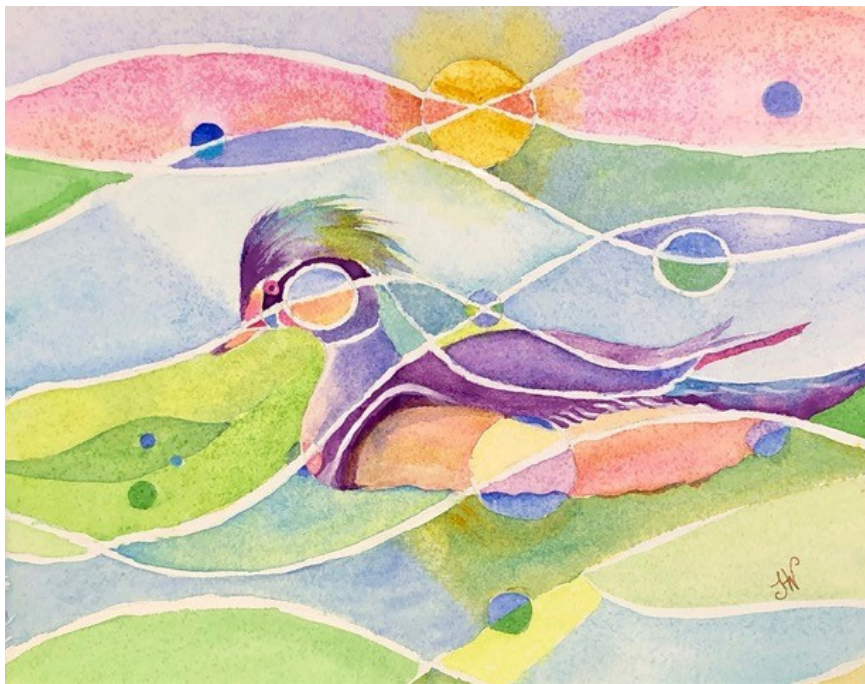
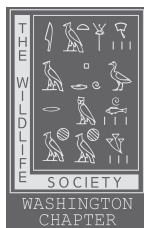


# 2023 Joint Annual Meeting Recovery and Resilience in a Pandemic and Climate Changing World

Great Wolf Lodge | Grand Mound, WA | April 24 – 28, 2023



*Artwork: Jocelyn Wagner*



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Hosted by the Washington Chapter of the Wildlife Society, The Society for Northwestern Vertebrate Biology, and Northwest Partners in Amphibian and Reptile Conservation.

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## Meeting Planning Committee

*Steering Committee:* Alex Pavlinovic, Bill Vogel, Bruce Thompson

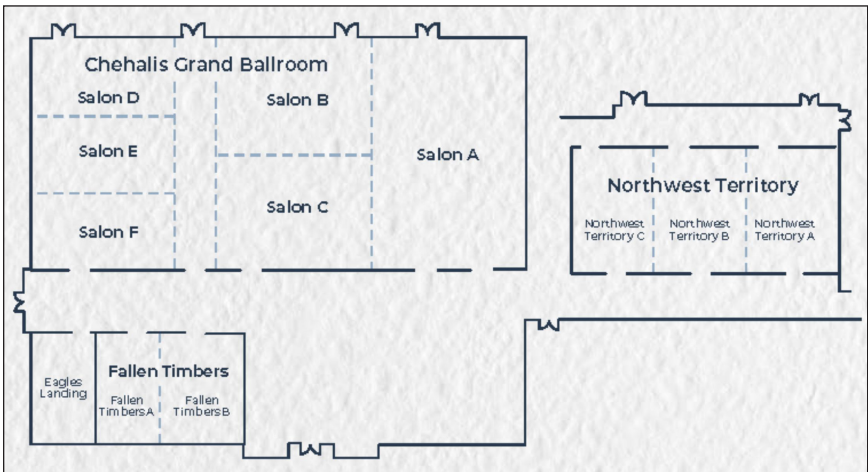
*Planning Committee:* Wendy Arjo, Candace Bennett, Kris Ernest, Marc Hayes, Jeff Kozma, Christine Parker-Graham, George Ritchotte, Laura Sprague, Jen Syrowitz, Teal Waterstrat

## Thank You

This meeting would not be possible without the many volunteers who donated their time and energy. Thank you to everyone who made this meeting a success!

## Location, Information, and Attractions

No matter what the weather outside is doing, the resort at Great Wolf Grand Mound keeps the 56,000 square foot indoor water park fun flowing 365 days per year. Located minutes south of Olympia, the all-suite property offers a spacious conference center, uncompromised culinary quality, and a unique set of attractions to cut loose at the end of the day.



**Great Wolf Lodge Meeting Room Layout**



## Welcome from the Partners!

It is a pleasure to welcome you to the 2023 Joint Annual Meeting hosted by the Washington Chapter of The Wildlife Society, The Society for Northwestern Vertebrate Biology, and Northwest Partners in Amphibian and Reptile Conservation. Our societies have collaborated to bring you this special program dedicated to Recovery and Resilience in a Pandemic and Climate Changing World. We hope this week's events offer numerous opportunities for professional development and personal enjoyment and inspire a renewed appreciation for wildlife habitat stewardship.

