

# CURRICULUM VITAE

## HOWARD BRADLEY SHAFFER

Department of Ecology and Evolutionary Biology  
621 Charles E. Young Drive South, Room LS5120  
Box 951606  
University of California  
Los Angeles, CA 90095-1606 USA

530-902-3078 (cell)  
[brad.shaffer@ucla.edu](mailto:brad.shaffer@ucla.edu) (email)  
<https://sites.lifesci.ucla.edu/eeb-shafferlab/>  
<https://www.ccgproject.org>

### Education:

University of Chicago Ph.D. in Evolutionary Biology December 1982  
University of California, Berkeley B.A. in Biology June 1976

### Current Position:

Distinguished Professor, Department of Ecology and Evolutionary Biology & Institute of Environment and Sustainability, UCLA  
Director, UCLA/La Kretz Center for California Conservation Science  
Director, Stunt Ranch Reserve, UC Natural Reserve System  
Director and Principle Investigator, California Conservation Genomics Project, 2019-present

### Major Grants and Awards (1990-present):

Wild Animal Initiative, "How do lentic vs lotic conditions in California estuaries affect the welfare of threespine stickleback?", (with Andrew Sharo), \$30,000, 3/2024 - 3/2026  
Section 6 Recovery Challenge Grant, US Fish and Wildlife Service/CA Dept. of Fish and Wildlife, "Genomics estimates of effective population size, inbreeding, and landscape connectivity across populations of the Santa Cruz long-toed salamander to inform recovery actions" \$184,974, 05/31/2024 – 12/31/2026  
Grant transfer, Michigan State University, "Construction of a reference genome for the spotted turtle, *Clemmys guttata*", 7/15/2023 – 6/1/2024, \$5000, FAU 447711-BS-85674 (IoES)  
CDFW, "Drought Response Implementation Work Plan for the Santa Cruz Long-Toed Salamander", \$42,788, 7/1/2023 – 6/30/2026  
CDFW, "Drought Response Implementation Work Plan for the Santa Barbara Distinct Population Segment of the California tiger salamander" (with Robert Cooper), \$250,000. 9/1/2023 – 3/30/2026. Agreement # D2380004.  
USFWS, "Lange's and Mormon Metalmark Butterfly Conservation Genomics" (with Zac MacDonald), \$100,000, 8/15/2023 – 12/31/2025 Award Number F23AP03183.  
Wild Animal Initiative, "Evaluating wild animal welfare in landscapes of fear at urban-wildland interfaces" (with Dave Daversa), \$253,956. F-2023-00001  
Morris Animal Foundation competitive grant, "Novel Epigenetic Approaches to Measure Wildlife Health and Stress" (with Dave Daversa), \$135,000, 7/1/2023 – 6/30/2025, Sponsor Award Number: D23ZO-457  
USFWS grant, "Supporting California Red-legged Frog Reintroduction Efforts in Southern California Through the Use of Novel Genomic Techniques" (with Joey Curti), \$19,199, 6/15/2023 - 12/31/2024

Wild Animal Initiative competitive grant, “Novel epigenetic approaches to measure wild animal welfare and stress”, (with Dave Daversa), \$30,000, 3/2023-2/2024 C-2023-00042

USFWS/SANDAG grant, “Conservation Genomics of the Quino Checkerspot”, \$47,526 (funding may change slightly), (with Zac MacDonald), 1/2023- 12/2024 (approximate dates)

Section 6 Recovery Challenge Grant, US Fish and Wildlife Service/CA Dept. of Fish and Wildlife, “Genetic Assessment and Recovery Action Recommendations for the California Tiger Salamander (*Ambystoma californiense*) in the Fort Ord Management Unit”, \$197,506, 01/01/2023 – 01/01/2026

Genetic and Landscape Improvement Recovery for the Endangered Santa Barbara Distinct Population Segment of the California Tiger Salamander”, US Fish and Wildlife Service, \$250,000, February 1, 2022 – January 31, 2027 Grant # F22AC00796

Environment Canada, “Genetic Analysis of Tiger Salamander Tissue from Manitoba”, \$25,000, December 2021 – March 2022.

Yosemite Conservancy, “Genetic Analysis of Western Pond Turtles in Yosemite National Park”, \$23,375 12/2020-12/2025

US Fish and Wildlife Service, “Historical and current trends in effective population size estimates in the Western spadefoot, *Spea hammondi*” Grant number # F21AC02546-00, 10/2021 – 3/2025, \$262,776

Florida Fish and Wildlife Commission, “Diamondback Terrapin Genetic Assessment”, \$72,233 FWC Agreement 20006, Oct. 2019 – Dec. 2022

US Fish and Wildlife Service, “High-Throughput Genomic Monitoring of Non-Native Genotypes from the Sonoma County Distinct Population Segment of the California Tiger Salamander, *Ambystoma californiense*”, 8/1/2020 – 7/31/2022, \$70,945 Award number F20AC11694

US Fish and Wildlife Service, “Research to Support Conservation and Recovery of Federally Listed and At-risk Reptiles and Amphibians” 7/15/2020 – 12/31/2025, \$75,924

State of California, “California Conservation Genomics Project”, 2019-2025, \$12,000,000 (UCLA led, Shaffer PI, with work distributed to other UC campuses, UC Award ID RSI-19-690224)

State of California, “A Synthetic Analysis of Reptiles and Amphibians to inform the CCGP”, 2019-2022, \$927,000 (Ian Wang, UC Berkeley, co-PI; approximately \$322,000 to the Wang lab at Berkeley, and \$605,000 to the Shaffer lab at UCLA)

State of California, California Conservation Genomics Project subawards for shoulderband snails (\$45,000), ruby spot damselfly (\$43,580), golden eagle (\$49,940); 5 butterfly species (\$147,234); total \$285,754

US Fish and Wildlife Service, “Investigating Recovery Needs and Population Dynamics of the Santa Barbara County Distinct Population Segment of the California Tiger Salamander”, 2019-2020, \$10,000

US Fish and Wildlife Service, “Risk Level Assessment Report for the Western Pond Turtle”, 2018-2020, \$15,000

Tim Gregory (gift) “Turtle and Tortoise Conservation Genomics” (support for postdoc Natalia Gallego-Garcia), \$75,000 (year 1), \$98,000 (year 2), \$89,225 (year 3) June 2019-2023, \$80,000 (year 4); \$342,225 total

Tim Gregory (gift), “Turtle Conservation Genomics”, \$21,399, January 2019

Natural Communities Coalition (formerly NROC), “Upland Habitat Restoration & Seasonal Pool Creation – Western Spadefoot (*Spea hammondi*)”, 2019-2021, \$91,585

California Department of Fish and Wildlife, M-SWG, “Advancing Western Pond Turtle Conservation in Washington, Oregon and California” 2018-2020, \$440,843 (UCLA portion, \$130,000)

Caltrans, “Landscape Genomics Study for California Tiger Salamander”, 2018-2020, \$199,985

UCLA Grand Challenge, “Conservation Genomics of Los Angeles Biodiversity”, 2018-2023, \$200,000

Sacramento Attorney General Office, Gift in support of research on California tiger salamander conservation, \$50,000 (awarded 2017)

US Department of Interior-CVPCP, “Rangewide and Landscape Genomics of the Central DPS of California Tiger Salamander”, \$350,865.00 (2017-2019) (Award number R17AC00063)

US Fish and Wildlife Service, “Species samples for landscape genomics” \$235,000, (2017-19) (Award number F16PX02290)

US Dept. of Interior/Fish and Wildlife Service: Genome-enabled Population Viability Analysis (Award number of the Mojave Desert Tortoise Award number F13AC00425, 2016-18, \$147,485 (supplemental funding)

Natural Communities Coalition (formerly NROC), “Population genomic assessment of habitat connectivity, effective population size, and the success of management activities for the western spadefoot (*Spea hammondi*) in central Orange County”, 2016-2018, \$150,000

UCLA Grand Challenge, “California Conservation Genomics Seed Grant: Modernizing Endangered and Threatened Species Management”, 2015-17, \$70,000

USFWS grant “Effective population size genetic analysis for the California tiger salamander in Santa Barbara County”, 2015-2018, \$71,675; supplement, “Terrestrial Habitat Use and Molecular Analysis of Hybridization in Endangered Santa Barbara County Tiger Salamanders”, \$83,150, 2016-2020; **total award \$154,825.**

Department of the Interior-National Park grant: Landscape genomics of the amphibians of the Santa Monica Mountains, \$126,422 (matching funds for Gary Bucciarelli)

NSF: SG Will phylogenomics resolve the most difficult parts of the tree of life: an empirical evaluation with the turtle genus *Pseudemys* \$150,000

National Park Service, 2016, “Field laboratory addition in the Santa Monica Mountains, \$75,000.

