To Really Know Birds You Have to Watch Them Fly

By Crista Videriksen Worthy

Birders tend to notice things, like this little birdhouse my neighbor Bill Junk noticed on the road to Pettit Lake. Henry Beston, who wrote the classic book *The Outermost House*, was a great observer of birds. He wrote: "...no one really knows a bird until he has seen it in flight. Since my year upon the dunes, spent in a world of magnificent fliers, I have been tempted to believe that the relation of the living bird with its wings folded to the living

bird in flight is almost that of the living bird to the same bird stuffed. In certain cases, the difference between the bird on the wing and the bird at rest is so great that one might be watching two different creatures. Not only do colours and new arrangements of colours appear in flight, there is also a revelation of personality. Study your birds on the ground as you will, but once you have thus observed them and studied their loveliness, do not be afraid to clap your hands and send them off into the air. They will take no real alarm and will soon forgive you. Watch birds flying."

Last fall I noticed a flock of about 50 Canada geese. It was late in the afternoon and the sun glowed low in the sky. These geese must have just graduated from the Air Force

Academy because they flew in a perfect V-formation, not one out of line. As their wings moved, the sun's low angle highlighted a lighter area under each bird's wing in perfect succession and I could clearly see the phenomenon I will describe below. It was a sublime moment of understanding; one I shall never forget.

Most people, if they think about it at all, assume geese and other birds that fly in this V-formation do so to "draft" the bird ahead, like NASCAR drivers, and thereby save a little energy. But as with most things in the natural world, reality is even more wonderful and complex. Science has unlocked the secret. A decade ago, scientists implanted heart-rate monitors in pelicans and discovered those flying behind other birds had lower heart

rates, indicating that they were using less energy. But that's not the whole story. Biomechanist Steven Portugal and colleagues at the University of London's Royal Veterinary College teamed up with an Austrian conservation group working to save a critically endangered large bird, the bald ibis. The birds once thrived across Central Europe but had dwindled to a few hundred. The conservation group Waldrappteam arranged for human foster parents to raise ibis chicks. Once the chicks were old enough, a foster parent

Bird house on the road to Pettit Lake

Photo by Bill Junk

and a pilot rode an ultralight airplane around the Alps and led the birds roughly on their natural migration from Salzburg, Austria, to southern Italy. Fourteen ibises were outfitted with lightweight high tech gadgets that used a GPS to log each bird's position and an accelerometer to measure the up-and-down motion of the bird's wings. From analyzing 30,000 wing beats from when the birds flew in perfect formation, it was discovered that they placed the tips of their wings in the thin spirals of upward-flowing air streaming off each wingtip of the bird in front of them—the upwash. If the trailing birds placed their wings in the leader's upwash, it pushed them upward, and they needed less energy to stay aloft.

But bird flight is more complex, because birds flap their

wings, and therefore the upwash is undulating up and down, which creates a wave pattern. This means the birds also have to adjust their timing if the distance between them and the bird ahead changes—and they do so remarkably quickly. If the trailing bird flies a full wing beat behind, it flaps its wings in phase with its leader to match the upwash flow. But if it's only half a wavelength behind, it flaps its wings in anti-phase, so that its wings go down as the bird's in front go up. That way, its wingtips will always meet upwash. The study was published in the journal Nature. As I watched those geese that afternoon, the reflected sunlight flashed from the first bird to Continued on Page 6

President's Message

By Liz Urban

It's hard to believe that many birds are already headed on migration to their wintering grounds. The past few months have flown by, and it's hard to believe that fall has arrived, according to the birds at least. Even though many of us are out looking for migrants in our free time, the GEAS board is hard at work reinvigorating our committees, and there are some exciting ideas on the horizon. We welcome participation from our members on any of the committees, so please send us an email if you would like to get involved.

We hope to increase the number of member opportunities available this coming year, so keep an eye out for more volunteer, education and 'just for fun' occasions. For instance, Amy Silver and the education committee are bringing a 'Birds of Boise' course to the Boise Schools Community Education series later this month. September also brings several volunteer chances. Our last outreach booth at the Capital City Public Market is scheduled, and there is a workday planned to continue to improve Blacks Creek Bird Reserve, thanks to Sean Finn's continued leadership. As we approach Christmas Bird Count season, we will also offer a family-friendly Kids' CBC in Boise and an event to make bird-friendly ornaments to feed birds in your yards this winter.

