Gary M. Bucciarelli

CURRICULUM VITAE

INSTITUTE OF THE ENVIRONMENT UNIVERSITY OF CALIFORNIA, DAVIS ONE SHIELDS AVENUE DAVIS, CA 95616 GARYB@UCDAVIS.EDU WWW.GARYBUCCIARELLI.ORG (323) 875-5986

EDUCATION

University of California, Los Angeles

Ph.D., Biology: Department of Ecology and Evolutionary Biology, 2015 Dissertation Title: *Phenotypic variation of toxin levels in a chemically defended amphibian: The ecological and evolutionary significance of tetrodotoxin.* Committee: H. Bradley Shaffer (chair), Lee. B. Kats, David B. Green, Gregory Grether, Thomas Smith

Antioch College

B.A., Interdisciplinary Cultural Studies, 2002 Committee: Christine Hill (chair), Anne Bohlen (department chair), Bob Devine (Antioch President)

PROFESSIONAL APPOINTMENTS

2023 - Present	Associate Adjunct Professor University of California, Davis; Department of Wildlife, Fish, and Conservation Biology
2022 - Present	Director UC Natural Reserve System ; UC Davis <i>Lassen Volcanic Park Biological Field Station</i>
2022 - Present	Director of Strategic Engagement UC Davis Natural Reserves
2016 - Present	Adjunct Professor Pepperdine University ; Natural Science Division
2018 - 2022	Associate Adjunct Professor University of California, Los Angeles ; Department of Ecology and Evolutionary Biology
2015 - 2022	Director of Research UC Natural Reserve System ; UCLA <i>Stunt Ranch Biological Field Station</i>

2015 - 2018	Postdoctoral Researcher University of California, Los Angeles In collaboration with the Institute of the Environment & Sustainability, La Kretz Center for Conservation Science and The National Park Service, Santa Monica Mountains National Recreation Area
2013 - 2014	Research Scientist The Malibu Institute Project: <i>The impacts of non-native species on stream invertebrates and amphibians</i>
2013 - 2015	Public Outreach Coordinator University of California, Los Angeles Institute of the Environment & Sustainability, La Kretz Center for Conservation Science
2012	Research Scientist Graniterock Consulting Project: The molecular ecology of native and non-native alleles in the Federally- endangered California tiger salamander
2011	Research Assistant Rincon del Socorro ; Ibera wetlands, Argentina Project: <i>The ecology of vertebrates in a restored wetland</i>
2009 - 2012	Research Assistant and Mentor La Selva Biological Preserve , Costa Rica Project: <i>Behavioral avoidance of ultraviolet radiation in calling male poison dart frogs</i>
2005 - 2010	Senior Manager Apple Inc. , Cupertino, CA Managed 150 employees; responsible for \$40 million of revenue; staffed the Los Angeles market

FUNDING & AWARDS

- **2022** National Science Foundation, DEB: Evolutionary Processes: \$986,000 (Submitted) Project: *Re-examining the origin and maintenance of a toxin phenotype in newts*
- **2022** National Science Foundation, LTREB: \$452,000 (In Revision) Project: Using sentinel sites and endemic species to predict population outcomes in human-altered environments
- **2022** University of California Climate Innovation and Entrepreneurship Fund: \$230,000 Project: AI synthesis of field and remote sensing data to assess ecosystem resilience and functional diversity in fire-affected landscapes

2022 Center for Information Technology Research in the Interest of Society (CITRIS): \$60,000 Project: Calibrating remote sensing data to develop a toolkit for the assessment of ecosystem resilience and functional diversity in fire affected landscapes

