The globalization of trade and transport is accelerating the risk of introducing potentially invasive species as they are moved both unintentionally and for deliberate purposes. Feral swine, as an example, their range expansion mostly having been human assisted, are devastating to ground-nesting birds. Combining the threats of invasive species with those posed by climate change for the long-term can magnify the intensity associated with both issues. Thomas Hall will summarize the findings of the report, “Bioinvasions in a Changing World: A Resource on Invasive Species-Climate Change Interactions for Conservation and Natural Resource Management,” which serves as a guide to the methods, resources, and assistance available for dealing effectively with invasive species and their interface with climate change at the site level, and to inform policy-making and planning at larger geographic scales. The presentation also ties the findings of the report to Colorado, particularly birds.

Tom Hall has been a wildlife biologist with the United States Department of Agriculture, Animal, and Plant Health Inspection Service (APHIS), Wildlife Services Program for 32 years. He currently is an Environmental Coordinator for Wildlife Services in Fort Collins. He has worked with several invasive species including feral swine, brown tree snakes, nutria, and feral dogs and cats to protect a variety of resources, including threatened and endangered species, human health and safety, and agriculture. He is a member of the APHIS Climate Change Working Group and co-chaired a group working on the intersection of invasive species and climate change for the Aquatic Nuisance Species Task Force and the National Invasive Species Council.

Join us on March 8 at the Fort Collins Senior Center for this free program. The public is always welcomed.
President’s Corner
by John Shenot

It was 1992. I’d finished graduate school in Ann Arbor, Michigan, and I was searching for a full-time job and a start to my new career. I had a part-time internship that almost paid the bills, and a little bit too much time on my hands. So, I was looking for entertainment—or even just distractions—that didn’t cost money.

Driving home from my internship one morning, I pulled over to the side of the road running along the Huron River because I had nothing better to do. And then I saw him, up close, and everything changed. He was so handsome I think I gasped. He was a Common Goldeneye, and from that day on I was a birder.

I suspect that many of us have a similar story that is engraved in our memory. That time, that day, that place, when the miracle that had been around us all along finally came into focus. When we saw the beauty, the mystery, the gift—when we really saw it—for the first time.

This month, I’m skipping my usual column about the “business” of FCAS to share my story and to encourage you to share your story. I’d love to hear it, certainly. But more importantly, tell a friend, a coworker, or a relative about that day you got hooked on nature. Bonus points if you tell someone who hasn’t yet had such a moment.
Conservation Corner by Bill Miller

"A state divided into a small number of rich and a large number of poor will always develop a government manipulated by the rich to protect the amenities represented by their property." – Harold Laski

Question: What’s the difference between ignorance, apathy, and ambivalence?
Answer: I don’t know, and I don’t care, one way or the other.

Oh, no! Another looming crisis

This issue has not been adequately brought forward to the public’s attention but has been discussed among the scientific community for well over a decade. The looming crisis is that of excessive, human-produced, reactive nitrogen in the world’s environment.

The earth’s atmosphere contains about 78% nitrogen. Atmospheric nitrogen is relatively inert (non-reactive), but can be converted to reactive nitrogen oxides by lightning, which can then be used by plants. It is the “fixed” nitrogen that one smells during a thunderstorm. Humans extract nitrogen, primarily from the atmosphere, and convert it to ammonia, which is then combined with other ingredients to produce nitrate fertilizers. Sometimes phosphorus also is added to the mix. Both nitrogen and phosphorus support the growth of algae and aquatic plants, providing food and habitat for fish, shellfish, and smaller organisms. When too much man-induced nitrogen and phosphorus enter the environment, air, water, and even soil can become polluted, resulting in serious environmental and human health issues, and impacts on the economy.

Nitrogen oxide, a principal contributor to smog and ground-level ozone, is derived from burning fossil fuels in vehicles and power plants. Excess nitrogen in the atmosphere produce pollutants such as ammonia and ozone, which can impair our ability to breathe, limit visibility, and alter plant growth. When excess nitrogen comes back to earth from the atmosphere, it can harm forests, soils, and waterways. Weak nitric acid can produce acid rain, harmful to the health of both plants and man-made structures. Nitrogen and phosphorus, in both fresh and salt water, are derived primarily from agricultural fertilizer runoff. Too much of either can lead to algal blooms that produce elevated toxins and bacterial growth harmful to humans if they come into contact with polluted water, consume tainted fish or shellfish, or drink contaminated water.

Billions of people owe their lives to nitrogen fertilizers that averted global famine in the 20th century—but few are aware that nitrogen pollution from fertilizers and other sources has become a major environmental problem that threatens human health and welfare in multiple ways. This is another environmental issue that will play out over time. Hopefully solutions can be developed that will ensure the health and welfare of humans, while also safeguarding the environment upon which we all depend.
The Year of the Bird

The first day of the college ornithology class I tell the students it’s “all about the birds.” Then I spend the rest of the semester either trying to convince them or encouraging them to discover it on their own. Studying birds provides a perfect window to begin to understand how ecosystems work. Everywhere I turn this semester, I find resources proving my case.