Los Angeles County Collaborative Grant, 2014-2017, “ A field laboratory in the Santa Monica Mountains”, \$500,000.

Natural Communities Coalition of Orange County, Wildlife Management and Monitoring Program, 2015, \$25,000

Los Angeles County Natural History Museum/UCLA La Kretz Center Collaborative Postdoctoral Funding Project, 2014-2016, \$50,000 (for Elizabeth Long)

Santa Monica Mountains National Park/UCLA La Kretz Center Collaborative Postdoctoral Funding Project, 2014-2016, \$50,000 (for John Benson)

Bureau of Land Management (with Mike Westphal), Population genomics of California tiger salamanders at Ft. Ord, 2013-2018, \$50,000

National Council for Scientific and Technological Development, Brazil, Special Visiting Researcher, 2014-2016, Ecology and Molecular Genetics of Small, Semi-Aquatic Brazilian Turtles in the Amazon Basin, \$126,027 (total award, collaborative with Richard Vogt)

NSF “Collaborative Research: Tracking genes in real time as they traverse a hybrid invasion landscape” 2013-2018, \$684,251.

US Dept. of Interior/Fish and Wildlife Service: Genome-enabled Population Viability Analysis of the Mojave Desert Tortoise. 2013-15, \$199,671.

California Department of Fish and Wildlife “Landscape genomic evaluation of habitat corridors for the Desert Tortoise” 2013-2014. \$155,000 (approximately)

Sabin Family Foundation: Conservation genomics of Long Island tiger salamanders. 2013-2017, \$49,256

Auburn University/Section 6 (USDI) "Genetic analysis of the Alabama red-bellied turtle (*Pseudemys alabamensis*): estimation of population subdivision, among population gene flow, and population decline." 10/2011-9/2012, \$50,000 (direct cost; half to UCLA).

US Department of Interior "Adult movement behavior and long-term trends in the population dynamics of the central population of the California tiger salamander" 2010-2013, \$268,596.00

DoD "Conservation of California tiger salamanders (*Ambystoma californiense*) at Travis Air Force Base, Solano County, California. 2009-2010, \$95,000.

NSF "Turtles of the World: Global systematics for an imperiled clade" 2008-2014, \$577,294.

US Department of Interior "Conservation genetic of California tiger salamanders (*Ambystoma californiense*)" 2007 – 2010, \$237,840.

California Department of Fish and Game, Interagency Agreement "Collaborative research on management-relevant Threatened and Endangered Species" 2007 – 2013, \$1,686,377.00.

NSF DDIG Dissertation Research "Systematic of rapid radiations: New approaches in the post-genomic age" 7/1/07 - 6/30/09, \$12,000; collaborative with R. C. Thomson.

Caltrans "Terrestrial movements of the California tiger salamander (*Ambystoma californiense*)" 2007 – 2008, \$163,917.

Sacramento County "Amphibian survey and *Spea hammondi* upland habitat use at Mather Field vernal pools" 8/2006 – 12/2008, \$40,000.00; collaborative with A. T. Chang.

USDA Forest Service, Redwood Sciences Laboratory, "*Rana cascadae* Genetics Study" 6/25/07-5/31/08, \$15,000.

Solano County Water Agency, "Identification of critical habitat for California Tiger Salamanders (*Ambystoma californiense*) in Solano County" 4/1/07-6/30/10, \$35,123.

USFS "Long-toed Salamander Genetic Analyses" 2006, \$33,027.

Caltrans "Understanding terrestrial movement of the California tiger salamander, *Ambystoma californiense*" 1/2005-5/2006, \$250,000.

NSF "Collaborative Research: Gauging introgression: Variation across the genome in mode and tempo of natural selection in a tiger salamander hybrid zone" 2005-2009, \$400,353.00 (\$238,705 to UCD), plus 2 REU supplements (\$6,000.00, 2006)

NSF "Genetics, ethics, and systematics: A workshop for turtles" 2005-2007, \$51,283.00

UC Integrated Pest Management, Exotic/Invasive Pests and Diseases Research Program "Ecological influences on invasion success of introduced genes in California tiger salamanders" 2004-2006, \$118,200.00 (direct costs)

NSF grant "Reconstructing Pleistocene range shifts in North American ectothermic vertebrates" 2002-2007, \$308,756.00, plus 2 REU supplements (\$6,000.00, 2006).

CalFed grant "Genetic identification of watershed-dependent species of special concern in the Central Valley" 2002-2005, \$851,660.00 (co-PI with Tom Smith: UCD budget, \$397,130)

EPA "Hybridization between an invasive exotic and a declining native amphibian: Molecular characterization, ecological dynamics and genetic remediation" 2001-2004 \$433,708.00

USFWS "Microsatellite analysis and terrestrial habitat requirements of the California tiger salamander, *Ambystoma californiense*" 2001-2003, \$100,000.00

USFWS "Microgeographic analysis of genetic variation in the endangered Santa Barbara tiger salamander (\$45,000.00) and the Santa Cruz long-toed salamander (\$25,000.00)" 2001-2003. (two awards, \$70,000 total)

NSF grant "The genetic consequences of long generation times in turtles" 1998-2001, \$150,000.00 plus 1 REU supplement (\$5,000.00)

Australian Research Council grant " Genetic differentiation among populations of freshwater turtle in eastern Australia, and its relationship to the history of population contraction and expansion in response to recent glacial events 1998 (Arthur Georges, University of Canberra co-PI), \$29,775.  
3 awards from California state and county agencies for population genetics work on hybridization and genetic identification of California tiger salamanders, 1998-1999 (approximately \$65,000.00 total)  
NSF grant "The genetic and physiological basis of life cycle convergence among Mexican ambystomatids" 1995-1999, \$317,000.00 plus 3 REU supplement (\$15,000.00)  
NSF grant "The Cladogenetic Record for Turtles: Paleontological Dates, DNA Sequences, and a Test of the Molecular Clock" 1993-1996, \$199,000.00 plus 2 REU supplements (\$10,000.00)  
NSF grant (Dissertation Improvement Grant for David M. Parichy) "Developmental analysis of morphological evolution: Convergence, divergence, and the origin of novelties in salamander pigment patterns" 1995-1996 \$14,000.00  
NSF grant (Dissertation Improvement Grant for Karen Marchetti)- "Significance of inter-specific variation in plumage patterns of birds" 1993-1994, \$11,900.00.  
National Park Service Cooperative Agreement, "Cooperative Agreement on Amphibian Population Genetics" 1993-1997, approx. \$140,000.00  
NSF grant "Speciation and Phylogenetic Diversification in a Polytypic Species" 1990-1993 \$121,877.00 plus 8 REU supplements (\$40,000.00) and 1 ROA supplement (\$12,800.00)  
California State Fish and Game Research Contract "Distribution and Status of the Endemic California Tiger Salamander" 1990-1993 \$50,000 (approximate budget)

