

**California-Nevada Amphibian Populations Task Force
January 10-11, 2013**

**Humboldt State University
The Kate Buchanan Room
Arcata, California**

AGENDA

- Chair:** David Bradford, US Environmental Protection Agency, National Exposure Research Laboratory, Las Vegas, NV
- Meeting Coordinator:** Jef Jaeger, University of Nevada-Las Vegas, School of Life Sciences, Las Vegas, NV
- Arcata Hosts:** John Reiss, Humboldt State University, Department of Biology
Karen Pope, US Forest Service, Pacific Southwest Research Station
Michael van Hattem, California Dept. of Fish and Wildlife
Teal Richards-Dimitre, Humboldt State University Sponsored Programs
Dave Dimitre, Green Diamond Resource Company
Don Ashton, McBain and Trush, Inc.
Ryan Bourque, Green Diamond Resource Company
- Registration Support:** Amphibian and Reptile Conservancy

Wednesday, January 9, 2013

- 5:00-9:00 pm Informal, non-hosted meet and greet - Mad River Brewing Company, Blue Lake, CA (www.madriverbrewing.com/). Food is available but options are limited.

Thursday, January 10, 2013

- 7:45-8:30 am **Registration and Refreshments**
- 8:30-8:50 am **Introduction and Announcements.** Dave Bradford¹, Michael van Hattem², and Jef Jaeger³. ¹US Environmental Protection Agency, Las Vegas, NV; ²California Department of Fish and Wildlife, Eureka, CA; ³University of Nevada-Las Vegas, School of Life Sciences, Las Vegas, NV.
- 8:50-8:55 am **Welcome to Humboldt State University.** John Reiss, Professor of Zoology, Humboldt State University, Arcata, CA.
- Session 1** Moderator: Dave Bradford, US Environmental Protection Agency, Las Vegas, NV
- 8:55-9:20 am **Chytridiomycosis Disease Ecology across *Batrachoseps attenuatus* Populations in California.** Carla Sette*, Vance Vredenbug, and Andrew Zink. Department of Biology, San Francisco State University, San Francisco, CA. (25 min)

- 9:20-9:45 am ***Batrachochytrium dendrobatidis* Prevalence in Northern Red-legged Frogs (*Rana aurora*)—10 Years Later.** Michael Sun and John O. Reiss*. Department of Biological Sciences, Humboldt State University, Arcata, CA. (25 min)
- 9:45-10:10 am **Roundup Exposure Decreases Risk of *Batrachochytrium dendrobatidis* Infection in Pacific Treefrog (*Pseudacris regilla*) Larvae.** John Romansic^{1*}, James Johnson², Steven Wagner², Rebecca Hill³, Christopher Gaulke⁴ and Andrew Blaustein³. ¹H. T. Harvey & Associates, Los Gatos, CA; ²Department of Biological Sciences, Central Washington University, Ellensburg, WA; ³Department of Zoology, Oregon State University, Corvallis, OR; ⁴Department of Medical Microbiology and Immunology, University of California, Davis, CA. (25 min)
- 10:10-10:45 am **Break** (35 min)
- 10:45-11:10 am **Status of the Dixie Valley Toad: First Reports from Population Surveys and Sampling for Amphibian Chytrid Fungus *Batrachochytrium dendrobatidis*.** Matthew Forrest^{1*}, Kris Urquhart², James Harter³, Brian Todd⁴ and Oliver Miano⁴. ¹Center for Marine Biodiversity and Conservation, Scripps Institution of Oceanography, UC San Diego, La Jolla, CA; ²Native Aquatics and Sport Fishery Biologist, Nevada Department of Wildlife, Fallon, NV; ³U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, Las Vegas, NV; ⁴Department of Wildlife, Fish and Conservation Biology, UC Davis, Davis, CA. (25 min)
- 11:10-11:35 pm **Delayed Life History Effects, Multi-Level Selection, and Evolutionary Tradeoffs in the California Tiger Salamander.** Christopher Searcy Christopher^{1*}, Levi Gray², Peter Trenham³, and H. Bradley Shaffer⁴. ¹Department of Evolution and Ecology, University of California, Davis, CA; ²Department of Biology, University of New Mexico; ³Biology Department, Western Washington University; ⁴Department of Ecology and Evolutionary Biology, University of California, Los Angeles, CA. (25 min)
- 11:35-12:00 am **California Department of Fish and Wildlife 2012 Amphibian-related Conservation Activities.** Betsy Bolster and Laura Patterson*. California Department of Fish and Wildlife, Sacramento, CA. (25 min)
- 12:00-1:30 pm **Lunch** (90 min)
- Session 2** Moderator: Michael van Hattem, California Dept. of Fish and Wildlife, Eureka, CA
- 1:30-1:55 pm **It Takes a Basin to Raise a Frog: Results from a Decade of Monitoring Reproduction and Dispersal of the Cascades Frog (*Rana cascadae*).** Justin Garwood. California Department of Fish and Wildlife, Arcata, CA. (25 min)
- 1:55-2:20 pm **Pond-and-Plug Meadow Restoration Creates Habitat for Native and Invasive Species.** Karen Pope* and Diane Sutherland-Montoya. USDA Forest Service, Redwood Sciences Laboratory, Arcata, CA. (25 min)

