

CHAVA L. WEITZMAN, Ph.D.

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POSTDOCTORAL POSITIONS

Postdoctoral Research Fellow 2022–present
Charles Darwin University, Research Institute for the Environment and Livelihoods
Supervisor: Dr. Keith Christian

Postdoctoral Research Associate 2019–2022
Virginia Tech, Department of Biological Sciences
Supervisor: Dr. Dana Hawley

EDUCATION

Ph.D. Ecology, Evolution, and Conservation Biology 2011–2017
University of Nevada, Reno
Advisor: Dr. C. Richard Tracy
Dissertation: Upper respiratory microbes in North American tortoises (genus *Gopherus*)

B.S. Ecology, Animal Behavior, and Oceanography 2004–2008
Minor emphasis: African Studies
Johnston Center for Integrative Studies
University of Redlands
Phi Beta Kappa, Biology Departmental Honors

Sea Education Association Spring 2007
SSV Corwith Cramer, Class 210
Oceanography, Nautical Science, Maritime Studies

PUBLICATIONS

(* = equal authorship, # = undergraduate student researcher)

(20) Sandmeier, F.C.*, K.L. Leonard*, **C.L. Weitzman**, C.R. Tracy. 2022. Evidence of a potential facilitative interaction between a commensal microbe and an opportunistic pathogen in wildlife disease. *Ecohealth*, *In press*.

(19) **Weitzman, C.L.**, L.K. Belden, M. May, R.A. Dalloul, D.M. Hawley. 2022. Antibiotic-induced gut dysbiosis does not alter host responses to ocular disease in songbirds. *PeerJ* 10:e13559.

(18) **Weitzman, C.L.***, G. Ceja*, A.E. Leon, D.M. Hawley. 2022. Protection generated by prior exposure to pathogens depends on both priming and challenge dose. *Infection and Immunity* 90:e00537-21.

(17) **Weitzman, C.L.**, B. Rostama, C.A. Thomason, M. May, L.K. Belden, D.M. Hawley. 2021. Experimental test of how microbiome protection changes with pathogen dose reveals variable protection across studies. *FEMS Microbiology Ecology* 97:fiab141.

(16) **Weitzman, C.L.***, B.E. Hagerty*, F.C. Sandmeier, C.R. Tracy. 2021. Desert tortoises in Zion National Park represent natural extension of eastern distribution. *Chelonian Conservation and Biology* 20:91-96.

(15) Luzuriaga-Neira, A., F.C. Sandmeier, **C.L. Weitzman**, C.R. Tracy, S.N. Bauschlicher, R.L. Tillett, D. Alvarez-Ponce. 2021. *Mycoplasma agassizii*, an opportunistic pathogen of

tortoises, shows very little genetic variation across the Mojave and Sonoran Deserts. *PLoS ONE* 16: e0245895.

- (14) **Weitzman, C.L.** *, C. Thomason*, E.J.A. Schuler*[#], A. Leon, S.R. Teemer, D.M. Hawley. 2020. House finches with high coccidia burdens experience more severe experimental *Mycoplasma gallisepticum* infections. *Parasitology Research* 119:3535–3539.
- (13) **Weitzman, C.L.**, M. Kaestli, K. Gibb, G. Brown, R. Shine, K. Christian. 2019. Disease exposure and anti-fungal bacteria on the skin of invasive cane toads in Australia. *Emerging Infectious Diseases* 25:1770–1771.
- (12) **Weitzman, C.L.**, K. Gibb, K. Christian. 2018. Higher skin microbial diversity on lizards than sympatric frogs in tropical Australia. *PeerJ* 6:e5960.
- (11) **Weitzman, C.L.**, F.C. Sandmeier, C.R. Tracy. 2018. Host species, pathogens and disease associated with divergent nasal microbial communities in tortoises. *Royal Society Open Science* 5:181068.
- (10) Christian, K., **C. Weitzman**, A. Rose, M. Kaestli, K. Gibb. 2018. Ecological patterns in the skin microbiome of frogs from tropical Australia. *Ecology and Evolution* 8(21):10510-10519.
- (9) Sandmeier, F.C., **C.L. Weitzman**, C.R. Tracy. 2018. An ecoimmunological approach to disease in tortoises reveals the importance of lymphocytes. *Ecosphere* 9(9):e02427.
- (8) Alvarez-Ponce, D., **C.L. Weitzman**, R.L. Tillett, F.C. Sandmeier, C.R. Tracy. 2018. High quality draft genome sequences of *Mycoplasma agassizii* strains PS6^T and 723 isolated from *Gopherus* tortoises with respiratory disease. *Standards in Genomic Sciences* 13:12.
- (7) **Weitzman, C.L.**, R.L. Tillett, F.C. Sandmeier, C.R. Tracy, D. Alvarez-Ponce. 2018. High quality draft genome sequence of *Mycoplasma testudineum* strain BH29^T, isolated from the respiratory tract of a desert tortoise. *Standards in Genomic Sciences* 13:9.
- (6) Shaffer, H.B., E. McCartney-Melstad, P.L. Ralph, G. Bradburd, E. Lundgren, J. Vu, B. Hagerty, F. Sandmeier, **C. Weitzman**, C.R. Tracy. 2017. Desert tortoises in the genomic age: Population genetics and the landscape. bioRxiv. DOI:10.1101/195743
- (5) **Weitzman, C.L.**, R. Gov[#], F.C. Sandmeier, S.J. Snyder, C.R. Tracy. 2017. Co-infection does not predict disease in *Gopherus* tortoises. *Royal Society Open Science* 4:171003.
- (4) **Weitzman, C.L.**, F.C. Sandmeier, C.R. Tracy. 2017. Prevalence and diversity of the upper respiratory pathogen *Mycoplasma agassizii* in Mojave desert tortoises (*Gopherus agassizii*). *Herpetologica* 73(2): 113–120.
- (3) Sandmeier, F.C., **C.L. Weitzman**, N.K. Maloney, C.R. Tracy, N. Nieto, M. Teglas, K. Hunter, S. DuPre, C.M. Gienger, M. Tuma. 2017. Comparison of current methods for the detection of chronic mycoplasmal UR TD in wild populations of the Mojave desert tortoise (*Gopherus agassizii*). *Journal of Wildlife Diseases* 53:91–101.
- (2) Jahner, J.P., D. Gibson, **C.L. Weitzman**, E.J. Blomberg, J.S. Sedinger, T.L. Parchman. 2016. Fine-scale genetic structure among greater sage-grouse leks in central Nevada. *BMC Evolutionary Biology* 16:127.
- (1) Honarvar, S., D.B. Fitzgerald, **C.L. Weitzman**, E.M. Sinclair, J.M. Esara Echube, M.P. O'Connor, G.W. Hearn. 2016. Assessment of important marine turtle nesting populations on the southern coast of Bioko Island, Equatorial Guinea. *Chelonian Conservation and Biology* 15:79–89.

