

California-Nevada Amphibian Populations Task Force

January 11–12, 2024

University of California, Merced
Merced, CA

AGENDA

- Chair:** Dave Bradford, Las Vegas, NV
- Vice Chair:** Jef Jaeger, School of Life Sciences, University of Nevada, Las Vegas
- Local Organizers:** Rob Grasso, Yosemite National Park, CA
Laura Van Vranken, Sequoia/Kings Canyon National Park, CA
John Kunna, LSA, Point Richmond, CA
- Parent Organization:** Amphibian and Reptile Conservancy
- Sponsor:** Department of Natural Resources, University of California, Merced

Wednesday, January 10, 2024

- 6:30-9:30 pm There is no Meet-and-Greet location, instead we suggest trying the various locations in the downtown area around the El Capitan Hotel. For those of you that love beer, please keep in mind that on Thursday evening we will officially be congregating at the Tioga Sequoia Brewing Taproom (located downtown), so you may want to try other spots.

Thursday, January 11, 2024

- 7:45-8:30 am **Registration and Refreshments**
- 8:30-8:45 am **Introduction and Announcements:** Dave Bradford
- 8:45-8:55 am **Thirty Years of Amphibian Conservation in Yosemite National Park: A Tale of Despair from the Unknown to a Lesson of Endurance and Hope.** Robert L. Grasso, Resources Management and Science Division, Yosemite National Park, CA

Session 1

- Moderator:** Sharon Marks, Department of Biological Sciences, California State Polytechnic University, Humboldt, Arcata, CA
- 8:55-9:15 am **Desert Slender Salamander (*Batrachoseps aridus*) and Salamanders in the Desert (*Batrachoseps* sp.) Update, or What We Accomplished Since the 2020**

APTF Meeting. Robert N. Fisher^{1*}, Casey Moss², Elizabeth Jockusch³, James Gannon⁴, Jeff Nordland¹, Jonathan Richmond¹, Andrew Louros⁵, Nick Van Gilder³, Robert Hansen⁶, Nathan Smith¹, Sam Fisher¹, Edwin Gaylord⁷, Todd Esque⁷, Carlton Rochester¹, Spencer Williams⁵, Noah Morales⁸, Vernon Bleich⁹, Adam R. Backlin⁵, and Elizabeth A. Gallegos⁵. ¹San Diego Field Station – San Diego Office, USGS Western Ecological Research Center, San Diego, CA, rfisher@usgs.gov; ²Dixon Field Station, USGS Western Ecological Research Center; ³University of Connecticut; ⁴California Desert Interagency Fire Program, Bureau of Land Management; ⁵Santa Ana Substation, USGS Western Ecological Research Center, Santa Ana, CA; ⁶Museum of Vertebrate Zoology, University of California, Berkeley; ⁷Henderson Field Station, USGS Western Ecological Research Center, Henderson, NV; ⁸Cal Poly Humboldt, Humboldt, CA; ⁹California Department of Fish and Wildlife, Bishop, CA.

- 9:15-9:35 am **A Pond Array for Investigating Predation on California Red-legged Frogs (*Rana draytonii*) by Rough-skinned Newts (*Taricha granulosa*).** Michael F. Westphal. US Bureau of Land Management, Central Coast Field Office, Marina, CA, mwestpha@blm.gov.
- 9:35-9:55 am **Let's Dig In: Western Spadefoot (*Spea hammondi*) Breeding Pool Construction in Coastal Orange County, CA.** Spencer J. Williams*, Andrew J. Louros*, Katherine L. Baumberger, Gage L. Hollingsworth, Mietron S. Shahbodaghloo, Adam R. Backlin, and Robert N. Fisher. U.S. Geological Survey, Western Ecological Research Center, San Diego Field Station, San Diego, CA.
- 9:55-10:30 am **Break and Refreshments** (35 min).
- 10:30-10:50 am **A New Herpetological Field Guide for California.** Robert W. Hansen^{1*} and Jackson D. Shedd². ¹Museum of Vertebrate Zoology, University of California, Berkeley, CA; ²San Diego Natural History Museum, San Diego, CA.
- 10:50-11:10 am **Life in the Desert; Columbia Spotted Frogs (*Rana luteiventris*) in the Great Basin.** Ellen K. Wilson*, and Mary M. Peacock. Department of Science, University of Nevada, Reno; Department of Science, University of Nevada, Reno.
- 11:10-11:30 am **Five-year Status Review for the Arroyo Toad, *Anaxyrus californicus*.** Andrew J. Dennhardt. Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, Ventura, CA.
- 11:30-11:50 am **Build it and They Will Come – California Red-legged Frog Habitat Restoration Success in Northern Baja California.** Tashi R. MacMillen^{1*}, Anny Peralta-García², Jeff A. Alvarez³, Jorge H. Valdez-Villavicencio², and Bradford D. Hollingsworth⁴. ¹Sequoia Ecological Consulting, Inc. Solana Beach, CA, tmacmillen@sequoiaeco.com; ²Conservacion de Fauna del Noroeste, A.C., Ensenada, Baja California, Mexico; ³The Wildlife Project, Sacramento, California; ⁴Department of Herpetology, San Diego Natural History Museum, San Diego, CA.

