

# Bitterroot AUDUBON



APRIL 2018

NEWSLETTER

VOLUME 32, NO. 8

## BEAVERS: Nature's Ecosystem Engineers

By Torrey Ritter

Beavers exert profound influence on the wetland and riparian habitats they occupy through the construction of dams and lodges, digging of tunnels and channels, and removal and redistribution of woody riparian vegetation. While the effects of beavers occupying an area can vary widely, in smaller headwater stream systems beaver activities expand and maintain healthy and productive riparian and wetland habitats. Beavers have been identified as a keystone species and an ecosystem engineer because they drastically modify the habitats they occupy and in doing so create environmental conditions that allow certain plant and animal species to inhabit an area where they may not otherwise occur. Bird species are especially impacted, as beaver activity creates patches of wetland habitats in what are many times dry and arid landscapes. These habitat patches support a variety of nesting and brood-rearing habitats for birds as well as productive foraging areas. It has been postulated that ecosystem engineers such as beavers contribute significantly to patch-level and landscape-level habitat heterogeneity and can,

therefore, increase overall species richness and diversity at the landscape scale. As a result, the use of beavers or beaver mimicry for wetland and riparian habitat restoration has dramatically increased in popularity over the past 30 years.



Courtesy Torrey Ritter

*Beaver habitat.*

Juvenile beavers disperse from their natal colonies at 1–3 years of age and head out on their own to start a new colony. The natural dispersal and settlement process provides the best opportunity to study an aspect of beaver life history that is most relatable to restoration projects. Beaver restoration projects often involve encouraging beavers to colonize an area that is relatively un-modified by previous beaver activity and is suboptimal in terms of habitat quality, a situation encountered by many dispersing beavers. In 2015, researchers at Montana State University undertook a 2.5-year project aimed at better understanding the ecology of beavers in relation to habitat restoration strategies. Researchers radio-marked dispersal-age beavers and followed them throughout the dispersal process to evaluate dispersal distances, timing, and outcomes. Concurrently, the researchers mapped beaver activity in the headwaters of two major river drainages to evaluate habitat preferences of beavers starting new colonies in novel areas. This mapping



Courtesy Torrey Ritter

*Beaver.*

effort also allowed the researchers to assess the influence of colony densities and the availability of territories on the dispersal and settlement process. Torrey Ritter, the graduate student leading this project, will present the results of this project as well as outline the impact of beavers on ecosystems in the western United States and associated wildlife species.

Torrey grew up in Wyoming and Idaho but has spent most of his life in the Bitterroot and Gallatin Valleys in Montana. Torrey grew up with a wildlife biologist mom and a forester dad, and spent most of his childhood fishing and hiking in the mountains and learning about the natural world from his wonderful parents. Torrey graduated from MSU in 2009 with a degree in Organismal Biology and spent the next 6 years working on a wide variety of wildlife-related research projects. Torrey started his wildlife work on Region 3 MWFP Wildlife Management Areas conducting survey and inventory of game and non-game species, trapping small mammals to evaluate the influence of restoration grazing systems, and conducting beaver occupancy and distribution surveys. He also worked as a Block Management technician, evaluated pre-nesting diet selection in sage grouse, surveyed nest occupancy and success for bald eagles and peregrine falcons, tracked pregnant radio-collared elk to evaluate disease dynamics, surveyed whitebark pine in high elevations within the Greater Yellowstone Ecosystem, and conducted hair snare sampling for grizzly bears in Grand Teton National Park. In 2015, Torrey was hired for his dream project investigating dispersal and habitat selection of beavers in the context of beaver-mediated habitat restoration. Torrey just completed his graduate degree in Animal and Range Sciences at Montana State University under the guidance of Dr. Lance McNew in the Wildlife Habitat Ecology Lab. Torrey plans on remaining in Montana and continuing to research beavers and advocate for beaver restoration.

**TO HEAR TORREY DESCRIBE THIS FASCINATING RESEARCH AND WHAT WAS LEARNED, JOIN BITTERROOT AUDUBON MONDAY, APRIL 16TH 7:00 P.M. AT THE FOREST SERVICE/NATURAL RESOURCES BUILDING, 1801 NORTH 1ST (north end of Hamilton west side of HWY 93). Enter the building on the west side. THE PUBLIC IS INVITED. Contact Kay Fulton for additional information (360-8664).**

## Letter from the President

*By Becky Peters, BAS President*

So Bill and I are on an extended vacation. First with the family to Kauai and now we are in New Mexico to bird. Each paradise has brought its own bitter realization. This is not an upper of a letter and I know I'm preaching to the choir.