### Washington Chapter of The Wildlife Society (WATWS)

The Washington Chapter of The Wildlife Society is a statewide affiliate of The Wildlife Society devoted to promoting excellence in wildlife stewardship through science and education. Chapter members represent a diverse array of wildlife conservation and management agencies, nongovernmental organizations, academic faculty, students, education programs, and other disciplines dedicated to conserving diversity, sustaining productivity, and ensuring responsible use of wildlife resources for the benefit of society. The Washington Chapter encourages research and professional growth through grants, workshops, annual meetings, and undergraduate scholarships. Learn more at <https://watws.wildapricot.org/>.



### 2022-2023 Executive Board

*President:* **Matt Wilson**

*Immediate Past President:* **Sara Hansen**

*President-Elect:* **Alex Pavlinovic**

*Vice President:* **George Ritchotte**

*Secretary:* **Candace Bennett**

*Treasurer:* **Bruce Thompson**

*Board Members:* **Merci Clinton, Kris Ernst, Jennifer Syrowitz, and Wendy Arjo**



## **Society for Northwestern Vertebrate Biology (SNVB)**

Founded in 1920, SNVB is the oldest scientific association devoted to the study of vertebrates in the Pacific Northwest. Our society strives to promote professional working relationships among ornithologists, mammalogists, herpetologists, and ichthyologists in our region. Please explore our website ([www.thesnvb.org](http://www.thesnvb.org)) and check out our flagship publication, *Northwestern Naturalist*.

If you share our passion for learning about the natural history and ecology of the Northwest, our annual meeting is a great place to meet new people while learning about research currently being conducted in our region.



## **Northwest Partners in Amphibian and Reptile Conservation (PARC)**

Northwest Partners in Amphibian and Reptile Conservation is the Northwest Regional Chapter of Partners in Amphibian and Reptile Conservation.

We are a diverse group of like-minded citizens, professionals and organizations dedicated to the conservation of herpetofauna (reptiles and amphibians) and their habitats. Our region includes individuals from Alaska, Washington, Oregon, Idaho, Montana, Wyoming, and parts of North Dakota, South Dakota and California in the U.S. as well as British Columbia, Alberta, and the Yukon Territories of Canada. Membership is free of charge and available to anyone interesting in conservation of Herps in the Pacific Northwest. Visit us at <http://www.nwparc.org/>.



**Current Co-chairs:** Laura A Sprague (USFWS) and Christine A. Parker-Graham, DVM, MA, Dipl. ACZM (USFWS)

*The Steering Committee has a representative from each of the states and provinces we cover.*

# Thank You to Our Sponsors and Financial Supporters!

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# Conference Highlights

## Plenary Speakers



### **James Johnston**

James is an Assistant Professor (Senior Research) at Oregon State University College of Forestry. He holds a bachelor's degree in History from the University of Oregon and a masters and PhD in Forest Science from Oregon State University. His research interests include fire ecology, dendroecology, restoration forestry, environmental law and policy, and collaborative governance.



### **Marguerite Pappaioanou**

Dr. Pappaioanou is an epidemiologist and veterinarian with over 30 years of experience working toward improving global and U.S. public health. She served at the U.S. Centers for Disease Control and Prevention for 24 years, working in the areas of malaria prevention and control, HIV seroprevalence surveillance, directing a global capacity building Data for Decision Making

Project, and coordinating the CDC's response to SARS, Monkeypox, and Highly Pathogenic Avian Influenza global outbreaks, among others. As Professor of Infectious Disease Epidemiology in the University of Minnesota School of Public Health she led a large NIH- and CDC-funded research program focused on surveillance for avian influenza and other emerging zoonotic infectious diseases at the human-animal interface. She joined the University of Washington Center for One Health Research as Affiliate Professor in 2016, where she has focused on bringing multiple sectors and disciplines together to address challenges to the health and well-being of humans, animals, and earth's life support ecosystems. She also serves on the Puget Sound Environmental Monitoring Program Steering Committee and is a member of the Diseases Workgroup. She has authored and co-authored numerous publications, including as co-editor, the IOM/NRC Committee report "Sustaining Global Surveillance and Response for Emerging Zoonotic Diseases." She received her Doctor of Veterinary Medicine degree from Michigan State University in 1972, Master of Preventive Veterinary Medicine and Doctor of Philosophy degrees from the University of California, Davis, in 1976 and 1982, respectively. She retired as Captain in the US Public Health Service in 2005.