11:50-1:50 pm **Lunch** (2 hours)

Session 2

Moderator: John Kunna, LSA, Point Richmond, CA

1:50-2:10 pm **Research and Conservation of Terrestrial Salamanders in Arid and Highly Seasonal Environments, Adventures with Camera Traps.** Christopher J. Evelyn. Cheadle Center of Biodiversity and Ecological Restoration, University of California, Santa Barbara, Santa Barbara, CA, christopher_evelyn@ucsb.edu.

2:10-2:30 pm **Proposed Listing of the Northwestern Pond Turtle (*Actinemys marmorata*) and Southwestern Pond Turtle (*Actinemys pallida*) as Threatened under the Endangered Species Act.** Andrew J. Dennhardt. Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, Ventura, CA.

2:30-2:50 pm **Atypical Breeding Habitat Use by *Spea hammondi* and *Rana boylei*.** Jakob Woodall^{1*}, Marissa Montjoy^{1*}, Andie Herman², Colleen Kamoroff¹, and Holly Burger¹. ¹Stillwater Sciences, Berkeley, CA, jwoodall@stillwatersci.com and mmontjoy@stillwatersci.com; ²Pacific Gas and Electric Company, Oakland, CA.

2:50-3:10 pm **Beyond the Karst: Diversification and Radiation of the Genus *Hydromantes* in Northern California.** Casey D. Moss^{1*}, Noah M. Morales², Robert W. Hansen³, Elizabeth L. Jockusch⁴, and Nicholas Van Gilder⁴. ¹U.S. Geological Survey, Dixon, CA; ²California Polytechnic University Humboldt, Arcata, CA; ³Museum of Vertebrate Zoology, University of California, Berkeley, CA; ⁴Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT.

3:10-3:40 pm **Break and Refreshments** (30 min).

3:40-4:00 pm **Perspectives on Northwestern Pond Turtle (*Actinemys marmorata*) Monitoring, Management and Habitat Restoration in Yosemite National Park.** Jason P. Waddington*, Ninette R Daniele*, Robert L. Grasso, Carson E. Lillard, and Michael Morales. Resources Management and Science Division, Yosemite National Park, CA, ninette_daniele@nps.gov.

4:00-4:20 pm **Connecting the Canyons: Conservation Genomics of a Desert-dwelling Lungless Salamander (*Batrachoseps campi*).** Nicholas R. Van Gilder^{1*}, Christopher Norment², and Elizabeth L. Jockusch¹. ¹Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT, nicholas.van_gilder@uconn.edu; ²Department of Environmental Science and Ecology, State University of New York Brockport, Brockport, NY.

4:20-4:40 pm **Distribution and Habitat Use of the Santa Clara County Population of Red-bellied Newts (*Taricha rivularis*).** Joie De Leon^{1,2*} and Rachel E. O'Malley². ¹Swaim Biological Inc., Livermore, CA, joiemdeleon@gmail.com; ²Department of Environmental Studies, San Jose State University, San Jose, CA.

