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2018 Joint Annual Meeting

*Regional Strategies Addressing Global Challenges for  
Wildlife and Habitat Conservation*

Red Lion Hotel on the River

Jantzen Beach, Oregon

February 13—16





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Washington  
Department of  
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WILDLIFE**



## Contributed Posters

Mitchell, Scott. WILD BEES AND SHRUBS IN EASTERN OREGON

Myers, Alexa. VARYING REMOTE CAMERA METHODOLOGY TO ASSESS PACIFIC FISHER DETECTABILITY IN A MULTISPECIES FRAMEWORK

Navarrete, Laura. DOCUMENTING THE DECLINE OF THE UPLAND SANDPIPER (BARTRAMIA LONGICAUDA) IN EASTERN OREGON

Newsome, Heidi. COMPARISON OF BEE OCCURRENCE BETWEEN THREE TYPES OF SAGE-BRUSH STEPPE HABITAT ON THE HANFORD REACH NATIONAL MONUMENT

Oedeker, Corrinne. WHO MOVED MY PENSTEMON? SYSTEMATIC DIRECT OBSERVATIONS PAIRED WITH CAMERA TRAPS QUERY HISTORICAL PERCEPTIONS OF AMERICAN PIKA BEHAVIOR

Ojala-Barbour, Reed. OLYMPIC TORRENT SALAMANDER (RHYACOTRITON OLYMPICUS) OVIPOSITION SITE WITH NOTES ON EARLY DEVELOPMENT

Owens, Terrah. EFFECTS OF WILDFIRE, INVASIVE GRASSES, AND AVIAN PREDATOR DENSITIES ON GREATER SAGE-GROUSE IN OREGON

Parker, Sadie. PRELIMINARY CHARACTERIZATION OF POPULATION GENETIC CONNECTIVITY IN TWO PACIFIC NORTHWEST AMPHIBIANS

Payne, Josie. ASSESSING AMERICAN BEAVER DAMMING ACTIVITIES IN WEST FORK COW CREEK, A SUB-BASIN TO THE UMPQUA WATERSHED

Peckham, Scott. TWO DECADES OF WILDLIFE HABITAT MANAGEMENT AT THE SUBWATERSHED SCALE: HOW TO QUANTIFY SUCCESS TOWARDS OBJECTIVES?

Perry, Lindsey. NEST-SITE SELECTION AND ABUNDANCE OF COMMON RAVENS (CORVUS CORAX) IN SAGEBRUSH HABITAT OF EASTERN OREGON

Plummer, Ian. USDA WILDLIFE SERVICES WILDLIFE DISEASE PROGRAM OVERVIEW AND ACTIVITIES IN OREGON

Revekant, Claire. COMPARISON OF AVIAN AND MAMMALIAN PREDATORS IN SAGE GROUSE CORE AND NON-CORE AREAS: ASSESSING PREDATOR ABUNDANCE AND RESPONSES TO ANTHROPOGENIC FEATURES

Rzeszewicz, Jian. LANDSCAPE METRICS INDICATE DIFFERENCES IN MESIC HABITAT DISTRIBUTION FOR TRANSLOCATED SAGE-GROUSE IN CENTRAL WASHINGTON

Schroeder, Vanessa. GRAZING SEASON OF USE EFFECTS ON SAGEBRUSH OBLIGATE AVIAN HABITAT

Schuster, Tygh. CELLULASE ACTIVITY IN WOODPECKER NEST AND CONTROL TREES

Stewart, Elaine. SPEAKING AS WHITE: LEARNING ABOUT EQUITY IN CONSERVATION PRACTICE

Temple, Amanda. MAPPING RISKS ACROSS URBAN-WILDLIFE CONNECTIVITY

Thompson, Pamela. PRELIMINARY ACOUSTIC SURVEYS OF BATS IN PORTLAND'S URBAN PARKS

Unfried, Julie. APPLYING THE POWER OF PARTNERSHIPS THROUGH THE SAGE GROUSE INITIATIVE TO CONSERVE WASHINGTON'S SAGEBRUSH STEPPE

VanderBrooke, Keith. COYOTES: POSSIBILITIES FOR CITIZEN SCIENCE AND URBAN ECOLOGY

Waianuhe, Lorraine. CORVID RESPONSE TO FOREST THINNING IN THE WILLAMETTE NATIONAL FOREST: IMPLICATIONS FOR THE CONSERVATION OF THE MARBLED MURRELET

Welker, Aspen. VEGETATIVE ANALYSIS OF COLUMBIA BASIN PYGMY RABBIT (BRACHYLAGUS IDAHOENSIS) HABITAT

Wilson, Matthew. NORTHERN PINTAIL SPRING MIGRATION STOPOVER AND RESIDENCE TIME IN THE CHANNLED SCABLANDS OF EASTERN WASHINGTON

Wise, Lindsey. MANAGING AND SHARING INVASIVE SPECIES DATA WITH IMAPINVASIVES



Presenters will be available  
to answer questions on  
Wednesday night from

6:00—7:00 PM

# Contributed Posters

Arstingstall, Katherine. ENHANCING CONSERVATION OF NATIVE BEES IN FORESTS AND GRASSLANDS OF EASTERN OREGON: IDENTIFYING MAJOR FOOD SOURCES USING DNA METABARCODING TECHNIQUES

Booth, Hannah. THE RELATIONSHIP BETWEEN WILDFIRE AND THE CASCADING IMPACTS OF PREDATORS ON PLANTS

Bresson, Barb. APPLYING HABITAT CONSERVATION FOR LAND BIRDS IN THE CONIFEROUS FORESTS OF WESTERN OREGON AND WASHINGTON TO PLANING IN THE SOUTH FORK, STILLAGUAMISH VEGETATION PROJECT

Bury, Gwendolynn. AFFORDABLE TEMPERATURE CHAMBERS WITH REALISTIC DIEL FLUCTUATIONS

Cencich, Aaron. ADAPTIVE MANAGEMENT OF WESTERN POND TURTLES IN OREGON'S WILLAMETTE VALLEY

Clark, Jessica. EVALUATION OF BLACK-TAILED DEER MOVEMENT, HABITAT USE AND SURVIVAL IN WESTERN OREGON

Cousins, Christopher. EDNA AND TERRESTRIAL AMPHIBIANS: POTENTIAL APPLICATIONS FOR SURVEYING, MONITORING, AND RESEARCH

Craig, Apryle. HUNGER GAMES: DEER FORAGING AND VIGILANCE IN THE FACE OF WOLF PREDATION RISK

Craig, Terry. USING SOILS INFORMATION TO PREDICT THE OUTCOME OF WILDLIFE HABITAT MANAGEMENT DECISIONS

Cummins, Caylen. CHARACTERISTICS OF FISHER REST AND DEN SITES IN THE SOUTHERN CASCADES OF OREGON

DeBano, Sandra. INFLUENCE OF NATIVE UNGULATE GRAZING ON NATIVE BEE COMMUNITIES IN RIPARIAN AREAS OF A BLUE MOUNTAIN FOREST SYSTEM

