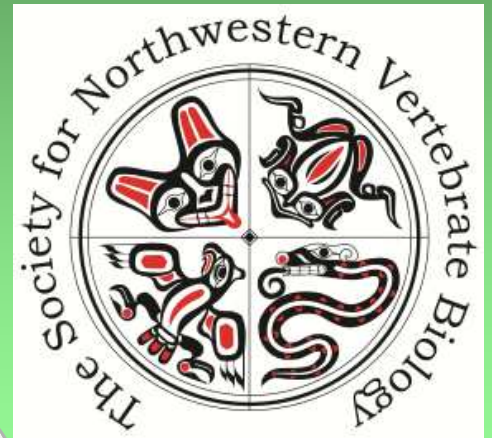
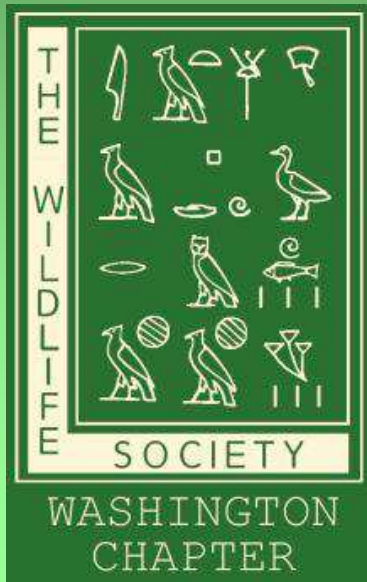


# ENHANCING NORTHWEST WILDLIFE PROGRAM DELIVERY



Danielle Munzing



RED LION HOTEL  
PASCO, WASHINGTON  
FEBRUARY 3-7, 2014

## WELCOME FROM THE PARTNERS!

The partner organizations described below have collaborated to plan and conduct this Joint Meeting devoted to Enhancing Conservation Program Delivery Among Agricultural and Other Natural Resource Interests. We strived to provide many opportunities for your professional enrichment, life-long learning and personal entertainment. Please enjoy while appreciating the importance of conservation collaboration.



**GLOBAL OWL PROJECT**— The Global Owl Project (GLOW) is a long-term, worldwide project to advance foundational aspects of science and conservation for the world's owls. In the USA, GLOW is partnering with the Northwest Habitat Institute, a non-profit, 501c3 conservation organization based in Corvallis, Oregon. Key interests of the Project are to: develop robust survey and monitoring techniques, analyze systematics and phylogeny of owls, archive owl vocalizations, compile owl literature, refine owl diversity and distribution information, compile cultural perspectives about owls, and distribute information to interested individuals, organizations, and agencies worldwide.

**Project Advisors:** Raju Acharya (Nepal); Vasileios A. Bontzorlos (Greece); James R. Duncan (Canada); Paula Enriquez Rocha (Mexico); Claus Konig (Germany); Bruce G. Marcot (USA); Dries Van Nieuwenhuysse (Belgium); Alan Sieradzki (UK); Roar Solheim (Norway); Michael Wink (Germany)



### **NORTHWEST PARTNERS IN AMPHIBIAN AND REPTILE CONSERVATION**

Partners in Amphibian and Reptile Conservation (PARC) is an inclusive partnership dedicated to conservation of herpetofauna--reptiles and amphibians--and their habitats. Membership entails all walks of life and includes individuals from state, provincial and federal agencies, conservation organizations, museums, pet trade industry, nature centers, zoos, energy industry, universities, herpetological organizations, research laboratories, forest industries, and environmental consultants. The diversity of our membership makes PARC the most comprehensive conservation effort ever undertaken for amphibians and reptiles. Northwest PARC is the Northwest Regional Chapter of PARC, covering 8 eight U.S. states and 3 Canadian provinces and territories.

#### **NW PARC Officers 2013-14 :**

Co-chairs: **Denim Jochimsen**, **Kris Kendell**; Social Media Coordinator: **Valorie Titus**; Treasurer: **Betsy Howell**; Webmaster/Newsletter Editor: **Brandon Fessler**; Steering Committee: **Bryce Maxell**, **Chuck Peterson**, **David Pilliod**, **Elke Wind**, **Janene Lichtenberg**, **Lisa Hallock**, **Lori Salzer**, **Purnima Govindarajulu**, **Steve Corn**, **Bill Boswoth**, **Dave Clayton**



### **RESEARCHERS IMPLEMENTING CONSERVATION**

**ACTION** — Researchers Implementing Conservation Action (RICA) is a recently formed non-profit group based in California. RICA's mission is to "Conduct and utilize good science to implement, and educate the Public about, wise conservation, utilizing the efficiencies of collaboration, and encouraging the increased ability to effect conservation (i.e., capacity building). *The Raptors of the Northwest Symposium* is devoted to understanding challenges to raptor conservation and management and relating research to those needs.

**Board of Directors:** President, **Jeff Lincer**; Vice President, **Wendy Yates**; Secretary, **Mark Brash**; Treasurer, **Jeff Brown**; Board Position #5, **Judie Lincer**

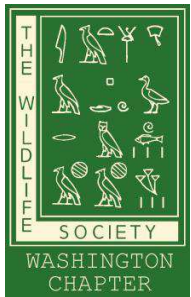


## **SOCIETY FOR NORTHWESTERN VERTEBRATE BIOLOGY**

— The Society for Northwestern Vertebrate Biology (SNVB) is the longest running scientific association devoted to the study of vertebrate ecology in the Pacific Northwest. The geographic scope of SNVB and its flagship publication, *Northwestern Naturalist*, is northwestern North America west of the Great Plains and north of the Mojave Desert. SNVB strives to promote close working relationships among ornithologists, mammalogists, herpetologists, and ichthyologists in the region, foster exchange of scientific information and interest in the study of vertebrates; and offer a forum for these activities through meetings and publications.

### **2013 Board:**

President:	<b>Steven Wagner</b>	Oregon VP:	<b>Rebecca (Becky) Hill</b>
Southern VP:	<b>Hartwell Welsh</b>	Northern VP:	<b>Darcy Pickard</b>
Washington VP:	<b>Robert Weaver</b>	Inland VP:	<b>Paul Hendricks</b>
Secretary:	<b>Lindsey Thurman</b>	Treasurer:	<b>Tiffany Sacra-Garcia</b>
Trustee:	<b>Blake Hossack</b>	Trustee:	<b>Kim Walters</b>
Trustee:	<b>Erim Gomez</b>	NW Naturalist Editor:	<b>Robert Hoffman</b>
NW Fauna Editor:	<b>Nat Seavey</b>	Murreletter Editor:	<b>Teal Waterstrat</b>
Web Master:	<b>Eric Lund</b>	Historian:	<b>Marc Hayes</b>



**WASHINGTON CHAPTER of THE WILDLIFE SOCIETY** — The Washington Chapter is a statewide affiliate of The Wildlife Society, a professional organization primarily in North America, and devoted to *promoting excellence in wildlife stewardship through science and education*. The Washington Chapter is about 300 members strong within the more than 11,000 members of TWS worldwide. Chapter members represent a broad array of professionals and lay persons among wildlife conservation and management agencies, non-governmental organizations, academic faculty, students, education programs, and other disciplines associated with conserving and learning about natural resources.