First, Hawaii: It is the "bird extinction capital of the world". All 33 Hawaiian endemic species are in trouble. They are the most threatened species in the world. The additional rainfall due to climate change favors the mosquito which then infects the birds with avian pox and avian malaria. The birds can't move northward to colder climates to escape these diseases. The death rate for some species is 90%.

Next, New Mexico: The health of the famous rivers here is in jeopardy and their future is uncertain. Not only is New Mexico in a severe drought, but then farmers are being forced to sell their water rights. And those water rights then transfer the little bit of water to urban centers (don't get me started on lush green golf courses in a desert) This state is losing the Yellow-billed Cuckoo and the Bell's Vireo.

So, help is needed now and needed fast. Can you do anything to help? Yes! Consider these actions (sure hope these charitable ideas don't change soon):

1. Give your favorite bird agency a Gift. Anyone over the youthful age of 70.5 can give an income tax-free gift on up to \$100,000 from an IRA to a charity (IRA Charitable Rollover) and you pay no income tax on the amount withdrawn for the gift.
2. Bequests. Through your will you can set up a gift that only goes to a charity after your needs have been met. You can set aside a percentage of your estate.
3. Endowments. You can make gifts to established endowments or set up a new one to go to the Audubon group of your choice. New Mexico has quite a few endowments for birds set up, as does Montana Audubon.
4. Sign up for Action Networks to receive action alerts. For example - [act.audubon.org/onlineactions/](http://act.audubon.org/onlineactions/) Or <https://abcbirds.org/get-involved/take-action/>. Then act!
5. Donate to American Bird Conservancy projects like the Kauai Forest Bird Recovery Project.
6. Research Resource Managers and Land Managers that implement conservation strategies that work to restore and improve threatened bird habitats and then financially support

them or volunteer for them.

You are not powerless and your resources are desperately needed now.

Mahalo and Gracias!

### **Bitterroot Audubon Board Member: Thomas Arminio**

*By Skip Horner*

With great sadness we must announce the recent death of Bitterroot Audubon board member Thomas Arminio. Thomas was an adventurer, an athlete, an artist, a poet, a high-ranking Public Health Service nurse, and an honest gentle soul who accomplished much. He had a knack for making and keeping friends wherever he went. At Bitterroot Audubon he was particularly active and helpful with the Scholarship Committee. His humor and his positive attitude will be greatly missed by everyone who knew him.

### **Welcome Back Waterfowl Day**

**EVENT DATE CHANGE: APRIL 7, 2018**

*By Judy Hoy*

Welcome Back Waterfowl Day will again be hosted by Bitterroot Audubon Society at the Lee Metcalf National Wildlife Refuge on Saturday, April 7 from 10 am to 1:30 pm. Audubon members with high quality optical equipment will be present on the dike along Wildfowl Lane on the county road between the ponds west of the Visitor Center to assist in identifying and observing the waterfowl and other birds and mammals that use the refuge wetlands. This special event is open to the public. Please note the date is April 7, not March 31 as it says on the Audubon calendar, to avoid Easter weekend, and hopefully be warmer. For more information or questions, please call Judy Hoy at 777-2487 or by email—[bjhoy@localnet.com](mailto:bjhoy@localnet.com).

*Please note: The refuge will not be staffed on the day of the event, and indoor restroom facilities may not be available during Welcome Back Waterfowl Day. Access to an outhouse toilet will remain available for public use, located near the river walking area.*

### **Big Hole Christmas Bird Count Recap**

*By Kate Stone*

Just when we're all gearing up for spring, I thought I'd take us back to a consistently wintry wonderland and report on the 2017-2018 Big Hole Christmas Bird Count, which took place on January 2. One of the things I love most about this count is that we



*Courtesy Kate Stone*

*Becky Peters and Estelle Shuttleworth enjoy the gloriousness of the Big Hole National Battlefield.*

often encounter conditions that limit our ability to see many birds, yet people keep coming out for the adventure. Take my morning surveying the Big Hole National Battlefield with Becky Peters and Estelle Shuttleworth; we slogged for several hours through knee-deep snow, and only turned up seven



*Courtesy Estelle Shuttleworth*

*Becky Peters and Kate Stone at the Big Hole National Battlefield Christmas Bird Count.*

birds- four of them Mallards flying away from us. In total, we had 15 people observe 449 birds of 15 species. Our top birds were the Black-billed Magpie (147), Snow Bunting (110), and Common Raven (63). Rough-legged Hawk numbers were relatively high (45), but we surprisingly had no American Tree Sparrows and just one Northern Shrike. Thanks to everyone who participated with such enthusiasm!