- **2022** Wild Genomes, Morris Animal Foundation: \$92,800 Project: Applying genomics to the conservation and management of the critically-endangered El Rinconstream frog in Patagonia, Argentina
- **2022** National Fish and Wildlife Foundation: \$151,089 Project: Improving methods and assessing the impacts of crayfish and crayfish trapping on unarmored threespine stickleback and California red-legged frogs in San Francisquito Creek
- **2022** California Proposition 50 Grant Program: \$385,000 Project: Looking back to see ahead: using long-term monitoring data to predict species persistence
- 2021 UC Natural Reserve System Field Science Fellowship (mentor)
- **2019** Las Virgenes Municipal Water District: \$125,000 Project: Direct potable reuse as drinking water: public perceptions and ecological effects
- **2015** United States Department of the Interior: \$270,000 Project: *A genomics-based conservation management plan for amphibians of the greater Los Angeles area*
- **2015** Las Virgenes Municipal Water District: \$95,000

Project: The characterization, evaluation, and control of invasive species in Los Angeles watersheds

- 2015 UCLA Dissertation Year Fellowship
- **2014 The National Park Services:** \$7,500 Project: *The impact of invasive species removal on amphibians and aquatic macroinvertebrates*
- **2014 Malibu Institute**: \$15,000 Project: *Reintroduction of local amphibian species into restored habitat*
- 2013 UCLA La Kretz Center: \$7,000

Project: Do predator cues induce increased toxin levels in a chemically defended amphibian?

- **2013** University of California Natural Reserve System Mildred Mathias Award: \$4,500 Project: Phenotypic variation through space and time of toxin levels in a chemically defended amphibian
- 2013 UCLA Life Sciences Distinction in Teaching Award
- **2011** National Science Foundation Graduate Research Fellowship Program - *Honorable Mention*

2011 UCLA Departmental Fellowship

1998 Antioch College Horace Mann Fellowship

PEER-REVIEWED PUBLICATIONS (* denotes mentored undergraduate or [‡]graduate researcher)

- 24) Daversa, D.R., **Bucciarelli, G.M.**, Shaffer, H.B., Lloyd-Smith, J., & Blumstein, D.T. (Under Review). Energetics, stress, and the demographic consequences of climate-disease interactions. *Trends in Ecology and Evolution*.
- 23) Cervantez, O., Anderson, D., **Bucciarelli, G.M.**, Lambert, M., & Friesen, M. (Under Review). Feral frogs, native newts, and chemical cues: Identifying threats from and management opportunities for invasive African clawed frogs in Washington state. *PeerJ*
- 22) Frey, A.R., **Bucciarelli, G.M.**, Kats, L.B., & Green, D.B. (Under Review). An amphibian toxin phenotype is sexually dimorphic and shows seasonal concordant change between sexes. *Science Advances*
- 21) Rouse, S.V., **Bucciarelli, G.M.**, Kats, L.B., & Roberts, D. (Under Review). The development and initial psychometric evaluation of a scale to measure attitudes about purified recycled water. *Journal of Political and Social Psychology*
- 20)_**Bucciarelli, G.M.,** * Smith, S.J, * Choe, J., * Shin, P., Fisher, R.N., & Kats, L.B. (In Revision). Native amphibian toxin reduces invasive crayfish feeding with apparent benefits to stream biodiversity. *BMC Ecology and Evolution*
- 19) [‡] van Riemsdijk, I., Arntzen, J.W., Bucciarelli, G.M., McCartney-Melstad, E., Rafajilovic, M., Scott, P.A., Toffelmier, E., Shaffer, H.B., & Wielstra, B. (Accepted). Spatial variation in introgression along a toad hybrid zone in France. *Heredity*.
- 18) * Clark, M.A., * Ota, W.M., * Smith, S.J., * Muramoto, B.K, * Chan, G., * Ngo, S., * Kenyon, M.,
 * Sturtevant, M., * Diamond, M., Bucciarelli, G.M., & Kats, L.B. 2022. A natural experiment identifies an impending ecological trap for a neotropical amphibian in response to extreme weather events. *Ecology and Evolution*.
- 17) ***Bucciarelli, G.M.**, *Alsalek, F., Green, D.B., Kats, L.B., & Shaffer, H.B. 2022. Toxic relationships and arms race coevolution revisited. *Annual Review of Animal Biosciences*.
- 16) ***Bucciarelli, G.M.**, *****Lechner, M., ***** Fontes, A., Kats, L.B., & Shaffer, H.B. 2021. From poison to promise: The evolution of tetrodotoxin and its potential as a therapeutic. *Toxins.* 13: 517
- 15) Grear, D., Mosher, B., Grant, E., Adams, M., Backlin, A., Barichivich, W., Brand, A., Bucciarelli, G.M., Calhoun, D., Chestnut, T., Davenport, J., Dietrich, A., Fisher, R., Glorioso, B., Halstead, B., Hayes, M., Honeycutt, R.K., Hossack, B., Kleeman, P., Lemos-Espinal, J., Lorch, J., McCreary, B., Muths,