### **2013 Executive Board:**

President:	<b>William O. Vogel</b>	President-Elect:	<b>Bruce Thompson</b>
Past President:	<b>Blake Murden</b>	Secretary:	<b>Michael Hall</b>
Treasurer:	<b>Craig Hansen</b>	Section Representative:	<b>A.J. Kroll</b>
Board Position #1:	<b>Jonathan Kemp</b>	Board Position #2:	<b>Wendy Arjo</b>
Board Position #3:	<b>Suzie Rizer</b>	Board Position #4:	<b>Tyler Hicks</b>
Newsletter Editor:	<b>Andrea Lyons</b>		
Regional Representatives:			

NE, **Annemarie Prince**; NW, **Steve Hall**; SW, **William Ritchie**; SE, **Sara Gregory**; Olympic Peninsula, **Betsy Howell**

***Many people, too numerous to list here, among all the Partners helped to make this Joint Meeting a success and they are thanked collectively. Those who served especially substantial and enduring roles in planning, coordinating, and conducting the Meeting include: Harriet Allen, Joshua Benton, Sara Gregory, Mike Hall, Becky Hill, Denim Jochimsen, David Johnson, Kris Kendell, A.J. Kroll, Don Larsen, Jeff Lincer, Madonna Luers, Eric Lund, Blake Murden, Heidi Newsome, Mike Passmore, Bruce Thompson, Bill Vogel, Steve Wagner, Teal Waterstrat, and Robert Weaver.***

# THANKS TO OUR SPONSORS!

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Washington Department of  
**FISH and WILDLIFE**

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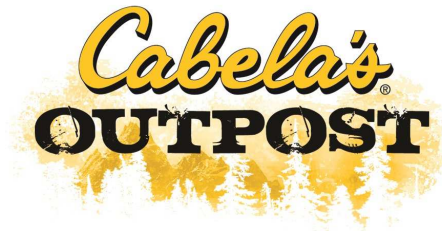


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(continued)

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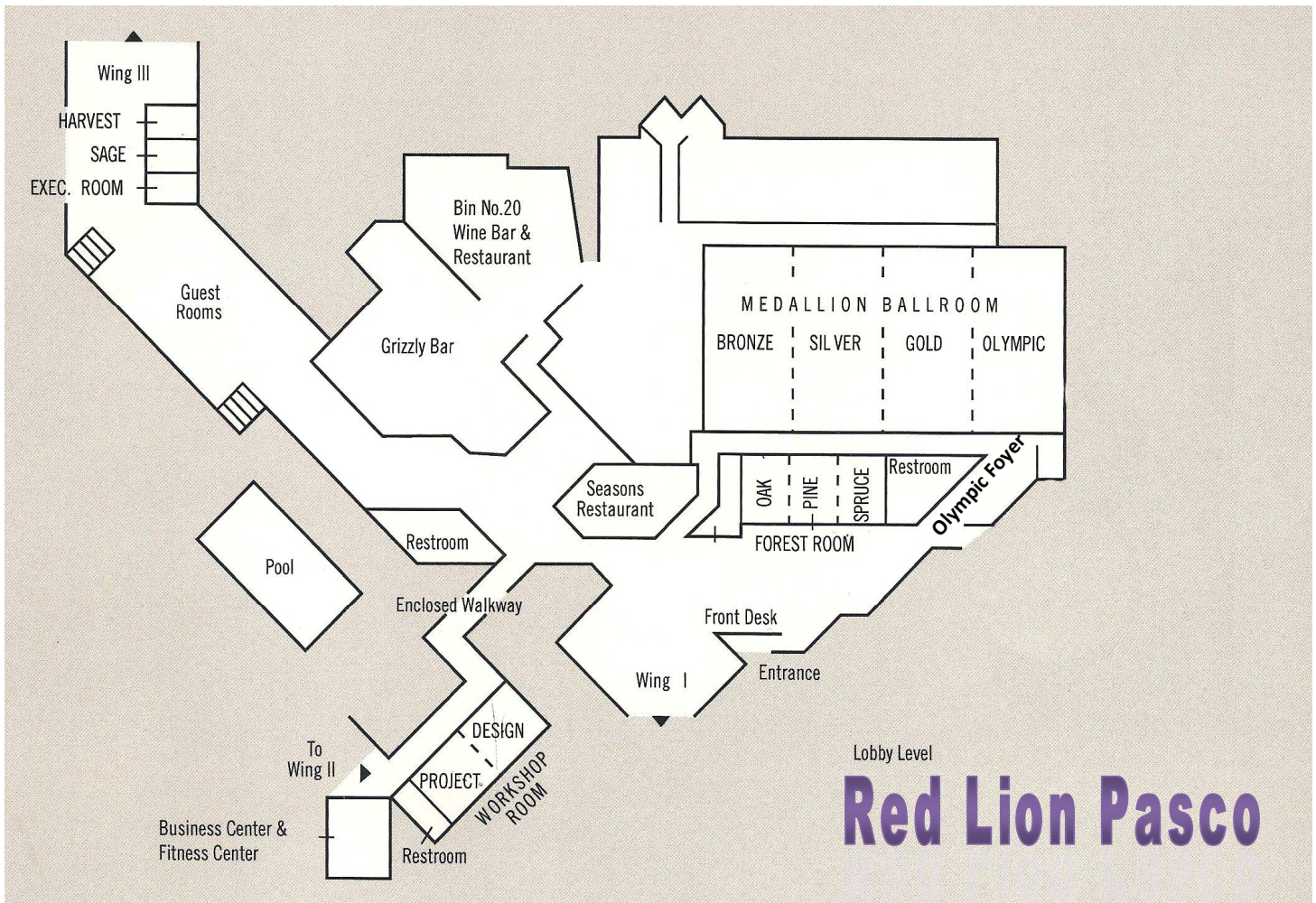
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### **FIELD TRIPS:**

1. **Hanford Reach National Monument Tour** – Monday, Feb 3 @ 0900-1500. Point of Contact: Jack Beaujon 509-546-8314. Free; Limit 20 people
2. **Guided Local Hike** – Monday, Feb 3 @ 0800-1000 and Feb 4 @ 1500-1700. Point of Contact: Heidi Newsome 509-546-8322. Donation of \$5 (suggested); Limit 20 people
3. **Columbia River Journeys** – Monday, Feb 3 @ 0800-1630. Point of Contact: Jesse McCarty 425-315-2444. \$85/person; Minimum of 15 people
4. **Vineyard Trail Ride** – Monday and Friday, Feb 3 and 7 @ 1500. Point of Contact: Teresa Owen 1-888-414-1619. \$40/person; Minimum of 15 people
5. **McNary Wildlife Refuge** – Tuesday, Feb 4 @ 0900-1400. Point of Contact: Lamont Glass 509-546-8313. Free; Limit 20 people
6. **Chamna Natural Area Preserve Bird Walk** – Tuesday, Feb 4 @ 0700-0900. Point of Contact: Heidi Newsome 509-546-8322. Donation of \$5 (suggested); Limit 20 people
7. **Bird Walk on Bateman Island in the Yakima River delta** – Tuesday, Thursday, and Friday, Feb 4, 6, & 7 @ 0800-1000. Point of Contact: Heidi Newsome 509-546-8322. Donation of \$5 (suggested); Limit 20 people



# WORKSHOPS

<u>WORKSHOP TITLE</u>	<u>TIME</u>	<u>LOCATION</u>
<b>NW PARC:</b> Problem Solving in Conservation Using Education and Outreach	0800-1700 (Tues)	BRONZE
<b>WDFW:</b> Shrub-Steppe Species Monitoring Project Discussion	1600-1800 (Tues)	SPRUCE
1. Next Generation Sequencing and Genomic Approaches to Wildlife Management and Conservation	1300-1700 (Tues)	OAK/PINE
2. Citizen Conservation Stewardship – Partnering For Wildlife Conservation	1400-1600 (Tues)	SPRUCE
3. Hunter Access and Landowner Incentive Programs in WA	1500-1700 (Wed)	SILVER
4. Farm Bill Basics: What and Why for Conservation and Producers	0800-0900 (Wed)	SILVER
5. Wildlife Conservation on Working/Private Lands	0900-1200 (Wed)	SILVER
6. Shared Lessons in Implementing Conservation Projects	1300-1500 (Wed)	SILVER
7. Effective Facilitation: Tips and Techniques	0800-1200 (Wed)	SPRUCE
8. Wildlife in Managed Forests: Finding Synergies between Silviculture and Wildlife Habitat Enhancement	0900-1100 (Wed)	PINE
9. Washington Habitat Connectivity: Current and Future Climate Conditions Analyses Overview and Applied Uses	1300-1500 (Wed)	SPRUCE
10. Washington Habitat Connectivity: Model Testing and Validation	1500-1700 (Wed)	SPRUCE
11. Initiative for Rural Innovation and Stewardship (IRIS)	1300-1500 (Wed)	PINE



Mike Passmore

## **SCHEDULE AT A GLANCE**

### **MONDAY FEB 3:**

<b><u>ACTIVITY</u></b>	<b><u>TIME</u></b>	<b><u>LOCATION</u></b>
NW PARC Annual Mtg	1300-1715	Bronze

