

2019 Othello Sandhill Crane Festival



March 22-24, 2019

*Elegant Travelers
On A Journey*

Register online at our website!

Website: [othellosandhillcranefestival.org](https://www.othellosandhillcranefestival.org)

Follow us on **Facebook:** <https://www.facebook.com/Othello-Sandhill-Crane-Festival>

Have questions? Need Help?

Give either one of us a call!

Othello Sandhill Crane Festival

1-866-Sandhill (Washington residents only) • (509) 989-5606

The Old Hotel Art Gallery

(509) 488-5936

Tuesday – Saturday: 10:00 a.m. – 5:00 p.m. • Sunday: 11:00 a.m. – 2:00 p.m. (March 24th ONLY)

theoldhotel@outlook.com



ABOUT OUR COVER

Susan Walpole, who supplied the art for the 2019 poster, uses art as her therapy. She had a brain tumor removed that resulted in brain damage but she overcomes that through oil painting. Many of her paintings have 6, 7, 8, or more layers of paint to achieve the radiant look for which she is striving.

Sandhill cranes (and other birds) often land in her backyard and she hides in the lilac bushes to photograph them. With this painting she slowly crept out, inching closer and closer, taking more photos every step of the way. They finally lifted off and she was able to capture in flight photos as well. This painting is inspired from that experience of literally taking hundreds of photos that afternoon.

OTHELLO SANDHILL CRANE FESTIVAL

March 22, 23, 24, 2019

(509) 989-5606 or 1-866-Sandhill

othellosandhillcranefestival.org



ABOUT OUR FESTIVAL

This is our 22nd annual Othello Sandhill Crane Festival!! Founded in 1998, the Othello Sandhill Crane Festival highlights the spring return of Sandhill Cranes to the greater Othello area and Columbia National Wildlife Refuge. Lectures are delivered on Saturday only, whereas tours are conducted on Friday, Saturday, and Sunday.

The three-day non-profit Festival includes a variety of entertaining, educational, and memorable activities for the whole family to enjoy.

Since its beginning, the Festival has been financially supported by the city of Othello through tourism development funds (hotel/motel taxes) and logistically supported by Othello Community Schools and Columbia National Wildlife Refuge.

The Grant County Conservation District provides additional financial support and administrative guidance.

The Othello Sandhill Crane Festival Committee is made up of volunteers who plan, organize, and conduct the event. The Committee includes a cross section of Othello citizens, Grant County Conservation District and U.S. Fish and Wildlife Service staff, and residents from neighboring communities. Funds generated from fees are re-invested into the Festival each year. We look forward to your visit!

FOR YOUR SAFETY – PLEASE READ

The Othello Sandhill Crane Festival sponsors viewing tours in order for Festival participants to view wildlife in a safe and manageable way. Tours are a great way to interact with fellow Festival attendees, as well as give you some one-on-one time with biologists and local experts.

For your safety and the consideration of others, please do not follow our tour buses while at the Festival. Our tour guides often obtain permission from landowners in advance to allow tour buses on private property; this permission does not extend to visitors in private vehicles.

If you would like to view wildlife on your own, please ask the wildlife guides or U.S. Fish and Wildlife Service staff at the Festival what options are available. This will allow all to safely enjoy the wildlife resources of the area.

Also, please keep in mind that lectures are delivered on Saturday only, while tours are conducted Friday, Saturday, and Sunday. Our lecture rooms each have a maximum capacity, we cannot accommodate attendees past that capacity. Lectures are available on a first-come, first-served basis. We apologize if the lecture you want to attend is full.

A Great Wildlife Photographer and Passionate Birder

Dave Goeke

In Memoriam, 1942-2018



Dave Goeke grew up in Illinois and spent his life working on and managing National Wildlife Refuges in Michigan, Minnesota, North Dakota, South Carolina, and Washington State. Part of Dave's legacy is the 196,000-acre Hanford REach National Monument. Dave was a driving force for the study team that recommended protection of the area, and was the local face of the Department of the Interior during the study. Countless hours were spent interacting with elected officials (including a Senate hearing) conservation groups, government agencies, people opposed to protection, and anyone showing even a spark of interest in what was to become the U.S. Fish and Wildlife Service's first national monument. In 1979 he started working in Othello at the Columbia National Wildlife Refuge as its long-term manager.

After his retirement, he started volunteering for the Othello Sandhill Crane Festival. He became a wildlife guide on the crane viewing busses. For Dave the sound of the Sandhill Cranes was "the sound of spring." He joyfully shared his knowledge of wildlife and the beauty of nature around us. He was also instrumental in scouting the Sandhill Cranes for the Festival.

Dave was a talented and dedicated wildlife photographer, a skill which gave him great joy in his retirement. Many of his photos were used as posters for the Festival and for many news articles. He also created a hardback book of his photographs. In 2016, a leucistic Sandhill Crane was observed during the Festival by a group. Dave searched for 22 days and finally found it hanging out on closed property in an alfalfa field. Dave said, "I've been out photographing cranes on most good days since the festival, but mostly I've been concentrating on shooting them against sunset colors near Scooteny Reservoir. Now I am working on this bird (referring to the leucistic Sandhill Crane), and these shots at least document its presence." The following year he was surprised to see that not only had the crane returned but that it also had a surprise companion. He was quoted as saying, "The leucistic crane nested successfully last year! It is now accompanied by a leucistic juvenile from last season."

Dave is survived by his wife Audre, who co-coordinated the Festival's Children's Activities, for many years, and by his sons Jim and Scott.

SUPPORTING PARTNERS

Stans Merry Mart - Ace Hardware
Basin Pacific Insurance
Big Bend Electric Caring Neighbors
Central Basin Audubon Society
City of Othello
CliftonLarsonAllen LLP
Columbia Bank
Columbia Basin Health Association
Columbia Basin Herald
Eppich Grain
Friends of the Mid-Columbia River Wildlife
Refuges
Grant County Conservation District
Greater Othello Chamber of Commerce
Ice Age Floods Institute
International Crane Foundation
J.R. Simplot Company
Lawrence Oil Company
MarDon Resort
MarJon Labor
McCain Foods
Roger Krug
Othello Community Schools
Othello Museum
Pirie and Jane Grant
ProGene Plant Research
Reichert's Showhouse
RDO
Spokane Audubon Society
Stevens Funeral Chapel
SVZ Fruits & Vegetables
Thaines and Bodah Center for Education and
Development
The Old Hotel Art Gallery
Time Out Pizza
US Bank
US Bureau of Reclamation
U.S. Fish and Wildlife Service
Washington State Fish and Wildlife

ACCOMMODATIONS

Adams County Fairgrounds

820 Reynolds Road
Othello, WA 99344
RV - Pay at Kiosk

The Quality Inn

1020 E Cedar
Othello, WA 99344
(509) 488 5671

Motel 6

65 E Windsor
Othello, WA 99344
(509) 488 2605

Coyote Run RV Park

351 E Hawthorn Street
Connell, WA 99326
877 273 9484

MarDon Resort

8198 Highway 262 E
Othello, WA 99344
(509) 346 2447
RV and Cabins

Sage Hills Golf Course & RV

10400 Sage Hill Road SE
Warden, WA 98857
(509) 349 2088
RV Park with 50/30 amp sites pull through.

Lions Park

815 E Pine Street
Othello, WA 99344
*Self-contained RVs may park in the parking lot
along the southern side (Pine St.) of the park.*

No Hookups

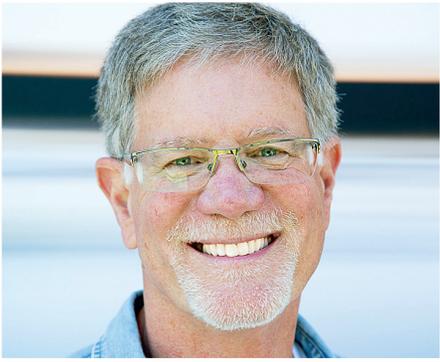
*Motel accommodations also available in
Moses Lake*

FEATURED SPEAKERS

FRIDAY NIGHT SPEAKER

TIM BOYER

“Exploring How Migration is Different for Sandhill Cranes and Shorebirds”



Tim Boyer is an award-winning nature photographer. His images have been published in many books and nature magazines. He is a full-time photographer and a graduate of Seattle Audubon’s Master Birder Program. He enjoys sharing his knowledge of photography and birds through workshops and presentations. In October of 2017 he started a YouTube channel where he posts bird photography tutorials every Wednesday and has just published the book: *Learn the Art of Bird Photography, The Complete Field Guide for Beginning and Intermediate Photographers and Birders*.

Tim has a degree in Recreation and Parks Management and had a career as mountain guide in Alaska, Washington, Canada, Mexico and Ecuador. He’s been to the top of North America (Denali) six times. Toss in a few marathons, an 18-year stint at a large non-profit where he was once the Corporate Controller (which he still can’t believe) and you can see he’s ready for adventure. He’s been a photographer since high school, (you know back when they used black & white film). He always knew he would have three different careers, but didn’t think that Bird Photography Workshop Leader and author would be number three.

Bird migration takes many forms, and Tim’s talk will take a look at how one of the largest birds and some of the smallest birds migrate. He’ll explain why and how are some birds able to make long distance migrations non-stop covering thousands of miles, and fly for days, while others migrate for four to seven hours a day and spend each night in a communal roost. Learn about migration through the lives of Sandhill Cranes, Long-Billed Curlews, and other birds.

Tim is also delivering a talk on Saturday from 12:00 noon – 1:00 pm in the Othello High School library entitled “Non-Professional Bird Photography for Birders.”

SATURDAY NIGHT SPEAKER

CATHY NOWAK

“A Year in the Lives of Ladd Marsh Cranes”

Cathy M. Nowak is a wildlife biologist with the Oregon Department of Fish and Wildlife at the Ladd Marsh Wildlife Area in northeast Oregon. She holds a Bachelor of Science in Biology from Central Washington University and a Master of Science in Natural Resource Sciences from Washington State University. In addition to her other duties, Cathy has been monitoring greater Sandhill Cranes at Ladd Marsh for 15 years and banding them for a decade.

The Oregon Department of Fish and Wildlife Ladd Marsh Wildlife Area, near La Grande, OR supports 20-25 nesting pairs of greater Sandhill Cranes. This 6,020 acre wildlife area is one of the largest remaining wetlands in NE Oregon, and includes a variety of wetland types (open water, emergent wetland, scrub shrub, and wet meadow) as well as prairie grassland, upland shrub, and conifer habitats. During spring migration 15,000 to 20,000 ducks and geese are typically present. The area also hosts nesting Black-Crowned Night Herons, Sandhill Cranes, and Long-Billed Curlews.

Cathy will talk about the seasonal activities of those birds from arrival in spring, to occupying territories, nesting, rearing young, fledging, fall staging and migration. The talk will highlight photos from capture and marking of adult birds, nesting cranes and nests and will include measurements of nest structures.