#### Elected and Appointed Positions:

Sustainable Los Angeles Grand Challenge inaugural Sustainability Research Council  
American Academy of Arts and Sciences, 2022-present  
External Expert Advisory Board (EEAB) of the Biodiversity Genomics Europe (BGE)  
Project (<https://biodiversitygenomics.eu>), 2022-present  
Board of Governors, American Society of Ichthyologists and Herpetologists (2021-2026)  
Treasurer, American Genetic Association, 2018-2021, 2021-2024  
NSF Panelist, Evolutionary and Ecological Genetics, Nov. 2017  
SERDP (Strategic Environmental Research and Development Program) panelist, May 2017  
Natural Communities Coalition (NCC) Science Advisory Panel, 8 November 2013-  
President, American Society of Ichthyologists and Herpetologists (2014)  
Treasurer, Society of Systematic Biologists, 2013-2015  
Board of Governors, American Society of Ichthyologists and Herpetologists (2013-2018)  
Advisory Board, the Turtle Conservancy (2013-present)  
Member, NCEAS working group on UCNRS Strategic Planning  
University-wide Natural Reserve System Advisory Committee, Spring 2012-present  
External member, Vernal Pool Oversight Committee, UC Merced (2012- Natural Reserve System)  
NSF panelist, Evolutionary Genetics Preliminary proposals, April 2012, 2013  
Director, La Kretz Center for California Conservation Science, 2012-present  
Executive Vice President, American Genetic Association (2012-2015)  
Editorial Board, Journal of Heredity 2012-present  
California Landscape Conservation Cooperative (LCC) Steering Committee, 2011-present  
President, American Genetics Association (2009 President elect, 2010 President, 2011, past President)  
Member, NIMBioS working group on Species Delimitation, 2010-2012  
Member, Amphibian Specialist Group (ASG) IUCN/SSC 2007-  
SERDP grant panelist (for the Department of Defense), 2010

NSF panelist, Evolutionary Genetics Panel, October 2006  
Member, Steering Committee, IUCN/SSC Tortoise and Freshwater Turtle Specialist Group 2006-  
Conservation Committee, American Society of Ichthyologists and Herpetologists 2005-  
Fitch Committee, American Society of Ichthyologists and Herpetologists, 2005-08 (Chair, 2008)  
Director, Center for Population Biology, UC Davis 2004-2009  
Axolotl Stock Center Advisory Committee, 2004-present  
IUCN/SSC Tortoise and Freshwater Turtle Specialist Group 2003-present  
Council, American Genetics Association, 2003-2006  
Council Member, Society of Systematic Biologists, 2002-2005  
Board of Governors, American Society of Ichthyologists and Herpetologists 1984-89  
Board of Governors, American Society of Ichthyologists and Herpetologists 1998-2003  
Council Member, Society of Systematic Zoologists (class of 1990)  
Associate Editor, Annual Reviews of Ecology and Systematics, 2001-2025  
Associate Editor, Ecological Applications (1997-2000, 2000-2003)  
Associate Editor, Zoological Journal of the Linnean Society, 1999-2005  
Associate Editor, Molecular Systematics and Evolution, Herpetologica (1988-1995)  
Associate Editor, Evolution Jan 1991-Dec 1993  
Editorial Board Member, Annual Reviews of Ecology and Systematics, (1996-2001)  
Editorial Board, Herpetological Conservation (appointed March, 1994-present)  
California/Nevada Workgroup & National Workshop member, Declining Amphibian Task Force  
NBS/BRD Workgroup to Develop a National Amphibian Monitoring System (1994-present)  
North Cascades National Park Research Review Panel, June, 1993  
National Science Foundation Panelist (NSF), Frontiers in Integrative Biological Research (FIBR)  
December, 2003  
NSF panelist, Population Biology Panel: April 1992, October 1993, April 1994, April 2000, April 2002  
NSF Panelist, Dissertation Improvement Grants for Evolutionary and Ecological Physiology, April,  
1995  
NSF Panelist, Dissertation Improvement Grants for Systematic Biology, February, 1997  
Special publications committee, American Assoc. of Ichthyologists and Herpetologists, (1999-present)  
Program Officer, Bay Area Biosystematists (2000-01)  
EPA Panelist, Terrestrial ecosystems (2001)  
NEON workshop participant, NSF (2002)  
IUCN working group on Asian Turtle Crisis, (2001-present)  
E.O. Wilson Award Committee, ASN (2001)

#### Awards and Honors:

American Academy of Arts and Sciences, elected 2022  
External Expert Advisory Board (EEAB) of the Biodiversity Genomics Europe (BGE)  
Project (<https://biodiversitygenomics.eu>), 2022-present  
Leadership team member, Earth Biogenome Project, 2020-present  
Meritorious Teaching Award in Herpetology, 2015 (this is the highest honor for teaching herpetology  
awarded by Herpetology Education Committee across the three primary international societies)  
Advisory Board, the Turtle Conservancy (2013-present)  
President, American Society of Ichthyologists and Herpetologists (2013 President elect, 2014 President,  
2015-16 Past President)  
Research Associate (Herpetology), Natural History Museum of LA County, 2013-present  
Executive Vice President, American Genetic Association, 2012-2015

Hrdy Fellow in Conservation Biology, Harvard University 2009-10  
President, American Genetic Association (2009 President elect, 2010 President, 2011 Past President)  
Darwin Day Keynote Speaker, UC Merced (March 6, 2009)  
External Examiner, Heather Alexander Ph.D. examination, Simon Fraser University, 2007  
Distinguished Scholarly Public Service Award, UC Davis (awarded 2006)  
Visiting Scholar, University of Canberra 2004  
Editorial Board, Chelonian Conservation and Biology (2003-present)  
Kyushu University, Japan 2003 (Distinguished Lecturer)  
Teaching Excellence Award, Northern California chapter, Phi Beta Kappa, 2002  
UC Davis Division of Biological Sciences Outstanding Teaching Award, 2002  
Research Faculty Affiliate, Museum of Vertebrate Zoology, Berkeley 2002-present  
Fellow, California Academy of Sciences (elected for life in 2001)  
Vice-Chancellors Visiting Scholar, University of Canberra 1995-96

#### Positions Held:

Assistant, Associate and Full Professor, UC Davis, 1987-2012  
Assistant Professor, Ecology and Evolutionary Biology, University of California, Irvine 1985-87  
Visiting Scholar, University of Chicago 1984-85  
Post-doctoral Research Fellow (with Dr. William Atchley) 1983-84  
Post-doctoral Research Fellow (with Dr. Russell Lande) 1983  
Research Associate, Field Museum of Natural History

#### Organized and Special Exhibits:

Biodiversity Genomics 2024 (virtual, organized a full session on CCGP, including full and lightning presentations)  
California Conservation Genomics Project Stakeholder meeting, ~25 agency and NGO stakeholders to meet and decide on optimal analysis and visualization techniques, March 2023  
California Conservation Genomics Project all-hands meeting, 105 UC and agency stakeholders to meet and develop best practices for landscape genomics, September 2022  
Best Practices in Teaching Herpetology, Joint Meetings of Ichthyology and Herpetology symposium organizer, 2022 annual meetings, Spokane  
California Conservation Genomics Project *ad hoc* advisory meeting, brought in 53 UC and agency stakeholders to develop initial plan for new 10M funding in conservation genomics, September 2019  
California Conservation Genomics Project All-PI meeting, July 13-14 2020.  
Herpfest 2019, co-organized with B. Espinoza, CSUN, May 2019  
NCC Day-long workshop on vernal pools, UCLA, April 2019  
*Pseudemys* species delimitation workshop organized, Gainesville, 2019  
*Emys (Actinemys) pallida* Working Group Meeting, Stunt Ranch Reserve, co-organized with USFWS, April 2018  
Conservation Genomics: A Workshop for Agency and NGO Partners, held at Stunt Ranch, organized by the La Kretz Center, 23 February 2018  
California Tiger Salamander Conservation Science Symposium, Ft Ord, co-organized with USFWS, September 2017  
Symposium: Invaders and Survivors: Reptiles and Amphibians in Urban Ecosystems, International Urban Wildlife Conference (sponsor and symposium organizer), June 2017  
ASIH at 100 Centennial Celebration, New Orleans 2016 (co-organizer)