### **TUESDAY FEB 4:**

<b><u>ACTIVITY</u></b>	<b><u>TIME</u></b>	<b><u>LOCATION</u></b>
NW PARC Workshop	0800-1700	Bronze
BUOW Plenary/Technical	0900-1700	Olympic
Workshop #1	1300-1700	Oak/Pine
Workshop #2	1400-1600	Spruce
Photo Contest	1300-1700	Design
WDFW Shrub/Steppe	1600-1800	Spruce
NW PARC/SNVB Social	1800-2200	Bronze

### **WEDNESDAY FEB 5:**

<b><u>ACTIVITY</u></b>	<b><u>TIME</u></b>	<b><u>LOCATION</u></b>
SNVB Business Mtg	0800-1200	Bronze
RICA NW Raptors	0800-1700	Gold
BUOW Technical	0900-1700	Olympic
Photo Contest	0800-1700	Design

### **WEDNESDAY FEB 5 (CONTINUED):**

<b><u>ACTIVITY</u></b>	<b><u>TIME</u></b>	<b><u>LOCATION</u></b>
Workshop #7	0800-1200	Spruce
Workshop #4	0800-0900	Silver
Workshop #8	0900-1100	Pine
Workshop #5	0900-1200	Silver
Workshop #6	1300-1500	Silver
Workshop #11	1300-1500	Pine
Workshop #3	1500-1700	Silver
Workshop #9	1300-1500	Spruce
Workshop #10	1500-1700	Spruce



## **SCHEDULE AT A GLANCE**

SNVB Workshop	1300-1700	Bronze
Student Mentor Social	1720-1900	Oak/Pine
Poster Session and		
Welcome Reception	1900-2200	Bronze/Silver/Gold

### **THURSDAY FEB 6:**

<b><u>ACTIVITY</u></b>	<b><u>TIME</u></b>	<b><u>LOCATION</u></b>
Joint Meeting Plenary	0800-1000	Gold/Olympic
Photo Contest	0800-1200	Design
SNVB/TWS Technical	1030-1700	Bronze and Olympic
RICA NW Raptors	1030-1700	Gold
SNVB/TWS Technical	1030-1700	Oak/Pine/Spruce
TWS Business Mtg	1700-1815	Project
Joint Meeting Banquet	1830-2200	Silver/Gold/Olympic

### **FRIDAY FEB 7:**

<b><u>ACTIVITY</u></b>	<b><u>TIME</u></b>	<b><u>LOCATION</u></b>
SNVB/TWS Technical	0800-1200	Bronze
SNVB/TWS Technical	0800-1200	Oak/Pine/Spruce

## **OLYMPIC FOYER:**

### **REGISTRATION**

Monday, 1130-1600  
Tuesday, 0730-1600  
Wednesday, 0730-1700  
Thursday, 0730-1600

### **VENDOR BOOTHS**

Tuesday, 1300-1700  
Wednesday, 1300-1700  
Thursday, 0900-1700

### **LUNCHESES (1200-1300) (meeting registrants only):**

Tuesday (Silver), Wednesday (Olympic Foyer), Thursday (Silver)

## Plenary Presenters

### ***If “Habitat is the Key to Wildlife”, What’s the Key to Habitat?***

#### **Betsy Bloomfield**

Executive Director, Cowiche Canyon Conservancy, Yakima, WA

**Background:** Betsy Bloomfield leads the Cowiche Canyon Conservancy, a land trust focused on shrub-steppe conservation in Yakima County, Washington. She stepped into this role after 10 years with The Nature Conservancy, the world’s largest land trust organization. Her job with the Nature Conservancy was based in Yakima, where she directed their eastern Washington Forest Program, and helped to conserve 20,000 acres of working forests in the Naches Basin. Prior to working for the Nature Conservancy, Betsy worked for the Washington Department of Fish and Wildlife in Ephrata, and the Chelan County Conservation District in Wenatchee. In those roles, she raised over \$15 million in conservation funding to protect some of the last remaining intact areas of forest, shrub-steppe and riverine habitat in eastern Washington. She has expertise in organizing functional collaborative workgroups and works effectively with leaders and practitioners from tribes, agencies, agriculture, and community groups. Originally from Seattle, she holds a Bachelor’s Degree in Anthropology from the University of Washington, and a Master’s Degree in Resource Management from Central Washington University.

**Presentation Summary:** “Habitat is the Key to Wildlife” is a great vision statement from our friends at the Washington State Department of Fish and Wildlife –a clear call to action requiring very few words. That idea has two underlying statements needed to make the vision real: *If habitat is the key to wildlife, then relationships are the key to habitat; and if relationships are the key to habitat, then working to shared outcomes is the key to relationships.* These two interlocking ideas are more instrumental to conserving wildlife now more than ever. In this discussion you will hear about how the fundamentals that lead to finding common ground and activating that shared purpose has led to habitat conservation success at all scales, from building a community shrub-steppe trail system to saving fifty thousand acres of the Teanaway Watershed.



### ***Amphibian Decline and Conservation***

#### **Dr. Michael J. Adams**

Research Ecologist, U.S. Geological Survey, Corvallis, OR

**Background:** Dr. Michael Adams is a Research Ecologist with the USGS Forest and Rangeland Ecosystem Center. He received a BS in Wildlife Biology from Colorado State University and a PhD in Forestry from the University of Washington. His research concerns amphibian conservation issues including invasive species, forest management, climate change, wetland restoration, disease, and monitoring design. He is a Principal Investigator for the Amphibian Research and Monitoring Initiative and leads efforts to synthesize and understand trends in amphibians on public lands.

**Presentation Summary:** In the past 25 years, amphibians have gone from nearly ignored as a resource management issue to perhaps the most recognizable issue in a global biodiversity crisis. Scientific progress has been great in that time period but management decisions for amphibians are still made with relatively meager information compared to other taxa. The global nature of amphibian declines leads to a sense



## **Dr. Michael J. Adams** (continued)

that little can be done locally. To address management needs at different scales, the USGS Amphibian Research and Monitoring Initiative integrates research on management options with long-term monitoring. This approach has led to numerous local studies that have been synthesized to produce the first broad-scale information on the rate of decline on public lands – estimates of how fast amphibians are disappearing from the places they occur. Important findings include that amphibians were declining on average in all categories of data we examined, declines were in protected areas, and even species thought to be stable were declining on average. Global patterns of decline and the presence of declines in protected areas have been the basis for a general focus on regional and global factors driving declines. However, it is important to emphasize that local management options are available and local habitat management may still be key to a global conservation strategy.

## ***Applications of Unmanned Vehicle Systems to Wildlife Research and Management in the 21<sup>st</sup> Century***

### **Dr. David M. Bird**

Emeritus Professor of Wildlife Biology, Department of Natural Resource Sciences, McGill University, Montreal, Quebec CANADA

**Background:** As an Emeritus Professor of Wildlife Biology of McGill University in Montreal, Quebec, Dr. David Bird has published over 180 scientific papers and supervised more than 40 graduate students, mostly focusing on birds of prey. His name graces the covers of at least 8 books. Dr. Bird is a past-president of the Raptor Research Foundation, Inc., the past-president of the Society of Canadian Ornithologists, an elected Fellow of the American Ornithologists Union, an elected member representing Canada on the prestigious International Ornithological Committee, and a member of the Board of Directors of Unmanned Systems Canada. He has been studying the applications of Unmanned Aerial Vehicles (UAVs) to wildlife research for about 6 years. He is the Founding Editor of a newly launched peer-reviewed publication, the Journal of Unmanned Vehicle Systems.

**Presentation Summary:** Small unmanned vehicle systems (UVS), formerly exclusive to militaries, are rapidly advancing in sophistication and availability to civilians. Ranging from hand-launched autonomous airplanes to terrestrial robots to underwater machines, they are increasingly being employed in such areas as agriculture, emergency services, meteorology, oceanography, geophysics and film-making. Another area that shows great potential for the applications of UVS and associated markets is wildlife research and management. Applications being carried out in various regions of the world today include monitoring breeding, wintering and migrating populations of colonially nesting birds, spawning salmon and orangutans, mapping breeding habitat of endangered species, tracking threatened caribou and polar bears in the far north, examining nest contents of raptorial birds breeding in inaccessible locations, and deterring poachers in Africa. As technology and industry continue to develop and the regulatory procedures begin to loosen, we anticipate an ever-widening range of applications to surface in this field. Some examples include underwater tracking of foraging aquatic birds, detecting signals from song-birds bearing radio-transmitters, surveying nest contents of underground burrows of birds and mammals, and dispersing nuisance birds. This presentation will attempt to explore possible applications of UVS of all types and sizes to help meet the needs of today's wildlife biologists and managers and to delve into the limitations faced by those wishing to utilize UVS in terms of costs, size, practicality in the field, regulations, etc.