FRIDAY, MARCH 22

TIME	FIELD TRIPS	LECTURES	SPEAKERS AND LEADERS
11:00 AM – 1:30 PM	Potholes Reservoir Boat Birding Tour		Mike Denny, Heidi Newsome
3:15 PM – Dark	Tonnemakers Hill Farm Tour		Tonnemakers Hill Farm
3:30 PM – Dark	Lower Crab Creek Birding Tour		Mike & MerryLynn Denny
4:00 PM – Dark	Columbia National Wildlife Refuge Tour		Wildlife Guides
5:00 PM – Dark	Crane Viewing Tour		Wildlife and Ag Guides
5:30 PM – Dark	Crane Viewing Tour		Wildlife and Ag Guides
8:15 PM – 9:00 PM		The Miracle of Migration – Journeys of Eastern WA Birds	Tim Boyer
EAGLES LODGE DINNER 5:00 PM – 8:00 PM			

SATURDAY, MARCH 23

ROTARY BREAKFAST 6:30 AM to 9:00 AM			
BOXED LUNCHES (Vegetarian or Meat)			
TIME	FIELD TRIPS	LECTURES	SPEAKERS AND LEADERS
7:30 AM – 9:15 AM	Crane Viewing Tour		Wildlife and Ag Guides
8:00 AM - 9:45 AM	Crane Viewing Tour		Wildlife and Ag Guides
8:30 AM - 10:15 AM	Crane Viewing Tour		Wildlife and Ag Guides
8:45 AM – 12:30 PM	Biking for Cranes Tour		Gerri Schrom
9:00 AM - 10:45 AM	Crane Viewing Tour		Wildlife and Ag Guides
9:10 AM – 10:00 AM		Biotechnology and GMOs	Mike Neff
9:10 AM – 10:00 AM		Wolf Haven – Wolves are Back	Chris Montero
9:10 AM – 10:00 AM		Heritage Gardens of the Columbia River Basin	Ernie Crediford
9:10 AM – 10:00 AM		Celebrate Birds Through Photography	Karen Ulvestad
9:10 AM – 10:00 AM		Wildflowers of the Shrub-Steppe	Terri Knoke
9:10 AM – 10:00 AM		Changing the Course of the Palouse River	Lloyd Stoess
10:10 AM – 11:00 AM		Biology and Ecology of Greater Sandhill Cranes	Dominic Bachman
10:10 AM – 11:00 AM		WSU Raptor Club - 1 of 2	WSU Raptor Club
10:10 AM – 11:00 AM		Coyote Canyon Mammoth Dig: Victim of an Ice Age Flood	Gary Kleinknecht
10:10 AM – 11:00 AM		Do Bryophytes Grow in Eastern WA?	Judy Harpel
10:10 AM – 11:00 AM		3Ds (Drones, Data, and Decisions) in Agriculture and Wildlife	Lav Khot
10:10 AM – 11:00 AM		Ice Age Floods and the Channeled Scablands	Brent Cunderla
10:10 AM – 11:00 AM		Migrations of Vaux's Happening	Larry Schwitters
11:10 AM – 12:00 PM		Birding in Borneo	Jason Fidorra
11:10 AM – 12:00 PM		Money and the Environment	Kyhardhan Ulvestad
11:10 AM – 12:00 PM		Hawk Watching	Paul Lindholdt
11:10 AM – 12:00 PM		The Indisputable Case for Multiple Ice Age Floods - 1 of 2	Bruce Bjornstad
11:10 AM – 12:00 PM		Trumpeter Swans in the Western United States	Gary Ivey
11:10 AM – 12:00 PM		Wildfire Impacts on Wildlife in the West	Heidi Newsome
11:10 AM – 12:00 PM		Feathers, Fowl, and Flight	Steve Bouffard
11:00 A.M. to 2:00 P.M.	Lunch Provided by the Othello Senior Center		
11:30 AM – 2:30 PM	Ice Age Floods & the Channeled Scablands Tour		Brent Cunderla

12:00 NOON – 1:00 PM		Non-Professional Bird Photography for Birders	Tim Boyer
1:10 PM – 2:00 PM		Tales of Natural History and Adventures on the Columbia River	Dennis Dauble
1:10 PM – 2:00 PM		Burrowing Owl Life History and Migration	Julie Conley
1:10 PM – 2:00 PM		Monitoring Albatross Nesting on Midway Atoll National Wildlife Refuge	Steve Bouffard
1:10 PM – 2:00 PM		Introduction to iNaturalist	Charles Swift
1:10 PM – 2:00 PM		eBird Basics	Jason Fidorra
1:10 PM – 2:00 PM		Natural History of the Blue Mountains	Bob Carson
1:10 PM – 2:00 PM		Sandhill Cranes of the Pacific Flyway	Gary Ivey
1:10 PM – 2:00 PM	Othello Community Museum Tour		Eric Morgan
2:10 PM – 3:00 PM	Urban Walk		Charles Swift
2:10 PM – 3:00 PM		Frogs Among Us	Ella Rowan
2:10 PM – 3:00 PM		Wildlife Photography	Bart Rulon
2:10 PM – 3:00 PM		The Indisputable Case for Multiple Ice Age Floods – 2 of 2	Bruce Bjornstad
2:10 PM – 3:00 PM		Rocky Reach Hydroelectric Project Fish Passage	Jeff Osborne
2:10 PM – 3:00 PM		Amphibians and Reptiles of the Columbia Basin	Jeff Howland
2:10 PM – 3:00 PM		Wildlife Conservation in the Sagebrush Sea	Kim Thorburn
3:10 PM – 4:00 PM		Our Changing Climate	Brian Bodah
3:10 PM – 4:00 PM		WSU Raptor Club – 2 of 2	WSU Raptor Club
3:10 PM – 4:00 PM		Raising Kid Colt – Young Sandhill Crane (Film Presentation)	Gary Ivey
3:10 PM – 4:00 PM		Bird Brains	Steve Bouffard
3:10 PM – 4:00 PM		Shorebirds, Elegant Travelers on a Long Journey	Roy Lowe
3:10 PM – 4:00 PM		Grand Coulee – Washington’s Grand Canyon	Gene Kiver
4:00 PM – 5:00 PM	Movie	Secret Life of the Forest	Reichert’s Showhouse
4:45 PM – 7:00 PM	Crane Viewing Tour	(may be late to banquet)	Wildlife and Ag Guides
5:00 PM – 7:15 PM	Crane Viewing Tour	(may be late to banquet)	Wildlife and Ag Guides
5:15 PM – 7:20 PM	Crane Viewing Tour	(may be late to banquet)	Wildlife and Ag Guides
5:30 PM – 7:30 PM	Crane Viewing Tour	(may be late to banquet)	Wildlife and Ag Guides
7:00 PM – 9:30 PM	Banquet and Silent Auction (Smokin’ Wood BBQ)	A Year in the Lives of Ladd Marsh Cranes	Cathy Nowak

SUNDAY, MARCH 24

BOXED LUNCHEES (Vegetarian or Meat)		
TIME	FIELD TRIPS	LEADERS
7:15 AM – 3:00 PM	Lower Crab Creek Birding Tour	Mike & MerryLynn Denny
7:30 AM – 3:30 PM	Wahluke Slope Birding	Randy Hill and Roy Lowe
8:00 AM – 10:00 AM	Crane Tour	Wildlife and Ag Guides
8:15 AM – 4:00 PM	Palouse Falls Tour	Lloyd Stoess & Ken Lacy
8:40 AM – 2:00 PM	Lower Grand Coulee Geology Tour	John Moody
9:00 AM – 3:00 PM	Dry Falls State Park Hike	Gene Kiver (meet at the Dry Falls State Park)
9:00 AM – 3:00 PM	Drumheller Channels Geology Hike	Bruce Bjornstad
9:30 AM – 3:00 PM	Hanford Reach Interpretive Center & Coyote Canyon	Gary Kleinknecht (meet at the REACH)
11:00 AM – 1:30 PM	Potholes Reservoir Boat Birding Tour	Mike & Levi Meseberg (departs from MarDon)
1:00 PM – 2:00 PM	Othello Community Museum Tour	Eric Morgan (meet at Othello Museum)

EVENT DESCRIPTIONS

Buses will normally load 10 to 15 minutes before the scheduled departure time.

Be sure to board your bus no later than five minutes prior to departure time.

General Admission gets you into the Festival all day Saturday for all the events and lectures.

Friday, March 22nd Tours and Events

All Friday tours depart from Stevens Funeral Chapel (511 S 7th Ave), except for the boat tour.



Potholes Reservoir Boat Birding Tour

Departs from MarDon Resort, 8198 WA Highway 262, Othello, WA 11:00 a.m. to 1:30 p.m. \$67 per person. Join well-known and respected birder Mike Denny and the U.S. Fish and Wildlife Service's Heidi Newsome on boat tours of Potholes Reservoir. This boat trip explores bird life in early spring on Potholes Reservoir and concentrates on the bays where waterfowl, grebes, shorebirds, herons, and eagles might be found. A map to the resort will be supplied with your registration confirmation. Please dress accordingly as it may be very cold and/or rainy this time of year.



Tonnemakers Hill Farm and Mammoth Dig Tour

Departs from Stevens Funeral Home 3:15 p.m. to Dark. \$27 per person. Tonnemakers Hill Farm is happy to be participating in the Othello Sandhill Crane Festival again this year due to popular demand. The farm was founded in 1962 by Pearl and Orland Tonnemakers and is now managed by their grandson Kole. They farm a relatively low acreage for the area (126), but organically cultivate thousands of varieties therein. Of particular note are the sweet and hot peppers, of which they grow more than 300 varieties. Other annual crops include tomatoes, melons, eggplant, summer squash, pumpkins, winter squash, and cucumbers. Perennial crops include asparagus, rhubarb, apricots, apriums, pluots, sweet and tart cherries, peaches, nectarines, plums, European and Asian pears, goji berries, hardy kiwis, paw paws, strawberries, raspberries, table grapes, and apples.

Those who sign up to visit can look forward to a tour of the orchard and greenhouses. You will also look at the Columbian Mammoth dig site and some of the bones recovered after discovering it by chance in the spring of 2015. There will be a discussion on some of the history and geology of the area and what we know about the mammoth thus far, based on its location in the soil profile and various tests that have been carried out. Further information about the farm can be found at www.tonnemaker.com.



Lower Crab Creek Birding Tour (First of 2)

Departs from Stevens Funeral Home 3:30 p.m. to Dark. \$37 per person. Well-known birders Mike and MerryLynn Denny, will

give you a tour along the north side of the Saddle Mountains, visiting a variety of dry and wetland habitats. The trip will concentrate on the lower slopes, greasewood patches, and wetlands where cranes roost. Nesters, such as Say's Phoebes and Loggerhead Shrikes, and early songbird migrants, various birds of prey, Washington ground squirrels, Long-Billed Curlews, and Chukars are expected. It will finish with waterfowl and cranes feasting. A longer version of this tour will take place on Sunday.



Columbia National Wildlife Refuge Tour

Departs from Stevens Funeral Home 4:00 p.m. to Sunset. \$37 per person. Columbia National Wildlife Refuge Manager Lisa Wilson, will take you to nearby wetlands and uplands on the refuge to view birds, other wildlife, the diversity of habitats, and unique geologic features. Cranes are likely but not guaranteed.



Crane Viewing Tours

Departs from Stevens Funeral Home 5:00 p.m. to Dark and 5:30 p.m. to Dark. \$16 Adults, \$10 Seniors/Children. These guided tours will go directly to the best Sandhill Crane feeding areas where and when they can be their noisiest. The evening feeding period toward sunset can be spectacular as cranes come and go. An experienced wildlife guide and a local agricultural expert will narrate each tour and will answer any questions you may have.