While I am excited to look forward, I also want to highlight a few big successes since the last newsletter. We are proud to be part of the effort advocating for the protection of the Boise River and thankful that a recent court ruling put a hold on the CuMo Mine Exploration Project until the appropriate environmental analysis is performed. Pam Conley has written more on this in this newsletter, and I would like to thank her for her tireless commitment to this important issue. GEAS also completed our third year of the collaborative New Roots Program this summer and provided youth in our under-served refugee community a chance to experience and learn about nature in the Treasure Valley. I hope you will consider joining me at the October monthly meeting to learn more about this year's program and the many partners that help make it possible.

I am proud to be a part of this volunteer-driven organization and thank our members for the opportunity to help guide our efforts this coming year. There are a lot of folks whose passion and commitment keep GEAS going, and I can't say thank you enough to each person who helps our chapter accomplish meaningful things and makes our community a wonderful place to live.

Liz Urban, President

GEAS CALENDAR September-October 2016

Field Trip: SIBA Elmore County	September 10
Family Birding Walk	September 11
Blacks Creek Bird Reserve workday	September 23
Blacks Creek Bird Reserve workday	September 24
Greenbelt Litter Patrol & Birding	September 25
GEAS Monthly meeting	September 27
Saturday Stroll, Greenbelt near Eagle	October 1
Family Birding Walk	October 8
GEAS Monthly meeting	October 25
Greenbelt Litter Patrol & Birding	October 30

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News from the Board: July and August

- Leadership of several committees changed with the beginning of our new year. Amy Silver is chairing the Education committee, Matt Podolsky is chairing the Conservation committee, and Michele Crist will chair our Grants & Awards Committee.
- The Board discussed how much funding the committees would receive during this fiscal year.
- Our semi-annual review and voting on grant awards took place at the July Board meeting. We awarded the following grants this cycle:
 - The Idaho Botanical Gardens, in partnership with GEAS, requested funds to grow native plants that will be used in restoration efforts at Blacks Creek Bird Reserve next spring. Awarded \$500.

- The Intermountain Bird
 Observatory requested funds to
 support an Education Outreach
 Specialist during the summer and
 fall of 2016. Awarded \$1000.
- The Peregrine Fund's World Center for Birds of Prey requested funds to support their 2017 'Raptor High' volunteer program for youth. Awarded \$150.
- The Basin School District requested funds and we supported the purchase of sound recording equipment for students to help identify bird species present at the Idaho Center for Outdoor Education in Idaho City by sound. Awarded \$181.
- The next review cycle for our small grants program will take place at the January board meeting.



Great blue heron takes wing.

Photo by N.S. Nokkentved

Chapter News

The speaker for the 2017 GEAS Banquet will be P. Dee Boersma, who has been called the "Jane Goodall of penguins" by the New York Times. Boersma, who has a doctorate in zoology, holds the Wadsworth Endowed Chair in Conservation Science at the University of Washington.

Boersma's academic research is in the area of conservation biology and has focused on seabirds as indicators of environmental change. For 30 years, she has been the director of the Wildlife Conservation Society's study of Magellanic penguins at Punta Tombo, Argentina, home of the

world's largest colony of Magellanic penguins. Boersma and her students follow the lives of individual penguins, monitor the colony, and develop the data needed to plan effective

conservation efforts. In the Galapagos Islands she is building "condos" to increase the Galapagos penguin population.

Boersma received a 2009
Heinz Foundation award for achievements leading toward a cleaner, greener, and more sustainable world; was awarded a 2010 Fulbright fellowship to study wildlife videography in New Zealand; and, in 2011, was named one of the Nature Conservancy's "Conservation Heroes of the last 50 years." In 2012, she received the Ocean Conservation Award from the Aquarium of the Pacific in Long Beach, California.

Boersma, with colleague and academic "grandson" Pablo Borboroglu, edited "Penguins: Natural History and Conservation," published in March 2013. The book is a thorough reference work on 17 penguin species written by the experts.