## Banquet Speaker

### ***Honoring Wildlife Professionals That Served In The Military 1914-2014.***

#### **Dr. David Manuwal**

College of the Environment

School of Environmental & Forest Science Box 352100 University of Washington Seattle, WA

**Background:** Dr. Manuwal is Emeritus Professor of Wildlife Science at the University of Washington in Seattle. His academic background includes a Bachelor's degree from Purdue University, Master's degree from the University of Montana, and Doctorate from University of California-Los Angeles. Dr. Manuwal engaged in a diverse and productive 40-year career as a Faculty member at the School of Environmental and Forest Sciences, University of Washington during 1972-2012. He also enjoyed temporary appointments at Bemidji State University in Minnesota and the University of Montana. His research interests have focused on ecology and conservation of forest birds and seabirds. He recently has been developing a keen interest in better understanding linkages between service to country and service to natural resources, the topic of his presentation and tribute to military veterans who have or are engaged in conserving our natural heritage.

#### ***Presentation Summary:***

This is a tribute to those that have served in the military and have made or are making contributions to vertebrate ecology and conservation including, ornithology, mammalogy, herpetology, and wildlife management. Individuals are in academia, governmental agencies, private companies, or NGO's. The illustrated presentation reflects on nearly 200 people who have contributed to serving our country and our natural resources. Enjoy a music-accompanied review of the people, affiliations, branches of service, descriptions of service, and some pictorial perspectives on patriots among us.



## **POSTER SESSION (Tuesday, 1900-2200; Bronze/Silver/Gold)**

**Assortative Mating as a Mechanism for Advancing Nesting Phenology in American Kestrels (*Falco sparverius*).** Alexandra Anderson\*, Julie A. Heath, James Smith, Stephen Novak, Eric Stolen, Karen Steenhof

**The Interactive Roles of Male Pheromones and Female Mating Receptivity on Scent Choice in Female Red-legged Salamanders.** Christina L Baggett\*, Lynne D. Houck, Damien B. Wilburn, Richard C. Feldhoff, and Pamela W. Feldhoff

**Acoustic Bat Inventory on National Wildlife Refuges in Eastern Oregon, Eastern Washington and Idaho.** Jenny Barnett

**Environmental DNA: Using Molecular Analysis to Detect Canadian Toad (*Anaxyrus hemiophrys*) in Central Alberta.** Brandon Booker, Kris Kendell, David Coltman, Corey Davis, Cynthia Paszkowski, Doug Manzer

**Alaska's Short-eared Owls Migratory Movements across Canada, USA, and Mexico.** Travis Booms\*, James A. Johnson

**Rate and Extent of Conversion of Native Shrub-Steppe to Agriculture at Frenchman's Coulee, Grant County, WA in the Past 70 Years.** Taggert Butterfield

**Resource Use and Selection in Animal Space Use Studies: A Comparison of Analyses Using Golden Eagle (*Aquila chrysaetos*) Global Positioning System (GPS) Radio Telemetry.** Andrew A Duff\*, James W Watson

**Reoccupation of Habitat Under Solar Panels by Burrowing Owls at a Utility-Scale Solar Facility in Southern California.** Doug Drynan Jeff Smith, Bridget Sousa, Steve Rottenborn, Brian Boroski

**Pre-construction monitoring of small mammals for the I-90 Snoqualmie Pass East project.** Kristina Ernest\*, Amanda Tompkins, Bryant Sawada

**Soft Release Methods for the Reintroduction of Washington Ground Squirrels.** Rich Finger

**Breeding and Foraging Ecology of Burrowing Owls in Southwestern Manitoba: The Manitoba Burrowing Owl Recovery Program.** Alexandra Froese

**Identification and Protection of a Bat Colony on the Hanford Site, Richland, Washington.** Kenneth A Gano, Jonathan G Lucas\*, Cole T Lindsey

**Monitoring Occupancy and Productivity at Golden Eagle Breeding Areas in Washington.** Gerald Hayes

**A Model of Bear Rub Tree Locations Using Landscape Covariates in Northwest Montana.** Matthew Morgan Henderson, Mark Hebblewhite, Jeff Stetz, Kate Kendall

**Bald Eagle (*Haliaeetus leucocephalus*) Space Use along the Lost Coast of Alaska**  
Stephen B Lewis\*, Michelle L Kissling

**Time for Change: A Review of US Forest Service Policies on Snag Cutting and its Impacts on Cavity-nesting Species in Eastern Washington.** Teresa Lorenz\*, Jeffrey M Kozma\*

**Use of Communal Shedding Sites by the Northern Pacific Rattlesnake (*Crotalus oreganus oreganus*) in Central Washington State** Caleb L Loughran\*, Daniel D Beck, Robert E Weaver

**Chemical Cues Allow for Recognition of Conspecifics by Neonate Northern Pacific Rattlesnakes (*Crotalus oreganus oreganus*).** Caleb L Loughran, Debbie Lewis, Robert E Weaver\*

**Western Painted Turtle Habitat Restoration, Threat Mitigation and Volunteer Monitoring Program Success at Burnaby Lake in the Lower Mainland, British Columbia.** Aimee M Mitchell\*, Vanessa L Kilburn, Deanna MacTavish, Chris MA Currie, Andrea Gielens

**Increasing Nesting and Hunting Opportunities for Raptors in mid-Columbia Orchards.** Tim Pitz

**Use of Terrestrial Chemical Cues in Mate Detection in the Coastal Tailed Frog (*Ascaphus truei*).** David Reavill\*, R Steven Wagner, Robert E Weaver

**Protecting Owls Impacted by Development: Standards for Burrowing Owl Relocations within the Western Riverside County Multiple Species Habitat Conservation Plan Area, Riverside County, California.** Noelle A Ronan\*, Laurie Dobson Correa, Karin Cleary-Rose, Heather Pert

## PRESENTATION SCHEDULE

(MONDAY, Feb 3)

	Bronze
	NW PARC Annual Meeting
1300-1315	Welcome and Introductions
1315-1345	<b>Priya Nanjappa:</b> National PARC update
1345-1415	<b>Denim Jochimsen:</b> Regional PARC update
1415-1500	Herpetological Conservation in the Northwest
1500-1530	<b>BREAK</b>
1530-1645	Herpetological Conservation in the Northwest
1645-1700	Co-chair wrap-up

[\*Denotes Student Speaker]

(Moderator)

(TUESDAY, Feb 4)

	Bronze
	NW PARC Workshop
0800-0830	Welcome and Introductions
0830-1000	<b>Scott Petersen:</b> Reptiles in the Classroom: Engaging Children in Conservation and
1000-1020	<b>BREAK</b>
1020-1120	<b>Rachel Rommel:</b> Making the Leap from Awareness to Action
1120-1200	<b>David Blackburn:</b> Engaging the Public with Amphibian Diversity and Conservation on the Web and in Museums
1200-1315	<b>LUNCH</b>
1315-1415	<b>Karen Dvornich:</b> NatureMapping's Fourteen-year Study of the Distribution and Habitat of the Pygmy Short-horned Lizard in the Waterville Plateau
1415-1440	<b>Deanna Olson:</b> Herpetological Conservation Paradigms: The PARC Kaleidoscope
1440-1500	<b>OPEN DISCUSSION</b>
1500-1520	<b>BREAK</b>
1520-1600	<b>Jessica Moore:</b> Transforming Public Interest into Public Engagement
1600-1645	<b>Emily Taylor:</b> Snakes as a Gateway Drug for Naturalists
1645-1700	<b>WRAP-UP AND DISCUSSION</b>

