



# The Golden Eagle

Newsletter of the Golden Eagle Audubon Society

Fall 2019

## Dinosaurs are not extinct, or Why don't birds have teeth?

By Crista Videriksen Worthy

Like almost any other kid, I grew up with a love for dinosaurs. In those days, dinos were thought to be cold-blooded, slow-moving, dumb beasts done in by long, slow, changes to the world climate. But over the last several decades, those views have changed as mountains of new evidence have emerged. It is now clear that dinosaurs like *Tyrannosaurus rex* did not stand upright, dragging their tails on the ground. Rather, they walked, and often ran, bent over, with their spines parallel to the ground, using their tails for balance. They were active, intelligent, and warm-blooded. After numerous new fossil discoveries, particularly in China, it is now evident that many dinosaurs had feathers. They lived in a world of nearly endless diversity.

We now know that world ended 65 million years ago in a spectacular and nearly unimaginable catastrophe. Moving at 45,000 miles per hour, an asteroid struck a shallow sea where the Yucatán peninsula is today. The energy released by the impact exceeded that of a billion Hiroshima bombs and gouged a crater about 18 miles deep while simultaneously lofting 25 trillion metric tons of debris into the atmosphere. As the Earth's crust briefly rebounded, it formed a peak higher than Mt. Everest. A gigantic jet of molten material, much of it hotter than the surface of the Sun, exited the atmosphere. Some of it ended up on other planets and moons in our solar system. The rest ignited everything on Earth within a thousand miles. Eventually, giant fires, tsunamis, debris, and soot ravaged nearly every corner of the planet. Photosynthesis all but stopped, killing most plant life, extinguishing the phytoplankton in the oceans, and causing atmospheric oxygen levels to plummet. After the fires died down, Earth plunged into a period of cold, perhaps even a deep freeze. Earth's two essential food chains, in the sea and on land, collapsed. About 75% of all species went extinct. More than 99.9999% of all living organisms on Earth died, and the carbon

cycle came to a halt.

I used to feel sad that dinosaurs were extinct. But in a way, they're not. Scientists now understand that birds evolved from theropods similar to *T. rex* and other, smaller, two-legged dinosaurs. Want to know what a *T. rex's* skin felt like? Just touch the skin on the feet of a chicken or other bird. When I watch a brown pelican skim over the Pacific, I now see, in my mind's eye, a pterodactyl, looking for fish. I'm almost surprised that a giant *Mesosaurus* doesn't emerge from the sea and grab the pelican.

When I watch a male ring-necked pheasant walk, especially if it's walking away from me, its form is exactly like that of a *T. rex*. I get it. Want to really get it? Go see "*T. rex: The Ultimate Predator*," a new exhibition that will run through next summer at the American Museum of Natural History in New York. You'll see startlingly lifelike theropods, and lots of feathers.

But wait. Why isn't there a single bird that has teeth?

Sure, some geese have serrated beaks to help them tear grass, but these are not teeth. I thought about this for a long time. OK, so a mouth full of teeth might weigh more than a beak without any, and birds need to be lightweight in order to fly (many dinos had hollow

bones, just like birds), but surely there are some cases where teeth would give a bird an evolutionary advantage. Maybe the asteroid that wiped out the dinosaurs 65 million years ago only allowed a few to survive that already lacked teeth?

As with many other discoveries, the answer was found by analyzing genomes—DNA. And it turns out the ancestors of all birds lost their teeth long before the asteroid hit. All birds have a gene that deactivates the formation of teeth. A study published in *Science*, in 2014, found that this gene can be traced back to a common ancestor of all modern birds, which lived some 100 million years ago. Tooth loss and beak

continued on Page 4



Vampire finch

Photo by Jaime Chaves

## President's Message

By Liz Urban

With fall upon us, I hope you are out and about enjoying the cooler weather and the end of the migration season. It has been so exciting to see what birders are finding out there the past month or so, and it is uplifting to see so many of those rarities appearing at Blacks Creek Bird Reserve. It was the work of community of partners— birders, conservationists, agencies, and more – that have made the reserve a model for cooperation and on-the-ground restoration action making impacts on birds. Your support of GEAS makes real-world differences, and I hope you feel pride in these accomplishments like I do.