P. Dee Boersma

Photo courtesy D. Boersma, www.washington.edu

GEAS EVENTS for September and October

Field trip information is subject to change. Please check the website http://www.goldeneagleaudubon.org and go to the Calendar and Field Trips section for the latest information or contact Alex Takasugi at 484-9132 or alextakasugi@cableone.net and Kristin Gnojewski at kgnojewski@cableone.net.

Field Trip Etiquette: We set up car pools to take as few cars as possible, while making sure everyone has a window. Please give the driver of your ride gas money and arrive 10 minutes early.

Wednesday Morning Club, September-October

Time: 8:30 a.m.

Location: Janjou Patisserie 1754 W. State St., Boise Contact: Kathy Barker McCoy, cell 921-1340, home 384-1205 Wednesday Morning Club continues this fall. Come join us for some great nature adventures. I like to grab some coffee, then carpool and head to the destination. I reserve the right to change the destination at the last minute based on weather conditions, bird sightings and group requests. We join Terry Rich on the first of each month at the Foothills Learning Center for a bird talk and walk. Sept. 7 - Hulls Gulch, meet at the Foothills Learning Center; Sept. 14 - Blacks Creek reservoir; Sept. 21 Laguna Point (greenbelt in Eagle); Sept. 28 - Ted Trueblood WMA: Oct. 5 - Hulls Gulch; Oct. 12 - Wilsons Pond – Oct. 19 - Kathryn Albertson Park; Oct. 26 - Barber Pool (Ben's Crow Inn).

Saturday, September 10

SIBA Field Trip to Elmore County

Time: 7:30 a.m.

Location: BLM office at 3948 Development Ave. by the Boise

airport

Trip leader: Letty Percifield lettyp@centurylink.net.
Contact: Alex Takasugi alextakasugi@cableone.net 484-9132.
SIBA (Southwest Idaho Birders Association) will host a trip to Elmore County looking for desert and forest birds. We will travel to Mountain Home, then on to the Prairie area and up Meadow Creek Road to the Fall Creek area to look for forest birds. This will be a long day, and we will be traveling on narrow dirt and dusty roads. There will be some walking, but a lot of vehicle travel as well. Be sure to have gas, water, lunch and snacks. We want to be in the forest early, so we will be leaving the Nampa Park and Ride at Exit 36 at 7 a.m. For those folks in the Boise area who wish to meet up with us, we will be stopping for a restroom break at the Blacks Creek Rest area before Exit 64; we plan to leave there at 7:45.

Sunday, September 11

Family Bird Walk in the Park

Time: 9 a.m. to 11 a.m.

Location: Kathryn Albertson Park parking lot, 1001 N.

Americana Blvd., Boise

Contact: Alex Takasugi alextakasugi@cableone.net 484-9132. We will walk the paved loop around the park looking for geese, ducks and herons on the water, as well as songbirds in the brush. Bring the whole family, especially the young ones. We have binoculars and field guides you can borrow. Sign up the kids in our Frequent Flyer Club where they earn rewards for birding.

Friday, September 23 and Saturday, September 24

Blacks Creek Bird Reserve workday

Time 9 a.m. to 1 p.m.

Location: Blacks Creek Bird Reserve, Kuna-Mora Road (I-84 East to Exit 64, then 2.8 mi south (right) on Kuna-Mora Road). Two half-day work days to plant some native seedlings, monitor vegetation recovery, upgrade fences and signs, and clean up some trash. We will provide snacks and water. Please wear work clothes and bring a water bottle and work gloves. RSVP at: info@goldeneagleaudubon.org.

Sunday, September 25

Boise River Greenbelt Bird Watching and Litter Patrol

Time: 9 a.m.

Location: Park behind the St. Al's Urgent Care at Bown Crossing and Parkcenter Ave.

Contact: Alex Takasugi alextakasugi@cableone.net, 484-9132 We'll walk the Bethine Church Nature Trail going downriver, birding as we go, then pick up litter on our way back. Birds abound in the pond/river/riparian wooded habitat. We usually finish around noon. Bring gloves, water and binocs. No public restrooms are available.

Tuesday, September 27

GEAS monthly meeting: La Vaquita

Time: 7 p.m.