**NOTE: Presentation and Poster abstracts will be only available online at <http://wildlife.org/washington/>**



Kris Kendall



## PRESENTATION SCHEDULE (TUESDAY, Feb 4)

	Olympic		Olympic
	Ecology and Population Dynamics. Techniques (David Johnson)	1200-1300	LUNCH
0900-0920	<b>David H. Johnson:</b> Welcome & Introduction to the 4 <sup>th</sup> BUOW Symposium!  <b>David H. Johnson, Mark D. Nelson:</b> Distribution Map of the Western Burrowing Owl ( <i>Athene cunicularia hypugaea</i> ) in the US and Canada, 2013	1300-1340	<b>PLENARY: Troy I. Wellicome:</b> Habitat Associations and Status of Burrowing Owls in Canada
0920-0940	<b>Jamie L. Wade*, James R. Belthoff:</b> Responses of Burrowing Owls to Experimental Changes in Clutch Size: Are Burrowing Owls Determinate or Indeterminate Egg-layers?	1340-1400	<b>Casey Williams*, Jennifer Good, Martha Desmond:</b> Reproductive Success of the Western Burrowing Owl ( <i>Athene cunicularia hypugaea</i> ) in Agricultural and Urban Habitats of Dona Ana County, New Mexico
0940-1000	<b>Colleen L. Wisinski, Lisa A. Nordstrom, Jeffrey L. Lincer, and Ron Swaisgood:</b> Use of Remote Cameras for Monitoring Burrowing Owl Nesting Ecology in San Diego County	1400-1420	<b>Miranda Campos*, Jennifer Davis, Martha Desmond:</b> Influence of Rainfall, Nest Density and Landscape Fragmentation on Burrowing Owl ( <i>Athene cunicularia hypugaea</i> ) Prey Deliveries to Nests
1000-1020	<b>BREAK</b>	1420-1440	<b>Ryan J. Fisher, Corey Scobie, Troy I. Wellicome, Erin M. Bayne:</b> A summary of extreme weather impacts on Burrowing Owls in Canada
1020-1040	<b>Jeffrey L. Lincer, Richard J. Clark, Tracy Fleming, Alan Sieradzki:</b> The Burrowing Owl ( <i>Athene cunicularia</i> ) Literature—Who??? needs it?	1440-1500	<b>John H. Barclay, Nicole M. Korfanta, Matthew J. Kauffman:</b> Long-term Population Dynamics of the Burrowing Owl Colony at San Jose International Airport
1040-1100	<b>Gerene Garcia*, Courtney J. Conway:</b> Why have Burrowing Owls Disappeared from Portions of their Former Breeding Range?	1500-1520	<b>BREAK</b>
1100-1120	<b>Courtney J. Conway:</b> Latitudinal Gradients in Population Trends and Demographic Traits of Burrowing Owls: Causes and Consequences	1520-1540	<b>David H. Johnson, Corey Scobie, Troy I. Wellicome:</b> Using the MP3-trap Technique to Capture Male Burrowing Owls in Cache or Temporary Burrows
1120-1140	<b>Courtney J. Conway, Alberto Macias Duarte:</b> Continental Patterns in Migration and Dispersal of Burrowing Owls based on Genetics and Stable Isotopes	1540-1600	<b>Eboni Duke*, Martha Desmond, Dawn VanLeeuwen:</b> Juvenile Burrowing Owl Survival and Dispersal in the Urban/ Agricultural Interface of Las Cruces, New Mexico
1140-1200	<b>Dayna Dominguez*, Martha Desmond, Gary Roemer, William Gould:</b> Stable Isotopes Reveal High Breeding Dispersal of a Migratory Owl ( <i>Athene cunicularia hypugaea</i> )	1600-1620	<b>David H. Johnson, Troy I. Wellicome, Mike Gregg, Courtney J. Conway, James Rebholz, Mike Livingston, Heidi Newsome, James Fox:</b> Use of Geolocators in Assessing Migration Patterns of Western Burrowing Owls in Oregon, Washington, and Saskatchewan
		1620-1700	<b>David H. Johnson, Eboni Duke, Troy L. Wellicome:</b> Panel Demonstration/ Discussion: Harnessing Geolocators, VHF and PTT Transmitters on Burrowing Owls

## PRESENTATION SCHEDULE (WEDNESDAY, Feb 5)

	<b>Olympic</b>	<b>Gold</b>
	<b>Conservation, Management, Translocation, Captive Breeding, Fossorial Wildlife (David Johnson)</b>	<b>Long-term Raptor Studies</b> (Douglas A. Boyce)
0800-0820	<b>OPEN</b>	<b>Jeff Lincer:</b> Welcome, Acknowledgements, and Announcements
0820-0900	<b>OPEN</b>	<b>Douglas A. Boyce:</b> "Science Matters: A View from Inside the Beltway"
0900-0920	<b>Alexandra Froese*:</b> Breeding and Foraging Ecology of Burrowing Owls in Southwestern Manitoba: The Manitoba	<b>Denver Holt:</b> Declining Populations of the Long-eared Owls and Snowy Owls in Montana and Alaska: Results of Long-term Research
0920-0940	<b>Sandra Menzel*:</b> Assessment of Artificial Burrows for Burrowing Owls at Mineta San José International Airport	<b>Michael Kochert, Karen Steenhof:</b> Long-term Reproduction of Golden Eagles in Relation to Habitat Alteration in SW Idaho <b>(0930-1000)</b>
0940-1000	<b>Heidi Newsome:</b> Patterns of Burrow Use by Burrowing Owls ( <i>Athene cunicularia</i> ) at the Mid-Columbia River National Wildlife Refuge Complex	<b>Michael Kochert, Karen Steenhof:</b> (cont.)
1000-1020	<b>BREAK</b>	<b>BREAK</b>
		<b>Human Impacts (Rick Harness)</b>
1020-1040	<b>Marie Barrett, Glenna Barrett, Shawna Bishop:</b> Avoidance, Minimization and Mitigation Measures Used During Construction to Protect Burrowing Owls in Imperial County, California	<b>Leslie New, Emily Bjerre, Brian Millsap, Mark Otto, Michael C. Runge :</b> Predicting Golden Eagle Fatalities at Wind Facilities in the Face of Uncertainty
1040-1100	<b>Greg Clark, Robert Fox -</b> Conservation of At-Risk Burrowing Owls Using Active Translocation in Arizona	<b>Patrick Kolar, Marc Bechard:</b> Impacts of Wind Energy Development on Breeding <i>Buteo</i> Hawks in the Columbia Plateau
1100-1120	<b>Lauren Meads, Aimee Mitchell, Dawn Brodie:</b> Bringing Back the Burrowing Owl ( <i>Athene cunicularia</i> ) to British Columbia: Community Conservation Looking Towards the next 10 Years	<b>Chris Vennum, Cynthia Downs, Michael Collopy, Chris Briggs:</b> Monitoring Population Health of SWHAs through Immunocompetence in Northern California
1120-1140	<b>Noelle A. Ronan, Laurie Dobson Correa, Karin Cleary-Rose, Heather Pert:</b> Protecting Owls Impacted by Development: Standards for Burrowing Owl Relocations within the Western Riverside County Multiple Species Habitat Conservation Plan Area, Riverside County, California	<b>Travis Booms, Geoffrey L. Holroyd, Marcel A. Gahbauer, Helen E. Trefry, David Wiggins, James A. Johnson:</b> Assessing the Decline, Status, and Conservation of Short-eared Owls in North America
1140-1200	<b>Noelle A. Ronan, Laurie Dobson Correa, Karin Cleary-Rose, Heather Pert:</b> Protecting Owls Impacted by Development: Standards for Burrowing Owl Relocations within the Western Riverside County Multiple Species Habitat Conservation Plan Area, Riverside County, California <b>(continued)</b>	<b>Rick Harness, James F. Dwyer, Kara Donohue, Pranay R. Juyyadi:</b> Contrasting Electrocution Risk Models from California, USA and Rajasthan, India