E., Pearl, C., Richgels, K., Robinson, C., Rowe, J., Sigafus, B., Stasiak, I., Sweet, S., Walls, S., Watkins-Colwell, G., White, C., Williams, L., & Winzeler, M. (2020). *Batrachochytrium salamandrivorans* (Bsal) not detected in an intensive survey of North American amphibians. *Scientific Reports*. 10: 1-7.

- 14) Bucciarelli, G.M., * Clark, M.A., Shaffer, H.B., Fisher, R.N., Delaney, K.S., Riley, S.P.D., Honeycutt, R.L. & Kats, L.B. 2020. Amphibian responses in the aftermath of extreme climate events. *Scientific Reports*. 10: 1-7.
- 13) Valliere, J.M., Bucciarelli, G.M., Bytnerowicz, A., Fenn, M.E., Irvine, I.C., Johnson, R.F., & Allen, E.B. 2020. Declines in native forb richness of an imperiled plant community across an anthropogenic nitrogen deposition gradient. *Ecosphere*. 11:e03032.
- 12) Valliere, J.M., * Escobedo, E., **Bucciarelli, G.M.,** Sharifi, M., & Rundel, P. 2019. Invasive annuals respond more negatively to drought than native species. *New Phytologist*. 223: 1647-1656.
- Bucciarelli, G.M., * Suh, D.S., * Davis, A., Roberts, D., Sharpton, D., Shaffer, H.B., Fisher, R.N., & Kats, L.B. 2019. Assessing effects of non-native crayfish on mosquito survival. *Conservation Biology*. 33: 122-131.
 - Second highest Altmetric score of all papers published in Conservation Biology in 2018-2019
 - Among the top 10% of most downloaded papers in 12 months following publication
 - Featured by National Geographic, NPR, and iHeartRadio
- 10) * Ota, W.M., *Olsen, B., **Bucciarelli, G.M.,** & Kats, L.B. 2018. The effect of newt toxins on an invasive snail. *Hydrobiologia*. 817: 341-348.
- 9)[‡] Velasco, M.A., Berkunsky, I., Simony, M.V., Quiroga, S., **Bucciarelli, G.M.,** Kats, L.B., & Kacoliris, F.P. 2017. The rainbow trout is affecting the occupancy of amphibians in Patagonia. *Hydrobiologia*. 817: 447-455.
- 8) **Bucciarelli, G.M.,** Green, D.B, Shaffer, H.B., & Kats, L.B. 2017. An amphibian chemical defense phenotype is inducible across life history stages. *Scientific Reports*. 7: 8185.
- 7)[‡] Calhoun, D.M., **Bucciarelli, G.M.,** Kats, L.B, Zimmer, R.K., & Johnson, P.T.J. 2017. Noxious newts and their natural enemies: Experimental effects of tetrodotoxin exposure on trematode parasites and aquatic macroinvertebrates. *Toxicon*. 137: 120-127.
- 6) Bucciarelli, G.M., Green, D.B., Shaffer, H.B., & Kats, L.B. 2016. Individual fluctuations in toxin levels affect breeding site fidelity in a chemically defended amphibian. *Proceedings of the Royal Society: B*. 283: 20160648.
- 5) **Bucciarelli, G.M.** & Kats, L.B. 2015. Effects of newt predator cues on the distribution and foraging of stream macroinvertebrates. *Hydrobiologia*. 749: 69-81.