California Conservation Genomics Initiative, Sacramento, (organized by Shaffer, in collaboration with CDFW), 1-2 February 2016  
Painted Turtle Genome Consortium, St. Louis, 6 December 2010  
Conservation Genomics, American Genetics Association President's Symposium, Hilo, Hawaii 26-29 July 2010  
The role of fossils in dating molecular phylogenies (convened following the fossil turtle symposium, Royal Tyrrell Museum, Drumheller, Alberta 20-21 October 2009)  
Workshop on Relocation of Endangered California Tiger Salamanders (organized by Shaffer, in collaboration with USFWS & CDFG) 21 March 2008  
Genetics, ethics, and systematics: A workshop for turtles (NSF funded workshop held at the Museum of Comparative Zoology, Harvard University, 2005)  
Declining Amphibians in Western North America (symposium organized for the Western Society of Naturalists, 1998)  
Systematics of Model Organisms (symposium co-organizer for Society of Systematic Biologists, 1992).  
Molecular Biology of Axolotls and other Urodeles (Provocateur on urodele evolutionary biology, International Workshop, 1993).  
Pacific Grove Natural History Museum, special exhibit on Declining California Amphibians (1994)

### Books

Thomson, R. C., A. N. Wright and H. B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern (University of California Press 390 + xv pages)

Turtle Taxonomy Working Group [A.G.J. Rhodin, J.B. Iverson, R. Bour, U. Fritz, A. Georges, H.B. Shaffer, and P.P. van Dijk]. 2017. Turtles of the World: Annotated Checklist and Atlas of Taxonomy, Synonymy, Distribution, and Conservation Status (8th Ed.). In: Rhodin, A.G.J., Iverson, J.B., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., Pritchard, P.C.H., and Mittermeier, R.A. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs 7:1–292. doi: 10.3854/crm.7.checklist.atlas.v8.2017. (Also listed under publications)

Turtle Taxonomy Working Group [A.G.J. Rhodin, J.B. Iverson, R. Bour, U. Fritz, A. Georges, H.B. Shaffer, and P.P. van Dijk]. 2021. Turtles of the World: Annotated Checklist and Atlas of Taxonomy, Synonymy, Distribution, and Conservation Status (9<sup>th</sup> Ed.). In: Rhodin, A.G.J., Iverson, J.B., van Dijk, P.P., Stanford, C.B., Goode, E.V., Buhlmann, K.A., and Mittermeier, R.A. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs 8:1–472. doi: 10.3854/crm.8.checklist.atlas.v9.2021. (Also listed under publications)

### Publications (Orchid ID: [0000-0002-5795-9242](https://orcid.org/0000-0002-5795-9242)):

242. Fitzpatrick, B. M., E. McCartney-Melstad, J. R. Johnson, and H. Bradley Shaffer. 2024. New evidence contradicts the rapid spread of invasive genes into a threatened native species. *Biological Invasions* 26:3353-3367.



241. Chaturvedi, S., M. Escalona, M. P. A. Marimuthu, O. Nguyen, N. Chumchim, C. W. Fairbairn, W. Seligmann, C. Miller, H. B. Shaffer, and N. K. Whiteman. 2024. A draft reference genome assembly of California Pipevine *Aristolochia californica* Torr. *Journal of Heredity* 115:507-515. <https://doi.org/10.1093/jhered/esae023>
240. MacDonald, Z.G., Shaffer, H. B., Sperling, F.A.H. 2024. Impacts of land use and climate change on natural populations: The butterfly perspective. Chapter 8, pages 108 - 131 In: Cork, S., Whiteside, D. (eds.) *Case Studies in Eco Health*. 5m Publishing, Sheffield, U.K. DOI: 10.52517/9781789183368.008.
239. Ward, P. S., E. I. Cash, K. Ferger, M. Escalona, R. Sahasrabudhe, C. Miller, E. Toffelmier, C. Fairbairn, W. Seligmann, H. B. Shaffer, and N. D. Tsutsui. 2024. Reference genome of the bicolored carpenter ant, *Camponotus vicinus*. *Journal of Heredity* 115:120-129. <https://doi.org/10.1093/jhered/esad055>
238. MacDonald, Z. G., T. Gillespie, and H. B. Shaffer. 2024. The highest butterfly in North America. *Frontiers in Ecology and the Environment* 22:e2707, doi:10.1002/fee.2707
237. Curti, J. N., D. Fraser, M. Escalona, C. W. Fairbairn, S. Sacco, R. Sahasrabudhe, O. Nguyen, W. Seligmann, P. H. Sudmant, E. Toffelmier, J. M. Vazquez, R. Wayne, H. B. Shaffer, and M. R. Buchalski. 2023. A genome assembly of the Yuma myotis bat, *Myotis yumanensis*. *Journal of Heredity* 115:139-148 <https://doi.org/10.1093/jhered/esad053>.
236. Westeen, E. P., M. Escalona, E. Beraut, M. P. A. Marimuthu, O. Nguyen, R. N. Fisher, E. Toffelmier, H. B. Shaffer, and I. J. Wang. 2023. A reference genome assembly for the continentally-distributed ring-necked snake, *Diadophis punctatus*. *Journal of Heredity* 114:690-697. <https://doi.org/10.1093/jhered/esad051>
235. Chaturvedi, S., M. Escalona, M. P. A. Marimuthu, O. Nguyen, N. Chumchim, C. W. Fairbairn, W. Seligmann, C. Miller, H. B. Shaffer, and Noah K. Whiteman. 2023. A draft reference genome assembly of the Pipevine Swallowtail butterfly, *Battus philenor*. *Journal of Heredity* 114:698-706.
234. Westeen, E. P., M. Escalona, M. L. Holding, E. Beraut, C. Fairbairn, M. P. A. Marimuthu, O. Nguyen, R. Perri, R. N. Fisher, E. Toffelmier, H. B. Shaffer, and I. J. Wang. 2023. A genome assembly for the southern Pacific rattlesnake, *Crotalus oreganus helleri*, in the western rattlesnake species complex. *Journal of Heredity* 114:681-689.
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Manuscripts in Press/Available Early Online:

- Scott, P. A., E. Najafi-Majd, E. Yildırım Caynak, M. Gidiş<sup>2,6</sup>, U. Kaya, and H. B. Shaffer. Phylogenomics reveal species limits and relationships in the narrow-range endemic Lycian salamanders. *Molecular Phylogenetics and Evolution* (accepted 24 September 2024).
- Jacobs, D. K., A. Kinziger, M. Abrecht, W. T. McCraney, B. A. Hà, B. T. Spies, E. Heath-Heckman, M. P. A. Marimuthu, O. Nguyen, C. W. Fairbairn, W. E. Seligmann, M. Escalona, C. Miller, and H. B. Shaffer. Reference genome for the endangered, genetically subdivided, northern tidewater goby, *Eucyclogobius newberryi*. *Journal of Heredity* (accepted 21 September 2024).
- MacDonald, Z. G., S. Schoville, M. Escalona, M. P. A. Marimuthu, O. Nguyen, N. Chumchim, C. W. Fairbairn, W. Seligmann, E. Toffelmier, T. Gillespie, and H. B. Shaffer. A genome assembly for the Chryxus Arctic (*Oeneis chryxus*), the highest butterfly in North America. *Journal of Heredity* (accepted 12 September 2024).
- Cash, E. I., M. Escalona, P. S. Ward, R. Sahasrabudhe, C. Miller, E. Toffelmier, C. Fairbairn, W. Seligmann, H. B. Shaffer, and N. D. Tsutsui. The reference genome of the kidnapper ant, *Polyergus mexicanus*. *Journal of Heredity* (accepted 22 August 2024).