- 2:20-2:45 pm **Habitat Factors Mediate Coexistence between *Rana cascadae* and Introduced Trout.** Rosemary Hartman^{1*}, Karen Pope², Hartwell Welsh², and Sharon Lawler¹. ¹Graduate Group in Ecology, University of California, Davis, CA; ²Redwood Sciences Laboratory, Pacific Southwest Research Station, USDA Forest Service, Arcata, CA. (25 min)
- 2:45-3:10 pm **Uncovering the Origin of Pathogenic Chytrid Fungus in Japan.** Gabriela Rios-Sotelo. Department of Biology, San Francisco State University San Francisco, CA. (25 min)
- 3:10-3:40 pm **Break** (30 min)
- 3:40-4:05 pm **The Sad Song of the Yosemite Toad: The Role of a Panzootic Fungus in an Enigmatic Decline.** Celeste Dodge^{1*}, Cathy Brown², Amy Lind², Lucas Wilkinson², Katie Wilkinson², and Vance Vredenburg¹. ¹San Francisco State University Department of Biology, San Francisco, CA; ²US Forest Service PSW Research Station and Sierra Nevada Amphibian Monitoring Program, Berkeley, CA. (25 min)
- 4:05-4:30 pm **Health Assessments of Western Pond Turtles from Two Northern California Populations.** Ninette Daniele^{1*}, Mike Castillio², Jada-Simone White², and Tag Engstrom². ¹ Biological Sciences Department, California State University, Chico, CA; ² Biological Sciences Department, California State University, Chico, CA. (25 min)
- 4:30-4:55 pm **How Should We Manage Amphibian Biodiversity in California?** Brian Todd^{1*}, Aaron Lotz¹, and Betsy Bolster². ¹Department of Wildlife, Fish and Conservation Biology, UC Davis, Davis, CA; ²California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program, Sacramento, CA. (25 min)
- 4:55-5:00 pm **Announcements**

BANQUET
Blue Lake Casino's Sapphire Palace

6:00-6:30 pm **Guests Arrive**

7:00 pm **Dinner and Presentation:**

**Origins, Maturation and Prospectus of the Declining
Amphibian Enterprise: Through One Perspective**

R. Bruce Bury
Research Zoologist, U.S. Geological Survey,
Forest and Rangeland Ecosystem Science Center, Corvallis, OR

POSTERS
(All Day, Thursday and Friday)

Evaluating Wildlife Crossing Tunnels through Behavioral Analyses and Movement Rates of the California Tiger Salamander, *Ambystoma californiense*. Tracy Bain^{1*}, David Cook², and Derek Girman¹.
¹Department of Biology, Sonoma State University, Rohnert Park, CA; ²Sonoma County Water Agency, Santa Rosa, CA.