- 4) **Bucciarelli, G.M.**, Blaustein, A.R., Garcia, T. & Kats, L.B. 2014. Invasion complexities: The diverse impacts of invasive species on amphibians. *Copeia*. 4: 611-632.
- 3) **Bucciarelli, G.M.**, * Li, A., Kats, L.B., & Green, D.B. 2014. Quantifying tetrodotoxin levels in the California Newt using a non-destructive sampling method. *Toxicon*. 80: 87-93.
- 2) Kats, L.B., Bucciarelli, G.M., Vandergon, T.L., Honeycutt, R.L. * Mattiasen, E., * Sanders, A., Riley, S.P., & Fisher, R.N. 2013. Effects of natural flooding and manual trapping on the facilitation of invasive crayfish-native amphibian coexistence in a semi-arid perennial stream. *Journal of Arid Environments*. 98: 109-112.
- 1) Kats, L.B., **Bucciarelli, G.M**. * Schlais, D.E., Blaustein, A.R., & Hahn, B. 2013. Ultraviolet radiation influences perch selection by a neotropical poison dart frog. *PLoS ONE*. 7(12).

REPORTS

- **2019** *"A conservation management plan for amphibians of greater Los Angeles informed by landscape genomics"* prepared by G.M. Bucciarelli, K.M. Pease, K.S. Delany, S.P.D. Riley, and H.B. Shaffer for the **National Park Service**.
- **2017** *"Characterization, evaluation, and control of invasive species in Los Angeles watersheds"* prepared by G.M. Bucciarelli, D. Sharpton, and L.B. Kats for the **Los Angeles Regional Water Quality Board**.

TEXTBOOKS & BOOKS

- **2020 Reviewer** <u>Evolution</u> (2nd ed.) by C.T. Bergstrom and L.A. Dugatkin
- 2019
 Reviewer

 West Southwest: Vertebrate Life in Southern California by Gregory Pregill
- 2014 Reviewer <u>Essentials of Ecology</u> (4th ed.) by M. Begon, C.R. Townsend, and R.W. Howarth
- 2013 Content Consultant

The Science of Life: Food Webs by Carol S. Surges

TEACHING EXPERIENCE

2022	UCLA: Research Colloquia, Winter and Spring Quarters (Instructor)
2019 - 2022	UCLA: Ecology (Instructor)
2018 - 2022	UCLA: Evolution (Instructor)
2016 - Present	Pepperdine University: Biostatistics; Experimental Design; Ecology (Instructor)
2014	UCLA: Field Biology Quarter - The Ecology of California Amphibians and Reptiles (TA)
2013 - 2015	UCLA: Molecular, Cellular, & Developmental Biology; Teaching Practicum (Instructor)
2012	UCLA: Introduction to Evolution (TA)
2011	UCLA: Ecological Responses to Environmental Challenges (TA)
2002	Antioch College: Media and Social Change (TA)
2001	Antioch College: Media Literacy and Production (TA)

DISSERTATION COMMITTEES

- 2021 Present Maria Jose Navarrete (UC Berkeley, dissertation advisor Rebecca Tarvin)
- **2023 Present** Yee-Ann Wong (UT Arlington, dissertation advisor JC Buckner)