- 4:40-5:00 pm **Lessons Learned from a Decade of Head-starting Endangered Frogs at the San Francisco Zoo.** Rochelle Stiles*, Ben Witzke*, Jamie McNellis*, Mikaela Wiley, Eric Krussman, and Jessie Bushell. Conservation Department, San Francisco Zoo and Gardens, San Francisco, CA, rochelles@sfzoo.org.
- 5:00-5:05 pm **Announcements:** Dave Bradford
- 6:00-ish pm Informal No-host Congregation at Tioga-Sequoia Brewery Taproom: 1707 N Street, Merced, CA. Beer on tap and we get \$1 off beer prices. A food truck with Mexican-style fare will be available and Little Oven Pizza (just around the corner) makes very good pizza for take-out to the taproom.

Friday, January 12, 2024

- 7:45-8:30 am **Registration and Refreshments**
- 8:30-8:40 am **Announcements:** Dave Bradford

Session 3

- Moderator:** Ninette Daniele, Resources Management and Science Division, Yosemite National Park, CA
- 8:40-9:00 am **Pond Characteristics that Influence Oviposition Site Selection for Two Pond-breeding Amphibians, Northern Red-legged Frog (*Rana aurora*) and Northwestern Salamander (*Ambystoma gracile*).** Jessica Jones* and Sharyn B. Marks. Department of Biological Sciences, California State Polytechnic University, Humboldt, Arcata, CA, jj227@humboldt.edu.
- 9:00-9:20 am **Informing Management Strategy for the Relict Leopard Frog: An Attempt to Improve Augmentation Success through Pre-Exposure and Clearance of an Amphibian Pathogen.** Rebeca Rivera^{1*}, Anthony W. Waddle², Yorick Lambrechts³, Frank van Breukelen¹, and Jef R. Jaeger¹. ¹School of Life Sciences, University of Nevada, Las Vegas, rivera48@unlv.nevada.edu; ²Veterinary and Agricultural Sciences, University of Melbourne, Australia, ³School of Natural Sciences, University of Tasmania, Australia.
- 9:20-9:40 am **Movement Ecology of North Feather Clade Foothill Yellow-legged Frogs.** Kelly Weintraub* and Colin P. Dillingham. Plumas National Forest, Mt Hough Ranger District, Quincy, CA, kelly.weintraub@usda.gov.
- 9:40-10:00 am **Prevalence of *Batrachochytrium* and Ranavirus in Southern Torrent Salamanders (*Rhyacotriton variegatus*) in Northern California.** Marilyn V. Sandoval* and Karen M. Kiemnec-Tyburczy. Department of Biological Sciences, California State Polytechnic University, Humboldt, Arcata, CA, mvs26@humboldt.edu.
- 10:00-10:30 am **Break and Refreshments** (30 min)
- 10:30-10:50 am **Loss of an Invasive Fish Predator in an Amphibian Dominated Pond Ecosystem Causes Trophic Rearrangement.** Michael P. Marchetti*, Esperanza Matteucci, Fiona

Quimby, and James Morrison. Department of Biology, St. Marys College of California, Moraga CA, mpmarchetti@stmarys-ca.edu.

- 10:50-11:10 am **A Successful Method to Translocate California Red-legged Frogs in Central California.** Jeff A. Alvarez^{1*}, Mike Palladini², and Jeffery T. Wilcox³. ¹The Wildlife Project, Sacramento, CA.; ²Land Trust of Napa County, Napa, CA; ³ Mitsui Ranch Preserve, Petaluma, California.
- 11:10-11:30 am **Applying Novel Genetic Methods to Rapidly Scan for Non-Native Genes in Sonoma California Tiger Salamanders.** Robert D. Cooper^{1,2*}, Erin Toffelmier^{1,2}, Dave G. Cook³, and H. Bradley Shaffer^{1,2}. ¹Department of Ecology and Evolutionary Biology, University of California, Los Angeles, CA, robert.cooper@ucla.edu; ²La Kretz Center for California Conservation Science, Institute of the Environment and Sustainability, University of California, Los Angeles, CA; ³Sonoma County Water Agency, Santa Rosa, CA.
- 11:30-11:50 am **Is *Spea hammondi* One Species or Two?: Population and Landscape Genomics of a Vernal Pool Specialist.** H. Bradley Shaffer*, Kevin M. Neal, and Robert Cooper. Department of Ecology and Evolutionary Biology, and La Kretz Center for California Conservation Science, Institute of the Environment and Sustainability, University of California, Los Angeles, CA.
- 11:50-1:40 pm **Lunch** (1 hour, 50 minutes)