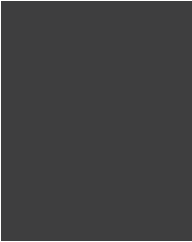




### Richard Tveten

Richard Tveten has bachelor's and master's degrees in terrestrial ecology and fire ecology from Western Washington University. For the last ten years he has been the Forest Management Team Lead for the Washington State Department of Fish and Wildlife where his team manages over 200,000 acres of forest. So far his team has restored more than 18,000

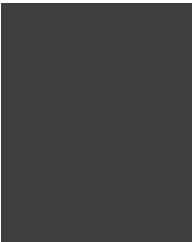
acres of forest from stabilized coastal dunes to subalpine woodlands and from Sitka spruce swamps to dry pine savannas. Richard has also worked as a wetlands consultant, the Washington State Department of Transportation statewide erosion control and stormwater team lead and as a botanist on Joint Base Lewis-McChord. He currently lives in an oak woodland just a few miles from here.



### Jennifer Watkins

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### Dave Wernitz

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# Special Events

## Workshops, Trainings, and Field Trips

### **Amphibian Conservation Working Sessions (All day Monday)**

Changing climatic conditions threaten many at-risk amphibians in the Pacific Northwest and also may enhance the risk of disease and invasive species encroachment. State and federal wildlife agencies are in the process of evaluating these threats, but information is lacking on: 1) availability of suitable habitat under different climate scenarios, 2) vulnerability of at-risk amphibians to different diseases, and how climate change will affect that vulnerability, and 3) potential future spread of harmful invasive species like American bullfrogs. This working session is part of a project aimed at providing actionable science that fills these knowledge gaps, and will focus on how changing climatic conditions affect habitat suitability for at-risk amphibians and American bullfrogs. The session will include a presentation describing work in progress, discussions to identify suitable methods and deliverables, and goal setting for future work.

### **An Overview of Genomic Approaches for Wildlife Conservation and Management (Monday PM)**

This workshop is designed to provide an overview of genomic methods that can be used to address research questions in wildlife ecology, conservation, and management. The field of wildlife genetics is being transformed by new genomic methods. This workshop will cover the topics of whole genome sequencing, reduced representation sequencing, identifying adaptive loci, single nucleotide polymorphism genotyping panels, eDNA metabarcoding, and diet metabarcoding. The workshop will include examples of how these new methods are being used to identify conservation and management units, assess genetic diversity and gene flow, monitor biodiversity, detect invasive species, and understand adaptation.

### **DEI Foundations and Bystander Awareness (Tuesday AM)**

This training will cover the following topics with an emphasis on providing interactive opportunities for attendees to practice concepts and become more comfortable with material in small-group settings. Topics include: foundational vocabulary on diversity, equity, and inclusion; the difference between sexuality and gender; how to respectfully use pronouns, share your own, and ask for someone else's; anti-discrimination laws and legal requirements for protected statuses; how to report issues and when/how to call folks in versus call them out; and empowering individuals to become

active bystanders when they witness any discriminatory behaviors. We aim to provide an overview of these topics while also highlighting ways attendees can implement these lessons in their own lives, agencies, and professional societies. We also will highlight the work of existing groups (e.g., Partners in Amphibian and Reptile Conservation's DEI Task Team, The Wildlife Society's Out in The Field) as ways attendees can continue learning on these topics after this training is completed.



### **Field Trip: Herps in the Black River Watershed (Tuesday AM)**

#### **Conservation Communication (All day Tuesday)**

The objective of this course is to introduce and explore key facets of effective communication processes in natural resources conservation settings among diverse resource professional backgrounds in a day-long interactive workshop to help participants think and judge as professionals. Exercises and discussion among participants and leaders will emphasize: elements of effective communication, attitudes toward wildlife as influences on conservation communication; decision styles and group decision-making in resource conservation; strategic thinking and forming effective objectives; diffusion of innovations; working with other disciplines and citizenry; and working with media professionals and advocacy in the professional setting.

#### **Indigenous and Western Science Communities Working Together (All day Tuesday)**

This workshop is designed as an open forum to foster new partnerships between western scientists and indigenous peoples. We will discuss and learn ways that we may better communicate, coordinate, and understand relations between indigenous peoples and western scientists. We believe that we can gain knowledge and new ways of thinking about conservation science by organizing our efforts collectively. This is an opportunity to better understand our common interests in conservation and shared concerns for nature. Exercises and discussion among workshop participants and the leader will emphasize: communications (including ethical space), Indigenous and Western science knowledge systems, relational values, monitoring, training, and conservation through reconciliation.



### **Field Trip: Connectivity in Southwest Washington and across I-5 (Friday AM)**

Join Conservation Northwest staff on a field trip to a camera-monitoring site and training facility at a farm adjacent to Interstate-5 (I-5) that sits on the edge of one of the recently modeled wildlife corridors that cross I-5. The site is less than 8 minutes from the Great Wolf lodge, and it will be reflective of

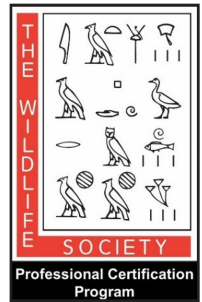
topics covered in the special session on connectivity, climate, and conservation. We will learn about the monitoring of wildlife with trail cameras, I-5, corridors, and the farm, while walking through 120 acres of heavily altered retired commercial agriculture farmland in the early stages of restoration. We will learn about the work the caretakers of the farm (Veterans Ecological Trades Collective) do and how they are restoring the land, while partnering with Conservation NW in seeking wildlife crossing structures on I-5.