Dinkins Jonathan. QUANTIFYING OVERLAP AND FITNESS CONSEQUENCES OF MIGRATION STRATEGY WITH SEASONAL HABITAT USE AND A CONSERVATION POLICY

Donnel, Emily. CENTRAL WASHINGTON BROODING SAGE-GROUSE SHOW NO PREFERENCE FOR MESIC HABITAT

Dreier, Jeff. BUILD IT AND THEY WILL COME: EXPANDING OREGON SPOTTED FROG HABITAT AT A WETLAND MITIGATION SITE

Duchac, Leila. TESTING A PASSIVE ACOUSTIC APPROACH TO DETECT NORTHERN SPOTTED OWLS AND BARRED OWLS

Dziedzic Emily. THE OBGp: GENOMIC DATA ASSEMBLY FOR THE DEVELOPMENT OF ENHANCED MOLECULAR MONITORING TOOLS

Ellison, Jordan. CHANGES IN CARNIVORE DISTRIBUTION IN WESTERN OREGON

Gayner, Elizabeth. OBSERVED TRENDS OF BIRDS IN POST-FIRE HABITAT IN SOUTHWESTERN OREGON: 1999-2017

Haas, Rachael. USING SPRING MIGRATION STOPOVER SITES TO PRIORITIZE CONSERVATION OF CHanneled SCABLAND WETLANDS

Heale, Jon. HABITAT SELECTION BY COLUMBIAN WHITE-TAILED DEER ALONG THE LOWER COLUMBIA RIVER

Healy, Faye. LINKING HABITAT CONDITIONS TO WATERBIRD COUNTS: USING THE INTEGRATED WATERBIRD MANAGEMENT AND MONITORING PROGRAM (IWMM) ON COLD SPRINGS NATIONAL WILDLIFE REFUGE

Howard, Linnea. COMPARISON OF CLASSIFICATION SCHEMES FOR CENTRAL WASHINGTON SAGE-GROUSE HABITAT

Hull, Iver. INFLUENCES OF FUEL REDUCTION LOGGING ON THE NUTRITIONAL ECOLOGY OF DEER IN NORTHEASTERN WASHINGTON

Jenkins, Julianna. USING LIDAR IMAGERY TO EXAMINE RESOURCE PARTITIONING BETWEEN NORTHERN SPOTTED OWLS AND BARRED OWLS IN THE OREGON COAST RANGE

Kordosky, Jennifer. LANDSCAPE OF STRESS AMONG PACIFIC FISHER: DOES CLIMATE CHANGE TRUMP ANTHROPOGENIC MODIFICATIONS IN THEIR HOME RANGE?

Latif, Quresh. GIS TOOLS FOR APPLYING HABITAT SUITABILITY MODELS TO INFORM FOREST MANAGEMENT

Law, Valerie. ARTIFICIAL HABITAT REFUGES WITHIN VINEYARDS MAY MITIGATE IMPACTS OF AGRICULTURE ON SNAKE POPULATIONS

Linnell, Mark. ARBOREAL RESTING AND DENNING BY MARTENS IN COASTAL FORESTS

Loggers, Elise. DRAGONFLY SPECIES RICHNESS ACROSS AN ELEVATIONAL GRADIENT IN NORTHEASTERN WASHINGTON STATE

Lorenz, Teresa. USING NEXT-GENERATION SEQUENCING TO IDENTIFY WOOD DECAY FUNGI AT WOODPECKER CAVITIES IN OREGON AND WASHINGTON

Lysak, Teri. THE WOLVERINE TRACKING PROJECT - USING CITIZEN SCIENCE TO STUDY RARE CARNIVORES

Maggi, Rachel. TAKING THE ENVIRONMENTAL QUALITY INCENTIVES PROGRAM 'OUT-OF-THE-BOX' FOR WILDLIFE

Manning, Michael. IDENTIFYING CLIMATE CHANGE EFFECTS ON SALMONID HYBRIDIZATION RISK IN THE PACIFIC NORTHWEST

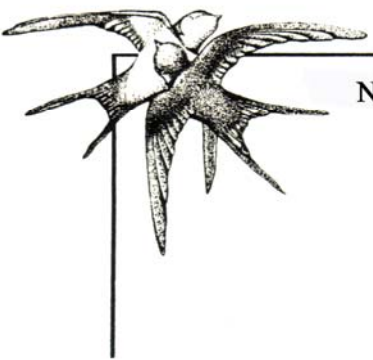
McFall, Sara. THE BENEFITS OF UNMANNED AERIAL SYSTEMS IN PRESCRIBED FIRE SITUATIONS

McGraw, Rex. OBSERVED PATTERNS OF DEER, DOGS, & HUMAN USERS ON THE NORTH BANK HABITAT MANAGEMENT AREA ADMINISTERED BY THE ROSEBURG DISTRICT OF THE BUREAU OF LAND MANAGEMENT

Millward, Lindsay. SMALL MAMMAL MICROHABITAT USE AND SPECIES COMPOSITION OF A WILDLIFE CROSSING STRUCTURE COMPARED WITH NEARBY HABITATS

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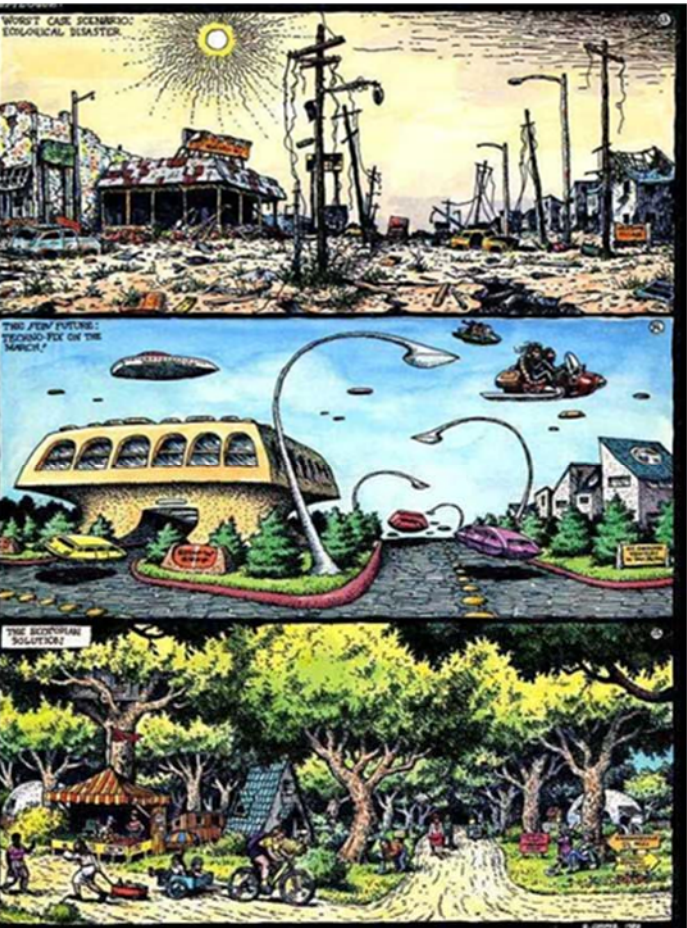
**Metro**



Welcome to Portland, Oregon Everyone!