Impacts of Landscape Features on the Genetic Structure of the California Giant Salamander (*Dicamptodon ensatus*). Briana Callahan and Derek Girman*. Department of Biology, Sonoma State University, Rohnert Park, CA.

“Hands-on, Minds-on” 3rd Grade Teaching Module: Life History and Population Ecology of Turtles. Ninette Daniele^{1*} and Jada-Simone White². ¹Biological Sciences Department, California State University, Chico, CA; ²Biological Sciences Department, California State University, Chico, CA.

Use of the Antifungal Drug Itraconazole to Treat *Batrachochytrium dendrobatidis* on Wild Caught Juvenile Cascades frogs (*Rana cascadae*) from the Lassen Region of California. Bennett Hardy^{1*}, Karen Pope², and Richard Brown¹. ¹Humboldt State University, Department of Wildlife, Arcata, CA; ²USDA Forest Service, Redwood Sciences Laboratory, Arcata, CA.

The Grand Dame of the North Fork Feather River: Insights into Longevity from Photographic Identification of Individual Foothill Yellow-legged Frogs (*Rana boylei*) Using Chin Mottling Patterns. Karla Marlow^{1*}, Kevin Wiseman^{1,2}, Clara Wheeler³, Joseph Drennan¹, and Ronald Jackman¹. ¹Garcia and Associates (GANDA), San Francisco, California; ²Department of Herpetology, California Academy of Sciences, San Francisco, California; ³USDA Pacific Southwest Research Station, Arcata, CA.

Male Mate Choice and Species Recognition via Chemical Cues in Pacific Newts. Kellianne Minarik*, Emily Harvey, Vanessa O’sullivan, Brittany French, and Derek Girman. Department of Biology, Sonoma State University, Rohnert Park, CA.

Friday, January 11, 2013

7:45-8:30 am **Registration and Refreshments**

8:30-8:35 am **Announcements.** David Bradford, US EPA, Las Vegas, NV

8:35-9:25 am **Plenary Presentation**

Is the Law Failing the West's Amphibians?

Holly Doremus

UC Berkeley School of Law:
Professor of Environmental Regulation
Co-Director, Center for Law, Energy & the Environment
Director, Environmental Law Program

Session 3 Moderator: Karen Pope, Pacific Southwest Research Station, Redwood Sciences Lab, Arcata CA

9:25-9:55 am **Detection of Stream-breeding Amphibians Using Environmental DNA.** Caren Goldberg^{1*}, David Pilliod², Robert Arkle², and Lisette Waits¹. ¹Fish and Wildlife Resources, University of Idaho, Moscow, ID; ²U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center, Boise, ID. (25 min)

9:55-10:30 am **Break** (35 min)

10:30-10:55am **The Impact of a Fungal Pathogen on the Cascades frog: Does Variation in Virulence Matter?** Jonah Piovia-Scott, Jonah^{1*}, Karen Pope², Daniel Rejmanek³, S. Joy Worth³, Sharon Lawler⁴, And Janet Foley³. ¹Department of Evolution and Ecology, University of California, Davis, CA; ²Pacific Southwest Research Station, United States Forest Service, Arcata, CA; ³Department of Veterinary Medicine and Epidemiology, University of California, Davis, CA; ⁴Department of Entomology, University of California, Davis, CA. (25 min)

10:55-11:20 am **Evolutionary Dynamics and Management Challenges of Hybrid California Tiger Salamanders.** H. Bradley Shaffer^{1*}, Jarrett Johnson² and Benjamin Fitzpatrick³. ¹Department of Ecology and Evolutionary Biology, University of California, Los Angeles; ²Department of Biology, Western Kentucky University, Bowling Green, KY; ³Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN. (25 min)