### **Wildlife Handling and Chemical Immobilization** (All day Friday and **Saturday?**)

Strengthen your confidence with the Global Wildlife Resources (GWR) wildlife handling and chemical immobilization workshop. Learn the latest drug combinations and fine-tune your field protocols. This 2-day course provides 12 CE hours for the TWS Professional Development Program and is a slightly condensed version of the 3-day courses that GWR teaches across the U.S. and Canada. This workshop will include lecture, discussion, videos, and a hands-on lab each day. A drug delivery lab provides opportunity for participants to practice a variety of projectors. A needle and syringe lab teaches basic skills and improves old skills for working with needles and syringes, syringe poles, and blood collection. The needle and syringe lab builds good habits to maximize human safety, animal care, and successful chemical immobilization. This course emphasizes care and respect for every animal and colleague.

## Continuing Education

The Wildlife Society has approved the 2023 Joint Annual Meeting for professional development credit. Attendees can earn up to 35.5 CEUs in Category I of the Certified Wildlife Biologist®/Professional Development Certificate Program. One CEU can be earned for every hour of classroom-style learning, and one CEU can be earned for every 3 hours of a field session.



### Icebreaker: Wildlife for All – Celebrating Diversity (Tuesday)

Please join us for this social event to help celebrate who we are as a wildlife community. This year's event values our members of the LGBTQIA+ community. Great opportunity to meet other wildlifers, participate in get-to-know-you activities (Wildlife Bingo), and enjoy snacks and refreshments. All are welcome.

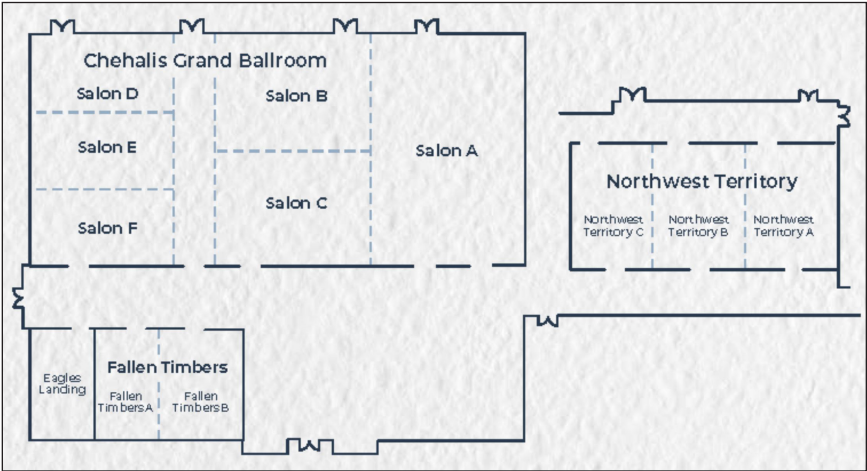
### Welcome Reception (Wednesday)

The Welcome Reception is the primary opportunity for our diverse set of participants to come together in an entertaining social and professional setting. There will be food (included with registration fee), beverages (gratis and no-host), and lots of time for mingling. There also will be opportunities for professional engagement during the Poster Session held in conjunction with the Reception. Silent auction and raffle items will contribute further to the enjoyment. Please arrange your schedule to ensure that you can participate in this time to reacquaint, make new friends, learn, and enjoy. We encourage members of the various organizations to mingle and contribute to improving both personal and professional relationships among the SAF and TWS organizations.

### Social Mixer and Awards Banquet (Thursday)

The Social Mixer and Awards Banquet on Thursday evening is an opportunity for participants to mingle, dine, and enjoy camaraderie. We also will be recognizing an array of accomplishments through awards to be presented by the partners hosting the Joint Meeting. There will be light entertainment as well as additional opportunity to support the organizations through participation in the culminating Silent Auction and Raffle events. Banquet tickets should be purchased in advance of the Joint Meeting through the online registration website. There may be some limited opportunities to obtain a Banquet ticket during on-site registration.

Great Wolf Lodge Meeting Room Layout



Extended Daily Schedule

Monday, April 24

Time	Fallen Timbers A	Fallen Timbers B
	<i>Northwest Herpetology; Moderators: Jonah Piova-Scott and Sky Button</i>	
10am – 12pm	Effects of Climate, Invasive Species, and Disease on PNW Amphibians	
12pm – 1pm	LUNCH ON YOUR OWN	
1pm – 5pm	Monitoring/Surveillance Needs for PNW Amphibian	An Overview of Genomic Approaches for Wildlife Conservation Moderator: Stacey Nerkowski
6pm – 7pm	Joint Planning Committee meeting	

George - do you want to mention where & when to get your nametag/lanyard/etc here?