In 1979 Robert Crumb drew up a short cartoon called “A Short History of America” depicting the growth of the United States from pastoral wilderness into three future scenarios. Our work as conservation biologists plays an essential role in determining what outcome lies ahead.

While the Pacific Northwest is known as a wellspring of conservation, the challenges ahead are significant and require great ideas, consensus building, and strident, on-the-ground action. From our online portal, we have individual access to almost every conservation scenario on the globe; yet the most lasting outcomes blossom from relationships and teamwork.



This week we will take in what we know about whales, bats, birds, budgets, plans, bees, and turtles together. Listen to, learn from, and challenge the big broad thinkers, annoyingly detailed thinkers, new thinkers, and old thinkers together. We will share a beer or coffee in the hall and mix methodologies, put the intertwined pieces of an ecosystem back together by sharing scientific research, new methods, life history details, policies, conservation visions, and comradery. In the Pacific Northwest, our populations and resource needs are growing, but so are our efforts and successes to make lasting conservation strategies to guide us forward in a changing world.

Thank you all for your support, hard work, contributions to this meeting.  
Sincerely,  
The Joint Wildlife Meeting Steering Committee

This meeting would not be possible without the small army of volunteers from several organizations.  
**Thank you to everyone who makes this meeting a success!**

NWPARC	SNVB	ORTWS	WATWS
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		Andrea Karoglanian	Annemarie Prince
		Summer Peterman	Katy Stuart
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		David Shepherdson	Bill Vogel
		Daphne Swope	Lindsey Webb
		Laura Tesler	
		Wendy Wente	



2018 Joint Annual Meeting  
Associated Meetings & Workshops

	Friday February 16 - Detailed Schedule - Associated Meetings & Workshops			
	Washington/Clark	Jantzen	Clackamas	Multnomah
8:00 AM - 9:00 AM	Breakfast with a Wildlifer	Workshop : Data Wrangling - The basics of data analysis		Workshop : Native Bee Workshop
9:00 AM - 10:00 AM			Workshop : Communication & Conflict Resolution Skills Double Workshop Session	
10:00 AM - 11:00 AM				
11:00 AM - 12:00 PM				
12:00 PM - 1:00 PM				
1:00 PM - 5:00 PM				

2018 Joint Annual Meeting  
Field Trips

	Friday February 16 - Detailed Schedule - Field Trips		
	Off-Site	Off-Site	Off-Site
8:00 AM - 9:00 AM	Workshop : White Nose Syndrome / Pd Surveillance Best Practices Workshop <i>PSU Campus, Science Building 1 - Room 542</i> <b>Meet on-site</b>	Field Trip : Amphibian Egg Mass Monitoring <b>Meet at far west side of Red Lion ; contact Katy Weil with questions at 503-970-9423</b>	Field Trip : Oregon Zoo Conservation Tour <i>Oregon Zoo</i> <b>Meet at Oregon Zoo Reception</b>
9:00 AM - 10:00 AM			
10:00 AM - 11:00 AM			
11:00 AM - 12:00 PM			
12:00 PM - 1:00 PM			

Vote for best presentation at the 2018 Joint Conference!



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Oregon Chapter of The Wildlife Society gives two awards for presentations at the annual meetings. The Dimick Award is given for the best overall presentation and the Les Eberhardt Award is given for the best student presentation.