11:20-11:45 am **California Amphibian and Reptile Species of Future Concern.** Amber Wright^{1*} and H. Bradley Shaffer². ¹Department of Evolution and Ecology, University of California, Davis; ²Department of Ecology and Evolutionary Biology, University of California, Los Angeles, CA. (25 min)

11:45-1:15 pm **Lunch** (90 min)

Session 4 Moderator: Don Ashton, McBain and Trush, Inc., Arcata CA

- 1:15-1:40 pm **The Demography of Sources and Sinks in an Amphibian Metapopulation.** David Pilliod^{1*} and Rick Scherer². ¹U.S. Geological Survey, Snake River Field Station, Boise, ID; ²Colorado State University, Department of Fish, Wildlife and Conservation Biology, Fort Collins, CO. (25 min.)
- 1:40-2:05 pm **Amphibian Population Trends In Yosemite National Park: What Do We Know from Long-Term Monitoring?** Gary Fellers*, Patrick Kleeman, and David Miller. U.S. Geological Survey, Western Ecological Research Center, Point Reyes National Seashore, Point Reyes, CA. (25 min)
- 2:05-2:30 pm **Thermoregulatory Behavior and Growth Characteristics of Western Pond Turtles on the Regulated Mainstem Trinity River and Unregulated South Fork Trinity River.** James Bettaso^{1*}, Donald Ashton², and Hartwell Welsh². ¹U. S. Fish and Wildlife Service, East Lansing Field Office, East Lansing, MI; ² U. S. Forest Service, Redwood Sciences Laboratory, Arcata, CA. (25 min)
- 2:30-2:55 pm **Amphibian Conservation and a *Growing Issue* on the North Coast.** Michael van Hattem^{1*}, Linda Miller¹, and Scott Bauer¹. ¹California Department of Fish and Wildlife, Coastal Conservation Planning, Eureka, CA. (25 min)
- 2:55-3:20 pm **Break** (25 min)
- 3:20-3:45 pm **Woodland Salamanders as Metrics of Forest Ecosystem Recovery: A Case Study from California's Redwoods.** Hartwell Welsh Jr.* and Garth Hodgson. USDA Forest Service, Pacific Southwest Research Station, Redwood Sciences Laboratory, Arcata, CA. (25 min)
- 3:45-4:10 pm **Plasticity of Breeding in Foothill Yellow-legged Frogs (*Rana boylei*) Relating to the Spring Snowmelt Recession in the Sierra Nevada.** Ryan Peek* and Sarah Yarnell. Center for Watershed Sciences, University of California, Davis, CA. (25 min)
- 4:10-4:35 pm **Status of Restoration and Research to Recover Mountain Yellow-legged Frogs in Sequoia and Kings Canyon National Parks.** Daniel Boiano^{1*}, Isaac Chellman¹, and Roland Knapp². ¹Sequoia and Kings Canyon National Parks, National Park Service, Three Rivers, CA; ²Sierra Nevada Aquatic Research Laboratory, University of California Santa Barbara, Mammoth Lakes, CA. (25 min)
- 4:35-5:00 pm **Population Genetics of Decaying Range Edges in the California Red-legged Frog (*Rana draytonii*).** Jonathan Richmond¹, Adam Backlin^{1*}, Patricia Tatarián², and Ben Solvesky³. ¹U. S. Geological Survey, San Diego CA; ²Wildlife Research Associates, Santa Rosa CA; ³2800 Cottage Way, Room W-2606, Sacramento, CA. (25 min)
- 5:00-5:10 pm **Announcements, Discussion of Future Meeting Venues, and Closing Remarks.** Dave Bradford.

Saturday, January 12, 2013

- 8:30 am-1:30 **Field Trip: Amphipalooza – How Many Species of Amphibians Can We Find?**
Sign-up and details will be provided at meeting on January 10.

* Indicates presenter in multi-authored talks