Session 4

- Moderator:** Tom Smith, Earth Research Institute, University of California, Santa Barbara, CA
- 1:40-1:50 pm **Update on Chileno Valley Newt Brigade.** Liza Prunuske, Chileno Valley Newt Brigade, Petaluma, CA.
- 1:50-2:10 pm **Rogue Turtles with Exotic Leeches: The Northwestern Pond Turtle, *Actinemys marmorata*, as a Host for the Common North American Turtle Leech, *Placobdella parasitica*.** Jason M. Reilly¹, Don T. Ashton^{2*}, James P. Holley³, Max C. McClarnon⁴, William E. Moser⁵, and Anna J. Phillips⁶. ¹Bureau of Land Management, Medford District, Grants Pass, OR; ²McBain Associates, Applied River Sciences, Arcata, CA; ³Northwest Ecological Research Institute, Portland, OR; ⁴Southern Oregon University, Ashland, OR; ⁵Smithsonian Institution, National Museum of Natural History, Suitland, MD; ⁶Smithsonian Institution, National Museum of Natural History, Washington, D.C.
- 2:10-2:30 pm **The Nature and Extent of Algal Symbiosis in North American Ranids.** Zachary T. Vegso* and Sharyn B. Marks. Department of Biological Sciences, California State Polytechnic University, Humboldt, Arcata, CA.
- 2:30-2:50 pm **Sals in the City: Surprising Response of the Wandering Salamander, *Aneides vagrans*, to Urbanization.** Noah M. Morales. California Polytechnic University, Humboldt, Arcata, CA.

- 2:50-3:10 pm **An Update on CDFW Amphibian Efforts and Quantifying Drought Impacts on Select Amphibians in California.** Ryan A. Peek^{1*}, Isaac Chellman^{2*}, and David Dimitrie³.
¹California Department of Fish and Wildlife, Branch Office, West Sacramento, CA;
²California Department of Fish and Wildlife, Region 2, Rancho Cordova, CA; ³Detroit Zoological Society, Royal Oak, MI.
- 3:10-3:35 pm **Break and Refreshments** (25 min)
- 3:35-3:55 pm **A Bi-national Effort to Re-establish Populations of the California Red-Legged Frog (*Rana draytonii*) in Extirpated Parts of the Range in Southern California.** Jonathan Richmond*, Elizabeth Gallegos, Adam Backlin, and Robert Fisher. U.S. Geological Survey, San Diego CA.
- 3:55-4:15 pm **Amphibian Update for Yosemite National Park – Insights on New Management Actions and Future Direction.** Robert L. Grasso*, Ninette R. Daniele, and Carson E. Lillard. Resources Management and Science Division, Yosemite National Park, El Portal, CA, rob_grasso@nps.gov.
- 4:15-4:35 pm **Evolutionary Rescue and Reintroduction of Resistant Frogs Allows Recovery in the Presence of a Lethal Fungal Disease.** Roland A. Knapp^{1,2*}, Mark Q. Wilber³, Allison Q. Byrne^{4,5}, Maxwell B. Joseph^{6,7}, Thomas C. Smith^{1,2}, Andrew P. Rothstein^{4,5}, Robert L. Grasso⁸, and Erica Bree Rosenblum^{4,5}. ¹Sierra Nevada Aquatic Research Laboratory, University of California, Mammoth Lakes, CA, roland.knapp@ucsb.edu; ²Earth Research Institute, University of California, Santa Barbara, CA; ³School of Natural Resources, University of Tennessee Institute of Agriculture, Knoxville, TN; ⁴Department of Environmental Science, Policy, and Management, University of California, Berkeley, CA; ⁵Museum of Vertebrate Zoology, University of California, Berkeley, CA; ⁶Earth Lab, University of Colorado, Boulder, CO; ⁷Planet, San Francisco, CA; ⁸Resources Management and Science, Yosemite National Park, El Portal, CA.
- 4:35-4:55 pm **Initial Demographic Estimates for Two Species of Narrowly Endemic Toads in Central Nevada: *Anaxyrus monfontanus* and *Anaxyrus nevadensis*.** Patrick M. Kleeman^{1*}, Brian J. Halstead², Jonathan P. Rose³, Kevin Guadalupe⁴, and Michael West⁵.
¹US Geological Survey, Point Reyes Station, CA, pkleeman@usgs.gov; ²US Geological Survey, Dixon, CA; ³US Geological Survey, Santa Cruz, CA; ⁴Nevada Department of Wildlife, Las Vegas, NV; ⁵Nevada Department of Wildlife, Tonopah, NV.
- 4:55-5:00 pm **Announcements and Closing Remarks.** Dave Bradford.

