

**Workshop on Declining Amphibian Populations of
California and Nevada:
Causes and Solutions**

2001 Annual Meeting of the Western Section of The Wildlife Society

February 22, 2001

Sacramento, CA

**David Bradford, U.S. Environmental Protection Agency, Las Vegas,
NV**

8:00 - 8:10 am **Introduction.** David F. Bradford

DISEASE SESSION

Moderator: Gary M. Fellers, U.S. Geological Survey, Point Reyes, CA

8:10 - 8:20 am **Introduction.** Gary M. Fellers

8:20 - 8:50 am **Viral and Fungal Pathogens in Tiger Salamanders in the Western United States and Canada.** James Collins¹, Elizabeth Davidson¹, Joyce Longcore², Allan Pessier³, Matthew Parris⁴, James Jancovich¹, Jesse Brunner¹, Danna Schock¹, and Andrew Storfer⁵. ¹Biology, Arizona State Univ., Tempe, AZ; ²Biological Sciences, Univ. of Maine, Orono, ME; ³Univ. of Illinois Zoological Pathology Program, Loyola Univ. Medical Center, Maywood, IL; ⁴Biology, Univ. of Memphis, Memphis, TN; ⁵Wildlife Ecology and Conservation, Univ. of Florida, Gainesville, FL.

8:50 - 9:00 am **Recent Observations of Chytridiomycosis among Amphibians in California.** Gary Fellers, Western Ecology Research Center, USGS, Point Reyes, CA.

9:00 - 9:10 am **Recent Observations of Chytridiomycosis in the Mountain Yellow-legged Frog in the Sierra Nevada.** Roland Knapp, Sierra Nevada Aquatic Research Laboratory, University of California, Mammoth Lakes, CA.

9:10 - 9:20 am **Comparison of Mountain Yellow-legged Frog Size Classes in Populations with and without Chytridiomycosis Infections.** Karen Pope and Kathleen Matthews, USFS Pacific Southwest Research Station, Albany, CA.

9:20 - 9:40 am **Parallels Between Mass Mortalities of Montane Amphibians in the Sierra Nevada and the Rockies of Colorado.** Cynthia Carey, Dept. of EPO Biology, University of Colorado, Boulder, CO.

9:40 - 10:10 am **Break**

CONTAMINANTS SESSION

Moderator: Carlos Davidson, California State University, Sacramento, CA

10:10 - 10:30 am **California Amphibian Declines, Prevailing Winds and Agricultural Land Use.** Carlos Davidson¹, Brad Shaffer², and Mark Jennings³. ¹Dept. of Environmental Studies, California State University, Sacramento, CA; ²Section of Evolution & Ecology, University of California, Davis, CA; ³US Geological Survey, San Simeon, CA, and Dept. of Herpetology, California Academy of Sciences, San Francisco, CA.

10:30 - 10:50 am **Biological Effects of Pesticides on Declining Amphibian Populations in the Sierra Nevada.** Donald Sparling¹, Gary Fellers², Laura McConnell³, and Deborah Cowman⁴. ¹USGS Patuxent Wildlife Research Center, Laurel, MD; ²Western Ecology Research Center, USGS, Point Reyes, CA; ³USDA Agriculture Research Center, Beltsville, MD; ⁴Dept. of Fisheries and Wildlife, Texas A&M University, College Station, TX

10:50 - 11:10 am **Test of an Environmental Model: Red-legged Frogs as Bioindicators of Endocrine-disrupting Contaminants.** James Bettaso^{1,2}, Hartwell Welsh², and Brent Palmer³. ¹Wildlife Dept., Humboldt State University, Arcata, CA; ²USDA Forest Service, Redwood Sciences Laboratory, Arcata, CA; T.H. Morgan School of Biological Sciences, ³University of Kentucky, Lexington, KY.

LISTING OF THREATENED AND ENDANGERED SPECIES SESSION

Moderator: Steve Morey, U.S. Fish and Wildlife Service, Portland, OR.

11:10 - 11:30 am **Listing Threatened and Endangered Amphibians: California and Nevada Update.** Steve Morey, U.S. Fish and Wildlife Service, Portland, OR.

11:30 - 11:50 am **The Santa Barbara Tiger Salamander Emergency Listing: The Interplay of Systematics, Genetics, and Land Use Practices.** H. Bradley Shaffer, Section of Evolution and Ecology, University of California, Davis, CA.