2018 Joint Annual Meeting  
Schedule-at-a-Glance

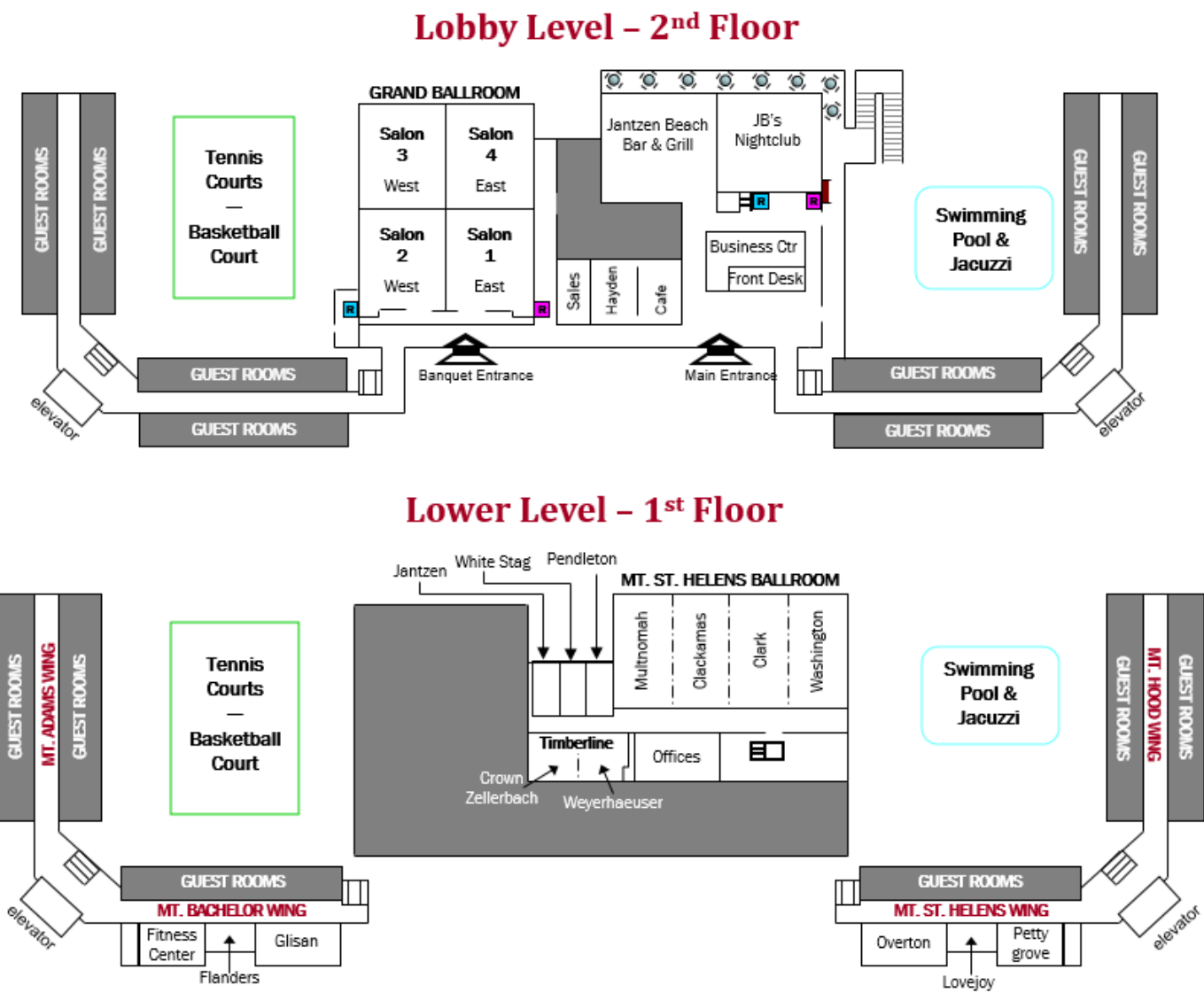
CONFERENCE PROGRAM

WEDNESDAY	February 14, 2018	
TIME	DESCRIPTION	ROOM
7:30 AM – 4:00 PM	Registration & Vendors	Grand Ballroom Hall
8:00 AM—10:15 AM	Washington Department of Natural Resources	Jantzen
8:00 AM – 10:15 AM	Oregon Biodiversity	Clark
8:00 AM – 10:15 AM	U.S. Forest Service	Timberline
10:15 AM — 10:30 AM	Break	Grand Ballroom Hall
10:30 AM — 12:00 PM	Welcome and Plenary Session	Grand Ballroom
12:00 PM – 1:00 PM	Hosted Lunch	Grand Ballroom
1:00 PM—2:45 PM	Concurrent Sessions	See Detailed Schedule, pgs 10-11
2:45 PM – 3:00 PM	Break	Grand Ballroom Hall
3:00 PM—5:05 PM	Concurrent Sessions	See Detailed Schedule, pgs 12-13
5:00 PM – 6:00 PM	Student Resume/Interview Session	Grand Ballroom
5:00 PM— 9:30 PM	Social & Entertainment (DJ starts at 7:00)	Grand Ballroom
6:00 PM— 7:00 PM	Poster Session	Grand Ballroom
8:00 PM—9:30 PM	Student Quiz Bowl	Timberline
THURSDAY	February 15, 2018	
TIME	DESCRIPTION	ROOM
7:30 AM – 4:00 AM	Registration & Vendors	Grand Ballroom Hall
8:10 AM – 9:55 AM	Concurrent Sessions	See Detailed Schedule, pgs 14-15
8:10 AM—5:00 PM	NW PARC Session	Multnomah
9:55 AM – 10:10 AM	Break	Mt St Helens Hall
10:10 AM – 11:50 AM	Concurrent Sessions	See Detailed Schedule, pgs 14-15
11:50 AM – 1:00 PM	ORTWS Presidents / WATWS / SNVB Lunches	See Detailed Schedule, pg 16
1:00 PM – 1:50 PM	IGNITE Concurrent Sessions	See Detailed Schedule, pgs 16-17
1:50 PM – 2:05 PM	Break	Mt St Helens Hall
2:05 PM – 3:30 PM	Concurrent Sessions	See Detailed Schedule, pgs 16-17
3:30 PM – 3:40 PM	Break	Mt St Helens Hall
3:40 PM—5:00 PM	Concurrent Sessions	See Detailed Schedule, pgs 18-19
5:00 PM – 6:00 PM	ORTWS Business Meeting	Timberline
5:00 PM – 9:00 PM	Banquet, Awards, Auction & Raffle	Grand Ballroom
FRIDAY	February 16, 2018	
8:00 AM—9:00 AM	Breakfast with Wildlifer	Timberline
Various Times	Field Trips—Offsite	See Details, pg 20
Various Times	Workshops	See Details, pg 20

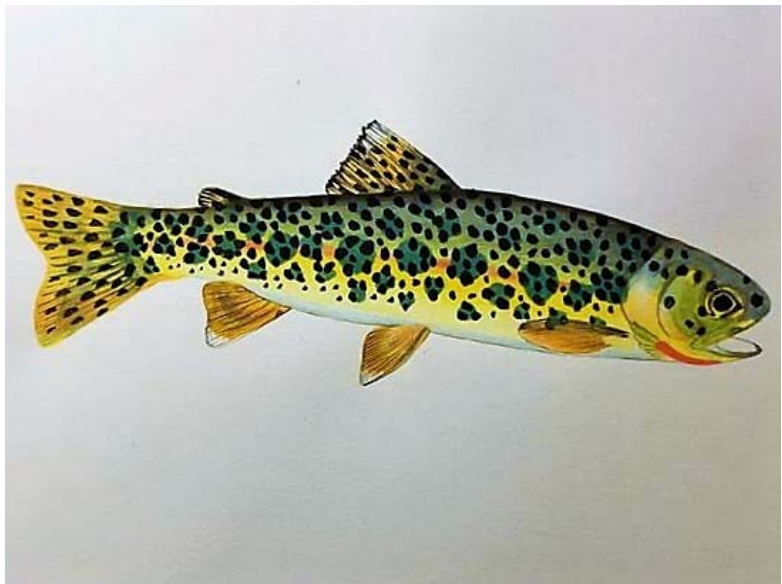


# Red Lion Jantzen Beach Hotel Layout

# Thursday Detailed Schedule—Evening



Lower level meeting rooms can only be accessed through the 2<sup>nd</sup> floor WING elevators and stairs



Break (Mt St Helens Hall)		3:30 PM - 3:40 PM
Washington Wildlife Connectivity [Josh Chapman]	Multnomah NW PARC - Amphibians [Dede Olson]	
Metro Habitat Connectivity Toolkit: Bringing Connectivity To An Actionable Scale. Leslie Bliss Ketchum	Saving An Emperiled Population Of Northern Red-Legged Frogs; How Citizens Came Together To Protect A Local Species Declining Due To Habitat Loss, Climate Change And Other Human Induced Threats. Sue Beilke	3:40 PM - 4:00 PM
A Connectivity Planning Framework for Oregon. Jim Strittholt.	The Slow Decline Of A Historic Frog Population In Yellowstone National Park. Deb Patla	4:00 PM - 4:20 PM
Panel Discussion	Disease Dynamics In A Translocated Population Of Oregon Spotted Frogs (Rana pretiosa). Jennifer Rowe	4:20 PM - 4:40 PM
Panel Discussion	Bsal: An Emerging Threat To Amphibians In The Pacific Northwest? Jonah Piovia-Scott	4:40 PM - 5:00 PM
		5:00 PM - 6:00 PM
Social Banquet / Awards / Auction / Raffle Grand Ballroom		5:00 PM - 9:00 PM