## PRESENTATION SCHEDULE (WEDNESDAY, continued)

	Olympic	Gold
1200-1300	LUNCH	LUNCH
		<b>Contaminants &amp; Health</b> (Jeff Lincer)
1300-1320	<b>Lisa A. Nordstrom:</b> Key Linkages between Burrowing Owls and Fossorial Wildlife	<b>ANNOUNCEMENTS</b>
1320-1340	<b>Jennifer Germano, Mallory Ecstut, Jeanette Perry, Allyson Walsh, Angela Covert, Ron Swaisgood, Kim Field:</b> Microclimate of Mojave Desert Tortoise Burrows as a Common Resource for Western Burrowing Owls	<b>James Watson, Robert W. Davies :</b> Assessing Lead Toxicosis and Diets of Nesting Golden Eagles in Washington
1340-1400	<b>Lisa A. Shipley, Miranda C. Crowell, Janet L. Rachlow, Jennifer S. Forbey:</b> Pygmy Rabbits: Obligate Burrowers under a Sagebrush Sea	<b>Dan Varland, Garth Herring, Collin A. Eagles-Smith, Thomas Hamer, Scott Ford:</b> Monitoring the Health of Avian Scavengers on the Pacific Coast
1400-1420	<b>Susanne Marczak, J.P. Montagne, Colleen L. Wisinski, Nan Nourn, Lisa A. Nordstrom; Debra M. Shier, Ronald R. Swaisgood:</b> Strategies for Successful Ground Squirrel Translocations in the Context of Creating Sustainable Habitat for Western Burrowing Owls in San Diego County	<b>Sofi Hindmarch, John E. Elliott, :</b> Who can be Hurt by Rat Poisons... Are Metropolitan Owls at Greater Risk than their Rural Counterparts?
1420-1440	Fossorial Wildlife – Panel Discussion Q&A	<b>Jason Brogan, Ronald C. Ydenberg, Kristine Kirkby, Sandi Ortiz:</b> Persistent Organic Pollutants in the Urban Environment: Exposure and Effects in an Avian Top Predator, the Cooper's Hawk ( <i>Accipiter cooperii</i> )
1440-1500	Fossorial Wildlife – Panel Discussion Q&A	<b>Panel of previous 4 speakers</b>
1500-1520	<b>BREAK</b>	<b>BREAK</b>
		<b>Other Research—Diurnal Raptors</b>  (James Dwyer)
1520-1540	<b>Lynne Trulio:</b> Burrowing Owls in the San Francisco Bay Area: Looking Back, Looking Forward	<b>Steve Lewis, Michelle L. Kissling:</b> Assessing Raptor Predation on Kittlitz's Murrelet in a Recently-Deglaciated Coastal Fjord
1540-1600	<b>Jessica Lovecchio, Kelly Bishop:</b> Imperial Irrigation District's Burrowing Owl Monitoring & Conservation	<b>James Dwyer, Rick E. Harness, Kerrin Doloughan:</b> Comparing Effectiveness of Competing Perch Deterrents for Raptors and Corvids
1600-1620	<b>Jeff Mach, Mike Gregg, David H. Johnson:</b> A Review of the Burrowing Owl Program on Umatilla Chemical Depot, Oregon	<b>Carol McIntyre, Joshua H. Schmidt:</b> Ecological and Environmental Correlates of Territory Occupancy and Breeding Performance of Migratory Golden Eagles in Interior Alaska
1620-1640	<b>Steven R. Sheffield:</b> Population dynamics and conservation status of the Western Burrowing Owl ( <i>Athene cunicularia hypugaea</i> ) in the United States and Canada: a 15-year update	<b>Frank Isaacs:</b> Golden Eagles Nesting in Oregon, 2011–2013
1640-1700	<b>David H. Johnson:</b> Burrowing Owl Symposium Wrap-up	<b>Steward Janes:</b> Distribution and Coexistence of Three <i>Buteo</i> Species in the Intermountain Region of Western North America



## PRESENTATION SCHEDULE (WEDNESDAY Feb 5, continued)

	<b>Bronze</b>
0800-1200	<b>SNVB BUSINESS MEETING</b>
	<b>Stream Amphibian Ecology and Conservation</b> (Bruce Bury)
1300-1320	<b>Announcements</b>
1320-1340	<b>R. Bruce Bury:</b> Stream Amphibians in the Pacific Northwest: Introduction to the Species, Habitats, Limits and Conservation Needs
1340-1400	<b>Kali Doten, Gwen W. Bury:</b> Behaviors Observed During Courtship of <i>Rhyacotriton variegatus</i>
1400-1420	<b>Lisa Wagner:</b> Courtship and Oviposition in Paedomorphic <i>Dicamptodon copei</i> and <i>Dicamptodon tenebrosus</i>
1420-1440	<b>David Reavill*, Steven Wagner, Brandon Fessler, Robert Weaver:</b> Chemosensory Detection and Shelter use of Terrestrial Giant Salamanders
1440-1500	<b>R. Bruce Bury, Gwen W. Bury, Christina L. Baggett, Kali Doten, Jason T. Bracken, Nick Waters, Rick Demmer:</b> Two species of <i>Dicamptodon</i> East of the Cascade Mountains in Oregon: Discovery of New Sites, Relationships and Biogeography
1500-1520	<b>BREAK</b>
1520-1540	<b>Hartwell Welsh, Garth R. Hodgson:</b> Stream Amphibians As Metrics Of Ecosystem Stress: A Case Study From California's Redwoods Revisited
1540-1600	<b>Deanna Olson, Julia I. Burton:</b> Headwater Stream Amphibian Habitat and Climate Change: Shrinking Heads Projected for Western Oregon Managed Forest Landscapes
1600-1620	<b>Caren Goldberg:</b> Detection of Stream Species Using Environmental DNA: Spatial and Temporal Inference
1620-1640	<b>Discussion</b>
1640-1700	<b>Discussion</b>

## PRESENTATION SCHEDULE (THURSDAY Feb 6)

0800-1000	<b>PLENARY—Enhancing Conservation Delivery (Gold/Olympic)</b>			
1000-1030	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>
	<b>Bronze</b>	<b>Gold</b>	<b>Olympic</b>	<b>Oak/Pine/Spruce</b>
	<b>Roads and Fauna</b>	<b>Other Research — Owls</b> (David Wiens)	<b>Forest Management</b>	<b>Development and Implementation of a Monitoring Cooperative for Terrestrial Amphibians</b>
1030-1040	<b>Announcements</b>	<b>Announcements</b>	<b>Announcements</b>	<b>Announcements</b>
1040-1100	<b>Jeff Drier:</b> Highway Maintenance Environmental Compliance Guidance for Protected Terrestrial Species	<b>Andrew Huang, John E. Elliott, Kathy Martin, Sofi Hindmarch:</b> Barn Owls ( <i>Tyto alba</i> ) in North America: Phylogeographic Structure, Connectivity, and Genetic Diversity	<b>Theodora Minkova:</b> Adaptive Management Process in the Olympic Experimental State Forest	<b>David Wake:</b> Salamanders as Model Study Organisms
1100-1120	<b>Hailey Starr, Kelly McAllister, Molly Sullivan*:</b> Wildlife Use of Highway Underpass Structures in Washington State	<b>David Wiens, Robert G. Anthony, Eric D. Forsman:</b> Competitive Interactions and Resource Partitioning Between Northern Spotted Owls and Barred Owls in Western Oregon	<b>Jake Verschuyt, A.J. Kroll, Jack Giovanini, Matthew Betts, Jim Rivers:</b> A Manipulative Study of the Effects of Forest Herbicide Use on Nest Success of Early Seral Birds	<b>Marc Hayes:</b> Vulnerability of Terrestrial Amphibians to Increases in Environmental Variability
1120-1140	<b>Craig Fergus*, Joseph Lorenz, Kristina Ernest, Steve Wagner:</b> Applying GIS Tools To The Analysis of Gene Flow In The American Pika and the Impacts of Roadways	<b>Lowell Diller, Keith A. Hamm, Desiree Early, David Lamphear, John P. Dumbacher:</b> Five Years into a Pilot Barred Owl Removal Experiment: Report on Feasibility, Effectiveness and Response of Northern Spotted Owls	<b>Teresa Lorenz, Kerri T. Vierling:</b> Why Are Most Snags Never Used by Woodpeckers for Nesting? The Role of Wood Density in Nest Site Selection	<b>Discussion</b>
1140-1200	<b>J. Charlie Palmer, James Rourke:</b> Barns and Barley: Developing a Highway through Sandhill Crane and Barn Owl Forage Habitat	<b>Denver Holt, Matthew Larson:</b> Natural Nest-site Characteristics of Two Small Forest Owls with Implications for Conservation and Management	<b>Peter Singleton:</b> Barred Owls and Spotted Owls in the Eastern Cascades, Washington	<b>Discussion</b>
1200-1300	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>
		<b>New Techniques, Data Analysis &amp; Modeling</b> (Carol McIntyre)		
1300-1320	<b>Announcements</b>	<b>Carol McIntyre, Karen Steenhof, Michael N. Kochert:</b> Coming to Terms: Why We Need to Use Consistent Terms to Describe Territory Occupancy and Breeding Activities	<b>OPEN</b>	<b>Announcements</b>
1320-1340	<b>Barbra Beasley:</b> Designing Effective Barrier Systems to Protect Amphibians from Roads	<b>James Junda, David M. Bird:</b> Use of Rotary Unmanned Aerial Vehicles (UAV) to Determine Nest Contents of Raptorial Birds	<b>OPEN</b>	<b>A.J. Kroll:</b> Responses of Terrestrial Amphibians in Production Ecosystems
1340-1400	<b>Jon Peterson, Kelly McAllister:</b> Fish Passage Designs Aid Wildlife Crossing in Washington State – State of the Practice	<b>Shawn Hawks, Steven J. Slater, Kent Woodruff:</b> Raptor Migration Monitoring & Predictive Modeling In The Northwest	<b>OPEN</b>	<b>Nancy Staub:</b> What We Learn from Mark-recapture Studies: The Case of the Plethodontid Salamander <i>Ensatina eschscholtzii</i>