Eagles Lodge Friday Night Dinner

127 East Larch St. 5:00 p.m. until food is sold out. Attendees are invited to join the local Eagles Lodge for a spaghetti feed. The menu includes spaghetti with or without meat sauce, salad, garlic bread, coffee, and water, all for \$10 per meal. You may pre-order your dinner on the registration form.

Friday Night Lecture

Held at Othello High School. 8:15 p.m. to 9:00 p.m. FREE of Charge. Join Tim Boyer for a wonderful presentation on bird migrations in eastern Washington State.



Saturday, March 23rd Tours and Events

All Saturday tours will depart from the main gym doors in the High School parking lot located at 340 South 7th St.

Saturday Early Morning Tours and Events 7:30 a.m.

Crane Viewing Tours (multiple)

7:30 a.m. to 9:15 a.m.; 8:00 a.m. to 9:45 a.m.; 8:30 a.m. to 10:15 a.m.; 9:00 a.m. to 10:45 a.m. \$16 Adults, \$10 Seniors/Children. These guided tours will go directly to the best Sandhill Crane feeding areas where and when they can be their noisiest. An experienced wildlife guide and a local agricultural expert will narrate each tour and will answer any questions you may have.

Biking for Cranes Tour

Departs from Stevens Funeral Home, 511 S. 7th St, 8:45 a.m. to 12:30 p.m. \$17 per person. Be ready to ride at 8:45 a.m. Enjoy a trip via bicycle with Geri Schrom through some of the best wildlife viewing areas near Othello. The ride will be approximately 30 miles round-trip and consists of flat to rolling terrain on paved roads. Helmets are required, and you should bring plenty of water. Bring a bike that is in great working condition, and you should be able to complete the ride at 10 to 12 mph. A support vehicle will be provided for repairs and safety. The purpose of the bike ride is to see birds, we will be stopping regularly to view wildlife.

Saturday Lectures 9:10 a.m.



Wolves Are Back

9:10 a.m. to 10:00 a.m.

Chris Montero is the Outreach Coordinator at Wolf Haven International. After studying biology in his native Costa Rica, he finished his studies at The Evergreen State College. Chris has worked for 20 years in conservation, both in

Washington State and Costa Rica. For five years he co-authored a comic strip about tropical flora and fauna for the Tico Times in Costa Rica, which was reproduced in an issue of Ranger Rick magazine. He also has experience as a naturalist guide, environmental interpreter, field technician, and scientific

illustrator and for the last eight years has been teaching Wildlife and Conservation for National Geographic Student Expeditions in Ecuador, Brazil, Australia, Belize and more recently in the Canadian Arctic.

After more than a 70-year absence, wolves have returned to Washington State. While they were hunted to extinction within state boundaries in the past, the Washington Department of Fish and Wildlife reported that in 2017 our state now has at least 122 wolves distributed in 22 distinct packs. As wolves continue reclaiming our wild areas, they bring change not only to our local ecosystems but also to our human culture. This presentation will explore the following topics: Where are these wolves and how are they surviving? How are they affecting the people in our state? How is our state managing these wolves?

Biotechnology and Genetically Modified Organisms (GMOs)

9:10 a.m. to 10:00 a.m.

Dr. Neff earned his bachelor's degree and doctorate from the University of Washington. For the past nine years, Dr. Neff has been the Director of the Molecular Plant Sciences Graduate Program at Washington State University (WSU), which has been ranked as one of the top four in plant-related research by the U.S. National Research Council. Dr. Neff has an active research program that includes the training of over 60 undergraduate researchers, and he is an inventor of two awarded patents and a third that was filed by WSU.



Neff will be discussing crop biotechnology, and why communication is the key to understanding this controversial subject. In addition to discussing genetically modified organisms (GMOs), Dr. Neff will talk about transgenic crops – including the methods, pros, and cons of GMOs and biotechnology. The goal of this presentation is to discuss the science behind the technology so that knowledgeable opinions can be developed on a case-by-case basis. This is the sixth presentation that Dr. Neff has delivered at the Othello Sandhill Crane Festival in the past seven years.



Heritage Gardens of the Columbia River Basin

9:10 a.m. to 10:00 a.m.

A life-long lover of the shrub steppe, Ernie Crediford spent much of his free time exploring and observing the plants and animals of the Columbia Basin. He is an active volunteer in many programs that promote native plants throughout

the Tri-Cities. He works with children and adults alike to collect seed, raise seedlings, and participate in restoration projects for native plants. Ernie is well-known for his wildflower photography, as well as the many wildflower fieldtrips that he organizes annually for the Columbia Basin Chapter of the Washington Native Plant Society. One of his passions is his

Heritage Garden. Heritage Gardens are landscaped areas designed to promote the use of native plants, especially those of cultural significance; promote low-water use landscaping; and encourage efficient irrigation methods. Ernie's Heritage Garden is populated with rescued plants, seeds, and carefully tended cuttings. Ernie has created a treasure trove of beauty in his own front yard. Ernie's depth of experience with growing native plants continues to be a great resource for those who are learning how to create their own gardens. Join Ernie to learn more about the program.

Celebrate Birds Through Photography



9:10 a.m. to 10:00 a.m.

Karen Ulvestad is breaking into the international photography scene with stock images published in Europe and Asia, and her work is collected by clients in the United States. She teaches and speaks at various birding festivals and prominent art schools, and she

runs independent workshops. Karen's work is represented by Photographers Direct (Europe), Alamy, and 500px.com stock agencies. Her resume also includes clients in commercial real estate and business.

Birds are present in our everyday lives, and this is a tribute to them. We look to our cameras to document their behavior or simply their beauty. Karen will discuss the variety of birds in the Pacific Northwest and photography tips for capturing the best images possible. Each season brings different species of birds into our yards, neighborhoods, forests, and wildlife refuges. Birds migrate through our area along the Pacific Flyway, and we get opportunities to experience their diversity. Wintering birds give us opportunities to visit, observe, and photograph these magnificent creatures.

Changing the Course of the Palouse River

9:10 a.m. to 10:00 a.m.

Register for the tour on Sunday to compliment his lecture. Lloyd Stoess graduated from Eastern Washington State College in 1974 with a bachelor's degree in geography with an emphasis in geomorphology. As a lifetime resident of the Washtucna area, he has accumulated an intimate knowledge of the area and has co-lead numerous bus tours of the area, as well as leading a yearly hike up the lower Palouse Canyon. He currently serves as president of the Palouse Falls Chapter of the Ice Age Floods Institute.

Before the Ice Age, the Palouse River flowed through what is now Washtucna Coulee, through present day Washtucna, Connell, and Eltopia, and entered the Columbia River near Richland. Today, it takes a 50-mile shortcut across the divide to the Snake River through the Palouse Canyon. Lloyd will present the two factors that were needed to achieve this river



course change through hundreds of feet of volcanic basalt rock. Included are aerial photos of the Palouse Canyon and the spectacular Palouse Falls, named the Official Waterfall for Washington State.

Wildflowers of the Shrub-Steppe

9:10 a.m. to 10:00 a.m.

Terri Knoke is a retired chemical engineer. She was first formally introduced to the study of wildflowers in 1998, attending a four-day North Cascades Institute wildflower class. In 2014, she was asked to illustrate a new species discovered by her uncle, Don Knoke, and thus started a new passion—botanical art. Terri recently received "Best of Show" for her watercolor in a national botanical art contest. Her work is currently being shown at the Museum of Natural History at the University of Colorado, Boulder. As a member of the American Society of Botanical Artists and Washington Native Plant Society, she continues to promote wildflowers through her art and efforts with Washington State's Rare Care Program.



This lecture is about wildflowers in eastern Washington, especially those found in the shrub-steppe environment. The presentation will include photos of wildflowers, where they are found, and what organizations are currently involved in their preservation. Included is how botanical art and scientific illustration are currently being used to promote and protect native plants in the Pacific Northwest.

Saturday Lectures 10:10 a.m.

Biology and Ecology of Greater Sandhill Cranes

10:10 a.m. to 11:00 a.m.

Dominic Bachman became the Natural Resources Conservation Service's State Wildlife Biologist for Washington in 2016, where he is working across the region's diverse habitats to conserve birds and other wildlife. He is the state technical lead on Sage-Grouse and focuses most of his efforts on wetlands, riparian, and sagebrush-steppe ecosystems. He has worked on bird habitat projects in most of the western states and spent ten years working as a refuge wildlife biologist for the U.S. Fish and Wildlife Service in coastal and northeastern California. He spent eight years as a crane biologist on the Modoc National Wildlife Refuge.



Dominic grew up in Utah and was raised on the wetlands surrounding the Great Salt Lake. He got his master's degree from Humboldt State University, working on coastal grassland

habitat management for geese. Dominic invites you to join his talk about the Greater Sandhill Cranes of Modoc County, focusing on their breeding biology and natural history. Also, discover what biologists are doing to learn more about this population of Sandhill Cranes. Learn everything there is to know about these amazing birds, as well as come see some incredible photos!

WSU Raptor Club

10:10 a.m. to 11:00 a.m.

A second presentation will be delivered at 3:10 p.m. Join the members of the Washington State University Raptor Club for this talk on captive and wild raptors (birds of prey). Several captive non-releasable raptors will be on display during this talk. The discussion will focus on the unique story and features of each of the Club's birds, including the key features of each raptor. The Club members will also provide information about what the public can do to help save these beautiful birds, and will tell the stories of how each bird came to be an educational ambassador. Bring your questions about any of the birds or species presented. This will be the first of two presentations. The same presentation (exclusive of questions asked by the audience) will be given again in the afternoon. Due to late arrivals startling the birds on display, entry to this talk will not be allowed after it has started. Plan to arrive early.



The WSU Raptor Club is a non-profit organization located on the WSU campus in Pullman. Its mission is to promote wildlife conservation through the use of non-releasable raptors as living representatives in public environmental education programs. The Club's presentations give people an opportunity to see these amazing creatures up-close (sorry, touching the birds is not allowed).

Coyote Canyon Mammoth Dig: Victim of an Ice Age Flood

10:10 a.m. to 11:00 a.m.

Register for the Hanford Reach tour on Sunday. Gary Kleinknecht has been involved with the Mid-Columbia Basin Old Natural Education Sciences (MCBONES) Research Center Foundation's Coyote Canyon Mammoth Dig for the last 10 years. Gary is a Tri-Cities native and alumnus of Washington State University and the University of South Carolina. He retired from teaching high school in 2013 after a 40-year career and is currently Education Director for MCBONES. He is past president of the Ice Age Floods Institute (IAFI) and is currently vice president of the IAFI.

Gary will discuss this paleontological and paleoecological project's unique beginning, including the generous donation that is helping to introduce the young people of the Mid-Columbia region to the above disciplines. Gary will cover the project's working hypothesis, progress made at the site over the past decade, and its connection with the Ice Age Floods. He will also discuss educational opportunities available through the site.



Do Bryophytes Grow in Eastern WA?

10:10 a.m. to 11:00 a.m.