## Photo & Art Credits

- Alan St. John—Page 19
- Anne Yen—Front cover
- Azita Roshani—Page 6
- Cathy Clark—Back cover
- Izzie Tween—Page 7
- Peter Ommundsen—Page 18
- Shelty Buckner-Redtwig Studio—Page 21



# Thursday Detailed Schedule—Evening

3:30 PM - 3:40 PM	Break (Mt St Helens Hall)		
	Timberline	Clackamas	Clark
	Forest Carnivores [Derek Broman]	Mammals [DeWaine Jackson]	Invasive Species [Jalene Littlejohn]
3:40 PM - 4:00 PM	Spatial Patterns Of Kill Site Distribution For Wolves And Cougars In An Area Of Sympatry. Elizabeth Orning	Space Use And Cover Selection Of Kit Foxes At Their Distributional Periphery. Carolyn Eckrich	Squeal on Pigs! How Feral Swine can Impact Oregon and Washington. Laurence Schafer and David Williams
4:00 PM - 4:20 PM	The Changing Landscape Of Predator Interactions: Diet Shifts And Mesopredator Release At A Continental Scale. Brian Tanis	Terrestrial food webs of the Pacific Northwest forests and the importance of spotted skunks. Marie Tosa	Feral and Free-Ranging Cat Management on State Conservation Lands: An Association of Fish and Wildlife Agencies Working Group Initiative. Colin Gillin
4:20 PM - 4:40 PM	Golden Eagles Nesting In Oregon, 2011–2016. Frank Isaacs	Using Assisted Migration Of Beavers To Quantify The Importance Of Habitat And Behavioural Patterns For Establishment. Izzie Tween	Pilot Eradication Attempt Of Ranavirus-Carrying African Clawed Frogs In Western Washington State. Marc P. Hayes Et Al.
4:40 PM - 5:00 PM	Camera Trap Placement And The Potential For Bias Due To Habitat Features. Travis Forrester	Validating American Marten Modeled Habitat Using Maxent. Patricia Johnson	Don't let it loose in Oregon. Rick Boatner
5:00 PM - 6:00 PM	Timberline		
	ORTWS Membership Meeting		
5:00 PM - 9:00 PM	Social Banquet / Awards / Auction / Raffle Grand Ballroom		



# Jantzen Beach Restaurant Map





Conference Highlights

Plenary Speaker  
Thomas E. Lovejoy



Thomas E. Lovejoy is one of the world’s fore-  
most conservation biologists. A professor at  
George Mason University, he previously held the  
Biodiversity Chair at the Heinz Center for Sci-  
ence, Economics and the Environment and was  
President from 2002-2008. An ecologist who has  
worked in the Brazilian Amazon since 1965, he  
works on the interface of science and environ-  
mental policy. Starting in the 1970’s he helped  
bring attention to the issue of tropical deforesta-  
tion and in 1980 published the first estimate of  
global extinction rates (in the Global 2000 Re-  
port to the President). He conceived the idea for  
the long term study on forest fragmentation in  
the Amazon (started in 1978) which is the larg-  
est experiment in landscape ecology, the Mini-  
mum Critical Size of Ecosystems project (also  
known as the Biological Dynamics of Forest  
Fragments Project). He also coined the term  
“Biological diversity”, originated the concept of  
debt-for-nature swaps and has worked on the  
interaction between climate change and biodi-

versity for more than 30 years. He is the founder of the public television series  
“Nature”. In the past, he served as the Senior Advisor to the President of the  
United Nations Foundation, as the Chief Biodiversity Advisor to the World Bank  
as well as Lead Specialist for the Environment for the Latin American region, as  
the Assistant Secretary for Environmental and External Affairs for the Smithson-  
ian Institution, and as Executive Vice President of World Wildlife Fund-US.  
In 2002, he was awarded the Tyler Prize, and in 2009 he was the winner of BBVA  
Foundation Frontiers of Knowledge Award in the Ecology and Conservation Biol-  
ogy Category. In 2012 he received the Blue Planet Prize. He has served on advi-  
sory councils in the Reagan, George H.W. Bush, and Clinton administrations. In  
2009 he was appointed Conservation Fellow by the National Geographic Society.  
He chaired the Scientific and Technical Panel for the Global Environment Facility  
which provides funding related to the international  
environmental conventions from 2009-2013 and  
serves as Advisor to the current Chair. He received his  
B.S. and Ph.D. (Biology) from Yale University.

Keynote Speaker Sponsor



Thursday Detailed Schedule—Afternoon

Lunch (on your own)		11:50 AM - 1:00 PM
Washington IGNITE Invertebrates [Peter Singleton]	Multnomah NW PARC - Reptiles [David Pilliod]	NW PARC Sessions Only
A vertebrate biologist's foray into the spineless world: Western bumblebee surveys in NE Washington State. Chris Loggers	Conservation and management of the midget faded rattlesnake (Crotalus concolor). Josh Parker	1:00 PM - 1:20 PM
Habitat Enhancement and Monitoring for Pollinators, Olympic National Forest. Karen Holtrop		
An Assessment Of Grassland Restoration On Native Bee Communities In Eastern Oregon. Lauren Smith	Status of the Striped Whipsnake (Masticophis taeniatus) in Washington. Lisa Hallock	1:20 PM - 1:40 PM
Reproductive response of a native solitary bee across a gradient of forest wildfire severity. Sara Galbraith		
So Many Weeds, So Little Time: Prioritizing Use Of Limited Resources. Elaine Stewart	Pond Turtle Conservation. Susan Barnes	1:40 PM - 2:00 PM
A Strategic Approach at Evaluating the "Don't Pack a Pest!" Campaign with a focus on International Student Travelers. Noelle Moen		
Break (Mt St Helens Hall)		2:00 PM - 2:10 PM
Washington Wildlife Connectivity [Josh Chapman]	Multnomah NW PARC - Reptiles [Dede Olson]	NW PARC Sessions Only
Circuit Theory-Based Connectivity Modeling in the Pacific Northwest: From Greater Sage-Grouse to Regional Ecological Flow. Aaron Jones and Ken Popper	Western Pond Turtle visual encounter surveys. Don Ashton	2:10 PM - 2:30 PM
Circuit Theory-Based Connectivity Modeling in the Pacific Northwest: From Greater Sage-Grouse to Regional Ecological Flow. Aaron Jones and Ken Popper	Western Pond Turtle status and trends: less dogma, more data. Bruce Bury	2:30 PM - 2:50 PM
A Behavioral-Based Wildlife Crossing Guild Approach To Evaluate Wildlife Connectivity And Crossing Design. Shannon Crossen	Shell Disease In Western Pond Turtles In Washington. Stefanie Bergh	2:50 PM - 3:10 PM
Connecting People to Connect Places: Lessons Learned From The Washington Wildlife Habitat Connectivity Working Group. Peter Singleton	Habitat Use And Performance Of Oregon Spotted Frog (Rana pretiosa) Larvae At Ponds And Emergent Wetlands Of The Samish River Preserve, Whatcom County, Washington, And Response To A Habitat Enhancement Project. Stephen Nyman	3:10 PM - 3:30 PM