Submitted Manuscripts:

- MacDonald, Z. G., J. H. Acorn, D. Simberloff, and H. B. Shaffer. The panchreston of ecological integrity conflicts with conservation in the genomic era. *Conservation Biology* (submitted 11 September 2024).
- Song, M.J., F. Freund, C. M. Tribble, E. Toffelmier, C. Miller, H. B. Shaffer, F-W Li<sup>5</sup>, and C. J. Rothfels. The nitrogen-fixing fern *Azolla* has a complex microbiome characterized by varying degrees of copylogenetic signal. *American Journal of Botany* (submitted 9 July 2024).
- Cooper, R. D., T K. Luckau, E. Toffelmier, D. G. Cook, S. Martinelli, and H. B. Shaffer. A novel genetic tool to enable rapid detection of rare non-native alleles. *Scientific Reports* (Submitted 10 January 2024).
- Ashander, J., P Ralph, E. McCartney-Melstad and H. B. Shaffer. Demographic inference in a spatially-explicit ecological model from genomic data: a proof of concept for the Mojave desert tortoise. (<http://biorxiv.org/cgi/content/short/354530v1>).

Technical Reports:

- Schlesinger, M.D., J.A. Feinberg, N.H. Nazdrowicz, J.D. Kleopfer, J. Beane, J.F. Bunnell, J. Burger, E. Corey, K. Gipe, J.W. Jaycox, E. Kiviat, J. Kubel, D. Quinn, C. Raithel, S. Wenner, E.L. White, B. Zarate, and H.B. Shaffer. 2017. Distribution, identification, landscape setting, and conservation of *Rana kauffeldi* in the northeastern U.S. Report to the Wildlife Management Institute for Regional Conservation Needs grant RCN 2013-03. Available from New York Natural Heritage Program, Albany, NY.
- Pauly, G. B. and H. B. Shaffer. 2010. Are flatwoods salamanders from South Carolina genetically distinct from their southern conspecifics? Final Report, USFWS.
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- Shaffer, H. B., D. Cook, B. Fitzpatrick, K. Leyse, A. Picco and P. Trenham. 2008. Guidelines for the relocation of California Tiger Salamanders (*Ambystoma californiense*). Final Report, U. S. Fish and Wildlife Service.
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- Atkinson, A. J., B. S. Yang, R. N. Fisher, E. Ervin, T. J. Case, N. Scott and H. B. Shaffer. 2002. Recommendations for MCB Camp Pendleton Arroyo Toad Monitoring Protocol. Final report, USGS.
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- Bishop, C., Bradford, D., Casper, G., Corn, S., Droege, S., Fellers, G., Geissler, P., Green, D., Heyer, R., Lannoo, M., Larson, D., Johnson, D., McDiarmid, R., Sauer, J., Shaffer, H.B., Whiteman, H., Wilbur, H. 1994. A Proposed North American Amphibian Monitoring.
- Rodriguez, L. O., J. Perez Z. and H. B. Shaffer. 2001. Anfibios y Reptiles/Amphibians and Reptiles. pp. 69-74 & 141-146 in Alverson, W.S., L.O. Rodriguez and D.K. Moskovits (eds.). Perú: Biabo Cordillera Azul. Rapid Biological Inventories Report 2. Chicago, Il.: The Field Museum.
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- Shaffer, H. B. and P. C. Trenham. 2002. Distinct population segments of the California tiger salamander, *Ambystoma californiense*. Report to the USFWS.
- Shaffer, H. B., Zhang, Y, and Wang, T. 2003. Amphibians and Reptiles. Pp. 73-75, 99-100, plates 5,6 in Stotz, D. F., E. J. Harris, D. K. Moskovits, K. Hao, S. Yi and G. W. Adelman (eds.). China: Yunnan, southern Gaoligongshan. Rapid Biological Inventories 04. Chicago, Il.: The Field Museum.

#### Book Reviews:

- Shaffer, H. B. 2022. Review of *Turtles of the World: A Guide to Every Family*, by J. E. Lovich and W. Gibbons. *Ichthyology and Herpetology*, 110 (3): 634 –636 (note, this PDF from the journal includes several book reviews including mine)
- Shaffer, H. B. 2022. Review of *Conservation genetics in mammals. Integrative Research Using Novel Approaches*, edited by Jorge Ortega and Jesus E. Maldonado. *Quarterly Review of Biology* 97:168-169.
- Shaffer, H.B. 2016. Review of *Biology & Conservation of North American Tortoises* edited by D.C. Rostal, E.D. McCoy and H.R. Mushinsky, 2014, John's Hopkins Press. 190 pp. and *The Texas Tortoise. A Natural History* by F. L. Rose and F. W. Judd, 2014, University of Oklahoma Press, 188 pp. *Quarterly Review of Biology* 91:526-527.
- Shaffer, H. B. 2014. Review of *The Turtles of Mexico: Land and Freshwater Forms*, by J. M. Legler and R. C. Vogt. *Copeia* 2014:187-189. DOI is 10.1643/OT-13-124.
- Shaffer, H.B. 2012. Review of *Biology of Turtles: From Structures to Strategies of Life*. J. Wyneken, M. H. Godfrey and V. Bels, eds. *Copeia* 2012:771-773.
- Shaffer, H. B. 2004. Amphibians, reptiles and a whole lot more. Review of “The Amphibians and Reptiles of Costa Rica. A Herpetofauna Between Two Continents, Between Two Seas.” by Jay M. Savage. *Conservation Biology* 18(5):1440-1441.
- Shaffer, H. B. 1998. Review of "Herpetology" by F Harvey Pough et al. *Systematic Biology*, 47(4):763-764.
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- Shaffer, H.B. 1990. Review of Speciation and its consequences (Otte and Endler, eds.) *Evolution* 44(6):1711-1712.
- Shaffer, H.B., and R.K. Grosberg. 1989. Review of Matsuda, R. Animal evolution in changing environments with special reference to abnormal metamorphosis. *Copeia* 1989(4):1121-1122.
- Shaffer, H.B. 1983. Review of Metamorphosis: A problem in developmental biology. (Gilbert and Frieden, eds.) *Herpetologica* 39(3): 311-313.

Invited Seminars/Symposia (2000-present):

- Turtle Survival Alliance, “Featured Presentation”, Tucson, AZ 2024  
Caltrans seminar on endangered species, June 2024 (virtual)  
University of Miami Biology Dept. Seminar & Searcy lab seminar, March 2024