Location: M.K. Nature Center, 600 S Walnut St., Boise Matthew Podolsky will give a presentation on la Vaquita, an endangered porpoise in the Sea of Cortez. Matt is known for his productions of the "Bluebird Man: Al Larson" and "The Scavenger Hunt: California Condor". Matt is a GEAS board member and chair of the Conservation Committee.

Saturday, October 1

Saturday Stroll! Boise Greenbelt near Eagle

Time: 9 a.m.

Location: Meet at the corner of Duxbury Pier Lane and W.

Sultana Dr. (see directions below)

Trip Leader: Lew Ulrey

Contact: Alex Takasugi alextakasugi@cableone.net 484-9132. Notes from the leader: This field trip will focus on the Boise River Greenbelt at Mile NW 8.8, which is just east of Eagle. We will walk west about 2.7 miles on the Greenbelt – 118 species of birds have been reported on this section of the path. We will definitely not see all 118, but typically this area yields 25 to 30 species. We should find lots of woodland birds as well as a good number of water birds.

We will meet at W. Sultana Drive and Duxbury Pier Lane at 9 a.m. and move out from there. To get there, travel west from Glenwood on State Street. When you reach Ulmer turn left or south (you cannot go right or north). Travel about a half mile south to where Ulmer turns right or west onto Sultana Dr. Travel west on Sultana Dr. for one quarter mile to where Sultana Dr. intersects Duxbury Pier Lane. This is our meeting place. Everyone will enjoy this outing more if he or she has a pair of binoculars; Audubon will have a few pairs to borrow. Our walk will end just short of Eagle Road. Before we start we will have to decide if we want to walk back, or if we want to take some cars to the west end to get us back. An advantage of walking back is that we will have the chance to find some new species and to review what we found on the way out. My birding friend and I have birded this path about once a month for eight years. It has never disappointed us. Continued next page

GEAS Events continued

Saturday, October 8

Family Bird Walk in the Park

Time: 9 a.m. to 11 a.m.

Location: Marianne Williams Park. 3451 E Barber

Dr., Boise. We will meet near the restrooms.

Contact: Alex Takasugi alextakasugi@cableone.net 484-9132. We will look for waterfowl on the ponds, then walk the paved loop heading upstream looking for songbirds and raptors. Bring the whole family, especially the young ones. We have binoculars and field guides you can borrow. Sign up the kids in our Frequent Flyer Club where they earn rewards for birding.

Tuesday, October 25

GEAS monthly meeting: New Roots Program.

Time: 7 p.m.

Location: M.K. Nature Center, 600 S Walnut St., Boise. Liz Urban will make a detailed presentation on the New Roots Program. The New Roots Program involves refugee students enrolled in the sixth-eighth grade in local Boise public schools for a 10 to 12-day summer camp in the area in 2016. This program provides food, water, materials and transportation at no cost to the student. Students will be exposed to the outdoor environment, ecology and conservation of the Treasure Valley. Liz will also talk about a follow-up program called "WOW"—Wild Outdoor Week—for graduates of the New Roots Program who are now high school refugee students.

Sunday, October 30

Boise River Greenbelt Bird Watching and Litter Patrol Time: 9 a.m.

Location: Park behind the St. Al's Urgent Care at Bown Crossing and Parkcenter Ave.

Contact: Alex Takasugi alextakasugi@cableone.net, 484-9132. We'll walk the Bethine Church Nature Trail going downriver, birding as we go, then pick up litter on our way back. Birds abound in the pond/river/riparian wooded habitat. We usually finish around noon. Bring gloves, water and binocs. No public restrooms are available.

GEAS plans Blacks Creek Bird Reserve workday

Golden Eagle Audubon and partners—BLM, New Roots, Sage International School, and Idaho Botanical Garden—are hosting two workdays from 9 a.m. to 1 p.m. on Friday September 23 and Saturday September 24 at Blacks Creek Bird Reserve. Work will include setting up and planting out a restoration demonstration garden, conducting vegetation monitoring surveys, repairing and upgrading fences and educational signs, placing swallow nest boxes, and a general clean up. Something for everyone!

Bring a water bottle, work gloves and wear work clothes. We will provide water & snacks. Visit: https://www.facebook.com/betterblackscreek/ for information on the Bird Reserve.