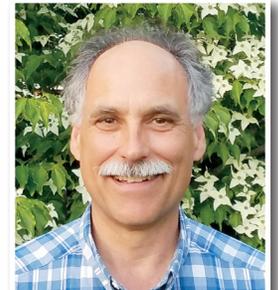
Dr. Judith Harpel has been studying bryophytes (mosses and similar plants) for over 40 years. She is the Curator of Bryophytes and an Adjunct Professor at the University of British Columbia. Her research interests are in bryophyte taxonomy, systematics, floristics, bryophyte ecology, and rare bryophyte management. Judith is a member of the Plant and Lichen Specialist Subcommittee for the Committee on the Status of Endangered Wildlife in Canada and the U.S. as Representative to the International Union for Conservation of Nature/SSC Bryophyte Specialists Group. She has done research on Sakhalin Island, in the Russian Far East, Yellowstone National Park, Mt. Rainier National Park, Olympic National Park, and throughout Canada and the United States. Currently, she is working on a moss checklist for the state of Washington. This is your opportunity to have your questions answered by a world-renowned expert and to learn some things you did not know about the fascinating world of bryophytes.



Ice Age Floods and the Channeled Scablands

10:10 a.m. to 11:00 a.m.

This lecture can be followed by a tour at 11:30, must pre-register. Brent Cunderla is a geologist who retired from the Bureau of Land Management in Wenatchee. He has been actively exploring late Pleistocene glacial geology for the past 25 years while working with the National Park Service and Ice Age Floods Institute to designate the Ice Age Floods National Geologic Trail. He has a bachelor's degree in earth sciences from the University of Wisconsin-River Falls, and a master's degree in geology from Portland State University.



Listen to a general overview by Brent of the Ice Age Floods that occurred numerous times during the Pleistocene (Ice Age) and the pathways of the floods from northwest Montana to the Pacific Ocean, with an emphasis on the flood features found in eastern Washington. The talk will include a discussion of how Joseph Pardee and J. Harlan Bretz swayed the geologic community about the field evidence of these catastrophic floods.

3Ds (Drones, Data, and Decisions) in Agriculture and Wildlife

10:10 a.m. to 11:00 a.m.

Dr. Lav Khot is an assistant professor in the Department of Biological Systems Engineering, CPAAS, IAREC, Washington State University (WSU). His research and extension program at WSU focuses on "sensing and automation technologies



for site specific and precision management of production agriculture," with special emphasis towards integration of proximal and remote (unmanned and manned aerial systems) sensing for data-enabled decision support and information delivery technologies. His program also focuses on development of next generation precise applications technologies.

In the past few years, small drones (aka, unmanned aerial systems [UAS]) and internet of things (IoT) enabled smart agriculture technologies have fascinated farmers and researchers alike with versatile application capabilities. Agribusiness industry is trying to keep pace with rapid developments in this sector. As the frontiers emerge, we must look beyond small drones to realize the full potential of this technology in agricultural production management. This talk is an effort to initiate discussion. Discussed will be general technology and application domain of both small and mid-sized drones and the IoT enabled devices in agriculture, along with its current regulatory aspects and drone usage in relation to wildlife.

Migrations of Vaux's Happening

10:10 a.m. to 11:00 a.m.

Larry Schwitters has a master's degree from East Texas State University, funded by a National Science Foundation competitive grant. He spent thirty years in the trenches of public education, mostly as a middle school science teacher and coach in the Renton School District. He has written for the American Birding Association's "Winging It." Schwitters also contributed to Rich Levad's stunning "The Coolest Bird," a natural history of the Black Swift and those who have pursued it.



Vaux's Swift was a little-studied species, for which there was, outside of Portland, a surprising lack of awareness of their evening roosting spectacle. Schwitters, working with Audubon has changed that. His Vaux's Happening project is the subject of a Smithsonian on line article and his project was also featured in "High Country News." The project was a recent feature of Bird Watcher Magazine.

For the last 22 migrations, Larry has pressed on with his Vaux's Happening Project documenting over 13 million roosting swifts, and with his wife Leora, continues to explore the edges of the continent in their quest for up close and personal time with each bird species found in North America.

Saturday Lectures 11:10 a.m.

Birding in Borneo

11:10 a.m. to 12:00 noon



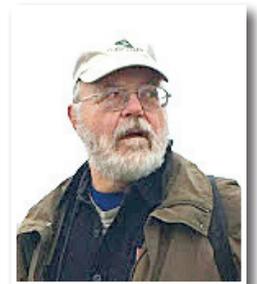
Jason Fidorra is a wildlife biologist for the Washington Department of Fish and Wildlife (WDFW) based in the Tri-Cities. Jason is working on the front lines of shrub-steppe conservation in WA, but when time and money allow he enjoys planning independent birding trips to different habitats around the world. Before joining WDFW, Jason worked on bird research and conservation projects across North America and as a birding guide in Central America.

Hear stories and see photos from a recent adventure in search of birds and wildlife of the world's third-largest island. Famous for orangutans and elephants, Borneo hosts amazing mammals but is equally famous for bird life including many endemic species and even an entire bird family found nowhere else on earth! Several surprises along the way resulted in this trip being a very memorable and recommended wildlife adventure.

Feathers, Fowl, and Flight

11:10 a.m. to 12:00 noon

Steve Bouffard is retired from the U.S. Fish and Wildlife Service, where he served over 30 years as a refuge biologist and manager. He worked in Idaho and Nevada, focusing on waterfowl, cranes, and Trumpeter Swans. He now lives in Boise, where he is a volunteer Curator of Birds for the Orma J. Smith Museum of Natural History at the College of Idaho. He still runs bird and butterfly surveys for state and federal agencies.



This talk discusses the most recent theories about the evolution of birds, feathers, and flight from their dinosaur ancestors. Feathers evolved before flight and even before birds. Many, if not most, dinosaurs had feathers.

Conservation Needs of Trumpeter Swans in the Western United States

11:10 a.m. to 12:00 noon

Dr. Gary Ivey works for the International Crane Foundation. He studied the nesting ecology of Sandhill Cranes for his master's thesis and the wintering ecology of Sandhill cranes for his Ph.D., both at Oregon State University. He is the past-president of the Trumpeter Swan Society and is working to help with conservation of cranes, swans, and other waterbirds in



western North America. He has been working with the Oregon flock of Trumpeter Swans since 1980 and is the coordinator for the Oregon Trumpeter Swan Restoration Program for the Trumpeter Swan Society.

Gary will review the history, status, and biology of Trumpeter Swans and their conservation needs. He will speak about the Oregon Trumpeter Swan Restoration Program and efforts by The Trumpeter Swan Society to rebuild western Trumpeter Swan populations to help further the recovery of these magnificent creatures from near extinction.

Wildfire Impacts on Wildlife in the West

11:10 a.m. to 12:00 noon.

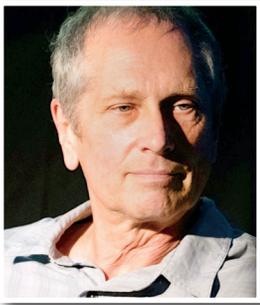
Heidi Newsome is a native west-sider that has been converted to an east-sider. She has a bachelor's degree in psychology/biology from Santa Clara University and master's degree in wildlife science from Oregon State University. Heidi has worked in the Mid-Columbia area since 1999. Her current role is Supervisory Wildlife Biologist for the Mid-Columbia River National Wildlife Refuge Complex. Heidi's major duties include supervising the biological staff and volunteers (herding cats), advising managers (going to lots of meetings), conducting wildlife surveys (OMG that is a huge elk), invasive plant management (getting scratched and stickered), and native habitat restoration (praying for just a little rain).



Her focus over the past several years has been shrub-steppe (a fire dependent ecosystem) ecology and management. If Heidi's talk is any indication of her humor, it should be entertaining. Her talk will address a very relevant topic, the impact wildfires have on wildlife. Today's wildfires are burning hotter, are fewer and far between, and are generally more destructive than historic natural fires that consumed mostly underbrush but left forests intact. Heidi will address how these new trends are impacting wildlife and ecosystem succession.

Hawk Watching

11:10 a.m. to 12:00 noon



A professor of English at Eastern Washington University, Paul Lindholdt has won awards from the Academy of American Poets, the Society of Professional Journalists, and the Washington Center for the Book. He has published more than 150 books, book chapters, journal articles, essays, and columns on the subjects of environment and

culture in America. He is on the boards of several arts and history organizations.

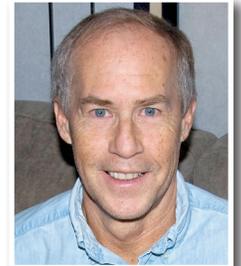
Paul is an English professor, not a scientist. In a literary essay paired with a slideshow, Paul Lindholdt describes a Cooper's hawk taking a starling in his back garden. The scene of the hawk plucking her prey evokes empathy both for the writhing

victim and for the hawk and her genus that human civilization has encroached upon. Hawks contend with fences, power lines, housecats, and loss of habitat today. From Mongolian horseback-hunters flying eagles to take down large game, to first-world cultures outfitting hawks with electrodes to track them, humans harness predatory birds for their benefit and entertainment while keeping their savageness at arm's length. This literary essay and slideshow constitute a bird's-eye view of the many ways that predation in the urban-rural interface can go wrong. Join Paul for a conversation from a literary point of view.

The Indisputable Case for Multiple Ice Age Floods

11:10 a.m. to 12:00 noon

Bruce Bjornstad is a licensed geologist/hydrologist and retired Senior Research Scientist from Batelle's Pacific Northwest National Laboratory. He received a Bachelor's degree in geology from the University of New Hampshire and a Master's degree in geology from Eastern Washington University. During his 35-year career he has written numerous documents and reports on the geology of the region as well as two geologic guidebooks on Ice Age floods that transformed the Pacific Northwest as recently as 14,000 years ago. Bruce is also the creator of an online YouTube Channel titled "Ice Age Floodscapes."



Only 40 years ago most geologists believed there was only one or a handful of Ice Age floods. Since then, geologists have gathered a lot of evidence to suggest there were dozens of Ice Age floods during the last glacial cycle alone (approximately 14,000 to 20,000 years ago). Not only that, many more floods have occurred during previous glacial cycles going back 2 million years or more. The same presentation will be repeated in the afternoon.

Money and the Environment

11:10 a.m. to 12:00 noon

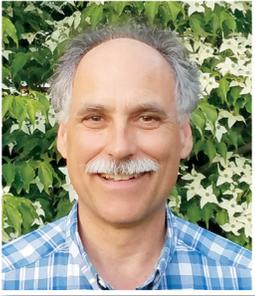


Kyhardhan Risson Ulvestad-LaReve lives and works out of the Edmonds Area. He expects to graduate high school in 2019, and embraces his love of photography through family travels. He started working photography when he was only two years old. He earned his first DSLR at five years old, and currently shoots with a Canon 60D. At nine years old, he won an honorable mention at the Edmonds Art Festival, while competing against high school students. His Gosling image shows his love of nature, along with his environmental projects, photography, and poetry. Currently, he works as a part-time assistant for his mom and Serendipity Photography Studios (the family business). He is learning both commercial and portrait photography.