Tuesday, April 25

Time	NW Territory B	Fallen Timbers A	NW Territory A	Chehalis	Offsite
8am – 12pm	DEI Foundations and Bystander Awareness Training	Conservation Communication	Indigenous and Western Science Communities Working Together		Field Trip: Herps in the Black River Watershed
12 – 1pm	LUNCH ON YOUR OWN				
	<b>Special Session:</b> <i>Wildlife Morbidity and Mortality</i> Moderator: Christine Parker-Graham	Conservation Communication	Indigenous and Western Science Communities Working Together		
1 – 1:20pm	Association of Antler Asymmetry with Hoof Disease in Elk; Margaret Wild				
1:20 – 1:40pm	Associations between Hair Trace Mineral Concentrations and the Occurrence of Treponeme-associated Hoof Disease in Elk; Steven Winter				
1:40 – 2pm	Transmission and Lesion Progression of Treponeme-Associated Hoof Disease in Carnivore Elk ( <i>Canis canadensis</i> ); Zachary Robinson				
2 – 2:20pm	Do Aquatic Mammals Inadvertently Spread Amphibian Chytrid Fungus on their Fur?; Tara Chestnut				
2:20 – 2:50pm	BREAK				
2:50 – 3:10pm	Intradermal Clefting in a Cachexic Ball Python ( <i>Python regius</i> ); Susie Masecar				
3:10 – 3:30pm	Susceptibility of U.S. Pacific Northwest Native Amphibians to Fish Rhabdoviruses; Evi Emmenegger				
3:30 – 3:50pm	Bat Monitoring and White-nose Syndrome Surveillance in Washington's National Parks; Tara Chestnut				
3:50 – 4:10pm	Dead Birds for Conservation Science and Advocacy; Joshua Morris				
4:10 – 4:30pm	How Many Times Should a Bullet Kill? Have You Switched to Copper?; Bill Vogel				
5 – 6pm	Resume review				
7:30 – 9pm				Icebreaker: Wildlife for All	



Wednesday, April 26

Time	Chehalis D/E/F	Chehalis A/B/C	Fallen Timbers A/B	NW Territory
8am – 9am	Poster & vendor display set-up			
9am – 12pm	<div>Plenary Welcome</div> <div>Plenary Session</div> <div>Emerging Zoonotic Infectious Diseases and Pandemics in the Anthropocene Era: Social Choices Impacting the Health of Life-Sustaining Ecosystems, Wildlife, and People</div> <div>Plenary Panel</div> <div>Recovery and Resilience in Dry Forests</div>	Plenary session		
12– 1pm		LUNCH	WATWS BUSINESS LUNCH	SNV
			Climate and Connectivity in SW Washington; Moderator: Jeff Azerrad, WDFW	Large Carnivore
1:10 – 1:30pm			Wildlife Habitat Connectivity Concepts; Mark Teske	Evaluating Camera-Baited Cougars; C
1:30 – 1:50pm			Enhancing Climate Connectivity as a Strategy for Wildlife Resilience to Climate Change; Harriet Morgan	Genetic Diversity of Population; Bear Popula
1:50 – 2:10pm			Washington Wildlife Habitat Connectivity Working Group: Cascades to Coast Connectivity Analysis; Brian Stewart	A Peek Under the Accelerometer: Energetics in Carnahan
2:10 – 2:30pm			Highway and Habitat Connectivity: How are Habitat Connectivity Priorities Determined by the Washington State Department of Transportation and Where Are They?; Glen Kalisz	Bears and Ecosystem Relationship Recreation;
2:30 – 3pm			BREAK	BREAK
3 – 3:20pm			Connecting the Landscape, How to Identify and Build a Strategy for Landscape Scale Wildlife Connectivity; Scott Downes	Determining Responses in Western Ca
3:20 – 3:40pm			Habitat Protection in an Urban Setting: Strategies to Inform Planning and Action in the City of Bellingham; Analiese Burns	Removing Goats from Patti Happ
3:40 – 4pm			Habitat Connectivity in Action: Updates, Success Stories, and Lessons Learned from the Interstate 90 Snoqualmie Pass East Wildlife Crossing Project; Glen Kalisz	Survival Patterns Mountain C Harris
4 – 4:20pm			Olympic Cougar Project; Mark Elbroch and Kim Sager-Fradkin	Wheat or Wheat? Habitat Selection in an Agricultural Southeast Shipley
4:20 – 4:40pm		Join us for food, beverages, mingling, silent action and raffle!	Opportunities to Engage in Creating a Connected Southwest Washington – Open discussion with previous speakers	Additional
4:40– 5pm				
6:30 – 9pm	Poster presentations	Welcome reception		