*Courtesy Kate Stone*

*The hearty group of CBC participants enjoy a fine meal at The Crossing in Wisdom- sweet potato fries recommended!*

### **Byron Weber Memorial Scholarship: Now \$1000 per Semester**

*By Skip Horner, Scholarship Committee Chair*

Our Scholarship Committee recently revitalized itself, and everyone is very excited about our future. Thanks to extraordinary sales of the Bitterroot Audubon calendar, the scholarship now has a sizable nest-egg to work with. Half of the proceeds of calendar sales go to the scholarship.

We are now offering \$1000 per semester to an upper-class student pursuing a major in a natural resource field at a Montana 4-year college. Preference will be given to a Bitterroot Valley resident. (Previous scholarship awards were \$500). Details are available on our website: [bitterrootaudubon.org](http://bitterrootaudubon.org). If you know of a qualified student, please send them our way! Deadline for Fall Semester applications is June 1.

Board member Betsy Ballard joined our committee and spent hours contacting every college in Montana. Our first scholarship recipient, Philip Williams, now a grad student at UM, also joined the committee and gives invaluable advice on how to make contact with the best students. He also manages our presence on Instagram. Go to [@bitterroot\\_audubon](https://www.instagram.com/@bitterroot_audubon). This is new, check it out! Jan Geer and the late Thomas Arminio, original committee members, continued to give help and support to our rejuvenation process. Together we re-wrote the protocols and requirements for the scholarship, and are actively sending the information to the financial aid offices at all the appropriate schools. Cynthia Fleming designed a lovely new poster promoting the scholarship that has also been sent to the schools.

Stay tuned to these pages in the future to learn about the outstanding student who will win our first \$1000 scholarship!

### **HIGHWAY CLEAN-UP! APRIL 17! 4PM! BELL CROSSING!**

*By Skip Horner*



Join us for our semi-annual highway clean-up. The winter snow has melted, exposing all the debris that blew out of the back of our rigs, so please come out to help us pick it all up. It's actually quite fun, and it doesn't take much time as long as enough people turn up. At 4PM on April 17 we'll meet and park on the west side of the highway on Bell Crossing Road, then fan out a mile in both directions. Bring gloves, sturdy footwear and appropriate clothing. We'll supply high-viz vests and large plastic garbage bags. Questions? Call Skip at 642-6840.

### **Call for Volunteers at the Bitterroot Audubon Society booth at the Youth Conservation and Education Expo!!**

*By Betsy Ballard*

**When:** Saturday May 12, 2018

**Where:** Teller Wildlife Refuge's Slack Barn, 1180 Chaffin Lane, Corvallis 10am- 3pm.

Please contact Betsy Ballard if you would be willing to assist with the planning of BAS educational materials for our booth, or be at the Expo for an hour or more to help. Also, please bring or encourage youth to attend the expo!!

Betsy's cell phone: 239-5105 Email: [diamondback@cybernet1.com](mailto:diamondback@cybernet1.com)

# Calendar of Events

- Apr 7:** Welcome Back Waterfowl Day, Lee Metcalf NWR, Stevensville, MT, 10AM-1:30PM
- Apr 16:** “*Beavers: Nature’s Ecosystem Engineers*” by Torrey Ritter, Audubon Meeting, Forest Service/DNRC Building, Hamilton, MT, 7PM, Board Mtg. 5PM.
- Apr 17:** Highway Clean-up, meet at Bell Crossing, contact Skip Horner for details (642-6840), 4PM.
- May 12:** Youth Conservation & Education Expo, Teller Wildlife Refuge Slack Barn, 1180 Chaffin Ln, Corvallis, MT, 10AM-3PM.
- May 21:** Audubon Meeting, Location TBA, 7PM, Board Mtg. 5PM.
- Jun 1:** BAS’s Byron Weber fall semester scholarship applications due, see [bitterrootaudubon.org](http://bitterrootaudubon.org) for details.
- Jun 8-10:** 19<sup>th</sup> Annual “Wings Across the Big Sky Festival.” Kalispell, MT. See Newsletter for details and [MTaudubon.org](http://MTaudubon.org)

