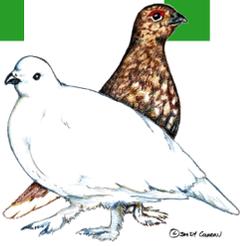


# PTARMIGAN



FORT COLLINS AUDUBON SOCIETY

P.O. Box 271968·Fort Collins,CO·80527-1968·[www.fortcollinsaudubon.org](http://www.fortcollinsaudubon.org)

Promoting the appreciation, conservation, and restoration of ecosystems, focusing on birds and other wildlife through education, participation, stewardship, and advocacy.

November 2020

Volume 51, Issue 8

**FCAS Hosts Dr. Craig Benkman**

**Evolutionary Ecologist, Ornithologist, Professor, University of Wyoming**

**Presenting:**

**“Some Crossbill Natural History and the Cassia Crossbill”**

**Thursday, November 12**

**Announcements: 7 p.m.; Program: 7:20 p.m.**

**\*\*\*This will be an online meeting using Zoom\*\*\***

**Enter the following link on your web browser at or before 7 p.m. and follow the instructions to join the meeting: <https://us02web.zoom.us/j/81677523880>**

Dr. Craig Benkman will discuss some of the more striking features of crossbills, a group of birds he started studying in 1982. His presentation will include how crossbills use their crossed mandibles to feed, why there is such great size variation among crossbills, and why crossbills are usually nomadic and breed at unusual times. Dr. Benkman will shift focus to the sedentary Cassia Crossbill, a species he found on his way to a conference in Boise, Idaho. He will discuss some of its evolutionary



Male Cassia Crossbill by Craig Benkman.

history and ecology, and end by discussing its future prospects in the face of climate change, including a fire this fall that burned nearly half of the Cassia Crossbill's habitat.

Craig Benkman is an evolutionary ecologist, ornithologist, a professor, and a Robert B. Berry Distinguished Chair in Ecology at the University of Wyoming.

FCAS members and guests are welcome and encouraged to Zoom in to this program.

**FCAS welcomes new National Audubon Society members** by sending one complimentary copy of our newsletter. Join us at our monthly programs on the second Thursday of the month to find out more about FCAS. National dues do not cover the cost of printing and mailing the newsletter, so if you'd like to keep receiving it, please support your local chapter and subscribe. See details on the last page of the newsletter or on our website at [www.fortcollinsaudubon.org](http://www.fortcollinsaudubon.org).

Before I dive into this month's main topic, Thanksgiving, I want to announce that Alan Godwin, Barb Patterson, and I are the members of this year's FCAS nominating committee. It's our job to recommend candidates to serve on the Board of Directors in 2021. We have a bunch of openings to fill, so please reach out to Alan, Barb, or me as soon as possible if you are interested.

Thanksgiving is, without question, my favorite holiday. Of course, I love a feast—who doesn't? But combining that feast with an invitation to reflect on what's important and to express gratitude for all we have is just a brilliant concept. I've found that people from other countries and other cultures are eager to celebrate it with us Americans.

So, yeah, I'll be feasting and giving thanks for all my blessings this month, to be sure. But as I write this column in October, I'm imagining that this year's holiday will be unlike any other in my lifetime. Because of the pandemic, many families will not be able to gather on Thanksgiving and the number of people in physical or financial distress, for whom a feast might not be possible, will be far greater than usual. The scale of the problem is almost unimaginable, and none of us can do much to solve it. But what we can do is reach out to someone who might be struggling, sick, or lonely and tell them we care. Or volunteer for a good cause. Or donate to a charity we believe in.

This message may seem to have little to do with the mission of FCAS, but I ask you to remember that some of our members will be on the receiving end of those calls and will be thankful to hear from someone who cares.



## Photo Contest Extension and Voting Time

There is still plenty of time to enter your photos for the FCAS online Photo Contest. We have extended the submissions into the first two weeks of November. Upload your photos at the contest website <http://www.fortcollinsaudubon.org/wp> until Sunday, November 16. Cash prizes are awarded for 1st place \$100.00; 2nd place \$75.00; 3rd place \$50.00.

Voting for your favorite photo will run from Sunday, November 15

–Monday, November 30. FCAS members will be the judges in the contest with one vote per person. The photo with the most votes will be the winner followed by second



and third place vote tallies. To view and vote for your favorite photo, register on the website <http://www.fortcollinsaudubon.org/wp> to create a login to have access to the photo gallery. Once registered, the website can be accessed by members any time during the contest. Please contact our webmaster Scott Miller at [scott@bulletboydesign.com](mailto:scott@bulletboydesign.com) if you have any issues with the website.

The prize winners will be shown at our December meeting, along with as many entries as time allows.