# Thursday Detailed Schedule—Afternoon

11:50 AM - 1:00 PM	SNVB Lunch Meeting <i>Overton Room</i>	ORTWS Past Presidents Lunch <i>White Stag</i>	WATWS Lunch & Business Meeting <i>Lounge</i>
	Timberline IGNITE Human Influences [Daphne Swope]	Clackamas IGNITE Avian Biology [Steven Borrego]	Clark IGNITE Mammal Ecology [David Shepherdson]
1:00 PM - 1:12 PM	Mentorship For Life. Paul Disalvo	Assessing Effects On Bird Populations Following Tidal Restoration At Fir Island Farm. Tom Virzi	A Glimpse Under The Snow: New Techniques To Oserve Small Mammal Subnivlean Behavior. Kendall Norcott
1:12 PM - 1:19 PM	What Are You Doing To Promote Diversity? Jessica Homyack	The Sage Grouse Initiative - Washington's Working Lands for Wildlife Conservation. Helen Dowling	Bat Population Monitoring At A Significant Maternity Roost In British Columbia. Patrick Burke
1:19 PM - 1:26 PM	Why (And How) Should I Teach Environmental Ethics? Aleta Quinn	An Update On The Oregon Marbled Murrelet Project: Unexpected Results Characterize The 2017 Breeding Season. Jim Rivers	Building Shared Solutions: Analyzing Animal Movement And Migration With "Migrater". Derek Spitz
1:26 PM - 1:33 PM	Motivations, Benefits, and Social Values of Big Game Hunting in Northeast Oregon. Matthew Helmer	Estimating Bald Eagle Occupancy In The Chesapeake Bay Watershed. Bethany Drahota	Understanding American black bear denning ecology in intensively managed forests. Vanessa Petro
1:33 PM - 1:40 PM	Quantifying the cost of human hunting on non-target individuals. Derek Spitz	Assessing Northern Spotted Owl Nest-Site Selection With A Lidar-Based Canopy Cover Model. M. Pruett	Development And Testing Of A Novel Camera-Trapping Protocol For Long-Duration, Over-Winter Surveys Of Carnivores. Robert Long
1:40 PM - 1:47 PM	SLLOPPS: Habitat in Dry Forest Fuels Reductions. Kenneth Bevis	Dusky Canada Goose Management in the Pacific Flyway. Nicholas Trejo	
1:50 PM - 2:05 PM	Break (Mt St Helens Hall)		
	Timberline Forest Carnivores [Derek Broman]	Clackamas Mammals [DeWaine Jackson]	Clark Invasive Species [Jalene Littlejohn]
2:05 PM - 2:30 PM	Using Lidar To Describe Pacific Marten Resting Habitat At Multiple Spatial Scales. Patrick Tweedy	Effect Of Season And Habitat On Predator Visitation Rates Of Endangered Columbia Basin Pygmy Rabbit Burrows. Brian Zinke	New Exotic Pests of Pacific Northwest Forests. Todd Murray
2:30 PM - 2:50 PM	Updating The Conservation Status Of The Cascade Red Fox Using Noninvasive Methods. Jocelyn Akins	Evaluation Of Pinniped Predation On Adult Salmonids And Other Fish In The Bonneville Dam Tailrace, 2017. Kyle Tidwell	Exotic forest insects, diseases and weeds in Oregon. Wyatt Williams
2:50 PM - 3:10 PM	Developing An Occupancy Model And Monitoring Framework For Wolverines In The Cascades. Robert Emmet	Identification And Characterization Of Snp Markers For The Columbia Basin Pygmy Rabbit (Brachylagus idahoensis). Stacey Nerkowski	Oregon Forest Pest Detectors: An Army In Oregon'S Defense Against Invasive Forest Pests. Amy Grotta
3:10 PM - 3:30 PM	Assessment of the Status and Distribution of Canada lynx in Washington Using Broad-scale Remote Camera Surveys. Daniel Thornton	Red Tree Vole Occupancy In Young Forests In The Oregon Coast Range. James Swingle	Squeal on Pigs! How Feral Swine can Impact Oregon and Washington. Laurence Schafer and David Williams

# Conference Highlights

## Wednesday Night Entertainment

brought to you by



Bring your song requests, SMILES,  
and dancing shoes!!  
Music starts at 7pm

**Grand Ballroom & Hall is where it's at!!!**

**Silent Auction                  Raffle Items                  Photo Contest**

## Raffle – Items will be displayed in Grand Ballroom Hall

Purchase your raffle tickets from your friendly student volunteers during the conference for a chance to win amazing prizes! Remember proceeds from the raffle go to fund student scholarships!

- Drawings will take place at various times throughout the meeting and Banquet
- Winners will be posted near the Registration Desk
- Prizes can be claimed at the Registration Desk by presenting your winning ticket
- All prizes need to be picked up before 8:00 AM on Friday.

**Raffle extends from Wednesday morning through Thursday evening**



# Wednesday Detailed Schedule

## Morning

8:00 AM - 10:15 AM	WA DNR Biologist Meeting <i>Jantzen</i>	Oregon Biodiversity <i>Clark</i>
10:15 AM - 10:30 AM	Break (Grand Ballroom Hall)	
10:30 AM - 12:00 PM	Welcome and Plenary Session <i>Grand Ballroom</i>	
12:00 PM - 1:00 PM	Hosted Lunch (Grand Ballroom)	
	Wednesday February 14 - Detailed Schedule [Moderator]	
	Timberline Renewable Energy [Sarah Reif & Todd Mabee]	Clackamas Non-Lead Hunting [Leland Brown]
		Clark Marine Mammals [Alex Pavlinovic]
1:00 PM - 1:25 PM	Renewable energy development: an overview of projected levels of development at regional, national, and global scales and how wildlife concerns are addressed in the development process. Todd Mabee	New perspectives on gray whales feeding in the Pacific Northwest examined with new suction-cup attached video tags. John Calambokidis et al.
1:25 PM - 1:45 PM	Renewable energy and wildlife: a path forward in uncertain times. Erin Lieberman	Flukebook: Collaborative Cetacean Monitoring with a Dash of A.I. Jason Holmberg
1:45 PM - 2:05 PM	Understanding and addressing domestic and international impacts to bats. Cris Hein	Gaining Valuable Insights over the Horizon at Sea Bruce Mate
2:05 PM - 2:25 PM	Impacts to birds, best practices in monitoring, avoidance/minimization. Mike Green	Zumwalt Preserve Non-Lead Ammunition Project. Justin Jones
2:25 PM - 2:45 PM	Spatial conservation prioritization for golden eagles in renewable energy landscapes. David Weins	Panel Discussion
2:45 PM - 3:00 PM	Break (Grand Ballroom Hall)	