## Bitterroot Audubon is on Instagram!

By Philip Williams

Philip Williams, a former Byron Weber Memorial Scholarship recipient, has created an Instagram account for Bitterroot Audubon. This social media application will help Bitterroot Audubon spread its message, including our generous scholarship, to a wide audience of students and outdoors enthusiasts. If you already have Instagram, you can find us @bitterroot\_audubon. If not, we highly recommend downloading the app from your mobile app store, creating an account, and giving us a follow! Help spread the word about our new social media presence, and get ready for fabulous photos, news, and updates!



## Citizen Science Birding Data Passes Scientific Muster: Amateur birders' reports track trends in government bird surveys, could fill data gaps in developing nations

Source: University of Utah  
Biologists report that eBird observations match trends in bird species populations measured by US government surveys to within 0.4 percent. As long as there have been birdwatchers, there have been

lists. Birders keep detailed records of the species they've seen and compare these lists with each other as evidence of their accomplishments. Now those lists, submitted and aggregated to birding site eBird, can help scientists track bird populations and identify conservation issues before it's too late.

Joshua Horns is an eBird user himself and a doctoral candidate in biology at the University of Utah. In a paper published in *Biological Conservation*, Horns and colleagues report that eBird observations match trends in bird species populations measured by U.S. government surveys to within 0.4 percent. Many nations don't conduct official bird surveys, Horns says. "In a lot of tropical nations that's especially worrisome because that's where most birds live." But he's now shown that eBird data may be able to fill that gap.

### How eBird works

For birders, eBird is a way to add their observations to a worldwide community and to contribute data to a vast and growing database of which birds have been seen where, and when.

Birders at the University of Utah (notably Kenny Frisch, an assistant horticulturalist who has logged 116 of the 120 known species on campus) have made the university a local hotspot. And eBird has a system in place to ensure that the data submitted reflects reality. Fact-checkers, including Frisch, are contacted by eBird to follow up on unusual sightings. Ornithologist Çagan Sekercioglu (currently the fifth-ranked eBirder in the world with 7,273 species observed) says he has been flagged for fact-checking when he identifies species never before seen in an area, and uses his photographs to verify his sightings.

### How many lists?

Horns' question was whether eBird data could serve as a reliable measure of bird populations. In the United States, he had the luxury of being able to compare birders' lists to the Breeding Bird Survey, conducted annually by the U.S. Geological Survey throughout the United States and Canada. But in South America, the Caribbean and tropical Africa, along with other bird hotspots, government data is absent. eBird users, however, are present all around the world.

Horns compared more than 11 million eBird lists to government data between 1997 and 2016. To account for the range in birder skill represented in the eBird lists, Horns used the length of the birders'

# **Save the Date!**

*June 8 - 10, 2018*

*Red Lion Hotel, Kalispell*



Montana Audubon's 19th annual Wings Across the Big Sky bird festival is coming to Kalispell in June 2018! Our longstanding community event draws birders and wildlife enthusiasts from around the state and beyond, to celebrate Montana's birds and the landscapes they inhabit. The festival is co-sponsored by the **Flathead Audubon Society**.

Visit our website for festival updates: [mtaudubon.org](http://mtaudubon.org)

- ***Field trips to Glacier and other breathtaking areas in the Flathead region***
- ***Silent Auction: bid on a private tour to an amazing Montana destination!***
- ***Birding & conservation Presentations***
- ***Evening Banquet, Dessert Auction and More!***

lists as a proxy for their expertise and experience. "Some studies have shown that as you bird for a longer stretch of time you do record more species, but as you bird for more and more years, the number of species you see on any outing increases as well," Horns says.

With additional statistical controls to ensure a good comparison between the eBird and official data, Horns set out to see how many lists were required to accurately track a species' population. The cutoff, he found, was just about 10,000 lists. So, if you have above that number of lists for a country or region, the results suggest, you can be confident that population species trends observed in the lists are a reflection of reality.

But what about areas that don't have that many lists? Horns says that lists from bird atlases and ecotourism groups can also be used, again with list length as a proxy for birder skill. Sekercioglu is doing his part, having submitted eBird lists following recent trips to Bolivia, New Guinea and Madagascar.