Website: <http://www.fortcollinsaudubon.org/wp>. Register with an email address, username, and password to create your login. Remember, voting by our FCAS members begins on November 15 and ends on November 30. Members may only vote once for their favorite photo.

Register and login to the photo contest website to view the photos and get the voting started! <http://www.fortcollinsaudubon.org/wp>.

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“Although tyranny, because it needs no consent, may successfully rule over foreign peoples, it can stay in power only if it destroys first of all the national institutions of its own people.” —*Hannah Arendt, The Origins of Totalitarianism*

## Plastics—There Is No “Away”

Plastics are durable, lightweight, and inexpensive materials. They can be molded into various products that find uses in numerous applications. Plastic production and consumption has snowballed since large-scale production began in the 1950s. Do you remember the last time that Coca Cola was dispensed from vending machines in glass bottles? Now it comes in aluminum cans or plastic bottles. Every year, more than 100 million tons of plastics are manufactured across the globe. Those new plastic materials are thermoformed, foamed, laminated, and extruded into millions of packages and products. Consequently, the reuse, recovery, and recycling of plastics are extremely important.

In 2020, an estimated 24 to 34 million tons of plastic waste will enter the world’s lakes, rivers, and oceans. That is roughly the weight of 21,000 rail locomotives. To understand why so much plastic ends up in our oceans and fresh waters we must first generate some definitions. The Global North is not exclusively a geographical term; it includes Australia, Canada, most Western European countries, Russia, Israel, Japan, New Zealand, Singapore, South Korea, Taiwan (ROC), and the United States. The Global South is made up of Africa; Latin America and the Caribbean; Pacific Islands; and the developing countries in Asia, including China and the Middle East. In economic terms, as of the early 21st century, the North—with approximately 25% of the world population—controls about 80% of the income earned anywhere in the world. Furthermore, 90% of the manufacturing industries are owned by and located in the North.

Virgin plastics are cheaper to produce than recycled products, undermining the viability of the recycling sector. The Global North dutifully collected much of its used plastics through recycling programs and sent them to Asian countries to be processed. China backed out of this arrangement in January 2018, leaving the Global North scrambling to find alternatives. Much of this waste was diverted to neighboring countries, primarily Indonesia, the Philippines, Thailand, Malaysia,

and Vietnam—four of them part of the so-called most polluting countries. These countries are now overwhelmed by the sheer volume of plastics.

An estimated 15 million waste pickers worldwide pick the most valuable pieces of plastic from mountains of imported waste to make their living. Remaining plas-

tics are often burned, emitting carbon-rich smoke containing carcinogenic furans and dioxins. Plastics that aren’t burned or processed are piled high or buried, contaminating arable soils and waterways.

Our oceans are littered with plastics. We’ve all seen pictures of turtle and other marine creatures entangled in plastic beverage six-pack rings or sea bird chicks that perish from starvation because their parents bring them plastic to eat, mistaking it for food. Ocean plastic is

clearly a problem with no obvious solution. Microplastics are now globally distributed in virtually all freshwater lakes and rivers, as well as in all oceans. They’ve been found in North America, Europe, and Asia. Clearly, plastic must be reduced or eliminated at its source. Ninety percent of ocean plastics come from 10 rivers, eight of which are in Asia. And the five most plastic-polluting countries are China, Indonesia, Philippines, Thailand, and Vietnam. Vietnam’s coast, for example, has piles of plastics on the beaches—plastic debris that affects coastal livelihoods. Their trash comes from us who live in the Global North.

What can you do? Bring your own shopping bags to all stores. Think twice before putting all produce into those flimsy plastic bags. Do you really need to put apples, oranges, onions, etc. in a bag? Rinse out and reuse the plastic bags to repackage at home if you think your produce needs it. Avoid items that use excessive packaging. Also pay attention to the information sheets on recycling sent out by your trash hauler that identify which plastics they will accept as recyclables—what is not identified goes into the regular trash. There are a lot more ideas at <https://myplasticfreelife.com/plasticfreeguide/>.

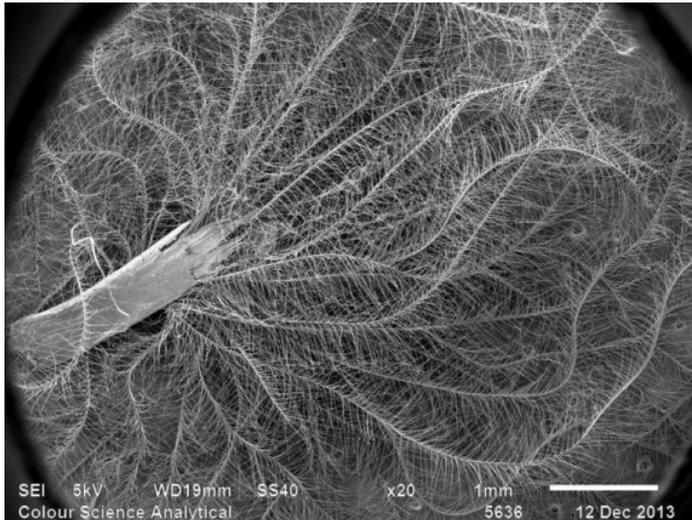


Plastic bottles and other waste at a disposal site.  
Photo from Shutterstock.