Wednesday, April 26

	NW Territory A	NW Territory B	
LUNCH	SNVB BUSINESS LUNCH	NWPARC BUSINESS LUNCH	LUNCH
in SW Jeff	Large Carnivores and Ungulates; Moderator: Hayley R. Rowe	Amphibians and Conservation; Moderator: Tony Fuchs	Beaver-Related Restoration; Moderator: Jesse Burgher
y Concepts;	Evaluating Genetic, Telemetry and Camera-Based Methods for Counting Cougars; Cameron Macias	Prioritizing Populations in Conservation Directly: A How-to-guide with Examples from Amphibians, Marmots, and Caribou in Canada; Mark Thompson	The Merits, Missteps, and Persistent Mysteries of Beaver-related Restoration; Dr. Caroline Nash
activity as evidence to organ	Genetic Diversity and Effective Population Size of the Selkirk Grizzly Bear Population; Megan Turnout	Oak Woodland and Prairie Restoration on the Scatter Creek Wildlife Area in Western Washington; Richard Tveten	Helping Beavers Help Us Restore River-scapes: Insight from Beaver-based Restoration Projects in Washington and Colorado Watersheds; Alexa Whipple
t p: Cascades sis;	A Peek Under the Hood: Using Accelerometers to Infer Behavior and Energetics in Grizzly Bears; Anthony Carnahan	Mitigating the Risks of Climate Change on Timberlands: Perspectives of a Large Private Landowner; Jessica Homyak	A Modern History of Beavers in the Puget Sound Lowlands, and the Planning for Beavers Manual; Jen Vanderhoof
nectivity: ity Priorities ngton State on and sz	Beavers and Boats: Bettering the Relationship between Wildlife and Recreation; Kurt Holman	Field safety and psychological rest; Erica Chestnut	Beaver Coexistence for More Resilient Urban Wetlands; Rachel Dirks
	BREAK	BREAK	BREAK
How egy for connectivity;	Determining Spatiotemporal Responses of Elk to Recreation in the Western Cascades; Michael Procko	There's Something in the Water: Steps to Understanding the Cues for Oregon Spotted frog (Rana pretiosa) Breeding; Andrea Gielens	Beaver Translocation: Past, Present, and Future in Washington and Beyond; Molly Alves
oan Setting: ng and ham;	Removing Non-native Mountain Goats from the Olympic Peninsula; Patti Happe	Breeding Response of Amphibians to Stochastic Aquatic Habitat Availability – Observations from JHTMON-9 Upper and Lower Campbell Reservoir Amphibian Assessment; Leah Ballin	Amphibian Facilitation by Beavers: A Review and Next Steps to Address Knowledge Gaps; Julianna Hoza
on: Updates, s Learned ualmie Pass ct;	Survival Patterns of Washington Mountain Goats, 2002-2022; Richard Harris	New Environmental DNA (eDNA) Protocols and Monitoring for Two Secretive Terrestrial Salamanders; Sky Button	Using Environmental DNA to Improve Beaver-related Restoration; Jesse Burgher
ark Elbroch	Wheat or Wild? Mule Deer Habitat Selection and Migration in an Agricultural Landscape in Southeastern Washington; Lisa Shipley	Washington Northern Leopard Frog Recovery Program: Post-release Monitoring of Behavior and Predator Threats; Erica Crespi	Evolving Relationships between Beaver and Salmonids in the Context of Climate Change; Dr. Michael Pollock
Creating a nington – ous speakers	Additional Q/A, discussion or adjourn	Conservation Challenges and Successes for Amphibians during Road Construction on the West Coast of Vancouver Island; Krysia Tuttle	Additional Q/A, discussion or adjourn
		Additional Q/A, discussion or adjourn	

8:30 – 9:30am

Thursday

9:30 – 9:50am

9:50 – 10:20am

10:20 – 12pm

12 – 1pm

1 – 1:20pm

1:20 – 1:40pm

1:40– 2pm

2 – 2:20pm

2:20 – 2:50pm

2:50 – 3:10pm

3:10 – 3:30pm

3:30 – 3:50pm

Poster & vendor display

Conservation Conundrum: How the Conservation Reserve Program Became Critical Habitat for the Columbia Basin Pygmy Rabbit; Jon Gallie

Dynamic Models to Guide Columbia Basin Shrubsteppe Conservation in an Era of Rapid Environmental Change; Andrew Shirk

Geospatial Data and Tools to Support Thoughtful Decision Making in the Shrubsteppe; Vincent Jansen

Supporting Biodiversity Protection Under Washington's Clean Energy Transition; Trina Bayard

Grazing, Fuels, and Fire...is There a Relationship? Is There a Goal?; Jeff Burnham

The Washington Shrubsteppe Restoration and Resilience Initiative: A New Model for Land Resource and Service Delivery in Shrubsteppe Conservation; Lynet Correll

Threats Contributing to the Ferruginous Hawk's Declining Status in Washington; James Watson

Conserving the Shrub Steppe Through Public-Private Partnerships; Ryan Lefler

Analysis of Genetic Relationships in the Cascade Torrey Pine: Distinct Lineages and Events Form Partnerships; Cousins

Response of Stream Amphibians to Alternative Riparian Management: Reed Ojala-Bar

Stream-Riparian Interactions Beyond BMPs;