This talk is part of a high school graduation requirement and will address a study on the economics of how people treat the environment around them, focusing on the social and monetary economic effects on ecosystems, whether it be urban, suburban, rural or a nature reserve. Topics to be addressed include: how tourism can create or destroy the environment, how homelessness affects the ecosystem, how the state of an economy affects the environment, and how a polluted environment affects the social structure of a community.

Saturday Tour 11:30 a.m.

Ice Age Floods and the Channeled Scablands Tour 11:30 a.m. to 2:30 p.m.



\$32 per person. Led by Brent Cunderla after his 10:10 – 11:00 a.m. lecture, this trip will emphasize the geology and catastrophic Ice Age Flood features found near Othello and Columbia National Wildlife Refuge. A visit to the Drumheller Channels (a National Park Service National Natural Landmark managed by Columbia NWR) will examine

scabland topography and ice-rafted boulders (erratic's). Brent has spent the last 25 years with the Bureau of Land Management in Wenatchee and has been actively exploring the late Pleistocene glacial geology, particularly the Ice Age Floods features of north-central Washington. There will be one stop for facilities and no lunch on this trip, so please plan accordingly.

Saturday Lecture 12:10 p.m.

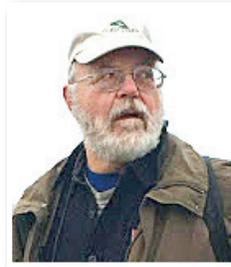
Non-Professional Bird Photography for Birders 12:10 p.m. to 1:00 p.m.

Tim Boyer. Whether you have a DSLR or a bridge camera, you digiscope, or you take bird images with your smart phone, there are certain fundamentals of bird photography that are important no matter what kind of equipment you use. This presentation is all about how to improve your bird photographs no matter what camera you have. We'll look at the fundamentals of bird photography through the elements necessary to make a beautiful image. The quality of light you choose, how to get a sharp image, how to get a great point of view, how to manage the background, what to watch for at the edges of



the frame, how to get a great composition, and how to get a good exposure are all covered in this presentation. Tim will also present examples of proper field techniques, how to get the best sun angle, how to get close to birds and how to photograph birds in flight.

Saturday Lectures 1:10 p.m.



Monitoring Albatross Nesting on Midway Atoll National Wildlife Refuge

1:10 p.m. to 2:00 p.m.

Steve Bouffard retired from the U.S. Fish and Wildlife Service with over 30 years of experience as a biologist and manager on national wildlife refuges

in Nevada and Idaho. He worked mostly with aquatic habitats and associated species, especially with Trumpeter Swans and cranes. Steve made several business trips to China, Russia, and Botswana related to cranes, often in cooperation with the International Crane Foundation. He is now a volunteer Curator of Birds at the Orma J. Smith Museum of Natural History at the College of Idaho. Every spring, he leads birding-by-ear field trips for visually impaired participants.

The refuge is located on the far northern end of the Hawaiian Archipelago. Midway is one of the oldest atoll formations in the world. It provides nesting habitat for millions of seabirds and is a touchstone for one of the most significant naval battles in our human history. Steve will talk about the annual albatross nesting census on Midway. He will also go over nesting biology and the other wildlife using the refuge.

An Introduction to iNaturalist 1:10 p.m. to 2:00 p.m.



Charles Swift is a birder, naturalist, environmental educator, and enthusiastic participant and proponent of citizen science. He has a long involvement in the Christmas Bird Count and eBird, and has recently gotten hooked on iNaturalist. His appreciation for the natural world goes back to his childhood days in the mid-Atlantic region and has lived in Moscow, Idaho

for over 20 years. He enjoys birding and naturalizing around the Northwest and wherever travels take him.

iNaturalist is citizen science project that takes advantage of the internet, smart phones, and crowd sourcing to collect observations of flora and fauna from around the world. It combines a network of naturalists and a large biodiversity database, along with identification help through expert peer review and computer-based tools. In this talk you will learn how

to contribute your observations to iNaturalist while expanding your knowledge of nature from your yard and beyond. iNaturalist has the goal of creating community awareness of local biodiversity and promoting further exploration of the environment.

Tales of Natural History and Adventures on the Columbia River

1:10 p.m. to 2:00 p.m.



Several Indian tribes lived along the mid-Columbia River where they had access to abundant fisheries resources. Their spoken mythology about salmon and other fishes, such as “doctor fish,” “swallowing monster’s pet,” and “night eel” provides insight into how intertwined their lives were with the river. Other important lessons in local natural history can be found in journals

of the Lewis and Clark Expedition. Scientific expeditions following the Gold Rush era added to our knowledge of fish and wildlife resources from this area. The presentation will entertain with readings of Native American myth, explorer journals and early 19th century angling lore, and describe how changes to the landscape have led to the fish community we know today.

Dennis Dauble retired from Pacific Northwest National Laboratory after 35+ years as a fisheries scientist. He currently serves as expert consultant on salmon issues and is a board member of the Northwest Outdoor Writers Association. He writes for regional newspapers, angling magazines and has written three books about fish and fishing. Read more on his website, DennisDaubleBooks.com.

Burrowing Owl Life History and Migration

1:10 p.m. to 2:00 p.m.



Julie Conley is a Range Management Specialist with the US Fish and Wildlife Service, where she focuses on the inventory and monitoring of shrubsteppe ecosystems. She holds a Master of Science in Range Management from the University of Arizona and has worked in grass/shrubland systems for the past 20 years. For five years she has played

the role of data manager and mapper for a team of biologists studying the migratory patterns of burrowing owls (*Athene cucularia*). The study is part of an international collaboration between the US and Canada that has spanned nearly a decade involving many organizations and countless field biologists in nine states and three provinces.

Julie will discuss burrowing owl life history and conservation status, describe ongoing demographic studies and habitat work at the Umatilla Chemical Depot in northeastern Oregon, and share the results of the team’s research documenting

burrowing owl migration patterns across western North America. Come along on the journey of these amazing travelers.

eBird Basics

1:10 p.m. to 2:00 p.m.



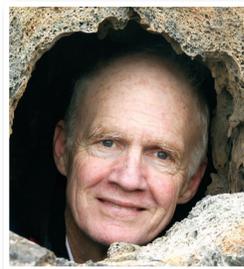
As a wildlife biologist for the WDFW, Jason Fidorra conducts surveys for a variety of wildlife, from elk to monarch butterflies, and contributes to research on Burrowing Owls, raptors, and game birds.

What is eBird, and why you should use it? eBird is a database of bird records and photos in a program that is similar

to listing software and has become one of the most successful citizen science projects in the world. We will go over some of the easy ways you can start using eBird to find birding hotspots, track your records, and view bird data on this free website, all while contributing to science and local conservation.

Natural History of the Blue Mountains

1:10 p.m. to 2:00 p.m.



Robert J. Carson, Phillips Professor of Geology and Environmental Studies Emeritus at Whitman College, was raised in Lexington, Virginia. Mountaineering, whitewater boating, and spelunking in Rockbridge County, Virginia, and summers in northern New England sparked his interest in geology, which he studied at Cornell

University. Most of his research is on Quaternary geology in Washington, northeastern Oregon, northwestern Wyoming, and Mongolia. His books include *Hiking Guide to Washington Geology*, *Where the Great River Bends*, *East of Yellowstone*, *Many Waters*, and *The Blues*.

The Blues are a long anticlinal ridge composed mostly of basalt flows. This ridge, which stretches from Clarno, Oregon to Clarkston, Washington, is the northernmost portion of the Blue Mountains physiographic section, itself part of the Columbia Plateau physiographic province, which is characterized by young volcanics. Beneath the Miocene flood basalts are limited outcrops of exotic terranes from near Asia, granite that resulted from melting during a plate tectonic collision, Eocene rocks resembling today’s Cascade volcanics, and Oligocene ash similar to what Yellowstone erupts. Not high enough to have been glaciated like the Wallows, the Blues consist of upland plateaus cut by deep V-shaped canyons like those along the two forks of the Walla Walla River.

These mountains have magnificent forests, with western juniper at the base and subalpine fir at the top. Other dominant conifers include ponderosa pine, Douglas-fir, lodgepole pine, grand fir, western white pine, Engelmann spruce, and the deciduous western larch whose needles turn brilliant yellow in autumn. Special to the Blues, because of limited precipitation,

is the grass-tree mosaic, with dense forests on north- and east-facing slopes, and meadows rich in wildflowers on south- and west-facing inclines. This mixture of grassland and forests provides critical habitat for many birds, large mammals, and other animals.

Sandhill Cranes of the Pacific Flyway

1:10 p.m. to 2:00 p.m.



Dr. Gary Ivey works for the International Crane Foundation. He studied the nesting ecology of Sandhill Cranes for his master's thesis and the wintering ecology of Sandhill Cranes for his Ph.D., both at Oregon State University. He also served as the president of The Trumpeter Swan Society and is working to help with

conservation of cranes, swans, and other waterbirds in western North America.

Gary will talk about the Sandhill Crane populations that breed and stage in Washington State and the broader Pacific Flyway. He will discuss the biology, life history, migration routes, wintering areas, and breeding areas of the three subspecies found in the state.

Saturday Afternoon Tours

Othello Community Museum

1:00 p.m. to 2:00 p.m.

Eric Morgan, Board President of the Othello Community Museum will give a guided tour through the facility, explaining the artifacts on display and history of the museum and area. The collection includes a bird and egg collection amassed by a local farmer and donated to the museum. Meet at the Othello Community Museum, on the corner of 3rd and Larch in Othello. The museum is located one block from the Othello High School grounds. The tour is free of charge and will be repeated at the same time on Sunday.

Urban Walk 2:00 p.m. to 3:00 p.m. Join birder and naturalist Charles Swift for a casual walk from the high school over to the nearby Kiwanis Park. The walk is an opportunity to observe nature (birds in particular) in a residential setting and is geared to all levels, especially for beginning and youth birders and naturalists. The walk is free of charge and will depart from the main entrance to the gym. Children are welcome to attend as long as they are accompanied by an adult.

Saturday Lectures 2:10 p.m.

Wildlife Conservation in the Sagebrush Sea

2:10 p.m. to 3:00 p.m.



Kim Thorburn is past president of the Spokane Audubon Society, one of the organizations working to conserve shrub-steppe and participating in the Lincoln County prairie grouse project. Kim volunteers for the Washington Department of Fish and Wildlife, radio tracking grouse, trapping birds

for translocation, and monitoring leks for the project. She also coordinates volunteers to assist with Prairie Grouse recovery activities and serves on the Washington Fish and Wildlife Commission.

Collaborative efforts to protect and recover the populations of Greater Sage-Grouse and Columbian Sharp-Tailed Grouse also have the potential to safeguard other species. Shrub-steppe, once a predominant ecosystem of the western United States, has been altered or destroyed by human activities in much of Washington and throughout the West. Providing rich habitat for a wide variety of wildlife, the loss of shrub-steppe means many animal species are threatened. This presentation examines efforts to restore sagebrush habitat and Sharp-Tailed Grouse populations to a historic range. It will cover volunteer opportunities and elucidates how these efforts are beneficial to many species of concern.

Frogs Among Us

2:10 p.m. to 3:00 p.m.



Ella Rowan is a wildlife biologist for Washington Department of Fish and Wildlife. She has worked with wildlife in Illinois, Oregon, Georgia, Alaska, and West Virginia. She currently works in the Ephrata, Washington, office, where she helps manage wildlife in Grant and Adams counties.