### Dressed for the Cold

It's 3:15 in the afternoon and still only 24°F. Pellets of snow, driven by a stiff breeze, are cutting fast and hard. In the distance rises a cacophony as hundreds of Canada Geese take flight and fill the sky. It is bitterly cold, yet this winterscape is alive with birds. It is hard



A whole down feather as viewed by electron microscope from The University of Leeds.

to imagine how Canada Geese, and a hundred other overwintering species, thrive here in such harsh conditions. So, how do they stay warm enough to survive?

Birds have a long list of adaptations for winter survival. High on that list is they are well dressed for the cold. A Canada Goose may have twenty-five thousand feathers on its body. Even the tiniest bird has many thousands. Fully fluffed, feathers can create a layer of trapped air that will keep a bird's temperature at 104°F even in subzero weather.

All feathers are made of keratin, a common protein found in hair, nails, horns, hooves, and beaks. It is, however, the structure of the feather (how that keratin is put together) that determines the feather's key purpose and resultant insulating ability. While stiff flight feathers cover the body, wings, and tail to "zip" together a streamlined shape, it is primarily the job of the underlying fluffy down feathers to insulate.

What characteristics allow down to trap heat so well

and still be so incredibly light? The work of "Dr. Down," Matthew Fuller, who did his doctoral thesis on down and its use in outdoor recreation, explains that a goose down feather is shaped much like a palm tree with a thick trunk (the feather shaft), and feathery leaves (called barbs) sprouting from the top. Each barb is only 20 micrometers across; a mere one fifth the width of the average coat of paint. Yet, each barb has progressively smaller structures projecting from it. Barbs are covered in barbules, which are covered in prongs, which are covered in immensely fine nodes. When viewed through an electron microscope, one sees the entire structure of goose down to be tubular (not so with duck down). This tubular shape prevents crushing. However, neither the barbs nor the barbules are perfectly cylindrical in cross section, but slightly flattened, which causes them to bend away from one another to avoid tangling. It also helps them spring back after compression. The smallest extensions, the prongs and nodes, are more cylindrical giving them maximum stiffness and increased compression resistance.



Canada Geese by Ann Kramer.

The fatter barbs keep the down feather

lofty, while the smaller barbules are nearly the perfect diameter to trap air and block heat transfer by radiation. Yet, a handful of down weighs less than a gram.

For hundreds of years, man has recognized the superior warmth provided by goose down. Even today, mountaineers spend thousands for outerwear and sleeping bags stuffed with it. We have yet to learn to synthesize what nature has perfected.

The author would be remiss not to mention that a majority sector of the international down industry employs the extremely controversial practice of "live plucking." A quick YouTube search will yield related videos that are extremely difficult to watch.

#### FCAS Welcomes New and Renewing Members

- |                 |                     |
|-----------------|---------------------|
| Barbara E. Case | Eileen Scholl       |
| Kristin J. Joy  | Lawrence W. Sherman |
| Cheryl Orwig    | Vickie Traxler      |
- Thank you for your membership.**

**Due to COVID-19, FCAS field trips are suspended until further notice.**



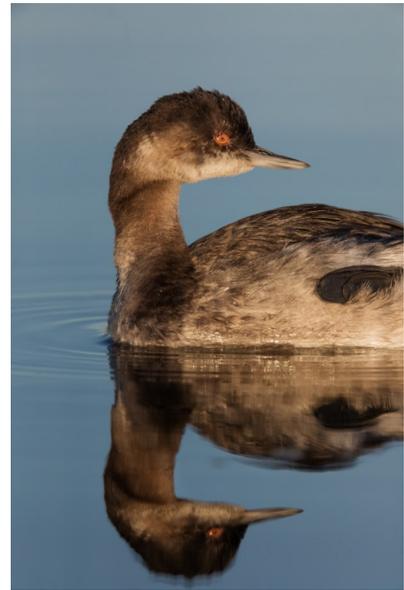
## November Birding Tips

by John Shenot

November is a great month for birding in Northern Colorado, especially for birds that hang out on or near water. Our largest reservoirs usually remain ice-free through most of the month and can attract a superb mix of migrating species. On a good day you might find 10 species of ducks and four species of grebes on a single body of water (it helps if you have a spotting scope). Rarities to look for include Barrow's Goldeneye, Long-tailed Duck, three species of scoters (Surf, White-winged, and Black), and Red-necked Grebe. If you take the time to sort through large flocks of Canada and Cackling Geese, you might find a Snow Goose, Ross's Goose, or Greater White-fronted Goose hiding in their midst. Tundra Swans and Trumpeter Swans are seen annually in low numbers. There are four species of loon that have been recorded in November in Larimer County, with the Common Loon being by far your best bet, followed by the not-so-common Pacific Loon. November is also when we start to see diversity in the gulls that congregate around reservoirs (and landfills), including Bonaparte's Gull and Lesser Black-backed Gull. I know that gulls aren't everyone's cup of tea, but