I am also excited to be able to share that the next chapter of our growth at GEAS begins with our joining Idaho Botanical Garden and Idaho Fish and Game Department in the Sagebrush-Steppe chapter of the Idaho Master Naturalists. The goal of the program is to develop a corps of well-informed volunteers to actively work toward stewardship of Idaho's natural environment. We are thrilled to be a part of building the experiences, connections, and contributions the program makes every year. Many Master Naturalist volunteers have long been involved in GEAS, but we look forward to being a partner in the training of future cohorts and building our volunteer program to have robust offerings for Master Naturalists as well as our members and the larger community. We will be addressing how best to scale our existing opportunities, including our community science programs, Native Plant Network, and more, and exploring new ways that can allow us to help build a better world for birds and for people. If you are interested in becoming a Master Naturalist in the next class, we invite you to visit <https://idfg.idaho.gov/master-naturalist> and find the 2020 application, anticipated to open in October.

Regardless of whether you are interested in becoming a Master Naturalist or not, we would like to invite you to attend our first ever volunteer orientation on Oct. 29. This will be an opportunity to learn more about all that GEAS is doing and the many different ways you can get involved. We are excited to be working towards the creation of more conservation, education, and advocacy opportunities for people to become involved in and what those opportunities will mean for birds in southwestern Idaho.

Liz Urban, president



Great blue heron

### BOARD OF DIRECTORS

Liz Urban, President	LUrban@goldeneagleaudubon.org	
Leah Dunn, Vice President	ldboise@gmail.com	
Jim Lyons, Secretary		
Alex Takasugi, Treasurer	alextakasugi@cableone.net	208-484-9132
Sean Finn, Past President	a.gentilis@gmail.com	208-371-2740
Michele Crist	mrcgoldeneagle@gmail.com	
Libby Burtner	burtnerlibby@hotmail.com	208-473-0870
Chris McClure	chrimcc@gmail.com	208-362-8241
Matt Podolsky	matthew@wildlensinc.org	208-724-6388
Alexander Sapiens	dr.sapiens@gmail.com	408-832-5400
Dondi Black	dondiblack@gmail.com	208-422-0566
Alan Crockett	abcrock.fu73573@msn.com	208-343-2969
Al Larson (Honorary)	larson83703@msn.com	208-343-0959
Bill Belknap (Honorary)		
Levi Mohler (Honorary, Deceased)		
Liven "Pete" Peterson (Honorary, Deceased)		

### COMMITTEES

Banquet:	mattmccoy28@gmail.com	
Matt McCoy		208-371-8920
Conservation:	mattmccoy28@gmail.com	
Matt McCoy		208-371-8920
Education:	kgnojewski@gmail.com	
Kristin Gnojewski		
Field Trips:	dondiblack@gmail.com	
Dondi Black		208-407-8798
Membership:	ldboise@gmail.com	
Leah Dunn		
Program:	dr.sapiens@gmail.com	
Alexander Sapiens		408-832-5400
Newsletter:	sparre47@gmail.com	
Niels S. Nokkentved		208-377-3360
Historian:	threehappycampers@hotmail.com	
Jennifer Robbins-Smith		208-859-3298
Grants and Awards	burtnerlibby@hotmail.com	
Libby Burtner		208-473-0870



## Chapter News:

The Advocacy Committee is working on issues at the local, state, and national scale. This new group of interested volunteers welcomes anyone who is interested to join us for upcoming committee meetings. The group is also hard at work coordinating GEAS's first ever 'Advocacy Training Workshop', scheduled for Nov. 2. Please see our calendar for more information.

Greg Kaltenecker, director of Intermountain Bird Observatory, attended the August board meeting to present GEAS and President Liz Urban with certificates of appreciation for our participation in the programming that earned them a Community Research Partnership Award.

GEAS held its second annual volunteer appreciation event in September. It was a pleasant evening recognizing the work and accomplishments we have made in

the past year. The board discussed the event at the October board meeting and is considering creating quarterly events that encourage our volunteers to gather rather than hosting a single, more costly, event.

The Native Plant Network produced more than 3,700 native seedlings this year, and a number of community planting events are scheduled this fall to help restore several important bird areas. Additionally, last year's plantings at the IBO river site have been monitored for survival using different treatments, and we now have a good basis for how to increase the survival of future plantings. Please see the calendar if you'd like to participate!

The Education Committee continues to seek grant opportunities for increasing our ability to deliver more programming and to support the 2020 New Roots Program.