Interagency Ecological Program, Genetics Project Work Team, December 2023 (virtual)  
USFWS talk on genetic improvement of SB CTS, August 2023  
Biodiversity Genomics 2023 (virtual, co-leading session with my talk plus several other CCGP presentations in a single session)  
USC invited lecture on Urban Biodiversity, September 2023  
PacBio 2023 Discoveries Roadshow, Berkeley, April 2023  
UCLA La Kretz Public Lecture, Los Angeles, April 2023  
Sonoma State University, Departmental Seminar, Rohnert Park, March 2023  
Oregon State University Departmental Seminar, Corvallis, OR, February 2023  
Museum of Vertebrate Zoology, UC Berkeley, February 2023  
Plant and Animal Genome Conference XXX (PAG), PacBio workshop talk, January 2023  
USFWS presentation to the Western Pond Turtle Range-wide Conservation Coalition (RCC), November 2022 (virtual)  
ARMI (Amphibian Research and Monitoring Initiative) workshop leader on genomics in amphibian research, Long Beach, November 2022  
NSF Office of Polar Programs workshop “Mapping the Future Applications of ‘Omics in Antarctic Research. October 2022 (virtual)  
**Keynote**, 4<sup>th</sup> Genomes of Animals & Plants Virtual Conference (GAP22.2), October 2022 (virtual)  
USFWS Western Pond Turtle Coordination Team meeting, September 2022 (virtual)  
17<sup>th</sup> International Conference on Genetics (ICG), Beijing, China (virtual)  
Joint Meetings of Ichthyologists and Herpetologists, Biogeography of California and the Pacific Northwest Symposium **Keynote speaker**, Spokane, WA, August 2022  
Joint Meetings of Ichthyologists and Herpetologists, Exemplary Teaching in Herpetology, Spokane, WA, August 2022  
UC Cooperative Extension workshop on post-fire recovery, February 2022 (virtual)  
USFWS/CDFW joint presentation, Santa Barbara CTS recovery options, January 2022 (virtual)  
Plant and Animal Genome Conference XXIX (PAG), January 2022 (lead talk in workshop on Population and Conservation genomics; virtual)  
UNLV Guest lecturer, Cons. Genetics course, November 2021 (virtual)  
California Conservation Genomics Project, November 2021 (virtual)  
University of South Florida, November 2021 (virtual)  
American Genetics Association President’s symposium, Snowbird, UT October 2021  
Western Pond Turtle Range-wide Conservation Coalition, Genomics update, April 2021; virtual  
Northern California Science Writers Association (virtual talk) April, 2021; virtual  
US Fish and Wildlife Service seminar, Ventura office, March 2021; virtual  
Santa Ynez Valley Natural History Society, February 2021; virtual  
UCLA, “Our Home, How California's Landscape is Evolving” panel seminar, February 2021  
City of Los Angeles Biodiversity symposium, November 2020; virtual  
Museum of Vertebrate Zoology, UC Berkeley, November 2020; virtual  
Wellcome Trust Biodiversity Genomics (plenary in Conservation session), October 2020; virtual  
California Department of Fish and Wildlife Conservation Lecture, October 2020; virtual  
San Diego State University, March 2020  
Princeton University, Princeton NJ December 2019  
Temple University, Philadelphia, Departmental Seminar, November 2019  
Michigan State University, East Lansing, Departmental Seminar, October 2019  
San Diego Natural History Museum Baja California WPT genomics, August 2019  
LSTS Conservation program, invited symposium talk, San Diego Zoo, April 2019

Exploring the Wildland-Urban Interface, symposium, Riverside, April 2019  
University of Florida Department Seminar, April 2019  
Sustainable LA Symposium, Natural and Urban Ecosystems of LA County, Los Angeles, February 2019  
University of Nevada Las Vegas, Las Vegas, February 2019  
**Keynote speaker**, California-Nevada Amphibian Populations Task Force, Arcata, January 2019  
California-Nevada Amphibian Populations Task Force (2<sup>nd</sup> talk), Arcata, January 2019  
The Wildlife Society Invasives Symposium at 25<sup>th</sup> Annual Conference, Cleveland, October 2018  
LA City Biodiversity Expert Council Workshop, Play del Rey, September 2018  
*Emys (Actinemys) marmorata* Working Group Meeting, McClellan Sacramento, September 2018  
Turtle Survival Alliance, *Graptemys* symposium, Dallas, August 2018  
*Emys (Actinemys) pallida* Working Group Meeting, Stunt Ranch, April 2018  
NHM Los Angeles, research symposium series, April 2018  
UC Merced Vernal Pool Symposium, keynote lecture, March 2018  
UCLA Grand Challenge Sustainable LA Energy Research Symposium, March 2018  
USFWS Webinar, Santa Barbara CTS Advisory Committee, March 2018  
Santa Barbara Tiger Salamander Collaborative Meeting, Santa Maria, November 2017  
California Tiger Salamander Conservation Science Symposium, Ft Ord, CA 2017  
University of California Conservation Genomics Consortium, Blue Oak Reserve, August 2017  
International Urban Wildlife Conference, San Diego, June 2017  
University of Texas, Austin, May 2017  
Genetics training grant annual speaker, Yale University, New Haven, May 2017  
Southwestern Herpetologists Society, Pasadena, March 2017  
USFWS Webinar, CTS Science Advisory Committee, December 2016  
Luskin Innovators Speaker Series Discussant: Citizen Scientists, UCLA, November 2016  
Mountain Yellow-legged Frogs in the Sierra Nevada Interagency Conservation Strategy Meeting, 2016  
UCLA Luskin Endowment Inaugural Symposium "Earth Now: Earth 2050", Los Angeles, 2016  
La Kretz Public Discussion, LA River biodiversity, LA Natural History Museum, 2016  
MapNet Genomics Workshop, Keynote, Nelson, New Zealand 2016  
American Society of Ichthyologists and Herpetologists Centennial Symposium, New Orleans, 2016  
Museum of Vertebrate Zoology, UC Berkeley, 2016  
Purdue University, West Lafayette, 2016  
California Conservation Genomics, Sacramento 2016  
American Society of Ichthyologists and Herpetologists, Presidential Address, Reno, 2015  
University of Kansas (Distinguished Biodiversity Speaker), 2015  
Genome 10K, Santa Cruz CA 2015  
Desert Tortoise Council 40<sup>th</sup> Annual Symposium, Las Vegas, 2015  
Iowa State University, Keynote Speaker, EEB Spring Symposium, Ames IA 2015  
Muir Centennial Symposium, UCLA (2014)  
USFWS Partners for Wildlife Amphibian Summit, Elkhorn Slough, CA 2014  
University of Montana (graduate student Super Speaker), 2014  
Peking University/UCLA joint conference, 2014  
LA County Museum of Natural History First Friday Speaker, 2014  
USGS Workshop on Genetics for Monitoring and Management, San Diego 2013  
LA County Museum of Natural History, RAAD Keynote Speaker 2013  
University of California, Riverside, 2013  
Louisiana State University, 2013  
IoES Board Meeting, UCLA 2013  
Luskin Center, UCLA 2013

LA County Museum of Natural History, 2012  
Pepperdine University, 2012  
CSU Northridge, 2012  
University of Southern California, 2012  
Keynote Speaker, Las Virgenes Federation, 2012  
Keynote speaker, UC Natural Reserve System, Oakland 2012  
7<sup>th</sup> World Congress of Herpetology, Vancouver 2012 (2 symposium talks)  
University of California, San Diego 2012  
University of Nevada, Reno 2012  
Case Western University, 2012  
Genome 10K, Santa Cruz, 2011  
California Academy of Sciences, San Francisco, 2011  
UCLA Ecology and Evolution Department Seminar, 2011  
CDFG CTS hybrid workshop, 2011  
The Wildlife Society, Sacramento, 2010  
NIMBioS Working Group on Species Delimitation, 2010-2012  
Bay Area Biosystematists 2010  
UC Davis Evolution and Ecology seminar, 2010  
Vernal Pool Workshop, CSU Chico, 2010  
American Genetics Association, Hilo 2010  
USFWS special workshop on hybrid salamander management, Sacramento 2010  
University of Tennessee, Knoxville 2010  
University of Massachusetts, Amherst 2010  
Concord Academy/Public seminar, Concord 2010  
Boston University 2010  
Royal Tyrrell Museum, Drumheller, Alberta 2009 (Fossil turtle symposium)  
Harvard University 2009 (Hrdy Lecture in Conservation Biology)  
USFWS, Sacramento Field Office 2009  
Darwin Day Keynote Speaker, UC Merced 2009  
Declining Amphibian Population Task Force, Bodega Bay, 2009 (3 talks)  
Turtle Survival Alliance, Tucson 2008  
Yale University, 2008 (2 lectures)  
University of California, Berkeley MVZ Centennial lecture 2008  
Bay Area Biosystematists, Sonoma State University 2008  
Jepson Prairie Docent's Seminar, California Tiger Salamander Biology, Davis 2008  
Purdue University, 2007  
University of Chicago, 2007  
Vernal pool workshop, UC Davis, 2007  
Jepson Prairie Docent's Seminar, California Tiger Salamander Biology, Davis 2007  
Bay Area Biosystematists, 2006  
UC Exotics/Pest symposium, Riverside 2006  
Powdermill Symposium on Freshwater Turtles, Portal AZ 2006 (3 talks)  
University of Kentucky, Lexington 2006  
Society of Systematic Biologists, Stony Brook 2006  
Okazaki Conference: Biology of Extinction, Okazaki, Japan 2006  
Jepson Prairie Docent's Seminar, California Tiger Salamander Biology, Davis 2006  
Simon Fraser University, Vancouver, Canada 2005  
University of Nevada, Reno, 2005