if you like challenges it can be very rewarding to learn how to identify them.

Some of my favorite water bodies for November birding are Prospect Ponds in Fort Collins, Fossil Creek Reservoir, Douglas Reservoir, and Timnath Reservoir—but there are many other good options in the area. Don't let cold weather stop you—just dress for success!



Eared Grebe  
by Claudio Conteras-Koob.

## Alex Cringan Memorial Scholarship



Dr. Alex Cringan.

The Alex Cringan Memorial Scholarship Fund was created to provide financial assistance to educators and students to enhance their skills, raise environmental awareness, and contribute to bird research. Two scholarship recipients, Saige GriffisWest and Nolan Bunting, finished up the current grant year by presenting at the September program meeting. Saige, a Front Range Community College student, did a project

on the effects of barbed wire on wildlife and birds. She collected data from wildlife rescues and rehabilitation facilities across the country, and did field surveys in Larimer and Weld Counties to document injuries and deaths

caused by fencing. She focused on educating the public on wildlife-friendly fencing techniques by creating a flyer that will be available from conservation agencies, or by email from [Barbara.patterson@frontrange.edu](mailto:Barbara.patterson@frontrange.edu).

Nolan Bunting, a CSU student and officer for the CSU Field Ornithology (CSUFO) chapter, started a feeder watch program on campus to educate the public about the behavior, ecology, and conservation of bird species. He put up three feeders around campus and involved over 40 students in the project. Signage at the feeders recognizes FCAS, Alex Cringan Scholarship, and the CSUFO to increase awareness of conservation organizations and community opportunities.

The scholarship cycle will take a break due to Covid precautions. Hopefully, we will offer the scholarship to teachers and students in 2021. Thanks to Saige and Nolan for great work, and to FCAS and the contributors for providing this valuable experience.

## Final Reminder on Proposed Changes to FCAS Bylaws

This month, at our chapter membership meeting on Thursday, November 12, we will take a vote on whether to approve or reject proposed changes to the FCAS constitution and bylaws. The changes were recommended by an ad hoc Bylaws Revision Committee that the Board of Directors created in February. We've posted the documents to a folder so you can download copies or review the changes online. Go to <https://drive.google.com/drive/folders/1OP0MuZBA4Q4MQJFVmH8Y16SvBmmsKqL?usp=sharing>. In that folder you'll find copies of the current bylaws (Revision G of 2015), the proposed new bylaws (Revision H of 2020), and a "redline" document that compares the two and shows all the changes that are being proposed.



Fort Collins Audubon Society  
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## Membership Application

Join Fort Collins Audubon Society (FCAS), National Audubon Society (NAS), or both.

- New or renewing FCAS Chapter Member \$ 20 Name: \_\_\_\_\_  
Receive the FCAS *Ptarmigan* by email
- New or renewing FCAS Chapter Member \$ 30 Address: \_\_\_\_\_  
Receive the FCAS *Ptarmigan* by mail
- Lifetime FCAS Chapter Member \$750 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Receive FCAS *Ptarmigan* by mail or email
- Additional support for FCAS programs \$ \_\_\_\_\_ Phone: \_\_\_\_\_
- Additional support for Alex Cringan Fund \$ \_\_\_\_\_ Email: \_\_\_\_\_  
(natural history education grants)
- New NAS member \$ 20 May we send you FCAS email alerts if updates occur for field  
Receive the NAS *Audubon* by mail trips, programs, etc.? Yes or No
- Renewing NAS member \$ 35 May we contact you for volunteer activities such as helping at  
Receive the NAS *Audubon* by mail events or contacting legislators on important issues? Yes or No

**Total Enclosed:** \$ \_\_\_\_\_

Please make your tax-exempt check payable to FCAS and mail with this form to FCAS,  
P.O. Box 271968, Fort Collins, CO, 80527-1968. Your cancelled check is your receipt. All renewals are due in January. New  
memberships begun after August 31 extend throughout the following year. Applications can be completed at

[www.fortcollinsaudubon.org](http://www.fortcollinsaudubon.org)