The Board has appointed an ad hoc

hiring committee to fill the newly created and posted Education and Community Engagement Specialist position. We hope to have this new part-time independent contractor come on board in October.

The Board discussed ideas on how to encourage membership amongst the birding and larger community. We plan to have a membership drive in the new year.

The Board will begin our strategic planning process in October. A review of the 2014-2019 plan is very uplifting. We have made great strides in implementing many of the identified priorities and actions. We look forward to updating the plan and envisioning the future of GEAS.

GEAS is proud to be hosting the 2019 National Audubon Photography Awards Traveling Exhibit this October 16 through November 6. Please see the calendar for details on where to view the exhibit.

## Volunteer News

A huge thank you to Alan and Alice Crockett, and Ann DeBolt for their heroic efforts in wrangling spotted knapweed, a noxious weed, between the East Parkcenter bridge and Barber Park in August. They filled about 16 large garbage bags with the wildlife habitat robbing denizens. Alan and Alice have also been working throughout the year controlling



Ann DeBolt and Alan Crockett on August 10, the big push day

a variety of weeds in the Bethine Church River Trail section of the Boise River greenbelt. Their weed warrior work is greatly appreciated.

Thank you to Libby Adams, Leslie Blackburn (CWI), Martha Brabeck (Boise Parks and Rec), Brenda Foster, Kristin Gnojewski, Annette Hanson, Helen Manny (CWI), Tricia Matthews, Lizzy Miskell, John and Anne Olden, John Roundy, Chelsea Smith, and Lorna Snowden for caring for native plant seedlings through the summer. We also thank Jared Arp, Kim Bahruth, Aaron Connolly, Dusty Perkins and Heidi Ware Carlisle for their relentless work ensuring bird habitat restoration.

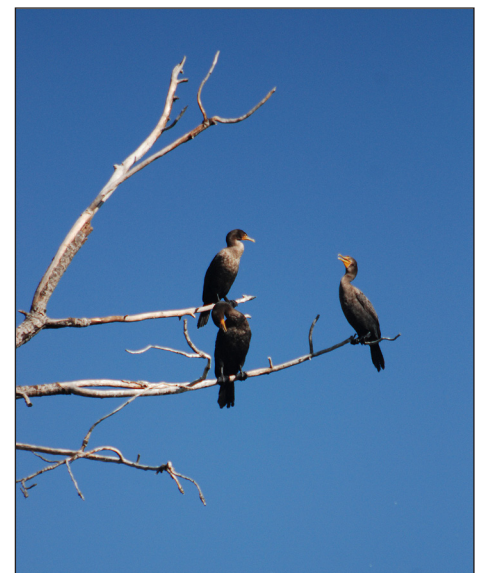
We are ever grateful to our field trip leaders Jim James, RL Rowland, Alan Crockett, Louisa Evers, Dondi Black, and Kathy Barker McCoy. Thank you for inspiring us all to get outside and go birding.

Thanks to Libby Burtner, Dondi Black, and Liz Urban for serving on the hiring committee for the new independent contractor position. Thanks to those who applied for their interest in our mission.

Thank you Liz Urban and Terra Falconer for organizing the volunteer appreciation event. Thank you to all that attended.

We appreciate Terra for participating in the Sage International water day as well as Libby Burtner for leading the photography walk for the Garden City Library 'How To' festival. Thank you to Debbie Erwin, Jim James, Aurora Galloway, and Dondi Black for assisting the Intro to Birding at Bown course.

Thanks also to Libby Burtner, Louise Maley, Dondi Black, Susan Hazelton, Niels Nokkentved and Sue Norton for their work on the newsletter.



Double crested cormorants



## Volunteer Spotlight: Kathy Barker McCoy

If you have ever joined Golden Eagle Audubon Society on a Wednesday morning bird walk, chances are that you have met Kathy Barker McCoy. Kathy started Wednesday Morning Club (WMC) more than six years ago as a way to consistently be outside and share her interest in birds. While it just started out as a couple of people birding together, WMC has grown and developed into a reliable group of birders that explore not only the birds around them, but also the plants and other wildlife.

When asked what inspired Kathy to start birding she recalled a story from her childhood. As a child, her grandparents had a house on Cape Cod and, while they were not expert birders themselves, they encouraged Kathy explore and learn about the world around her. She remembers that they had a pair of binoculars and a field guide in the kitchen window and would urge her to look up the birds that she would see. One day she spotted a large bird with a red eye right outside the window. As a child this bird seemed huge and when she looked it up, she found that it was a northern goshawk. This experience, along with a trip along the Clearwater River where she was surrounded by western tanagers, were the two experiences that really solidified her love for birds.