# Thursday Detailed Schedule

## Morning

Thursday February 15 - Detailed Schedule [Moderator]		
Washington	Multnomah	NW PARC Sessions Only
White Nose Syndrome [Tom Rodhouse / Ann Froschauer]	NW PARC - Reptiles [David Pilliod]	
	PARC Updates. Betsy Howell and Katy Weil	8:10 AM - 8:35 AM
Managing the Spread of Pseudogymnoascus destructans and Conserving Bats Threatened by White-nose Syndrome in North America. Ann Froschauer	Top Ten Research and Conservation Priorities. David Pilliod and Dede Olson	8:35 AM - 8:55 AM
Bat Hibernacula In The Western United States: Implications For Population Monitoring And White-Nose Syndrome Surveillance. Thomas Rodhouse	Reptile Data Needs: The Increasing Role Of Crowdsourced Data. Chuck Peterson	8:55 AM - 9:15 AM
Bat Grid 2.0: Collaborative Monitoring To Assess Declines In Oregon Bat Populations From 2003-2017 Via Bat Grid And North American Bat Monitoring Programs. Roger Rodriguez	Reptiles Aid Science Education. Brad Tylman	9:15 AM - 9:35 AM
Implementation Of Bat Monitoring And White-Nose Syndrome Surveillance In The North Coast Cascades Network In Response To Disease Detection In Western Washington. Tara Chestnut	Conservation of lizards and snakes under the umbrella of single-species management. Michelle Jeffries	9:35 AM - 9:55 AM
Break (Mt St Helens Hall)		9:55 AM - 10:10 AM
Evaluating Bat Guano At Summer Roost Sites As An Alternative Sampling Strategy For Surveillance Of Pseudogymnoascus destructans. Kyle George	What's Hurting our Herps? Major Diseases of Reptiles and Amphibians in the Pacific Northwest. Katie Haman	10:10 AM - 10:30 AM
Seeing Beyond White-Nose Syndrome: An Update From Region 6 Usfs And Or/Wa BLM. Kelli Van Norman	Road Mortality in a Great Basin Snake Community. Chris Rombough	10:30 AM - 10:50 AM
An Overview Of White-Nose Syndrome Surveillance Efforts In Oregon. Ray Dodd	The High Life: Ecology and conservation of montane reptiles. Justin Demianew	10:50 AM - 11:10 AM
Washington Department of Fish and Wildlife's White-nose Syndrome Response - Overview. Abigail Tobin	Ectothermoclines: Reptile climate sensitivity from a rarity- and traits-based analysis examining intrinsic risk to climate change. Dede Olson	11:10 AM - 11:30 AM
Q&A	Temperature-dependent Sex Determination under Rapid Anthropogenic Environmental Change: Evolution at a Turtle's Pace? Fred Janzen	11:30 AM - 11:50 AM



## Thursday Detailed Schedule Morning

	Thursday February 15 - Detailed Schedule [Moderator]		
	Timberline Forest Carnivores [Derek Broman]	Clackamas Non-Game Birds [McKay Larrabee]	Clark Changing Environment [Karen Hussey]
8:10 AM - 8:30 AM			
8:30 AM - 8:55 AM	Cultural competence in conservation biology: a case study by the Washington Cascades Fisher Restoration Team. Tara Chestnut		Potential Effects And Implications Of Climate Change On Elk In Dry Forest Ecosystems. Michael Wisdom
8:55 AM - 9:15 AM	The Effects Of Mixed-Severity Wildfires On Fisher Population Dynamics. David Green	Nez Perce Tribe California Condor Project. David Moen	Measuring Habitat Quality Across Multiple Scales With Unmanned Aerial Systems. Peter Olsoy
9:15 AM - 9:35 AM	Early Development And Reproductive Den Characteristics Of A Secondary-Cavity-Obligate Mustelid. Sean Matthews	Snowy Plover Juvenile Survival In Oregon. Eleanor Gaines	Recreation and Wildlife Impacts: A Balancing Act. Lauri Turner
9:35 AM - 9:55 AM		Status Of Spotted Owls, Barred Owls, And Removal Experiments In Oregon And Washington. J. David Wiens	Science and Law and the ESA listing process. Jonathan Drake
9:55 AM - 10:10 AM	Break (Mt St Helens Hall)		
10:10 AM - 10:30 AM	Population status and viability analysis of Pacific martens in coastal Oregon. Mark Linnell	Where Did The Goshawk Go: Design And Analysis Considerations For Gps Telemetry Studies. Peter Singleton	Using The Endangered Species Act To Protect Rare Amphibians And Reptiles In The Northwest. Jenny Loda
10:30 AM - 10:50 AM	Reintroducing Fishers to their Historical Range in Washington: Progress in the Southern Cascades. Jeff Lewis		Desperately Seeking Skeeters: West Nile Virus Surveillance In Response To Greater Sage-Grouse Population Declines. Emily Weidner
10:50 AM - 11:10 AM	Status of Fisher Populations in Western Oregon. Brent Barry	Determining Effective Distance Radius Of Passive Acoustic Technology For Northern Spotted Owl ( <i>Strix occidentalis</i> ) Surveys. Matthew Hane	Fire, Fragmentation, And The Farmbill: Unique Developments And Challenges In The Recovery Of Columbia Basin Pygmy Rabbits. Jonathan Gallie
11:10 AM - 11:30 AM	Translocations As Roadmaps For Conservation Planning: The Case Of Fishers In Oregon. Aaron Facka	Dispersal Patterns And Connectivity Of Western Purple Martin Colonies In Western Oregon. Lorelle Sherman	Is Climate Change Responsible for the Shift in Giant Panda Breeding Seasons? Meghan Martin-Wintle
11:30 AM - 11:50 AM	Multi-region, multi-scale, mesocarnivore monitoring- developing a scientifically defensible broad-scale monitoring framework. Katie Moriarty	Frugivorous Birds In Recovering Sagebrush Steppe Habitat: Frenemies Of Restoration? Gabriel Sandoval	Spatial Movement of Columbian White-Tailed Deer in Response to Cattle Grazing. Brent Wolf

