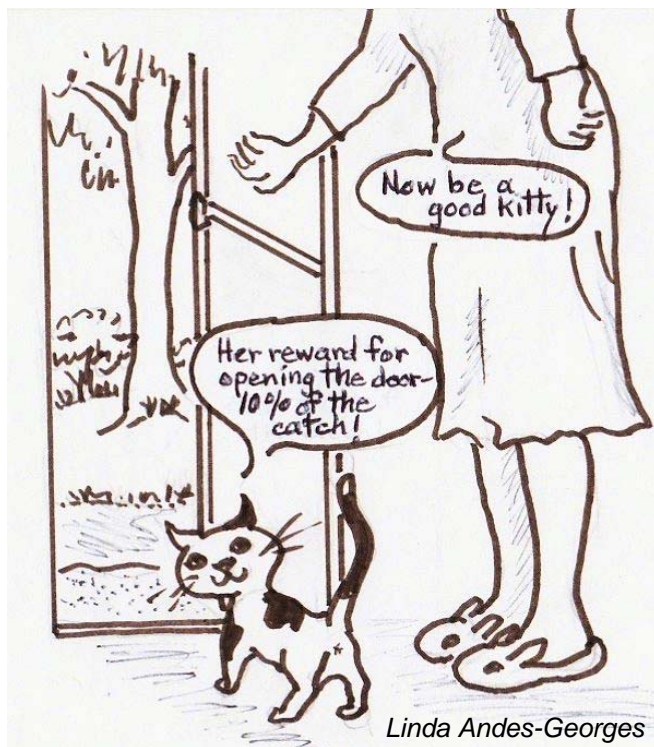
We were reminded that “we can’t solve the problems of the past by using the same kind of thinking we used when we created them.” (Albert Einstein, who regrettably did not attend the session).

The Colorado Natural Heritage Program website was recommended to us, as well as the government “[SurfYourWatershed](#)” site, and the [BeeSafeBoulder](#) folks urged us to get active in helping pollinators, both in the garden and politically (banning neo-nicotinoids, among others).

The hit of the morning was Lauren Springer Ogden’s presentation on waterwise plants for our region. All of us took notes like mad, thinking of spots in our yard which would look great and help pollinators if we can just get enough water to start them off well. Visit her website or order one of her beautiful books and drool over the transformations that plants and a little water and time can create.



(<http://www.plantdrivendesign.com/>)



You know who you are: you are the incorrigible humans who cannot resist the pleading meows, the paws on the door, the desperation in your feline companion’s gaze. The gaze hypnotizes you: “Must release the cat. She must go out. She promises not to chase lizards, birds, frogs, rabbits, snakes or chipmunks, only mice.”

Do not believe this for a minute. Your cat has been programmed by nature to be a killing machine, and although all cats feel that they must pursue (which is why it is so much fun for us to play with them), very few of them are humane killers. They chase the wounded prey, they tease, they often lose grip so that the maimed critters creep off to die in misery, slowly. Only cats trained by their mothers to effect an efficient kill can get it over with quickly. They can, but they often do not.



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 \$25 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, Feb, and April 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.