The Wildlife Society, Santa Rosa, 2005  
CSIRO, Canberra, Australia, 2004  
University of Canberra, Australia 2004  
First Okazaki Biology Conference: Biology of Extinction, Okazaki, Japan 2004  
Wildlife Society, Santa Rosa, CA 2003 (2 lectures)  
American Society of Ichthyologists and Herpetologists, Manaus 2003 (2 symposia)  
University of Michigan, Ann Arbor 2003  
Kyushu University, Japan 2003 (Distinguished Lecturer invitation)  
University of Texas, Austin, 2003  
Sacramento Zoological Society, Sacramento, 2002  
Joint Meetings, ASIH, SSAR, and HL, Kansas City, MO 2002  
Society for Conservation Biology, UC Davis chapter, 2002  
Chico State University, Chico, CA 2002  
Dartmouth College, Hanover, N.H. 2001  
California Academy of Sciences "BioForum" speaker, 2001  
Florida State University (elected yearly speaker by FSU graduate students), 2001  
Wildlife Society, Declining CA amphibian symposium, Sacramento, 2001 (4 presentations)  
San Benito Co. Habitat Conservation Plan Workshop, Hollister, 2000  
Santa Ynez Natural History Society, Inaugural presentation, Santa Barbara, 2000  
American Association of Ichthyologists and Herpetologists, La Paz, 2000  
Field Museum of Natural History, Chicago, 2000

Presented Papers (2000-present):

Animal Behavior Society, Ontario, Canada, 2024  
Joint Meetings of Ichthyology and Herpetology, Pittsburg, PA 2024  
California-Nevada Amphibian Populations Task Force, Merced, 2024 (3 talks)  
American Ornithological Society, Ontario, 2023  
North American Society for Bat Research (Curti, presents) 2023  
The Wildlife Society, Louisville, 2023  
California-Nevada Amphibian Populations Task Force, Sebastopol, 2023 (4 talks)  
Turtle Survival Alliance, virtual meeting, 2020  
California-Nevada Amphibian Populations Task Force, San Diego, 2020  
The Wildlife Society, Sacramento (Eric Olson, presenting), 2020  
Herpfest, CSUN, Northridge, 2019 (2 talks)  
American Society of Ichthyologists and Herpetologists, Rochester NY 2018 (4 talks, 1 presentation)  
American Society of Ichthyologists and Herpetologists, Austin TX 2017 (3 talks, 1 presentation)  
Evolution/SSE/SSB, Portland, Oregon (3 talks, 1 presentation)  
Herpfest, UC Riverside, Riverside, 2017  
California-Nevada Amphibian Populations Task Force, Santa Barbara, 2017 (4 presentations)  
American Society of Ichthyologists and Herpetologists New Orleans 2016 (5 presentations)  
Turtle Survival Alliance, Tucson, 2015  
California-Nevada Amphibian Populations Task Force, Malibu, 2015 (1 presentation, 4 coauthored)  
Turtle Survival Alliance, St. Louis 2013  
American Society of Ichthyologists and Herpetologists Albuquerque 2013 (5 presentations)  
California-Nevada Amphibian Populations Task Force, Arcata, 2013 (3 presentations)  
California-Nevada Amphibian Populations Task Force, Placerville, 2012  
American Society of Ichthyologists and Herpetologists Minneapolis 2011 (2 presentations)

Ecological Society of America, Austin 2011  
Tropical Conservation Biology and Environmental Science, UH Hilo, 2011  
Turtle Survival Alliance, Orlando 2010  
Ecological Society of America, Pittsburg 2010 (coauthor on 2 talks)  
Ecological Society of America, Albuquerque NM 2009  
American Society of Ichthyologists and Herpetologists Portland OR 2009 (coauthor on 3 presentations)  
Society for the Study of Evolution, Idaho 2009 (coauthor on 2 presentations)  
American Society of Ichthyologists and Herpetologists Montreal 2008 (2 presentations)  
Society for the Study of Evolution, Minneapolis 2008 (coauthor on 3 presentations)  
Southeastern Ecology, Evolution, and Population Genetics, Tennessee 2007  
American Society of Ichthyologists and Herpetologists St. Louis, MO 2007 (2 presentations)  
American Society of Ichthyologists and Herpetologists New Orleans, LA 2006 (3 presentations)  
American Society of Ichthyologists and Herpetologists Tampa, FL 2005 (4 presentations)  
Ecological Society of America, Montreal 2004  
Society for the Study of Evolution, Chico, CA 2003

### Conservation and Outreach Activities

Serve on the Sustainable Los Angeles Grand Challenge inaugural Sustainability Research Council, 2024-present  
Served as an expert client to submit an *amicus curiae* brief on the potential effects of a proposed Kern County oil and gas ordinance on the Temblor legless lizard to the California Court of Appeal, Fifth Appellate District, in the matter of *V Lions Farming, LLC, et al. v. County of Kern, et al.*  
Governmental and NGO stakeholder meeting, CCGP, Sacramento March 2023  
All-hands meeting, CCGP, UCLA, September 2022  
A Conversation on Los Angeles Wildlife Corridors, Invited Panelist (21 September 2021)  
Western Pond Turtle Rangelwide Conservation Coalition, Founding Member  
USFWS Species Survival Analysis technical team for Western Pond turtle, March 2021-present  
USFWS seminar, March 2021, on SB CTS  
UCLA, “Our Home, How California's Landscape is Evolving” panel seminar, February 2021  
NASA Biodiversity Conservation Roundtable participant, 15 January & 11 February 2021  
Scientific peer review, USFWS Species Status Assessment (Western spadefoot), 27 April 2020-present  
USFWS expert meeting, Western spadefoot, presenter/participant, 8-9 July 2020  
San Diego Natural History Museum Baja California research symposium August 2019  
Santa Cruz Long-toed salamander working group, Elkhorn Slough, August 2019  
NCC Day-long workshop on vernal pools, UCLA, April 2019  
LSTS Conservation program, invited symposium talk, San Diego Zoo, April 2019  
Exploring the Wildland-Urban Interface, symposium, Riverside, April 2019  
Lecture for University of Florida Herpetology Course, declining amphibians, April 2019  
Sustainable LA Symposium, Natural and Urban Ecosystems of LA County, Los Angeles, February 2019  
Santa Barbara Tiger Salamander Collaborative presentation, Santa Maria, May, 2018  
UCLA Grand Challenge Sustainable LA Energy Research Symposium, March 2018  
Atlantic Coast Leopard Frog recovery team (2016- present)  
Santa Barbara Tiger Salamander Collaborative presentation, Santa Maria, November 2017  
California Tiger Salamander Conservation Science Symposium (2017, cosponsor)  
Biodiversity Expert Council, City of Los Angeles (2017-present)  
University of California Conservation Genomics Consortium, 2017