Cumulative Effects of Land Management on Macroinvertebrates

Water Quality and Stream Responses Across Stand Age; Ash

Freshwater Biodiversity and Stream Age; Brooke Pe

Assessing Spatial Variation in the Upper End of Trout (Oncorhynchus) Within Headwaters of Washington, U

Ripple Effects of Land Use Change on Freshwater Mussel Communities; Lawrence

LUNCH

Small Mammals and Birds; Moderator: Ian Shriner

Forest Mgmt. Complexity and Resilience; Claudine Reyn

Prediction of Canada Lynx Habitat. Upscaling TLS Ground Cover Classifications to Landscape Level ALS; Jonathan Batchelor

Wildlife Habitat Ownership: A Landscape-Level Analysis; Ken Bevis

Prediction of Canada Lynx Habitat. Upscaling TLS Ground Cover Classifications to Landscape Level ALS; Ian Shriner

Characteristics of Woodpeckers in Shrubsteppe: Implications for Management; Kozma

Prediction of Canada Lynx Habitat. Upscaling TLS Ground Cover Classifications to Landscape Level ALS; Ben Turnock

Long-term Growth and Green Recruitment in a Forest in Southwestern Washington; Hansen

Pikas Rock! Colonization and Use of Anthropogenic Rock Structures along Roads by the American Pika (Ochotona princeps); a Rocky Habitat Specialist; Kristina Ernest

Biodiversity Resilience in a Forest Retention Area

Thursday, April 27

# WORK IN PROGRESS

Friday, April 28

Time	NW Territory B		NW Territory A
8am – 8:50am	Resume review	Turtles of the Pacific Northwest: Ecology and Management; Moderator: G. W. Bury	Ecology, Status and Protection of the Pacific Northwest Pond Turtle in the Pacific Northwest; Date and Remaining Questions; Moderator: G. W. Bury
8:50 – 9:10am			Oregon Strategic Plan for the Pacific Northwest Pond Turtle
9:10 – 9:30am			Age in a Population of Northwest Pond Turtles (Actinemys marmorata); Life Span and Age Averages; G. W. Bury
9:30– 9:50am			Population Estimation Methods for Northwest Pond Turtles, Washington; Moderator: G. W. Bury
9:50 – 10:20am			BR
10:20 – 10:40am			Testing the Efficacy of a Novel Method for Incorporating a Planted Block into a Turtles' Habitat
10:40 – 11am			A Preliminary Analysis of the Effect of Recreation on Freshwater Turtles in a Proximate Park; Joshua Keiser
11 – 11:20am			Management and Monitoring of the Easternmost Northwest Turtles; Andrew Meyers
11:20 – 11:40am			Estimated Occupancy and Abundance of Turtles and Western Painted Turtles in Middle Willamette Waters
11:40 – 12pm			Twenty-six Years and Counting: The Northwest Pond Turtle in Humboldt County, CA; Moderator: G. W. Bury
12 – 1pm			LUNCH ON
1 – 1:20pm			Introduced Red-eared Slider (Trachemys elegans) in British Columbia: Status and (2) Evidence of Hybridization; Mitchell and Brent Matsuda
1:20 – 1:40pm			Occurrence and Distribution of Turtles in Oregon; Madison
1:40 – 2pm			The Efficacy of Two Novel Diagnostic Methods (Humatin) for Cryptosporidium in Turtles (Chrysemys picta b
2 – 2:20pm			Emerging Health Concerns in Turtles; Max R. Lambert
2:20 – 5pm			

Friday, April 28

# WORK IN PROGRESS



# Silent Auction & Raffle

The partner organizations hosting this meeting will conduct a live and silent auction, and several raffles as fund-raising events to benefit organizational activities. Auction items arise from a wide array of donations from sponsors and members. Proceeds, by mutual agreement, are shared by the partners to support various initiatives such as scholarships, conservation actions, and similar endeavors.

Anticipate opportunities to participate throughout the meeting, with the raffles occurring each day, silent auction Wednesday evening at the Welcome Reception, and the live auction being held during the Banquet on Thursday evening. Please be prepared to donate and participate in these opportunities to further support WATWS, SNVB, and NWPARC!

*No more than 3,000 raffle tickets will be sold at \$1.00 per ticket; there are no discounts for quantity ticket purchases. The tickets will be deposited in containers specific to each of multiple items included in the raffle. The probability for winning a specific item will be related to the total number of tickets deposited for such item and the number of tickets deposited by or on behalf of any specific ticket purchaser. Any related questions can be directed to the Treasurer of the WA-TWS at [treasurer@watws.org](mailto:treasurer@watws.org).*