INVITED LECTURES

- 2023 Lingnan University, Tuen Mun, Science Unit, Hong Kong SAR, China
- 2023 University of Hong Kong, School of Biological Sciences, Hong Kong SAR, China
- 2022 California State University, Dominguez Hills, Department of Biology, Dominguez Hills, CA
- 2021 California State University, Channel Islands, Department of Biology, Camarillo, CA
- 2020 National Park Service, Thousand Oaks, CA
- 2020 San Diego Natural History Museum, San Diego, CA
- 2019 Pepperdine University, Seaver College, Malibu, CA
- 2017 California State University, Northridge, Department of Biology, Los Angeles, CA
- 2016 Imperial College, Department of Ecology and Evolutionary Biology London, United Kingdom
- 2016 La Plata University, Department of Ecology La Plata, Argentina
- 2015 Pepperdine University, Department of Biology Malibu, CA
- 2014 The Chautauqua Series Temescal Canyon Park, Pacific Palisades, CA
- 2014 Southwestern Herpetological Society Pasadena, CA
- 2014 Mountains Recreation and Conservation Authority Pacific Palisades, CA
- 2014 Cold Creek Docents Calabasas, CA
- 2013 California Native Plant Society Santa Monica, CA
- 2013 Las Virgenes Municipal Water District Calabasas, CA
- 2012 Topanga Canyon Docents Malibu, CA
- 2010 Santa Monica College, Department of Biology Santa Monica, CA

PRESENTATIONS (* denotes mentored undergraduate)

S.M. Westcott, L.F. Sullivan, F.O. Shafau, G.M. Bucciarelli, A. Frey, D.B. Green, E.A. Heath-Heckman, and H.L. Eisthen. "Newt-associated bacteria synthesize a protective neurotoxin." 2022. **8th Conference on Beneficial Microbes.**

* E. Vetter, * E. DeArment, * A. Fontes, G.M. Bucciarelli, and L.B. Kats. "Conspecific aggression of invasive crayfish in response to amphibian chemical cues." 2021. Seaver Research and Scholarly Achievement Symposium.

* A. Fontes, * E. Vetter, G.M. Bucciarelli, and L.B. Kats. "The effects of symbiote ostracods on invasive crayfish behavior." 2021. Seaver Research and Scholarly Achievement Symposium

J.M. Valliere, G.M. Bucciarelli, * A. Bytnerowicz, M.E. Fenn, I.C. Irvine, R.F. Johnson, and E.B. Allen, "Atmospheric nitrogen deposition drives declines in native plant richness across the Santa Monica Mountains, California." 2020. **National Atmospheric Deposition Program (NADP) Scientific Symposium**.

G.M. Bucciarelli, * D. Hu, * M. Carter, D.B. Green, H.B. Shaffer, and L.B. Kats, "Fluctuating toxins and the evolution of chemical defenses in a poisonous amphibian." 2020. **World Congress of Herpetology**.

* D. Addison, * B. Muramoto, * D. Rizzo, L.B. Kats, and G.M. Bucciarelli. "Effects of TTX on the movement, metamorphosis, and mortality of mosquito larvae." 2019. **Southern California Conference for Undergraduate Research**. Mentor.

* M. Sturtevant, * C. Russel, R. Garcia, G.M. Bucciarelli, and L.B. Kats. "Tetrodotoxin reduction due to antibiotics in the California newt." 2019. **Southern California Conference for Undergraduate Research**. Mentor.

G.M. Bucciarelli, * D. Hu, D.B. Green, H.B. Shaffer, and L.B. Kats, "Assessing range wide variation of toxin defenses in a poisonous amphibian." 2019. **Oxford Venoms and Toxins World Symposium.**

* S.J. Smith, G.M. Bucciarelli, and L.B. Kats. "Impacts of a native toxic salamander on the behavior of a stream invader." 2019. Ecological Society of America. Mentor.

* A. Fontes, G.M. Bucciarelli, and L.B. Kats "The effects of symbiote ostracods on invasive crayfish behavior." 2019. **Behavior**. Mentor.

* S.J. Smith, G.M. Bucciarelli, and L.B. Kats. "Feeding behavior of invasive crayfish, *Procambarus clarkii*, in response to native chemical cues." 2018. Southern California Conference for Undergraduate Research. Mentor.

* A. Fontes, G.M. Bucciarelli, and L.B. Kats. "Removal of symbiotic ostracods and the impact of feeding behavior and conspecific aggression in host crayfish, *Procambarus clarkü*." 2018. Southern California Conference for Undergraduate Research. Mentor.