First from the Cornell Lab of Ornithology: “The fantastic thing about birds is that they allow us access to the very little details of the living world. Because birds give us this microscope into how nature works, so beautifully, we can look closely at how they interact with their food, with their shelter, with their places for nesting, and with one another. Birds give us access to how nature works in ways that most animals don’t. There’s art in nature and there’s science in nature. And then there’s the teaching that one can do from putting those together. These factors ultimately culminate in the same place. We can’t help singing about it because it’s so spectacular. And that all comes from the fundamental human privilege we have that starts from being able to see something, to listen to something, to think about it, and to reflect on it. There’s nothing that’s more beautiful and fulfilling and potentially, explosively, life changing, than simply observing nature.”

Second is from the January issue of National Geographic proclaiming “the year of the bird.” National Geographic in partnership with the National Audubon Society, BirdLife International, and the Cornell Lab of Ornithology has devoted the whole year to examining our changing environment with birds as their focus. Jonathan Franzen’s article, “Why Birds Matter,” leads with, “It’s not just what they do for the environment—it’s what they do for our souls.” The article, “Flight Patterns” by Catherine Zuckerman and Xavi Bou, captures the invisible patterns that birds make across the sky. Throughout 2018, National Geographic and the year of the birds will be offering digital content, books, and travel adventures including “Planet of the Birds” on the National Geographic Wild channel.

Last, I recommend “The Genius of Birds” by Jennifer Ackerman. This beautifully written book documents cutting edge research celebrating the triumphs and complexity of birds and their extraordinary feats of mental prowess! Do we need any more reasons to study birds? Beyond the sheer joy they provide, birds play a role in the environment: pollinating plants, dispersing seeds, controlling insects, and removing rotting flesh. They are relatively easy to find, are colorful, have songs, are active in the day, live above ground, and can be seen from a distance. The observation of bird behavior allows for the development and testing of ecological principles, such as adaptive radiation, character displacement, species diversity, dangers associated with pesticides, and the effects of shrinking habitat. As Thomas Lovejoy, a famed biologist and conservationist stated, “If you take care of the birds, you take care of most of the big problems in the world.”

Welcome New National Members

FCAS welcomes new National Audubon Society members by sending one complimentary copy of our newsletter. We invite you to 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 the Ptarmigan after the complimentary issue, please support your local chapter and subscribe to the newsletter. See the details on the last page of the newsletter or on our website at www.fortcollinsaudubon.org.
Upcoming Field Trips

All field trips are free (unless otherwise noted) and open to the public. All experience levels are welcome. Bring snacks or lunch, water, binoculars, and spotting scopes. Inquire with the FCAS Field Trip Chairperson (Sirena Brownlee, 970-980-6184 or sirena.brownlee@hdrinc.com) or the trip leader named below if you need to borrow binoculars. Please understand that changes to the dates, meeting times or locations, and trip leaders are occasionally unavoidable. Contact the listed trip leader prior to the day of the trip or visit fortcollinsaudubon.org for more information and updates. RSVP strongly encouraged.

March 11, Sunday, Bobcat Ridge Natural Area Bird Survey. Leader: Denise Bretting, dbretting@swloveland.com, work: 970-669-1185, home: 970-669-8095. FCAS performs a monthly bird census for the City of Fort Collins on the second Sunday of each month. All levels are welcome. Meet at 7:30 a.m. in the parking lot. Call for any change. Dates and times for future surveys are: April 8 at 7 a.m., May 13 at 6:30 a.m., and June 10 at 6:30 a.m.

March 31, Saturday, Lee Martinez Park. Leader: Sirena Brownlee, sirena.brownlee@hdrinc.com, 970-980-6184. Meet at 9:30 am in the Lee Martinez parking lot off Elm Street for a three-mile walk along the Poudre River and Salyer and McMurry Natural Areas. This is a good time of year for early spring migrants and resident birds that should be starting to sing.

FCAS Welcomes News and Renewing Members

David Bayer
Donald Beaver
Hetty Bixby
Bob Blinderman
Denise Bretting
Irene Briggs
Sirena Brownlee
Tom Butler
David Cantrell
Kate Carr
Larry Caswell
Morris Clark
Scott Cobble
James & Ruth DeMartini
Kenneth Dunnington
Ray & Joan Glabach
Ruth Grant
Vince Griesemer
Melannie Hartman
Diana Hoffman
Anne Hunsinger
Ted Huston
Nancy Jones
Barbara Jones
Janet Latona
Dorothy Leising
Ted Manahan
Serena Mangus
Michelle Mckim
Larry Moskowitz
Daniel J. ODonnell
Tim Priehs
Elizabeth Pruessner
Rosemary Rader
Joanne Rankin
Barbara Seibert
Joan Skurat
Paula Stearns
Daniel Teska
Edith Thompson
Al Trask
Barbara Turnbull
Lisa Voelker
Sheila Webber
Peter Weckesser
Wild Birds Unlimited
Lori Zabel

Thank you for your membership. Your support makes our programs and conservation efforts possible, and helps us achieve our mission of connecting people to the natural world.
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 trips, programs, etc.? Yes or No
Receive the NAS Audubon by mail

☐ Renewing NAS member $35 May we contact you for volunteer activities such as helping at events or contacting legislators on important issues? Yes or No
Receive the NAS Audubon by mail

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.