## Wednesday Detailed Schedule Morning

U.S. Forest Service <i>Timberline</i>		8:00 AM - 10:15 AM
Break ( <i>Grand Ballroom Hall</i> )		10:15 AM - 10:30 AM
Welcome and Plenary Session <i>Grand Ballroom</i>		10:30 AM - 12:00 PM
Hosted Lunch ( <i>Grand Ballroom</i> )		12:00 PM - 1:00 PM
Wednesday February 14 - Detailed Schedule [Moderator]		
Washington	Multnomah	
Forest Management & Habitat [Jake Verschuyt]	Amphibians [Wendy Wente]	
Enhancing Wildlife Habitat Elements in Fuels Reduction Projects in Dry Forests of Washington and Oregon. Nicole Strong	Age-Specific Risk To The Threatened Anuran ( <i>Rana pretiosa</i> ) That Manifests An Age-Linked Response To The Predatory Strike Distance Of The American Bullfrog ( <i>Rana catesbeiana</i> ). Kyle Tidwell	1:00 PM - 1:25 PM
Incorporating woodpecker habitat into design of post-fire salvage logging. Victoria A. Saab	Association Of Pond-Breeding Amphibians With Beaver Dams In The Washington Cascades. John Romansic	1:25 PM - 1:45 PM
Logging Impacts On Headwater Amphibian Communities Persist In Redwood National And State Parks 60 Years Post Logging. Alyssa Marquez	Environmental Dna And Other Nonlethal Methods Of Detecting Amphibian Pathogens In Captivity And Trade: Ranavirus As A Case Study. Jesse Brunner	1:45 PM - 2:05 PM
Tools For Assessment And Protection Of Wildlife Habitat Corridors Within An Urbanizing Environment - Developed For Duvall, Washington. Christina Hersum	Exploring Habitat Controls On The Northern Red-Legged Frog: Implications For Conservation On Urbanizing Landscapes In The Pacific Northwest. Marc Hayes	2:05 PM - 2:25 PM
Vegetation response to juniper reduction and grazing exclusion in sagebrush-steppe habitat in eastern Oregon. Jacob Dittel	Summer Phenology And Habitats Of Pnw Ranid Frogs. Amy Yahnke	2:25 PM - 2:45 PM
Break ( <i>Grand Ballroom Hall</i> )		2:45 PM - 3:00 PM



## Wednesday Detailed Schedule Afternoon

	Timberline Renewable Energy [Sarah Reif & Todd Mabee]	Clackamas Finding Broader Relevancy and Greater Funding for Fish and Wildlife Conservation [John Goodell]	Clark Marine Mammals [Alex Pavlinovic]
3:00 PM - 3:25 PM	The rise of solar energy development in Oregon: current trends and how solar facilities are permitted at the state and county level. Maxwell Woods and Jon Jinings	Fish and Wildlife Budgets in Oregon and Washington State: An Overview of the Numbers. Roger Fuhrman	Entanglements of Large Whales along the U.S. West Coast. Daniel Lawson
3:25 PM - 3:45 PM	Renewable energy development impacts on wildlife habitat connectivity– how smart planning and innovative approaches to mitigation can help streamline Oregon’s transition off of fossil fuels. Sarah Reif	Oregon’s Search for Alternative Funding for Fish, Wildlife and Related Outdoor Recreation and Education – Task Force Recommendations and Legislative Efforts. Representative Ken Helm	Mucormycosis: An Emerging Disease In Cetaceans Of The Salish Sea Jessica Huggins
3:45 PM - 4:05 PM	Introduction of the greater sage-grouse Development siting Tool and how it can help inform energy development. Lee Foster	Washington State Wildlife Leaders Forum: Stakeholder Recommendations for Wildlife Agency Improvement. Fred Koontz	Southeast Alaska humpback whales increase non-song source levels in higher natural or manmade ambient noise. Michelle Fournet
4:05 PM - 4:25 PM	Panel Discussion	“The Big Think”: Finding Natural Resource Solutions through Coalition Building. Caroline Fitchett	Effects of vessels and noise on killer whales. Marla Holt
4:25 PM - 4:45 PM	Panel Discussion	Alliance for America’s Fish and Wildlife Campaign and Recovering America’s Wildlife Act. Sean Saville	Using satellite-tag locations and acoustic detection data to inform Critical Habitat revision for endangered southern resident killer whales. Part 1. Brad Hanson
4:45 PM - 5:05 PM		Conservation Funding Panel Discussion	Using satellite-tag locations and acoustic detection data to inform Critical Habitat revision for endangered southern resident killer whales. Part 2. Brad Hanson
5:00 PM - 6:00 PM	Student Resume/Interview Session <i>Grand Ballroom</i>		
5:00 PM - 9:30 PM	Social Mixer & Entertainment / Photo Contest <i>Grand Ballroom</i>		
6:00 PM - 7:00 PM	Poster Session <i>Pre-Function Room / Grand Ballroom</i>		
8:00 PM - 9:30 PM	Student Quiz Bowl <i>Timberline</i>		

## Wednesday Detailed Schedule Afternoon

Washington Ecological Responses to Forest Management [Jake Verschuy]	Multnomah Amphibians [Wendy Wente]	
Guild-Specific Effects Of Intensive Forest Management On Avian Abundance. Jake Verschuy	Stepping Into A Larger World: Incorporating Post-Metamorphic Movement Research Into Amphibian Ecology. Evan Bredeweg	3:00 PM - 3:25 PM
Dynamic Demographic Response To Experimental Forest Herbicide Treatments By An Early Successional Songbird. James Rivers	Colonization of restored habitat by Oregon Spotted Frogs ( <i>Rana pretiosa</i> ) and American Bullfrogs ( <i>Lithobates catesbeianus</i> ): implications for management of both species. Christopher Pearl	3:25 PM - 3:45 PM
Top-Down Trophic Effects Of Birds On Arthropods And Plants Mediated By Forest Management Intensity. Scott Harris	Post-Fire Recovery And Spatial Population Dynamics Of Tailed Frogs. Blake Hossack	3:45 PM - 4:05 PM
Early Seral Forest Alternatives In The Pacific Northwest. Andrew Kroll	An aggressive approach to bullfrog control and eradication in Sunriver, Oregon. Jesse Short	4:05 PM - 4:25 PM
Stand-Level Tradeoffs Between Timber Production, Biodiversity And Ecosystem Function In The Oregon Coast Range. Urs Korman	Scientific Collecting Permits: Towards Improved and More Effective Guidelines. R. Bruce Bury	4:25 PM - 4:45 PM
Effects Of Intensive Forest Management On Deer And Elk Foraging Dynamics In The Oregon Coast Range. Thomas Stokely	Q&A	4:45 PM - 5:05 PM
Student Resume/Interview Session <i>Grand Ballroom</i>		5:00 PM - 6:00 PM
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