* W. Ota, * B. Olsen, G.M. Bucciarelli, and L.B. Kats. "The effect of an amphibian toxin on an invasive snail." 2017. **Ecological Society of America**. Mentor.

L.B. Kats, and G.M. Bucciarelli. "The influence of UV radiation on tropical dart frog behavior." 2017. **Southern California Academy of Sciences 110th Annual Meeting**.

* A. Flores, G.M. Bucciarelli, D.B. Green, and L.B. Kats. "Tolerance to aquatic nitrate toxicity may contribute to the invasive potential of globally introduced crayfish." 2016. **Southern California**

Conference for Undergraduate Research. Mentor.

* A. Flores, G.M. Bucciarelli, D.B. Green, and L.B. Kats. "The effect of nitrate on the release of glucose into the hemolymph of crayfish." 2016. **National Meeting of the American Chemical Society**. Mentor.

G.M. Bucciarelli, H.B. Shaffer, D.B. Green, and L.B. Kats. "Phenotypic variation in space and time of toxin levels in a chemically defended amphibian." 2015. **Ecological Society of America**.

G.M. Bucciarelli, H.B. Shaffer, D.B. Green, and L.B. Kats. "Fluctuations in toxin levels of a chemically defended amphibian." 2015. **Oxford Venoms and Toxins World Symposium**.

G.M. Bucciarelli, H.B. Shaffer, D.B. Green, and L.B. Kats. "Temporal variation in toxin levels of a chemically defended amphibian." 2015. **American Society of Ichthyologists and Herpetologists**.

G.M. Bucciarelli, H.B. Shaffer, D.B. Green, and L.B. Kats. "Tracking newts and defensive toxin levels through time in the Santa Monica Mountains." 2015. Meeting of the **California-Nevada Amphibian Populations Task Force**.

* A. Li, G.M. Bucciarelli, L.B. Kats and D.B. Green. "Reduced sample size and improved extraction and recovery of tetrodotoxin from the California newt, *Taricha torosa*." 2014. National Meeting of the American Chemical Society. Mentor.

M. Gidis, G.M. Bucciarelli, U. Kaya, and H.B. Shaffer. "*Lyciasalamandra* genus: A status review using next-generation sequencing methods." 2014. American Society of Ichthyologists and Herpetologists.

G.M. Bucciarelli. "Phenotypic variation in space and time of an amphibian chemical defense." 2014. **University of California Natural Reserve System Annual Symposium**.

* A. Sokolova, A., * N. Huron, * A. Reimer, G. Bucciarelli and L.B. Kats. "Effects of Tetrodotoxin on New Zealand Mud Snails (*Potamopyrgus antipodarum*)." 2013. Southern California Conference for Undergraduate Research. Mentor.

* J.M. Buie, * N. Novella, * J. Liao, * C.M. Sutter, Kats, L.B., and G.M. Bucciarelli. "Stream current as a limiting factor for aquatic invasive species in southern California streams." 2013. **International Conference on Challenges in Aquatic Sciences**.

* Sutter, C.M., * N.A. Novella, L.B. Kats and G. Bucciarelli. "Effects of ultraviolet light on male aggression in the strawberry poison dart frog, *Oophaga pumilio*" 2012. **Southern California Conference for Undergraduate Research**. Mentor.

* J. Liao. * A. Nakahar, * A. Sokolova, G. Bucciarelli and L.B. Kats. "Activated carbon adsorption of tetrodotoxin in post fire streams?" 2012. **Southern California Conference for Undergraduate Research**. Mentor.

* N. Huron, L.B. Kats and G.M. Bucciarelli. "A comparison of auditory and visual cues in the territorial behavior of the strawberry poison dart, *Oophaga pumilio*." 2012. Southern California Conference for Undergraduate Research. Mentor.

* A. Chowaniec, G.M. Bucciarelli, L.B.Kats and D. B. Green. "An improved method for the analysis of tetrodotoxin by high performance liquid chromatography coupled with fluorescence detection." 2011. **Western Regional Meeting of the American Chemical Society**.