11:50 -12:10 pm **The Southern California Distinct Population Segment of the Mountain Yellow-legged Frog: Evaluating Extinction Threats and Developing Recovery Strategies.** Glen Knowles, U.S. Fish and Wildlife Service, Carlsbad, CA.

12:10 - 1:40 pm **Lunch**

EXOTIC SPECIES SESSION

Moderator: Roland Knapp, University of California, Mammoth Lakes, CA.

1:40 - 2:00 pm **Amphibian Assemblages and Introduced fishes in the Trinity Alps Wilderness of the Klamath Mountains of Northwestern California.** Hartwell Welsh, Jr., and Daniel Boiano. USDA, Forest Service, Redwood Sciences Laboratory, Arcata, CA.

2:00 - 2:20 pm **Removal of Nonnative Trout from Sierra Nevada Lakes as a Means to Recover Mountain Yellow-legged Frog Populations.** Roland Knapp¹, Vance Vredenburg², and Curtis Milliron³. ¹Sierra Nevada Aquatic Research Laboratory, University of California, Mammoth Lakes, CA; ²Dept. of Integrative Biology and Museum of Vertebrate Zoology, University of California, Berkeley, CA; ³California Dept. of Fish and Game, Bishop, CA.

2:20 - 2:40 pm **Update on the Efforts to Determine the Status of Native Amphibian Fauna in Southern California and the Development of Invasive Aquatic Species Eradication Techniques.** Edward Ervin and Robert Fisher. US Geological Survey, Department of Biology, San Diego State University, San Diego, CA.

2:40 - 3:00 pm **Genetic Pollution, California Tiger Salamanders, and Endangered Species Remediation.** H. Bradley Shaffer and Benjamin Fitzpatrick, Section of Evolution & Ecology, University of California, Davis, CA.

3:00 - 3:30 pm **Break**

FOREST MANAGEMENT SESSION

Moderator: Hartwell H. Welsh, Jr., U.S. Forest Service, Arcata, CA.

3:30 - 3:50 pm **Comparison of Abundance, Assemblage, and Activity of Nocturnal Amphibians in Old Growth and Second Growth Redwood Forest Creeks in Humboldt County, California.** Don Ashton¹, Hartwell Welsh, Jr.², and Sharyn Marks¹. ¹Dept. of Biological Sciences, Humboldt State University, Arcata, CA; ²USDA, Forest Service, Redwood Sciences Laboratory, Arcata, CA.

3:50 - 4:10 pm **Effects of Silvicultural Edges on Terrestrial Amphibian Abundance and Microclimate in Northwestern California.** Nancy Karraker¹ and Hartwell Welsh, Jr.². ¹Humboldt State University, Arcata, CA; ²USDA Forest Service, Redwood Sciences Laboratory, Arcata, CA.

4:10 - 4:30 pm **Habitat Alterations and Amphibian Populations: The Role of Forestry in the Decline of Amphibians in Northern California.** Hartwell Welsh, Jr., and Lisa Ollivier, USDA Forest Service, Pacific Redwood Sciences Laboratory, Arcata, CA.

4:30 - 4:50 pm **Forest Management and Conservation in the Sierra Nevada: Implications for Amphibians.** Amy Lind. USDA Forest Service, Pacific Southwest Research Station, Sierra Nevada Framework Project, Sacramento, CA.

4:50 - 5:25 pm **Briefings**

5:25 -5:30 pm **Concluding Remarks.** David Bradford

POSTER SESSION

The Status of the Northern Leopard Frog (*Rana pipiens*) in Nevada. Cynthia Hitchcock, Dept. of Biology, University of Nevada, Reno.

Effects of Agricultural Pesticides on Translocated Egg Masses and Tadpoles of the Pacific Treefrog in Lassen, Yosemite, and Sequoia National Parks. Deborah F. Cowman¹, Donald W. Sparling², Gary Fellers³, and Thomas E. Lacher⁴. ¹Wildlife and Fisheries Sciences Dept., Texas A&M Univ., College Station, TX; ²USGS Patuxent Wildlife Research Center, Laurel, MD; ³USGS, Point Reyes National Seashore, Point Reyes, CA; ⁴ Wildlife and Fisheries Sciences Dept., Texas A&M Univ, College Station, TX.

Oviposition Sites of the Amargosa Toad (*Bufo nelsoni*). Denise Jones, C.R. Tracy, and Eric Simandle. Dept. of Biology, University of Nevada, Reno.