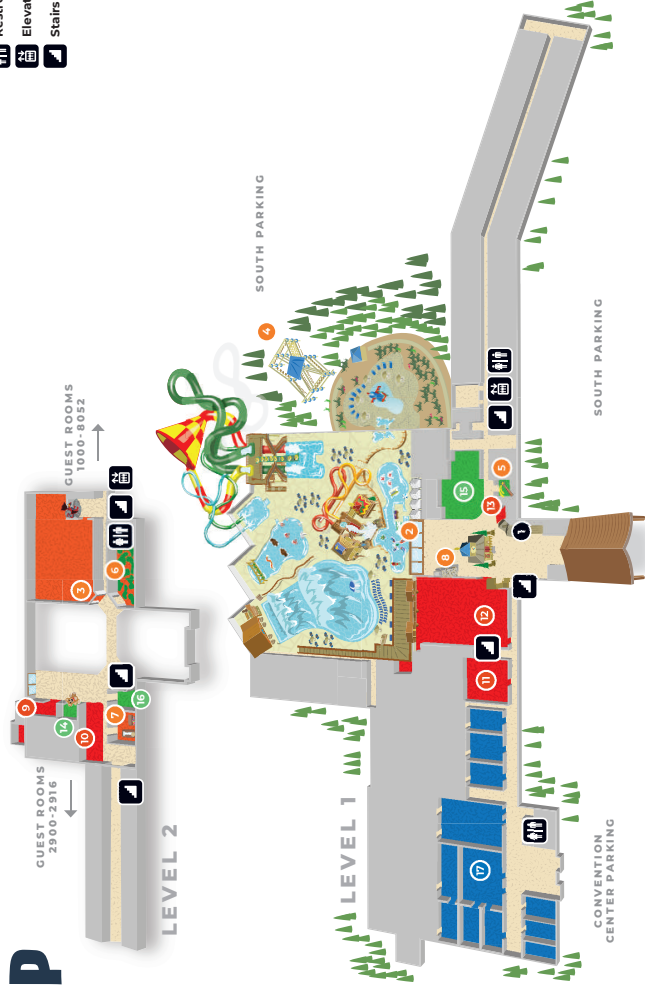


# Contributed Posters

Posters will be displayed and presented in the Chehalis D/E/F Ballroom on Wednesday and Thursday.

*\*Indicates a student presentation*

Presenter	Poster Title
Bayard, Trina	Salish Sea Estuaries Avian Monitoring Framework
Bowens, Wesley T.	Coastal Tailed Frog Population Declines in Western Washington Managed Forests Eight Years After Timber Harvest
Bresee, Cecelia*	Parenting is No Yolk: Nesting Behaviors of Bushtits ( <i>Psaltirparus minimus</i> ) on the Seattle University Campus
Collins, Dylan	Staqeya: the Lone Wolf at the Edge of its Ecological Niche
Cook, Kimberly	In Situ Treatment of Juvenile Cascades Frogs for Chytridiomycosis can Reverse Population Declines
Foster, Alex D.	Cispus River Elk Forage Management and Monitoring
Garcia, Mercedes	Community Reporting and Camera Traps Identify Habitat and Human Demographic Factors That Affect Urban Wildlife Distributions
Hougan, Hannah	In-stream Breeding Conditions of the Western Toad ( <i>Bufo</i> = <i>Anaxyrus boreas</i> ) Across Washington's Chehalis Basin
Pearhill, Robert A	Microbe Surveillance in the Amphibian Pet Trade: Results from a Pilot Study
Pignatelli, Joseph J. III	Preliminary Findings of a Long Term Freshwater Turtle Population Study on Lake Washington, Seattle
Scott, Emma*	Development of a Management Plan for the Western Painted Turtle at the Sandy River Delta, Oregon
Thompson, Marianne	Movement of Coastal Tailed Frog Larvae Associated with Interstate 90
Trovillion, Daniel	Monitoring the Effectiveness of Beaver Dam Analogues as a Stream Restoration Tool in Western Washington
Tveten, Richard	Forest Management on Washington Department of Fish and Wildlife Lands



## GUEST SERVICES

- 1 Front Desk and Guest Services

## ATTRACTIONS

- 2 Wiley's Waterpark  
Pools, slides and water activities for every age
- 3 Northern Lights Arcade  
The newest games, plus prizes
- 4 Howlers Peak Ropes Course  
An elevated obstacle course on ropes
- 5 MagiQuest, Compass Quest, Shadow Quest  
An interactive adventure game

- 6 Howl at the Moon Mini Golf  
Nine challenging holes

- 7 Olivers Mining  
A sand-sifting hunt for gemstones
- 8 Cub Club  
Bingo, balloon twisting, crafts and more

## DINING

- 9 Hungry as a Wolf  
Pizza, pasta and other Italian favorites
- 10 Bear Paw Sweets & Eats  
Cupcakes, ice cream and baked goods
- 11 Lodge Wood Fire Grill  
Locally-sourced food and beverage

- 12 The Loose Moose Cottage  
A buffet for every meal of the day

- 13 Starbucks  
Coffee, pastries and breakfast sandwiches

## SHOPPING

- 14 Build-A-Bear Workshop  
Create your own stuffed toys
- 15 Buckhorn Exchange  
Souvenirs, gifts and vacation essentials
- 16 Great Wolf Candy Company  
A wide assortment of candy and other sweets

## GROUPS & MEETINGS

- 17 Conference Center