Kathy later went on to earn a B.A. in biology and spent six years in Seattle, working for a biotech company. While in Seattle, she became actively involved with the Seattle Audubon Society. She went through their Master Birder Program, which gave her the confidence to start leading field trips. Her interest in wildlife has taken her all over the country over the years. She studied salamanders as a marker for habitat evaluation in graduate school and worked as a wildlife consultant surveying habitat in many different regions in the United States. She had opportunities to survey bald eagles, marbled murrelets, spotted owls and more. She moved to Boise as a consultant and has since retired.



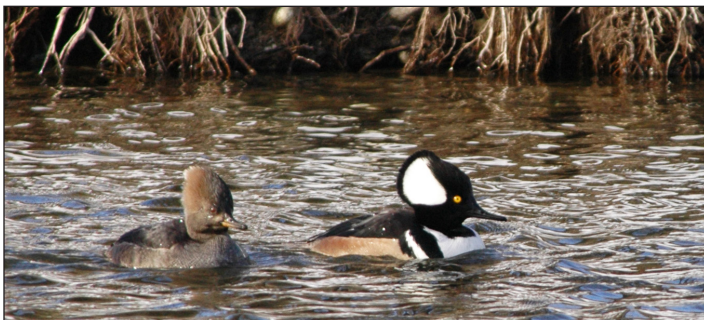
While Kathy has a long history of birding professionally, she would like to encourage those who may not have such a history, but an interest in birding, to lead field trips. Teaching others about birding is one of the best ways to learn yourself. If you have a favorite birding spot or would like to make birding a consistent part of your life, try leading a field trip or two. If you would like to learn from Kathy about the ins-and-outs of leading a bird walk, she would be happy to help.

Thank you, Kathy, for sharing your passion with us and encouraging the members of GEAS to always keep learning.

### Continued from Page 1

development happened concurrently and progressed from front to back over millions of years. *Ichthyornis*, an early species of bird, had a partial beak in the front of the mouth and teeth in the back.

But—we still don't know *why* birds lost their teeth. Numerous very ancient birds that flew also had teeth. Beaks are extremely versatile—the Galapagos vampire finch even uses its beak to draw blood from the wings of boobies—but so far scientists do not understand the evolutionary pressures that favored the formation of beaks at the expense of teeth. I do know this: the same cockatoo that used to gently preen water droplets off my eyelashes when I got out of the shower once bit me when I tried to take him for a car ride. I sure was glad he didn't have any choppers!



Hooded mergansers, Boise River



Nesting osprey on Payette Lake



**Call for Fall 2019 Small Grant Applications**

GEAS is proud to continue its successful Small Grants Program this fall. The GEAS Grants and Awards Committee will be accepting applications for the coming grant cycle through November 15. The GEAS board votes in December on funding decisions for applications, which are generally \$500 or less. We welcome conservation, education, or research projects to apply for consideration. Information and application are on the GEAS website at: <https://www.goldeneagleaudubon.org/Small-Grants-Program>. Questions may be submitted via email to committee chair, Libby Burtner at: [lburtner@goldeneagleaudubon.org](mailto:lburtner@goldeneagleaudubon.org).

**GEAS and IBO looking for education intern**

Golden Eagle Audubon Society is partnering with Intermountain Bird Observatory to bring on an education specialist intern for the fall of 2019 at the IBO Research Stations. Some may know Heather Hayes from her role as the research biologist and outreach coordinator for the Curlew Crew, and those who don't, will be thrilled to interact with her about migrating song birds. This fall we are excited to have Heather join us in engaging the public about birds and habitat along the Boise River. GEAS is excited to see her passion for outreach also help expand on the conservation messaging that reaches all the IBO visitors. We are excited to be helping visitors learn more about how to make differences at home by planting native plants, reducing window collisions and more. Heather has a background in conservation biology and began to cultivate her love of environmental education through her volunteer work with the Audubon Society.