Please RSVP at: info@goldeneagleaudubon.org if you can join us, or if you have questions.

Field Trip Report: Cascade Lake, August 9-12

By N.S. Nokkentved

We headed north out of Boise, and about an hour and a half later we turned off Highway 55 in Cascade. We turned south, then west and finally north along the west side of Cascade Lake. You can see birds all around the lake, but the best areas are along the west side. Soon we caught sight of a group of pelicans, and then a great blue heron in the distance. We saw Brewer's blackbirds, swallows, yellowheaded blackbirds and western meadowlarks.

We checked out several campgrounds along the way, but the best was Amanita. We found a nice site overlooking the lake, with a sandy beach at the foot of the campsite. That afternoon, we watched several western grebes in the water just off shore; overhead an osprey soared and circled. A great blue heron sped by just above the water's edge. We heard several birds in the woods of the campground, and a number of small gray birds flitted in the brush along the beach. I could never get a good enough look to identify them. Later the next day, while relaxing in the shade with my binoculars, I counted 53 grebes visible from my vantage point.

On the last morning in camp, we put the canoe in the water again and paddled up the lake to a shallow area closed to the motorized boats that otherwise terrorize the lake later in the day. On the way, we heard the unmistakable sound of sandhill cranes. We looked through the binoculars but found only stumps in the water. A little farther along, one of those stumps was topped by a heron. A sandpiper tripped along the shoreline, and a belted kingfisher found a perch on another stump. In the distance we could see a small group of pelicans, but still no sandhills. We decided to paddle a little closer to the pelicans. Then suddenly came the sandhill cry and two of them flew over us and landed in the grass on a slight rise maybe forty yards away. They settled in and began grazing. We watched them for a while.

Time was getting late, and the boaters would soon be on the water, so we headed back to camp. No sooner did I have the canoe back on top of the car, than a ski boat came racing by the beach.

On our way home, we stopped for lunch on the east side of Cascade Lake at the Sugarloaf unit of the Lake Cascade State Park. We found a picnic table that looked over a small wetland and saw a small group of Canada geese, a group of mallards, three great blue herons, two sandhill cranes, and just then a western grebe poked its black and white head up. Cascade Lake is close enough to Boise to make a full day trip, but unlike me, don't forget the tripod.



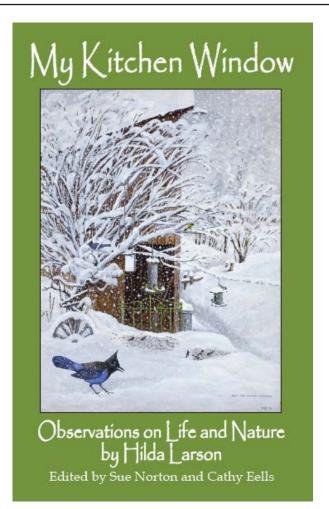
Western grebes

Photo by N.S. Nokkentved

Continued from Page 1

the last, like spectators doing the wave at a football game, albeit much faster. It's unknown whether the birds are hardwired for this complexity, or whether they just feel it out and adjust, but the energy savings are being looked at by a variety of scientists and engineers. Birds still have much to teach us. And much for us to wonder at.

On June 12, I had a remarkable experience while driving. I had just swept west onto Hill Drive at 40 mph when a female mallard flew in front of me at eye level from the right. She strained to stay in front of the car, flying less than 10 feet in front at exactly my speed. As we headed west she slowly rose higher and fell back slightly, first right in front of the windshield and then directly above my open sunroof so that I could almost have reached up and touched her heaving breast. We continued that way for nearly half a mile until the road curved right and she veered left. That close encounter reminded me of a remarkable film called *Winged Migration*. If you haven't seen it, buy it or rent it. It's filled with incredibly moving and beautiful scenes of birds in flight, close-up. You'll feel like you're literally flying in a flock of geese or other birds.



To order a copy contact Sue Norton at 378-4248 or at nortonsu@msn.com or Cathy Eells at 459-4435 or cathyeells53@gmail.com. Copies are \$13. Sue or Cathy will mail one to you for \$16. Proceeds will go to GEAS and SIBA.