Saturday Field Trip, January 13, 2024 (Optional)

- 9:00 - Noon The field trip will consist of a walking tour of the vernal pool habitats on a working ranch about 30 minutes from Merced. The area comprises grasslands, vernal pools, and seasonal creeks that provide vital ecosystem services for the region as well as aquatic and upland habitat for Western Spadefoot, California Tiger Salamander, tadpole shrimp, fairy shrimp, and sensitive plant species. Given the early date in the year, however, we may not see any of these species. The trip will be led by staff of the Sierra Foothill Conservancy, which has a conservation easement for the property. The terrain is uneven rolling grassland in wet

conditions, with no trails. Bring waterproof boots, and clothing layers for cold to warm conditions and potentially rain. We will meet up at a time to be determined in front of the Le Grand Community Park, 13071 Le Grand Rd., Le Grand, CA 95333, located about 20 minutes from Merced. We will then caravan in private vehicles another 10 minutes to the site. There will be ample parking at the site, but NO RESTROOMS. More details will be provided at the meeting.

POSTERS (alphabetical by author)

Thursday

During breaks

Literature Review and Meta-analysis: Effectiveness of Amphibian and Reptile Road Crossing Systems. Cheryl Brehme and Robert Fisher. San Diego Field Station – San Diego Office, USGS Western Ecological Research Center, San Diego, CA.

A New Tiger Salamander King in Town: Documenting the Spread of Barred Tiger Salamanders (*Ambystoma mavortium*) within San Diego County. Sam Fisher^{1*}, Dhafir Williams¹, Tristan Edgarian¹, Carlton Rochester¹, Jeff Nordland¹, James Gannon², Andrew Louros³, Nathan Smith¹, Spencer Williams³, Edward Ervin⁴, Jeremy Sebes¹, Brad Hollingsworth⁵, Chris Mcallister⁶, Chris Croom⁷, H. Brad Shaffer⁸, and Robert N. Fisher¹.
¹San Diego Field Station – San Diego Office, USGS Western Ecological Research Center, San Diego, CA, rfisher@usgs.gov; ²California Desert Interagency Fire Program, Bureau of Land Management; ³Santa Ana Substation, USGS Western Ecological Research Center, Santa Ana, CA; ⁴Merkel & Associates, Inc., San Diego, CA; ⁵The San Diego Natural History Museum, San Diego, CA; ⁶Division of Natural Sciences, Northeast Texas Community College, Mt. Pleasant, TX; ⁷IB Biology & AVID, San Diego High School; ⁸University of California Los Angeles, Los Angeles, CA.

Divergence Time Estimation and Paleobiogeography of the Salamander Subgenus *Plethopsis*. Max Laubstein^{1*}, Christopher Evelyn¹, and Doug Wilson².
¹Cheadle Center for Biodiversity & Ecological Restoration, University of California, Santa Barbara; ²Department of Earth Science, University of California, Santa Barbara, Santa Barbara, CA.

Illegal take of northwestern pond turtle (*Actinemys marmorata*) near the northwestern boundary of Sequoia National Park. Kristie A. Stein^{1*}, Erik W. Meyer², and Laura N. Van Vranken^{1*}. ¹National Park Service, Sequoia and Kings Canyon National Parks, Three Rivers, CA, kristie_stein@nps.gov, laura_van_vranken@nps.gov; ²National Park Service, Interior Regions 8, 9, 10, 12.

* Indicates presenter in multi-authored presentation