**GEAS partners with Master Naturalist Program**

Do you like supporting conservation through volunteerism? We have good news for you! Golden Eagle Audubon Society is excited to announce that we are the newest official partner of the Sagebrush-Steppe Chapter of the Master Naturalist Program. The Master Naturalist program aims to develop a corps of well-informed volunteers to work toward stewardship of Idaho's natural environment. With this partnership, GEAS will be offering a more structured volunteer program and training, creating new volunteer opportunities, and providing great ways to get involved. If you are already a Master Naturalist or would like to become one, stay tuned for more details about what's to come. Learn more about the program at <https://idfg.idaho.gov/master-naturalist>.

**Advocacy Training Workshop**

Saturday, November 2, 10:30 a.m. - 3:30 p.m.  
 Would you like to protect birds and their habitats by communicating with local lawmakers and other municipal organizations, but don't know where to start? Would you like to learn to write effective letters to policymakers on behalf of birds? Please join Golden Eagle Audubon Society for our Advocacy Training Workshop from 10:30 a.m. to 3:30 p.m. on November 2. The goal of this training is to provide tools to help our members become effective advocates who can talk with their legislators confidently and present facts on behalf of birds. Lunch will be provided. Limited space is available, RSVP required.



This bench was installed recently at Warm Springs Park as a memorial for Colleen Harden.





Golden Eagle Audubon Society-Save the Date! Advocacy Work Shop 10:30 a.m. - 3:30 p.m., Saturday, November 2 at Bown Public Library. Lunch Provided. We are limited to 30 people, so please RSVP-watch the Eblasts for more information.

## Arctic home to millions of birds threatened by oil and gas exploration

By N.S. Nokkentved

About 195 bird species, including birds that migrate to and from Idaho and most parts of the United States, can be found on the arctic coast of Alaska in the spring and summer. The coastal plain here is a key fall staging area for an annual average of more than a hundred thousand migrating lesser snow geese. Eider ducks migrate in huge numbers, up to fifty thousand per day. Black brandt, white-fronted and snow geese, ducks, ptarmigan, black billed and yellow-billed loons breed in the refuge.

Conservationists call it America's Serengeti for its wildlife migrations. Oil industry officials call it Area-1002, for the section of the 1980 Alaska National Interest Lands Conservation Act that left it open to oil exploration. The native Gwich'in people, who rely on the caribou that give birth in the area, call it "the place where life begins."

Regardless of what you call it, the 1.5-million-acre coastal plain of northeastern Alaska, about the size of Long Island, is the most productive part, in terms of wildlife, of the Arctic National

Wildlife Refuge. It was set aside in 1960 specifically to protect this wildlife, and its wilderness and recreational values. Each of the three groups sees the coastal plain from a perspective that reflects their attitude toward the landscape. Conservationists see it for its own worth and place a value on just knowing it is there and intact. Energy industry officials see it for the value of the oil that it may contain. The Gwich'in see it as part of the community to which they belong. It is not that any of the groups are wrong, but the coastal plain is a place where the most abundant and irreplaceable resource is wilderness and it has values greater than any oil it might contain.

At stake in Alaska is an unspoiled arctic wilderness ecosystem that stretches east into northwestern Canada and the wildlife and native cultures it supports. It is home to polar bears, wolves, muskoxen, vast herds of caribou and millions of birds, and it supports two indigenous cultures. In 1959, then-Interior Secretary Fred Seaton called it one the world's great wildlife areas and one of America's

wildlife and wilderness frontiers. In the 1980 legislation that doubled the size of the refuge, President Jimmy Carter said his goal was to restrict "development in areas that are clearly incompatible with oil exploration." A 1987 U.S. Department of the Interior environmental study of the area concluded oil development would threaten or destroy the very values for which the refuge was created. "The wilderness character of the 1002 area would be lost, leaving the designated Arctic Refuge wilderness area east of the Aichillik River to the Canadian border and the three-million-acre North Yukon National Park in Canada as the only remaining areas of preserved Arctic coastal plain ecosystems in North America."

In 2019, Congress passed a budget that called for oil and gas exploration in this wilderness.

*This article is adapted from N.S. Nokkentved's book: "To Think Like a Mountain: Environmental Challenges in the American West." (Pullman, Wash., WSU Press, 2019) Available online from WSU Press.*

## Golden Eagle Audubon Society Annual Banquet and Silent Auction



### Save the Date

**March 21, 2020 at 6 p.m.**  
**Riverside Hotel | 2900 W**  
**Chinden Blvd. Boise, ID**

**More details to come**  
**Registration opening soon**

Join GEAS for a night of great food, wonderful auction items, good company, and delicious desserts to raise funds for a great cause!