# PRESENTATION SCHEDULE (THURSDAY Feb 6, continued)

	Bronze	Gold	Olympic	(Oak/Pine/Spruce)
			<b>Mammals</b>	<b>Terrestrial Amphibian Symposium</b> (A.J. Kroll/Tiffany Garcia)
1400-1420	<b>Discussion</b>	<b>Matt Larson, Denver Holt:</b> Investigations of a Roadside Survey Technique for Short-eared Owl	<b>Asa Staven*, Lori K. Sheeran, Jin-Hua Li, R. Steven Wagner:</b> Interactions Between Tourists and Juvenile Tibetan Macaques at Mt. Huangshan, China	<b>Aimee McIntyre, Eric M. Lund, Marc P. Hayes, Charlie M. Crisafulli:</b> Van Dyke's Salamanders in the Genus <i>Plethodon</i> : Estimates of Detection Probability and Implications for Research and Monitoring
1420-1440	<b>Discussion</b>	<b>Jesse Watson, Troy Wellicome, Erin Bayne:</b> Home Range and Resource Use of GPS-monitored Ferruginous Hawks ( <i>Buteo regalis</i> ) in Response to Changes in Energy-development Infrastructure	<b>Amy Ulappa, Lisa Shipley:</b> The Roles and Benefits of Captive Animal Research for on-the-Ground Wildlife Management	<b>Tiffany Garcia:</b> Sampling Techniques for Terrestrial Salamanders: The Good, the Bad, and the Ugly
1440-1500	<b>Discussion</b>	<b>Neil Paprocki, Eric G. Nolte, Stephen J. Novak, Gregory Kaltenecker, Jon R. Bart, Julie A. Heath:</b> How Responses of Raptors to Climate Change Affects the Reliability and Interpretation of Population Trend Estimates	<b>Alyson Brokaw, Joseph M. Szewczak:</b> Assessing the Use of Social Calls to Attract Bats to Artificial Roost Sites	<b>Discussion</b>
1500-1520	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>
		<b>Trends, Management, &amp; Public Education</b> (James Watson)		
1520-1540	<b>OPEN</b>	<b>Clifford Anderson, Dominique Viehover, Patrick Viehover, Steve Osmek:</b> Managing Raptors to Reduce Bird Hazards at the Seattle-Tacoma International Airport	<b>Stephanie M. DeMay, Lisette P. Waits, Janet L. Rachlow, Penny A. Becker:</b> Noninvasive Genetic Monitoring of the Columbia Basin Pygmy Rabbit Recovery	<b>Stephen Spear:</b> Genetic Monitoring of Amphibian Populations: Advances using Environmental DNA (eDNA)
1540-1600	<b>OPEN</b>	<b>Jim Watson:</b> Ferruginous Hawk Recovery in Washington: Implications of Potential Limiting Factors	<b>Julie Maenhout, Antoinette J. Piaggio, Jimmy D. Taylor:</b> Genetic Diversity of Beavers in Oregon	<b>Nathan Chelgren:</b> Multilevel Models for Monitoring Terrestrial Amphibians
1600-1620	<b>OPEN</b>	<b>Ryan Stutzman, Sara Gregory:</b> Ferruginous Hawk Habitat and Private Land Conservation: Lessons Learned and Future Challenges	<b>Kristen Richardson, William Gaines, Aaron Wirsing, Robert Long:</b> Patterns of Black Bear Relative Abundance in The North Cascades Ecosystem: Implications for the Role of Wilderness in Large Carnivore Conservation	<b>Discussion</b>
1620-1640	<b>OPEN</b>	<b>Mike Green, Kevin Kritz, Ted Swem, Robert Mesta, Phil Delphey, Susan Cameron, Maria Tur, Brian Millsap, Mark Otto:</b> Delisting Monitoring Results for the American Peregrine Falcon, 2003-2012	<b>Jeff Lewis:</b> Reintroducing Fishers to the Cascade Mountain Range in Washington	<b>Discussion</b>
1640-1700	<b>OPEN</b>	<b>Gretchen Albrecht, Susan Burchadt, Fred Koontz, James Watson:</b> Taking Raptor Ecology of the Shrub-Steppe from the Field to the Zoo	<b>Discussion</b>	<b>Discussion</b>



## PRESENTATION SCHEDULE (FRIDAY, Feb 7)

	Bronze	Oak/Pine/Spruce
	Agriculture and Fauna	Reptiles, Amphibians, & Decapods (Marc P. Hayes)
0800-0840	OPEN	OPEN
0840-0900	<b>James Huckabay:</b> Coordinated Resource Management 101—Finding Common Ground among Agricultural, Natural Resource and Wildlife Interests	<b>Alksandra Bugajski, Dustin Oaten, Tamara Lamb, Derek Ebner, Marcel Gahbauer:</b> Giving Frogs and Toads a Helping Hand: An Evaluation of Amphibian Translocation Efforts for Mitigation Purposes
0900-0920	<b>Tim Dring, Dave Kreft:</b> Natural Resource Conservation Service Conservation Planning and Practices Used on Private Lands Wildlife Habitat	<b>Ashley Smithers*, Laura Guderyahn, Meryl C. Mims:</b> Habitat and Landscape Factors Influencing the Presence of Five Pond Breeding Amphibian Species in Highly Urbanized Ponds in Gresham, OR
0920-0940	<b>John Cotton, Eric Braaten, Todd Baarstad, Ryan Stutzman, Erik Lewis, Don Larsen:</b> Developing and Implementing Conservation Reserve Program State Acres For Wildlife Enhancement Projects in Washington	<b>Dustin Oaten:</b> Migratory Behaviour of Two Sympatric Amphibian Species within a Grassland System
0940-1000	<b>Dominique Chabot, David M. Bird:</b> The Rise of Unmanned Aircraft in Wildlife Research and Management: Their Application to the Study of Waterbirds and Beyond	<b>Katie Remine, Jenny Mears, Chris Anderson:</b> Partnering for Amphibian Monitoring – Engaging Zoo Audiences in Collecting Data for Washington Department of Fish And Wildlife
<b>1000-1020</b>		<b>BREAK</b>
1020-1040	<b>Dave Kreft:</b> Natural Resource Conservation Service Easement Programs and Wildlife Habitat Protection, Restoration and Enhancement	<b>Stephan Selego, Tiffany Garcia:</b> Invasive, Native, and Aquaculture Red Swamp Crayfish Differ in Expressions of Behavioral Types across Temperature Gradients
1040-1100	<b>Erik Lewis, Tim Dring:</b> Washington State has Opportunity to Enhance Agricultural Habitat Through the “Habitat Buffers for Upland Birds” Practice of the Conservation Reserve Program	<b>Gwen W. Bury, R. Bruce Bury, Jason Bracken, Christina L. Baggett, Kali Doten:</b> Life of the Western Pond Turtle in the Willamette Valley: Growth Rate, Clutch Size, Algae Infestation and Conservation Status
1100-1120	<b>Discussion</b>	<b>Andrea Gielens, Aimee M. Mitchell, Vanessa L. Kilburn, Chris Currie, Deanna MacTavish:</b> Recovery of The Western Painted Turtle in the Lower Mainland and Fraser Valley: Recovery through Partnership, Planning and Persistence
1120-1140	<b>Discussion</b>	<b>Caleb Loughran*, Alison G. Scoville, Daniel D. Beck:</b> Variation in the thermal preference of Northern Pacific Rattlesnake ( <i>Crotalus oregonus</i> )
1140-1200	<b>Discussion</b>	<b>Daniel Beck, C.M. Gienger, Jared Horrocks, Aaron Gilbertson, Ray Geroso:</b> People and Rattlesnakes: Growth Rates and Life History Tradeoffs in <i>Crotalus oregonus</i>

# SPECIAL EVENTS!

**JOINT MEETING WELCOME RECEPTION:** The Welcome Reception on Wednesday evening 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 opportunity for professional engagement during the Poster Session held in conjunction with the Reception. Silent auction, raffle, and door prize 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. All that you do at the Reception will contribute in some way to furthering conservation in the Pacific Northwest landscape.