Come learn about the amazing biology of frogs that inhabit our part of Washington, our efforts to help Northern Leopard Frogs rebound, and how you can help too! Frogs eat mosquitos and other insects, warn us about water quality problems, and provide important prey for other species of animals. Their being super cute is a bonus!

Rocky Reach Hydroelectric Project Fish Passage

2:10 p.m. to 3:00 p.m.



Jeff Osborn, the Senior License Compliance Specialist for Public Utility District No. 1 of Chelan County, has spent the better part of the past 37 years participating in improving juvenile fish passage survival past hydroelectric dams on the Columbia and Snake rivers. He worked for the Bonneville Power Administration from 1988 to 1995 assisting river operators with operations to aide juvenile salmon and steelhead migration survival. He participated in relicensing the Lake Chelan and Rocky

Reach hydroelectric Project for Chelan PUD as the lead for natural resources, and subsequent license implementation since 1998. His current position is responsible for maintaining compliance with all license terms and conditions for Chelan PUDs Rocky Reach, Rock island, and Lake Chelan Hydroelectric projects. Jeff has both a B.S. and M.S. in Fisheries Science from the University of Washington.

Join Jeff as he speaks about the history of juvenile salmon and steelhead downstream passage and adult Pacific lamprey upstream passage at Rocky Reach Dam. He will speak to how technology, science, and engineering have come together to achieve success.

Wildlife Photography

2:10 p.m. to 3:00 p.m.

Bart Rulon's love of wildlife started at a very young age, and after graduating from the University of Kentucky in a self-made biological illustration major he moved to Washington State to start a career making images of wildlife and never looked back. Bart has written and illustrated 5 books about photography, art, and wildlife, published by North Light Books, and he has been a contributing author/artist/photographer in over 10 additional books. Bart's award-winning art and photographs have been shown in over 60 museums in North America and abroad, and his work is included in the permanent collections of the Leigh Yawkey Woodson Art Museum, the Bennington Center for the Arts, and the Massachusetts Audubon Society. You can see his photography, art, and books at www.BartRulon.com



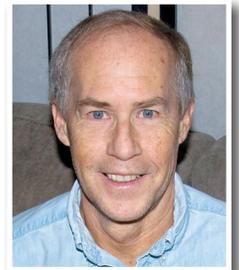
Award winning wildlife artist and photographer Bart Rulon will go behind the scenes to show how a professional wildlife photographer works in this colorful slide show. Bart will talk about equipment, locations, field techniques, camera techniques, camera settings, and he will share a multitude of photographs, and a few stories from his wildlife expeditions around the world and locally. Bart's travels have taken him on long trips to Africa, India, South America, Costa Rica, and Alaska to photograph wildlife, and he spends between 50 and 90 days per year out on the water photographing whales and

other wildlife around the San Juan Islands. The slide show will focus mostly on birds and wildlife of western Washington but will include other locations as well. A few of the many topics covered will include cameras, lenses, teleconverters, aperture, ISO, white balance, raw photography, tripods, monopods, bean bags, boat photography, kayak photography, photography from a blind, techniques for approaching birds, birds in flight, locations for bird photography and more. Questions are welcomed and encouraged! If you are a fan of wildlife or a photographer of any skill level, from novice to serious amateur, you will enjoy this slide show!

The Indisputable Case for Multiple Ice Age Floods

2:10 p.m. to 3:00 p.m.

This is your second chance to hear geologist Bruce Bjornstad deliver the same presentation that was given at 11:10 a.m. Only 40 years ago most geologists believed there was only one or a handful of Ice Age floods. Since then, geologists have gathered a lot of evidence to suggest there were dozens of Ice Age floods during the last glacial cycle alone (approximately 14,000 to 20,000 years ago). Not only that, many more floods have occurred during previous glacial cycles going back 2 million years or more. The same presentation was given earlier in the morning.



Amphibians and Reptiles of the Columbia Basin

2:10 p.m. to 3:00 p.m.

Jeff Howland has worked for the U.S. Fish and Wildlife Service for 20 years, including over 18 years on national wildlife refuges. For the last ten years he has been at the Mid-Columbia River National Wildlife Refuge Complex. Before joining the Service, he spent eight years as the state herpetologist of Arizona, administering and implementing amphibian and reptile conservation programs and projects throughout the state. As a graduate student, Jeff studied reptile ecology in the Chihuahuan Desert of west Texas and the Sonoran and Mojave deserts of California.



Jeff will give you an introduction to the common (and some not-so-common) amphibians and reptiles of the Columbia Basin, including discussion of threats and conservation measures for some of the species of most concern. Although this is an arid area, the reptiles and amphibians found here are plentiful and fascinating. Jeff's talk is your opportunity to discover a world around you that you didn't even know existed.

Saturday Lectures 3:10 p.m.



WSU Raptor Club

3:10 p.m. to 4:00 p.m.

This will be the second of two presentations. The same presentation is given in the morning. Due to late arrivals

startling the birds on display, **entry to this talk will not be allowed after it has started. Plan to arrive early.** The club's presentations give people an opportunity to see these amazing creatures up-close (sorry, touching the birds is not allowed).

Raising Kid Colt – A Story of a Young Sandhill Crane

3:10 p.m. to 4:00 p.m.



Gary Ivey will present a 45-minute film, "Raising Kid Colt – A Story of a Young Sandhill Crane," which was filmed over a span of two summers by Nina Faust. Nina was able to capture the intimate details of the lives of a family of Sandhill Cranes; the cranes learned to trust their neighbors, Nina and Kachemak Crane Watch co-

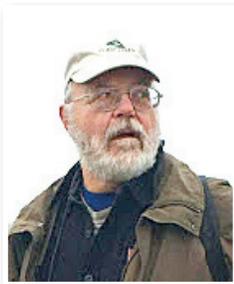
founder, Edgar Bailey. During the summer of 2010, the crane pair investigated the lands near their house, identifying food sources, roosting sites, and a nesting area.

In spring of 2011, the two Sandhill Cranes returned, and in early May, before the snow was even gone, they laid their two eggs on an island nest in a pond. Because of the rapport established with the cranes the summer before, Nina was able to get remarkable footage of the family's daily life over the whole summer, until the family migrated with the other local Homer, Alaska, cranes. "Raising Kid Colt" provides viewers with seldom-seen perspectives of raising crane colts, as well as a progression of colt development over the summer.

Bird Brains

3:10 p.m. to 4:00 p.m.

Steve Bouffard retired from the U.S. Fish and Wildlife Service with over 30 years of experience as a biologist and manager on national wildlife refuges in Nevada and Idaho. He worked mostly with aquatic habitats and associated species, especially with trumpeter swans and cranes.



This lecture will discuss some misconceptions about bird intelligence and some of the amazing things they can do.

Grand Coulee – Washington's Grand Canyon

3:10 p.m. to 4:00 p.m.

Gene Kiver taught geology at Eastern Washington University for 34 years before retiring. He continues to research, present lectures, and lead field trips on the Pleistocene history of the Channeled Scabland and related features in eastern Washington. Completion of a recent guidebook on the northern reaches of the flood area, co-authored with Bruce Bjornstad, and a new book on Washington geology (Washington Rocks!) are some of his recent activities.



A key area in the Missoula Floods story revolves around the Grand Coulee. Its relation to the location of the Okanogan Glacier ice lobe, terrace levels along the upper Columbia River, and overland flooding in the Channeled Scabland will be discussed in this illustrated presentation. Why is the Grand Coulee located where it is? How fast was this spectacular canyon cut and by what processes? Why was the Grand Coulee Dam placed where it is? What influence did the Grand Coulee have on local tribes, early settlers, and modern agriculture? Join Gene on this fascinating talk of the local area!

Shorebirds, Elegant Travelers on a Long Journey

3:10 p.m. to 4:00 p.m.

Roy Lowe was employed with the U.S. Fish and Wildlife Service for more than 37 years. He was the Project Leader of the Oregon Coast National Wildlife Refuge Complex upon his retirement in 2015. More recently, he has been helping train coastal wetlands managers in the People's Republic of China while serving as a volunteer for Global Parks and the Paulson Institute.



Shorebirds breeding in North America migrate extremely long distances to winter in the Southern Hemisphere on both sides of the Pacific Ocean. One individual was documented flying more than 7,000 miles nonstop! While these birds are very capable fliers their survival is dependent on international conservation efforts.

Our Changing Climate

3:10 p.m. to 4:00 p.m.



Dr. Brian W. Bodah has served as an environmental educator for the past 17 years, teaching environmental and experiential education at the kindergarten through university level in the Massachusetts and Minnesota public school systems and two land grant universities, Washington State University and Cornell. Brian served as a naturalist intern at the Audubon Center of the North Woods (ACNW) and the Alaska Raptor Center, where he was an educator and had daily contact with non-releasable birds of

prey. Brian trained a Red-Tailed Hawk named Dakota while at the ACNW in Sandstone, Minnesota. He has also worked as an environmental education consultant for the Brazilian Ministry of Education through the Charles Leopold Foundation and in various capacities for the National Park Service.

Originally a self-taught naturalist, Brian went on to earn a Bachelor of Science, cum laude, in Environmental Science from Ohio State University, a masters level certificate in environmental education from Hamline University, a Master of Business Administration from the University of Washington—Tacoma, and a Ph.D. in Biological and Agricultural Engineering from Washington State University. His interactive talk on global climate change will focus on the impacts to habitat availability due to global climate change, as well as the science behind the causes of global climate change. This is designed to be an interactive talk – so bring your questions on global climate change for Dr. Bodah to answer!

Saturday Late Afternoon/Evening

Secret Life of the Forest Movie

4:00 p.m. to 5:00 p.m.

Secret Life of the Forest Movie 4:00 p.m. to 5:00 p.m. \$6. Take a break after a long day of lectures and tours to enjoy the viewing of this documentary. This showing is at Reichert's Showhouse, 130 N. Broadway Ave., Othello, WA \$6 charge is for small popcorn and a drink.

Crane Viewing Tours (multiple)

4:45 p.m. to 7:00 p.m.; 5:00 p.m. to 7:15 p.m.; 5:15 p.m. to 7:20 p.m.; 5:30 p.m. to 7:30 p.m.

\$16 Adults, \$10 Seniors/Children. These guided tours will go directly to the best Sandhill Crane feeding areas, where and when they can be their noisiest. The evening feeding period toward sunset can be spectacular as cranes come and go. An experienced wildlife guide and a local agricultural expert will narrate each tour and will answer any questions you may have.

Banquet and Silent Auction

7:00 p.m. to 9:30 p.m.

\$35. Held at the High School Cafeteria. Join featured speaker, Cathy Nowak, for her talk "A Year in the Lives of Ladd Marsh Cranes," a fun combination of observations, pictures, and information. Read about Cathy's bio and the description of her presentation on the "Featured Speakers" page in the front of this brochure.

Enjoy Smokin' Wood BBQ's culinary delights. The menu includes barbecued tri-tip beef or chicken, a vegetarian main dish, side dishes, and desert. Come support future Othello Sandhill Crane Festivals by bidding at our Silent Auction from 7:00 p.m. to 8:30 p.m.