We are pleased to have Lauren McGough as our keynote speaker for the evening. Lauren McGough will present her program titled, “Life as a Mongolian Eagle Hunter and the Role of Falconry in Eagle Conservation.” McGough has been a licensed and practicing falconer since age 14. She has been particularly enamored with golden eagles as hunting partners, a unique branch of falconry that has only a handful of practitioners in the United States. After spending nearly two years as an exchange student in the United Kingdom and learning the strong European tradition of eagle falconry, she graduated from the University of Oklahoma with dual degrees in zoology and international studies. In 2009, she was a Fulbright Scholar to Mongolia, where she apprenticed herself to local eagle masters and trained eagles for hunting foxes on horseback. She loved Kazakh eagle culture so much that she earned a doctorate in social anthropology from the University of St. Andrews in Scotland. Most of all, McGough has enjoyed bringing the eagle training techniques she’s learned abroad back to her home country, where she teaches golden eagles in need of rehabilitation how to hunt on the great plains. The past two years she has also been using this technique to rehabilitate eagles in South Africa.

### #BringBirdsBack: 7 Simple Actions to Help Save Birds

A recent study published in the journal Science, show that 2.9 billion breeding adult birds have been lost since 1970, including birds in every ecosystem. That amounts to one in every four birds that we have lost in less than a single lifetime. You can make a difference to help save birds.

- 1. Make windows safer to prevent window collisions.** Find out more about our Stop the Thunk campaign on our website.
- 2. Plant native plants to create quality habitat for birds.** GEAS has helped plant thousands of native plants in the Treasure Valley through our Native Plant Network. You can help too by adding native plants to your garden.
- 3. Drink bird-friendly coffee.** Join our coffee club to get bird-friendly coffee at wholesale prices!
- 4. Watch birds and share what you see.** Join GEAS on one of our 80+ field trips throughout the year and enter your data into ebird.
- 5. Reduce your use of plastics.**
- 6. Keep cats indoors.**
- 7. Avoid pesticides by eating organic.**





Golden Eagle Audubon Society  
PO Box 8261  
Boise, ID 83707  
Electronic Service Requested

Non-profit Organization  
U.S. Postage Paid  
Boise, ID  
Permit No. 181

The Golden Eagle Audubon Society publishes *The Golden Eagle* six times a year.

- Please help us save paper and mailing costs; if you would like to receive your newsletter online, send your name and zip code in an e-mail to [membership@goldeneagleaudubon.org](mailto:membership@goldeneagleaudubon.org). GEAS does not share your e-mail address.
- For membership/subscription information, renewals, or change of address, e-mail [membership@goldeneagleaudubon.org](mailto:membership@goldeneagleaudubon.org).
- For newsletter submissions, send an e-mail to Niels S. Nokkentved at [sparre47@gmail.com](mailto:sparre47@gmail.com). The deadline for newsletter submissions is the second Sunday of the month.

### We invite you to join the Golden Eagle Audubon Chapter

Membership in the local chapter includes a one-year subscription to *The Golden Eagle*, and all my dues remain with the local chapter and support local activities.

Name: \_\_\_\_\_  
E-Mail: \_\_\_\_\_ (allows for website login)  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_

- Student membership \$15
- Individual membership \$20
- Family membership \$35
- Golden Eagle Lifetime membership \$500

I would like to donate an additional \$ \_\_\_\_\_

Make check payable to Golden Eagle Audubon Society. Mail to: Golden Eagle Audubon Society, PO Box 8261, Boise, ID 83707, **or pay by credit card on our website [www.goldeneagleaudubon.org](http://www.goldeneagleaudubon.org) (click support GEAS).**

Please contact us for information on membership scholarships.

To join the National Audubon Society visit <http://www.audubon.org/> and use chapter code G00 for Golden Eagle Audubon Society, or write to: National Audubon Society, PO Box 422250, Palm Coast, FL 32142-2250.

The Golden Eagle Audubon Society is southwest Idaho's chapter of the National Audubon Society.  
GEAS promotes environmental awareness through field trips, local programs and volunteer work.

Post Office Box 8261, Boise, Idaho 83707  
[www.goldeneagleaudubon.org](http://www.goldeneagleaudubon.org)

Chapter Code: C5ZG000Z