Herpetological Education Committee, ASIH (2016-2019)  
Spiritus Award Committee (Chair), ASIH, 2017  
Urban Wildlife Working Group Symposium Coordination Committee, San Diego, 2017  
La Kretz Public Discussion, LA River biodiversity, LA Natural History Museum, 2016  
MapNet workshop, Keynote on Conservation Genomics, Nelson New Zealand, 2016  
Workshop on grant writing, ASIH centennial meeting, New Orleans, 2016  
California tiger salamander Science Advisory Committee workshop, Sacramento, 2016  
Presentation to Carlsbad office of USFWS on California Conservation Genomics Initiative, 2016  
Presentation to Sacramento office of USFWS on California Conservation Genomics Initiative, 2016  
Presentation to Ventura office of USFWS on California Conservation Genomics Initiative, 2016  
Natural Communities Coalition, Orange County, leadership team and full day workshop, 2016  
California Conservation Genomics Workshop, Sacramento, February 2016  
California tiger salamander Science Advisory Committee appointment by USFWS, January 2016  
Presentation leader to California Fish and Game Commission, 7-8 October 2015, Los Angeles  
Sustainable LA Biodiversity Committee and Leadership Team, UCLA Grand Challenge, 2014-present  
Animals in 3-D, panel discussion on animals in science and culture, UCLA, September 2014  
USFWS Partners for Wildlife Amphibian Summit speaker, Elkhorn Slough, CA 2014  
First Friday Keynote, 7 March 2014, LA County Museum of Natural History  
Genetics for Monitoring and Management Workshop, (Genomics presenter) November 2013  
Science Panel Member (invited), Nature Reserve of Orange County, November 2013  
Advisory Board, The Turtle Conservancy (2013-present)  
Hosted California Fish and Game Commission, 22-23 May 2013, UCLA campus  
Presentation leader to California Fish and Game Commission, 22-23 May 2013, Los Angeles  
Cabrillo National Monument Reptile and Amphibian Monitoring Advisory Committee, 2013  
California Tiger Salamander Recovery Planning working group, 2013-present  
UC Merced Vernal Pool Reserve Advisory Committee, 2012-present  
Keynote Speaker, Las Virgenes Federation, April 2012  
La Kretz Center for California Conservation Science, Director, 2012-present  
California Landscape Conservation Cooperative (LCC) Steering Committee, 2011-present  
Advisory Board, Turtle Conservation and Research Programme, India (April 2011-present)  
Jepson Prairie Docent's Seminar, California Tiger Salamander Biology, Davis 2011  
Lead scientist/speaker, CDFG workshop on hybrid CA tiger salamander management, 2011  
Speaker & Discussion leader, USFWS special meeting on management of hybrid CTS, 2010  
Grant evaluator for the Department of Defense SERDP program, 2010  
Evaluator for the National Research Council report, *Sea Turtle Status and Trends: Integrating Demography and Abundance*, March 2010  
Invited speaker, annual public seminar on conservation biology, Concord Academy, 2010  
Invited scientific commentator/evaluator on the Proposed Rule to list the California Tiger Salamander as endangered in California, CDFG, 2009.  
Pro bono consultant, California tiger salamander conservation, Travis Air Force Base, 2009  
Presentation to USFWS updating on California Tiger Salamander conservation, 2009  
Amphibian and Reptile Species of Special Concern document for the state of California, 2008-09  
Peer reviewer, Recovery Plan for the Mojave Desert Tortoise, USFWS November 2008  
Turtle Survival Alliance, Participant in the Top 40 endangered species program  
Member, Rush Ranch Science and Technical Advisory Team (August 2008-present)  
Workshop on Relocation of Endangered California Tiger Salamanders (organized by Shaffer, in collaboration with USFWS & CDFG) 21 March 2008  
Workshop on Conservation and Management of Western Pond Turtles, Redding 6 Feb. 2008

Jepson Prairie Docent's Seminar, California Tiger Salamander Biology, Davis 2007  
Potrero Hills Scientific Review Team, May-September 2006/7 (CTS evaluation)  
Jepson Prairie Docent's Seminar, California Tiger Salamander Biology, Davis 2006  
Invited participant, "Evolutionary hotspots" workshop (California State Parks) November, 2005  
Scientific advisor, Caltrans working group on mitigation standards for California tiger salamanders, October 2005  
Invited speaker, Wildlife Society workshop on the Western Pond Turtle, Sonoma State University, 16-17 April 2005  
Invited speaker, California State Parks symposium on Genetic Monitoring. UC Davis, 16 February, 2005  
ASIH Conservation Committee, 2005-present  
CSIRO Researching with Scientists Scheme (2004): (for four Australian high-school students)  
Reviewer for 2004 IUCN amphibians of the world project (Mexican ambystomatid salamanders)  
"Conservation of the California Tiger Salamander"- Published interview **Environmental Review** 2004, 11(10): 1-8.  
Invited speaker for the Yolo Basin Foundation's Flyway Nights Lecture Series, 2003  
Invited scientific commentor/evaluator on the Proposed Rule to list the Central California population segment of *Ambystoma californiense*, USFWS, 2003.  
Invited speaker, Wildlife Society workshop on the California Tiger Salamander, Sonoma State University, 4-5 October, 2003  
Member, Science Advisory team, Arroyo toad monitoring and survey study, Camp Pendleton, CA 2002  
Member, Science Advisory Group for the Merced County NCCP/HCP 2002  
Speaker on Amphibian Declines, Sacramento Zoological Society, Sacramento, 2002  
Participant, Rapid Biological Inventory. China: Gaoligong Shan, Yunnan Prov. Field Museum of Natural History, 2002  
Invited Participant, Wildlife Society/USFWS/SDFG workshop on the California Red-legged frog, Pt. Reyes, 8-9 April, 2002  
Participant, California Academy of Sciences "Bioforum" program, 2001  
Member, USFWS Santa Barbara tiger salamander recovery team, 2001-present  
Member, Santa Cruz long-toed salamander recovery team, 2001-present  
Participant, Rapid Biological Inventory. Perú: Biabo Cordillera Azul. Field Museum of Natural History, 2001  
IUCN workshop on Asian Turtle Crisis (facilitator for systematic biology). Dallas January, 2001.  
San Benito Co. Habitat Conservation Plan (HCP) Workshop, expert on the California Tiger Salamander. September, 2000  
Santa Barbara Co. Emergency listing team for the USFWS on the Santa Barbara Tiger Salamander. Spring, 2000.  
UC Davis Arboretum Speaker. Spring, 2000.  
Member, Jepson Prairie Advisory Committee, ~1995-present

Ph.D. Students Mentored (bold are current):

Mike Benard  
Gideon Bradburd  
Gary Bucciarelli  
Ann Chang  
Robert Cooper  
**Joseph Curti**

Carlos Davidson  
Tag Engstrom  
Robert Fisher  
Ben Fitzpatrick  
Natalia Gallego Garcia  
Lara Hansen  
Karen Leyse  
Amy Lind  
Karen Marchetti  
Evan McCartney-Melstad  
Kevin Neal  
Dave Parichy  
Nathan Rank  
Maureen Ryan  
Wes Savage  
Chris Searcy  
Phil Spinks  
Bob Thomson  
Erin Toffelmier  
Pete Trenham  
Ian Wang

Postdoctorals Mentored (**bold are current**):

Jamie Ashander  
Joscha Beninde  
Gary Bucciarelli  
Jim Clark  
Adam Clause  
**Robert Cooper**  
**David Daversa**  
Ben Fitzpatrick  
Natalia Gallego Garcia  
Muge Gidis  
Rich Glor  
Jesse Grismer  
Mike Hickerson  
Fred Janzen  
Jarrett Johnson  
Elizabeth Long  
**Zachary MacDonald**  
Evan McCartney-Melstad  
Mark McKnight  
Emily Moriarty Lemmon  
Tom Near  
Greg Pauly  
Seth Riley  
Peter Scott  
Chris Searcy



Phil Spinks  
Dave Starkey  
**Erin Toffelmier (also Associate Director, CCGP)**  
Pete Trenham  
Randal Voss  
Ben Wielstra  
Amber Wright  
Yonghua Wu