Sunday, March 24th Tours and Events

Most tours depart from Othello High School, 340 S 7th St. When you return from your tour, the High School will be closed. You may visit The Old Hotel, 33 E Larch St or the Othello Community Museum (corner of Larch and 3rd Streets). Tours departing from other locations are noted in the tour description.

Lower Crab Creek Birding Tour (Second of 2) **7:15 a.m. to 3:00 p.m.**



\$47. This tour, led by avid Walla Walla area birders Mike and MerryLynn Denny, will extend beyond the area covered on Friday. You will depart from Othello to western Grant County to visit a variety of dry and wet habitats between Corfu and Beverly. This trip will concentrate on the Russian olive groves and wetlands

in the Lower Crab Creek Wildlife Area, cliffs and greasewood patches along Saddle Mountain, and wetlands where cranes roost. Nesters—such as Say's Phoebes and Loggerhead Shrikes—other early songbird migrants, various birds of prey, and possibly Chukar are expected. This tour is almost eight hours in length, so bring food, drink, and walking shoes. This is a longer version of the same tour offered on Friday.

Wahluke Slope Birding Tour

7:30 a.m. to 3:30 p.m.

\$47 per person. Led by Randy Hill and Roy Lowe, this trip will visit the Wahluke Slope and Saddle Mountain area of the Hanford Reach National Monument, including portions of the closed area. It will concentrate on shrub-steppe areas and the Saddle Mountains ridge and its wide-open vistas. Sage-brush Sparrow, Loggerhead Shrike, Long-eared Owl, Prairie Falcon, and Chukar are good possibilities. It will include a spectacular view of the White Bluffs along the Columbia River. The journey will continue west to Sentinel Gap, where the river has significant woody riparian habitat that is a magnet for rarities during migration, and large rafts of waterfowl are commonly seen. If time permits a trip up Crab Creek to Corfu will be the return route. *This trip will take about eight hours, so don't forget to bring food and drink.*

Crane Tour

8:00 a.m. to 10:00 a.m.

\$16 Adults, \$10 Seniors/Children. Join us for a view of Sandhill Cranes. This guided tour will go directly to the best Sandhill Crane feeding areas where and when they can be their noisiest. An experienced wildlife guide and a local agricultural expert will narrate the tour and will answer any questions you may have.

Palouse Falls Tour 8:15 a.m. to 4:00 p.m. \$32. Lloyd Stoess and Ken Lacy will be your hosts on a tour of the route the Glacial Lake Missoula floodwaters followed through the lower Cheney-Palouse scablands. The catastrophic flooding amounted to as much as nine million cubic meters of water per second, creating the landscape we see today throughout the Columbia Basin.

View some of the more spectacular examples of flood-related geomorphologic activity found anywhere in the world. Highlights of the tour include the Palouse-Snake River Divide, Washtucna Coulee, Palouse Canyon, Mid-Canyon Bar, Devil's Canyon, and, of course, the spectacular Palouse Falls where we will have lunch. Typically, wild turkeys and deer are seen on the trip. Boxed lunches are available for order on the registration form.

 **Lower Grand Coulee Geology Tour**

8:40 a.m. to 2:00 p.m.

\$32. Join John Moody, president of the Lower Grand Coulee Chapter of the Ice Age Floods Institute and civil and water resources engineer, as you travel north and west on McManamon Road through the Columbia National Wildlife Refuge to the Drumheller Channels National Landmark overlook. There, you will walk out to the overlook for a presentation. You will then travel west to view granite erratics alongside Frenchman Hills. Then, head north to Soap Lake. You will walk to Sundial and view Soap Lake (original plunge pool) and the Lower Grand Coulee Monocline. Then, travel to Lake Lenore Caves and walk around and enjoy your lunch. You will have the opportunity to view a few overlooks, Dry Falls, and Monster Rock in the Ephrata Fan. On your return to Othello, you will travel along a portion of the Coulee Corridor National Scenic Byway. Boxed lunches are available for order on the registration form.

Dry Falls State Park Hike

9:00 a.m. to 3:00 p.m.

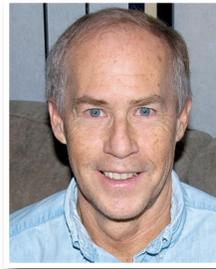


\$16. **Meet at the visitor center of the Dry Falls State Park**, 34875 Park Lake Road NE, Coulee City, WA 99115. A Discover Pass is required in all vehicles. Gene Kiver will take you on a hike at Dry Falls State Park. This hike will go up Monument Coulee on the east side of Umatilla Rock and will likely return along Dry Falls Coulee to the trailhead. The hike is about 2.6 miles, depending on the route taken. An optional trail to the "notch" in Umatilla Rock involves

a 140' elevation change. The trail on the west side is well-defined, but if one chooses to ascend or descend on the east side there is some unstable footing. Spectacular views of the 400-foot headwall of Dry Falls and the plunge pool lakes at the base of the cataract are some of the features that will be explained. Participants should bring water, snacks, lunch, and appropriate clothing. Dry Falls State Park is 66 miles North from Othello on Highway 17 (there will be no bus transportation from Othello). **Bring your own lunch, snacks, and drinks.**

Drumheller Channels Geology Hike

9:00 a.m. to 3:00 p.m.



\$32. A 3-4-mile hike of moderate difficulty, led by geologist Bruce Bjornstad, will directly explore the evidence for the Ice Age Floods. The floods cut through volcanic Columbia River basalt within the Drumheller Channels just northwest of Othello. One hundred years ago, J. Harlen Bretz recognized this area as one of the most spectacular examples of Ice Age Flood erosion in the Channeled Scabland. Bring sturdy footwear, a camera, and lunch; bus transport is provided. Boxed lunches are available for order on the registration form.

Hanford Reach Interpretive Center and Coyote Canyon

9:30 a.m. to 3:00 p.m.

Meet at the Hanford Reach Interpretive Center.

\$25, includes entrance fee into The REACH. The Coyote Canyon Mammoth Site is an ongoing paleo-ecological excavation located southwest of Kennewick. The 17,449-year-old mammoth bones are buried in Missoula Floods sediments. The Mid-Columbia Basin Old Natural Education Sciences (MCBONES) Research Center Foundation is a nonprofit educational organization and acts as an oversight and support entity for the project. Gary Kleinknecht will take you to the dig and Dig House, a 40 x 40 ft pole building set up as classroom, laboratory, and museum area. This trip will also take you to The Hanford Reach Interpretive Center (The REACH) in Richland. If you have not visited The REACH, here is your chance to see an amazing building with exhibits on the region's natural history and Hanford Reach National Monument. Dress according to the weather, wear sturdy shoes and bring lunch, snacks and drink.



Address for The REACH: 1943 Columbia Park Trail, Richland. Count on at least one hour driving from Othello to the Reach. Directions: From Othello go south on SR 17 toward Mesa. At US 395 go south toward Pasco where US 395 joins US 12. Go west toward Richland. Stay on US 395 and US 12 for two miles, then follow exit signs for Kennewick via US 395, cross the Columbia River, then immediately exit to the right onto SR 240 toward Richland. Exit onto Columbia Center Blvd., turn right and go to the stop sign, then turn right onto Columbia Park Trail. The REACH is on your right (0.3 of a mile) just past some apartments. There will be no bus transportation from Othello. Bring your own lunch, snacks, and drinks.

Potholes Reservoir Boat Birding Tour

Departs from MarDon Resort, 8198 WA 262, Othello.

11:00 a.m. to 1:30 p.m.

\$67 per person. Join the Meseberg's on a boat tour of the Potholes Reservoir. This boat trip explores bird life in early spring on Potholes Reservoir, concentrating on the bays where waterfowl, grebes, shorebirds, herons, and eagles might be found. Please dress accordingly, as it may be very cold and/or rainy this time of year.

Othello Community Museum Tour

1:00 p.m. to 2:00 p.m.

Eric Morgan, Board President of the Othello Community Museum will give a guided tour through the facility, explaining the artifacts on display and history of the museum and area. The collection includes a bird and egg collection amassed by a local farmer and donated to the museum. *Meet at the Othello Community Museum, on the corner of 3rd and Larch in Othello.* The tour is free of charge and will be a repeat of what was presented on Saturday.

Festival Activities

Novelties Available for sale all day Saturday. Don't forget to purchase your commemorative 2019 Sandhill Crane Festival items, including T-shirts, pins, postcards, pens, and plush birds.

Children's Programs 10:00 a.m. to 2:00 p.m. Saturday. Learning is fun for children and this year's programs at the Sandhill Crane Festival will provide entertainment along with education. Children will enjoy origami, a variety of crafts, creative painting projects, and much more. Mask making is also available. These events are free to children attending the Festival who are accompanied by a paying adult. Children taking part in all the activities will receive a prize, courtesy of the U.S. Fish and Wildlife Service.

Author Forum 10:00 a.m. to 4:00 p.m. Near The Old Hotel booth in the gym, Saturday only. Book signing will be available throughout the day by Bruce Bjornstad, Dennis Dauble, Mike Denny, David Gluckman, Gene Kiver, Tim Boyer, Paul Lindholdt, and many others.

Displays and Activities Occur all day on Saturday and included with General Admission Price into the Festival. Festival attendees will have the opportunity to view wildlife, Columbia Basin-related exhibits, commercial displays, and the art show. Bring your children—the festival offers many kid-friendly activities for preschoolers on up and kid-friendly lectures running every hour. We are also pleased to have special guest, "Jimmye the Firefighter," who will draw cartoon characters.

Othello Rotary Breakfast Saturday, 6:30 a.m. to 9:30 a.m. Held at the Othello High School. The Othello Rotary will be offering pancakes, scrambled eggs, sausage, coffee, and juice

Saturday morning only. The price is \$5 for a small and \$7 for a large breakfast. No reservations necessary. Breakfast may be pre-ordered on the registration form, or you may order the day of the Festival.

Boxed Lunches Boxed lunches can be ordered for tours on Saturday and Sunday (pre-registration required) for \$10. The box lunch choices include sandwiches of: vegetarian, turkey, or ham on a home-made wheat bun. You may pre-order a box lunch on the registration form.

Lunch provided by the Othello Senior Center on Saturday 11:00 a.m. to 2:00 p.m. The Othello Senior Center will be providing an affordable *a la carte* lunch at the Othello High School. You have a choice of baked potato bar, hotdogs, homemade soups, chili, nachos, dessert and drinks.

The Old Hotel Art Gallery Tuesday through Saturday, 10:00 a.m. to 5:00 p.m.; Sunday (March 24th ONLY) 11:00 a.m. to 2:00 p.m. Weekend events at the gallery, located at 33 E Larch Street, include a wine tasting with local food sampling, featuring Gingko Forest Winery from Mattawa, on Saturday from 2:00 p.m. until 5:00 p.m. Available for purchase will be wines, local foods, Sandhill Crane jewelry, and books featuring: birds, wildflowers, local history, geology and Ice Age Floods. A fantastic selection of original art is offered, as well as craft items, prints and cards. As an added attraction, the non-profit has a 1946 all-steel caboose built by the Milwaukee Railroad that has been turned into an interpretive museum and is located in the parking lot. The gallery also hosts a vendor booth at the Festival.