G.M. Bucciarelli, * D.E. Schlais and L.B. Kats. "Ultraviolet radiation influences perch selection by a neotropical poison dart frog." 2011. **Joint Meeting of Ichthyologists and Herpetologists**.

* A. Sanders, * E. Uemura, * E.G. Mattiasen, * N. Huron, * C. Sutter, L.B. Kats and G.M. Bucciarelli. "The influence of flood events on the long-term coexistence of native amphibians." 2010. **Southern California Conference for Undergraduate Research**. Mentor.

* E.G. Mattiasen, * A. Chowaniec, L.B. Kats and G.M. Bucciarelli. "Vulnerability of native caddisfly species to invasive crayfish in the Santa Monica Mountains." 2010. **Southern California Conference for Undergraduate Research**. Mentor.

*J. Chung, *C. Hwang, *M. Bender, *F. Sapigao, G.M. Bucciarelli, T. Vandergon, R.L. Honeycutt, and L.B. Kats. "Long term coexistence of native amphibians and invasive crayfish mediated by flood events." 2010. **Joint Meeting of Ichthyologists and Herpetologists**.

JOURNAL EDITORIAL BOARDS

BMC Ecology and Evolution (2021 - Present) Frontiers in Amphibian and Reptile Science (2022 - Present) Toxins (2022 - Present)

JOURNAL REFEREE

Biological Invasions (3) BMC Evolutionary Biology (1) Conservation Biology (3) Copeia (1) Diversity (2) Ecohealth (1) Endangered Species Research (1) Ecology and Evolution (2) Freshwater Biology (2) Hydrobiologia (8) Journal of Arid Environments (2) Journal of Animal Ecology (1) Journal of Chemical Ecology (3) Land (1) Marine Drugs (2) Molecular Ecology (3) Oecologia (2) Phylomedusa (1) PLoS ONE (1) Toxicon (5) Toxins (4) Western North American Naturalist (1)

SERVICE & OUTREACH

2023 - Present	Lassen Park Foundation Board Member
2021	Wildlife Health Center External Protocol Reviewer, Amphibian Decontamination
2021 - Present	Occidental College IACUC Committee Member, External Scientific Advisor
2020	EPA Internal Technical Advisor
2020 - 2021	IUCN Red List Amphibian Assessment Consultant
2020 - Present	Faculty Sponsor UCLA Ecology Graduate Student Research Assessment Projects
2018 - Present	Amigos de los Rios Technical Advisory Committee

2016 - Present	UC Natural Reserve System (NRS) Board of Councilors
2016 - Present	UC Office of the President Universitywide Advisory Board, UC NRS
2016	${\bf UC}~{\bf NRS}$ Committee Chair to assess incorporation of Pt. Reyes National Park into NRS
2015 - Present	California Cooperative Ecosystem Studies Unit (CA CESU) UCLA Representative
2013 - 2015	UCLA Committee on Diversity and Equal Opportunity (CODEO) Graduate Member
2013 - Present	Collaborative Science Agenda on Climate Change in Southern California Member
2012 - 2019	Cold Creek Docents & Topanga Docents Volunteer instructor
2010 - 2016	National Park Services Volunteer at ScienceFest (5,000+ visitors)
2010 - 2015	Los Angeles Natural History Museum Volunteer at Reptile and amphibian appreciation day (RAAD), NatureFest; and Reptiles and Amphibians of Southern California (RASCals) community science project

SELECT PRESS

UC Research and Innovation The California Academy of Science's bioGraphic The Center for Biological Diversity's The Revelator National Geographic NPR "Take Two" on-air interview discussing invasive species with A Martínez, August 9, 2018 KFI AM640 iHeartRadio Network interview discussing invasive crayfish with Monica Rix, August, 13 2018 Malibu Surfside News Spectrum News on-air interview discussing invasive mosquitoes with Kelvin Washington, October 13, 2021 UC Natural Reserve System, Field Science Fellowship The Guardian