The eBird data is more accurate for common birds, Horns says, simply because they're observed so often. "White-crowned pigeons live only in the Florida Keys," Horns says, "so unless you live in the Florida Keys, you're not going to be seeing them." Also, more lists are submitted for areas closer to cities. "You're not going to have many people out in Utah's West Desert looking for birds but there will be a lot in Farmington Bay, near the Great Salt Lake," Horns says.

But even common birds can be vulnerable. Horns' analysis of eBird data shows significant declines for 48 percent of 574 North American bird species over the past 20 years. Large numbers of a common bird species could be lost before the general public notices, Horns says. "It's those declines in common species that could really drive down functioning of an ecosystem versus declines in rarer species."

Horns' results show the value of citizen science observations by amateurs, although the practice of birdwatching long predates the term "citizen science." Each time birders head out, tripods and binoculars in hand, they are serving as another set of scientific eyes to help bird conservation efforts. "We hope this analysis can be taken a step further," Horns says, "We can use it to start monitoring these birds and pick up on birds that may be declining

before they decline so much that it's hard to bring them back."

### **What's the story, Story?**

*By Jim Story*

***Question: How often do hummingbirds need to feed to maintain their high level of activity?***

***Answer:*** Hummingbirds, like most small animals, need a large energy intake to maintain their high body temperature. Studies indicate that hummingbirds don't feed constantly; they will feed about 15 times per hour, with each feeding lasting about a minute. The birds perch quietly for the remainder of the hour. During the resting period, the birds are emptying their crops (a modified part of their digestive system) of the accumulated nectar. The birds apparently wait until the crop is half empty before feeding again, and this happens in about 4 minutes – hence the 15 feeding trips per hour. (info from *Birder's Handbook*).

*Local birding expert Jim Story answers your questions about birds and their habits. Jim welcomes your questions at [jstory4689@gmail.com](mailto:jstory4689@gmail.com).*

## **News and Notes**

### **Call for Photos**

Bitterroot Audubon is seeking images of birds for a feature in our newsletter: *Bird Shots*. If you have taken a great photo and would like to submit it for consideration, please email the jpeg image, with a brief description, to [BASeditors@gmail.com](mailto:BASeditors@gmail.com).

### **Bitterroot Audubon is on Facebook**

If you use Facebook, please look for Bitterroot Audubon and "Like" us!

## **Bird Shots**



*Courtesy Mel Holloway*

*Female Red-winged Blackbird, Spring 2018.*

BITTERROOT AUDUBON  
PO BOX 326  
HAMILTON MT 59840-0326

**Officers**

President	Becky Peters*	369-5210
Vice-Pres.	Mike Daniels*	
Secretary	John Ormiston*	363-5464
Treasurer	Jim Story*	493-9813

**Directors & Committee Chairs**

IBA Program	Sherry Ritter	370-4778
Programs	Kay Fulton*	
Website	Kate Stone*	381-1115
Education		
Nwsltr. Eds. &	Sara Ashline* <a href="mailto:baseditors@gmail.com">baseditors@gmail.com</a>	
Distribution	Karen Griffing	
Hospitality	Rosan Stover	
Membership	Susie Duff*	961-5455
Publicity	Dave Lockman	777-2929
Rep. to MT		
Audubon	Becky Peters*	
Scholarship	Skip Horner*	642-6840
Aud. Adv.	Betsy Ballard*	
Field Trips	Michelle Long*	
At large	Judy Hoy*	777-2487
At large	Susan Nelson*	

\* Board Member

EMAIL: [contactus@bitterrootaudubon.org](mailto:contactus@bitterrootaudubon.org)

WEBSITE: [www.BitterrootAudubon.org](http://www.BitterrootAudubon.org)

INSTAGRAM: @bitterroot\_audubon  
and on Facebook!

**Chapter Only Membership**

The Bitterroot Audubon Chapter Only Membership is \$15/year. These members will be supporting local chapter activities, receive the full color e-newsletter, and enjoy Chapter benefits. To join as a Chapter Only Member, complete this form.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Email: \_\_\_\_\_

Send this application with \$15 to:



Bitterroot Audubon Society  
PO Box 326  
Hamilton, MT 59840-0326

**NATIONAL AUDUBON SOCIETY  
MEMBERSHIP APPLICATION**



**Audubon**

Renew or Sign up  
for your  
National Audubon Membership at  
[Audubon.org](http://Audubon.org)