Earlier nesting associated with climate change

By Shawn H. Smith

A common response to climate change is for organisms to change the timing of their reproductive events. These shifts in the timing have been seen all over the world and include organisms from almost all taxa.

Hypotheses primarily come from systems involving avian specialists - or birds dependent on one or two key prey items for successful reproduction. In these systems, warmer springs have advanced the emergence of vegetation and the insects that feed on the vegetation. As a result, birds must also begin their reproductive period earlier or face having offspring when prey is much less abundant.

It is difficult to document changes, such as these, because few long term studies monitor all levels of a system. Instead, many studies use Normalize Difference Vegetation Index, or NDVI, which is a measure of the greenness of plants using remote sensing satellites, as a proxy for the prey items that typically feed on plants. They then monitor the relationship between the index and the predator over time.

My research tested the hypothesis that changes in the timing of prey abundance have driven changes in the nesting period of a generalist predator, the American kestrel. Kestrels are small falcons capable of feeding on insects, small mammals, reptiles and birds. American kestrels in southwestern Idaho have advanced their nesting period by 15 days over the past 24 years. Because they are capable of consuming various prey items, it is unknown if kestrels would change their reproduction to track their prey.

I was able to determine that small mammals were a key prey item during the nesting period, and small mammals peaked when NDVI peaked. Using linear models I found that NDVI reliably predicted small mammal abundance and can therefore be used as a proxy.



The index also was used to estimate historical changes in the start of the growing season, or the timing of vegetation greenup. I found that in southwestern Idaho, the start of growing season has advanced by 26 days since 1992 only in agricultural areas and not in sagebrush-steppe habitat. American kestrels are tracking theses changes in the growing season, which represents earlier prey abundance, by advancing their reproduction. The plants in agricultural areas are greening-up earlier because of a combination of higher temperatures and farmers adapting to climate change by planting their crops earlier. Therefore, American kestrels are nesting earlier because humans are adapting to climate change and changing when small mammals will be most abundant!

Blacks Creek Bird Reserve

2016 Clean, Restore, Conserve

Please join us for a half-day work day at Blacks Creek Bird Reserve!

Activities will include:

- Habitat Restoration
- Vegetation Monitoring
- Fence Repairs and Upgrades
- Sign Upgrades
- Trash Removal



Friday, Sept 23 & Saturday Sept 24 - 9 am-1 pm Blacks Creek Bird Reserve, Kuna-Mora Road

[I-84 East to Exit 64, then 2.8 mi south (right) on Kuna-Mora Road]

BRING GLOVES AND A WATER BOTTLE; WE WILL HAVE TOOLS, WATER & SNACKS



CuMo Mine Exploration Project Update

By Pam Conley

On July 11, Advocates for the West, our attorneys for the CuMo lawsuit, won a federal court decision in our ongoing battle to keep the Canadian mining company, American CuMo from developing what the company says could be the world's largest open pit molybdenum mine in the Boise River watershed.

U.S. District Court Judge Edward J. Lodge ruled that the U.S. Forest Service's Supplemental Environmental Assessment of the project did not have enough baseline information about Sacajawea's bitterroot, a small rare flowering plant native to Idaho.

"The Forest Service cannot know the impact the project will have, let alone conclude whether or not its impact is significant, without having accurate baseline data for (Sacajawea's bitterroot) in the project area. What is known and recognized in the (Forest Service's environmental review documents) is that the (plant) species is very rare, a large portion of its population is located within the project area, it is protected, and its future is at risk," Lodge said.

Under the CuMo Exploration Project, the company would construct 10 miles of new roads and 137 drill pads to drill 259 exploration holes in the Boise National Forest – including within Sacajawea's bitterroot habitat – to map the site's mineral

resources. This is a big project and it needs to follow our laws that protect our environment. We will continue to fight this project which we feel is inappropriate for the Boise River watershed.



Chapter Code: C5ZG000Z

Sacajawea's bitterroot (Lewisia sacajaweana)

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

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- For membership/subscription information, renewals, or change of address, e-mail membership@goldeneagleaudubon.org.
- For newsletter submissions, send an e-mail to Niels S. Nokkentved at 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 and support local activit	1	bscription to The Golden Eagle,	and all my dues remain with the local chapter
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