Art Contest The Old Hotel Art Gallery sponsors an art contest. All entries must feature nature and/or wildlife of the Columbia Basin. There are five grade categories: 2nd grade & under, 3-5 grade, 6-8 grade, 9-12 grade, and adult. Entries may include any media. First place in each category receives a prize. All artwork will be displayed at the Festival on Saturday. Art contest participants receive free general admission to the Festival. For more information, contact The Old Hotel at (509) 488-5936.

Visit Columbia National Wildlife Refuge The refuge office will be open during the Festival from 8:00 a.m. to 4:00 p.m. Friday and 9:00 a.m. to 4:00 p.m. Saturday and Sunday. The Columbia NWR office is located amid rock rims, lakes, and broad expanses of sagebrush steppe. The refuge is a focal point for a large segment of the Pacific Flyway waterfowl migrating north, as well as wintering populations of many species. Take a self-guided vehicle tour of the refuge and adjoining lands to view wildlife and the magnificent geological features of the Ice Age Floods. The refuge headquarters is located 5.5 miles northwest of Othello. Directions to the headquarters: Drive north out of Othello on Broadway. Stay on this road, which turns into McManamon Road. Turn right on Morgan Lake Road. Turn right into Columbia National Wildlife Refuge headquarters within ½ mile.



Othello Community Museum Friday-Sunday 10:00 a.m. to 5:00 p.m. History comes alive for you at 3rd Avenue and Larch Street. Exhibits include the Milwaukee Railroad, the Columbia Basin Irrigation Project, antique tools, and more. The museum also has a variety of taxidermy birds from the area, as well as a comprehensive egg display. Guided tours available free of charge at 1:00 p.m. on both Saturday and Sunday.

America's Oldest Operating Railroad Car Saturday 9:00 a.m. to 5:00 p.m. "The Abraham Lincoln" will visit Othello during the Crane Festival for free public tours. The century-old Denver and Rio Grande Western Railroad executive car will be located on North Broadway and will be open. Built by the Pullman Company in 1910, the 90-ton antique is a fully restored example of the conservative elegance of the classic Mission Style. Visitors are welcome aboard to stroll back through time, enjoying a self-guided tour. Visit pullman-car.com for details on this unique and historical private railroad car.

Migration Game All day Saturday. Take to the wing and migrate from your winter to summer home. Discover the trials and obstacles birds face on their long migration routes. This activity (hosted by the U.S. Fish and Wildlife Service) will be held in the cafeteria and is fun for all ages. Everyone is welcome.

FREE Photo Booth 10:00 a.m. to 2:00 p.m. on Saturday. There will be a free photo booth to take your picture with a digitized Sandhill Crane in the background to take home as a memento.

AS ALWAYS, PLEASE CHECK OUR NEW WEBSITE FOR UPDATES AND AVAILABILITY OF TOURS AT: othellosandhillcranefestival.org

We're also on Facebook (Othello Sandhill Crane Festival)! "Like" our page to receive the latest updates and Festival news!



Wildlife and Agriculture in Othello

Although Othello is well-known for the spring Sandhill Crane Festival, birders also regularly travel to our area during the fall migration season. Our area is part of the great Pacific Flyway, an "interstate" for avian migration.

Thirty-two different types of mammals and over 200 species of birds have been observed at Columbia National Wildlife Refuge. At the height of the spring and fall migration, biologists have estimated the refuge is home to up to 100,000 birds.

The diversity of wildlife in our area is matched only by the diversity of the crops grown here. Agriculture is also an important part of avian life in the Basin. Sandhill Cranes feast on leftover corn from fall harvest, and other crops grown here provide forage for many other species. Crops—wheat, alfalfa hay, potatoes, apples, spelt, grapes, cherries, melons, peas, onions, peaches, apricots, and nectarines, and seed crops like carrots and radishes—provide "leftovers" for many mammals and birds in our area. Nearly 800 acres of cropland are planted specifically as part of a program designed to maintain healthy waterfowl and crane populations.

According to Columbia National Wildlife Refuge, during fall and especially in March and April, refuge fields near Corfu, Road E SE, and Barton Road attract up to 60,000 Mallards, 30,000 Northern Pintails, 15,000 Sandhill Cranes, and 50,000 Canada and Cackling Geese.

The delicate balance of nature and agriculture is an important one for our area, and the issue is one local farmers take very seriously. Our Festival enlists the help of dozens of local farmers each year—they not only provide valuable resources and time as Festival backers but volunteer to ride along on our tours to answer your questions.

Thanks for your interest in our Festival, and we hope to see you soon! Be sure to "like" the Festival's Facebook page (Othello Sandhill Crane Festival) for the latest updates and information.

2019 OTHELLO SANDHILL CRANE FESTIVAL REGISTRATION FORM

Online Registration **STRONGLY PREFERRED**

Space cannot be guaranteed if registering using this form.

www.othellosandhillcranefestival.org

Name:	Address:
City:	State/Zip:
Daytime Phone:	E-mail Address:

All events are a first-come, first-served basis. Reservations filled in the order received; payment must accompany registration. **Mail-in registration deadline is March 10, 2019 (no refunds after this date).** Field trip participants must purchase a Saturday General Admission Ticket. Tickets are mailed to the address you provide, be sure to bring your tickets with you to the Festival. If you did not receive your tickets in the mail, check-in at the front registration table. **Help us save natural resources: register online at www.othellosandhillcranefestival.org**

GENERAL ADMISSION TICKETS:

	Quantity	Fee	Total
General Admission – Adult		\$ 10	
General Admission – Seniors (65 and Older)		\$ 5	
General Admission – Child (Under 12 with Paid Adult Admission)		FREE	N/C
Eagles Lodge Friday Dinner		\$ 10	
Boxed Lunch – Would Like for Saturday or Sunday or Both		\$ 10	
Breakfast March 23 rd – Othello Rotary		\$7 – Large \$5 – Small	
		TOTAL	\$

FRIDAY, MARCH 22, 2019

TIME	TOUR	1 ST	2 ND	Quantity	FEE	TOTAL
11:00 AM – 1:30 PM	Potholes Reservoir Boat Tour				\$ 67	
3:15 PM – Dark	Tonnemakers Hill Farm Tour				\$ 27	
3:30 PM – Dark	Lower Crab Creek Birding Tour				\$ 37	
4:00 PM – Sunset	Columbia National Wildlife Refuge Tour				\$ 37	
5:00 PM – Dark	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children	
5:30 PM – Dark	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children	
					Friday Total	\$

SATURDAY, MARCH 23, 2019

TIME	TOUR	1 ST	2 ND	Quantity	FEE	TOTAL
7:30 AM – 9:15 AM	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children	
8:00 AM – 9:45 AM	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children	
8:30 AM – 10:15 AM	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children	
8:45 AM – 12:30 PM	Biking for Cranes Tour				\$ 17	
9:00 AM – 10:45 AM	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children	
11:30 AM – 2:30 PM	Ice Age Floods and the Channeled Scablands Tour				\$ 32	



4:00 PM – 5:00 PM	Life of the Forest Movie (Meet at Reichert’s Showhouse)					\$ 6	
4:45 PM – 7:00 PM	Crane Viewing Tour					\$ 16-Adults \$ 10-Seniors/Children	
5:00 PM – 7:15 PM	Crane Viewing Tour					\$ 16-Adults \$ 10-Seniors/Children	
5:15 PM – 7:20 PM	Crane Viewing Tour					\$ 16-Adults \$ 10-Seniors/Children	
5:30 PM – 7:30 PM	Crane Viewing Tour					\$ 16-Adults \$ 10-Seniors/Children	
7:00 PM – 9:30 PM	Banquet and Silent Auction					\$ 35	
						Saturday Total	\$

SUNDAY, MARCH 24, 2019

TIME	TOUR	1 ST	2 ND	Quantity	FEE	TOTAL	
7:15 AM – 3:00 PM	Lower Crab Creek Birding Tour				\$ 47		
7:30 AM – 3:15 PM	Wahluke Slope Birding Tour				\$ 47		
8:00 AM – 10:00 AM	Crane Viewing Tour				\$ 16-Adults \$ 10-Seniors/Children		
8:15 AM – 4:00 PM	Palouse Falls Tour				\$ 32		
8:40 AM – 3:15 PM	Lower Grand Coulee Tour				\$ 32		
9:00 AM – 3:00 PM	Dry Falls State Park Hike (Meet at Dry Falls)				\$ 16		
9:00 AM – 3:30 PM	Drumheller Channels Geology Hike				\$ 32		
9:30 AM – 3:00 PM	Hanford Reach/ Coyote Canyon Tour (Meet at the Reach)				\$ 25		
11:00 AM – 1:30 PM	Potholes Reservoir Boat Tour (Meet at MarDon)				\$67		
						Sunday Total	\$

TOTALS:

TOTAL GENERAL ADMISSIONS	\$
TOTAL FRIDAY MARCH 22nd	\$
TOTAL SATURDAY MARCH 23rd	\$
TOTAL SUNDAY MARCH 24th	\$
DONATION TO THE FESTIVAL	\$
TOTAL DUE	\$

- 1) **PLEASE CONSIDER ONLINE REGISTRATION:** <http://www.othellosandhillcranefestival.org/>
- 2) TO REGISTER BY MAIL - ENTER CARD INFORMATION BELOW AND MAIL CHECK
AND REGISTRATION FORM TO: Othello Sandhill Crane Festival, PO Box 542, Othello, WA 99344

I Will Pay by Check (payment enclosed) Amount: \$ _____

Payable to “Othello Sandhill Crane Festival” Check # _____

Please Charge My Credit Card: Visa MasterCard Account Number: _____

Exp. Date: _____ / _____ Name on Card: _____

If you still have questions please call: 1-866-Sandhill (Washington Residents Only) or (509) 989-5606

How did you hear about the Festival? _____

IMPORTANT NOTES: Brochure mailing is now only done by request • 2019 online registration opens Feb. 1st

MAP AND DRIVING DIRECTIONS



Driving Directions to Othello High School (340 S 7th Ave., Othello, WA 99344)

From Moses Lake

Take Highway 17 south to Cunningham Road and turn right. Cunningham Road becomes Main Street when you get to Othello. Turn left at the light on 7th Avenue. Othello High School is located on the right in the second block.

From Spokane

Take US Highway 395 south to US Highway 26 west. Follow Highway 26 to Othello. Turn right onto 1st Avenue. Follow 1st Avenue to Main Street. Turn right on 7th Avenue. Othello High School is located on the right in the second block.

From Seattle

Follow I-90 east to Highway 26 east just after crossing the Columbia River at Vantage. Follow Highway 26 to Othello. Turn left on 1st Avenue. Follow 1st Avenue to Main Street. Turn right at the stop light on Main Street. Follow Main Street to 7th Avenue. Turn right on 7th Avenue. Othello High School is located on the right in the second block.

From the Tri-Cities

Take US Highway 395 north to the Highway 17/ Othello exit. Follow Highway 17 north to Cunningham road and turn left. Cunningham road becomes Main Street when you get to Othello. Turn left at the light on 7th Avenue. Othello High School is located on the right in the second block

Othello Sandhill Crane Festival

PO Box 542

Othello, WA 99344

1-866-Sandhill (1-866-726-3445)

509-488-2802



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