**POSTER SESSION:** The poster session will be held on Wednesday, February 5 from 1900-2200 in the Bronze/Silver/Gold rooms, in conjunction with that evening's welcome reception. The posters will be displayed throughout the evening, and taken down shortly after. Judging of student's poster will take place at this time.

**SILENT AUCTIONS/RAFFLES:** The partner organizations hosting this meeting will conduct several Silent Auctions, Raffles, and other fund-raising events to benefit organizational activities. Silent Auction and Raffle items arise from a wide array of donations from sponsors and members. Proceeds, by mutual agreement, are shared by the organizers to support various initiatives such as scholarships, conservation actions, and similar endeavors. Anticipate opportunities to participate throughout the week, with major Silent Auction and Raffle events at the Wednesday night Reception and Thursday night Banquet. Those not attending the Banquet will have an opportunity to participate in the Silent Auction and Raffle after the Banquet meal. There will be door prizes and other raffle events throughout the meeting. So, bring your \$1's, \$5's, \$10's, and any other denominations you prefer to be an active participant in these opportunities to further support the hosting groups. There will be some options to participate for as little as a penny!

**NWPARC/SNVB SOCIAL:** The Society of Northwest Vertebrate Biology and Northwest Partners in Amphibian and Reptile Conservation are pleased to invite their members and conference delegates to an informal social gathering in the Bronze Room, Tuesday evening (4 February). Doors open at 18:00 and a cash bar will be available. Food and beverages can also be purchased from the Grizzly Bar and/or Bin No. 20 Wine Bar & Restaurant, within the hotel. We look forward to our friends and colleagues re-connecting and making new connections.

**VENDOR BOOTHS:** We expect a small array of vendor exhibits that represent interests of sponsors, host organizations, and business entities aligned with interests of the meeting hosts. Vendors will represent programs, products, and messages that are consistent with interests and policies of the partner organizations. Meeting participants can expect to find information applicable to their professional pursuits as well as items for sale. These services will be available from 1:00 pm Tuesday through 5:00 pm Thursday.

**Note:** *For Program Updates, Announcements, Job Opportunities, and Other Useful Information, Participants Should Examine the Notice Board Near the Registration Area.*

# SPECIAL EVENTS!

**STUDENT MENTOR SESSION:** This session, scheduled for early Wednesday evening, is a special effort by the Student Opportunities Committee to help students make contact with resource professionals from the Pacific Northwest. This is a great opportunity for budding professionals to interact with prospective employers and other professional colleagues to get pointers on jobs, studies, and other professional endeavors. This session is intended for any interested resource professionals, academic faculty, other conservationists, and other participants to join with students for productive and enlightening discussion. Refreshments will be available for active participants in the session. This is an opportunity for students to connect with professionals in a casual setting to ask questions and advice about preparing for a career in conservation. Participants will meet and talk with a variety of mentors and different professionals, providing students with a great opportunity to network, develop contacts, and learn more about the future job market. Sign up at the registration desk to be a mentor or mentoree!

**PHOTO CONTEST:** The photo contest is scheduled in the Design room for Tuesday afternoon, all day Wednesday, and Thursday morning. Please drop off your photos and vote for your favorites. Winners will be announced at the Banquet.

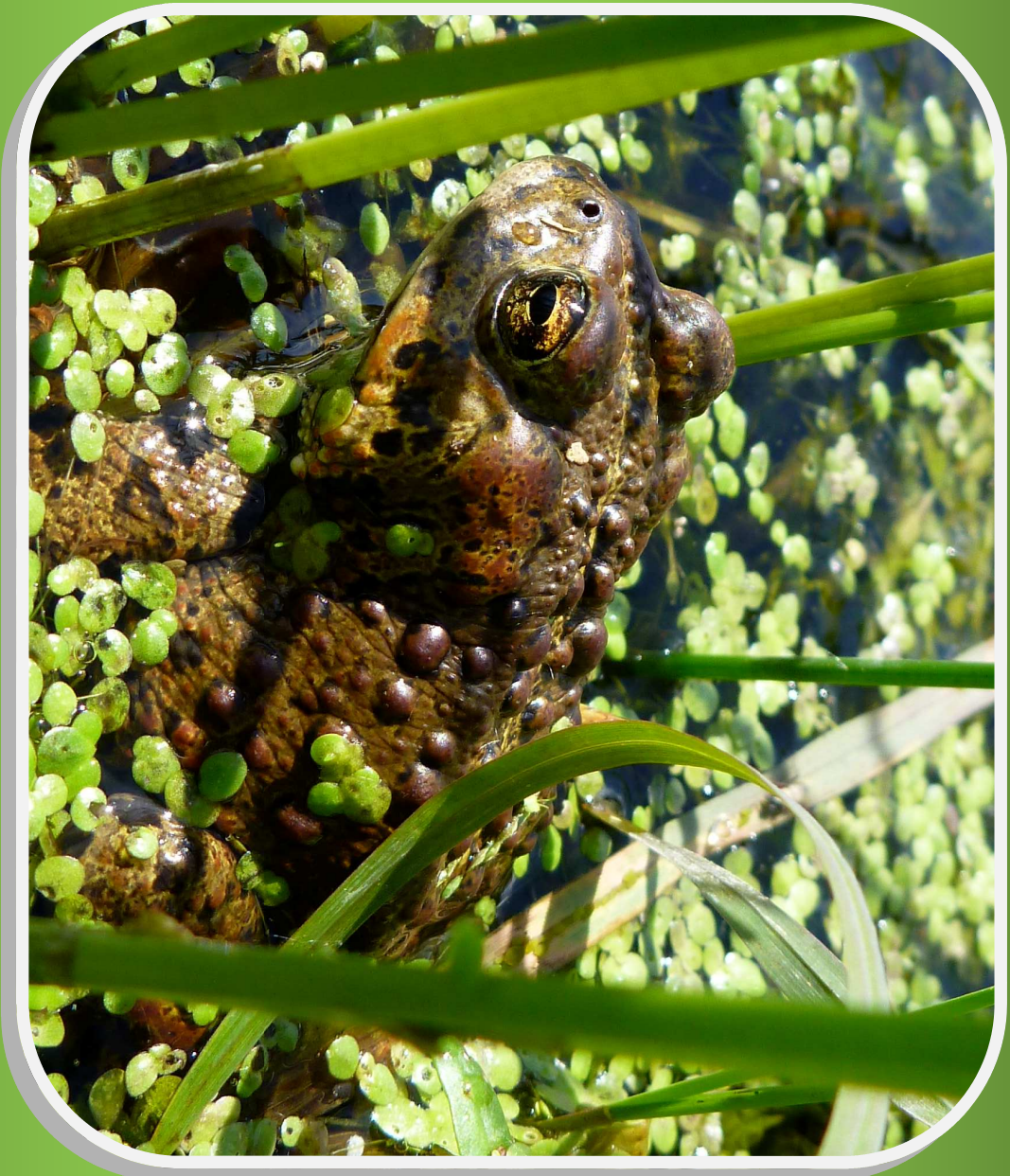
**JOINT MEETING BANQUET:** The Banquet on Thursday evening is an opportunity for members among all of the host organizations to mingle, dine, and enjoy camaraderie. We also will be recognizing an array of conservation accomplishments through awards to be presented by the partners hosting the Joint Meeting. 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 at the meeting, but don't count on that; be prepared.



Mike Passmore



**HEADIN' HOME!!!**



Kris Kendell

**THANKS FOR  
PARTICIPATING!**