PROFESSIONAL POSITIONS

- Postdoctoral Research Fellow** 2022–pres
Charles Darwin University, Darwin, NT, Australia
Studying fundamental relationships between hosts and their skin microbes. ARC grant funded to PIs Keith Christian, Karen Gibb, and Greg Brown (Macquarie University)
- Postdoctoral Associate, Virginia Tech, Blacksburg, VA** 2019–2022
Investigated interactions between pathogens and microbiomes in the house finch conjunctivitis disease system. NSF grant funded to PI Dana Hawley, Co-PI Lisa Belden
- NSF Graduate Research Fellow, Graduate Research/Teaching Assistant** 2011–2017
University of Nevada, Reno
Worked on various projects in disease ecology, physiological ecology, speciation, and conservation of amphibians and reptiles. Taught undergraduate and graduate courses.
- Graduate Intern** 2015
NSF and STRI, Panama
Predation and trematode parasitism in intertidal *Cerithium* snails
- Research Technician** 2011
Entomology Department, Rutgers University
Native pollinator communities within restored areas
- Senior Field Assistant** 2009–2011
Bioko Biodiversity Protection Program, Equatorial Guinea
Nesting ecology of sea turtles (two field seasons)
- Herpetological Field Technician** 2010
AmeriCorps and Great Basin Institute, NV
Disease ecology of desert tortoises
- Field Assistant** 2009
DANTA: Association for Conservation of the Tropics, Santa Cruz, Bolivia
Social behavior of wild titi monkeys, *Callicebus donacophilus*
- Field Assistant** 2008
STRI, Gamboa, Panama
Roosting behavior and ecology of *Heliconius* butterflies
- Senior Honors Research** 2007–2008
Biology Department and Proudian Honors, University of Redlands
Ethiopian wolf population densities
- Intern** 2007
Institute for Marine and Coastal Sciences, Rutgers University
Methods development to measure denitrification in soils

TEACHING AND SUPERVISORY COMMITTEES

- Postgraduate Supervising**
Katrina McMahon, M.Sc. in progress (Charles Darwin University, co-supervisor)
Shalyn N. Bauschlicher, M.S., 2021 (Colorado State University–Pueblo, committee member)
- Guest Lectures:**
University of Hawaii at Manoa – Reptile/Amphibian Conservation & Management 2018
Indiana University, Bloomington – Biodiversity 2017
Bard College at Simon’s Rock – Ecology 2017

University of Nevada, Reno – Ecology and Population Biology 2013, 2014, 2016

Instructor (University of Nevada, Reno):
Herpetology, BIOL 432/632 2015, 2017
Scholarly Teaching for Future College Faculty,
BIOL 792, faculty sponsor Guy Hoelzer 2014
Herpetology Lab, BIOL 432/632 2014

Teaching Assistant (University of Nevada, Reno):
Ecology and Population Biology, BIOL 314 2014, 2016
General Microbiology, BIOL 251 2016
Comparative Animal Physiology, BIOL 315 2011
Organismal Biology, BIOL 191 2011, 2014

University of Redlands:
Hebrew Language (**Teaching Assistant**), REL 440 2007
Calculus I & II (**Grader**), MATH 121 & 122 2005–2006

GRANTS AND FELLOWSHIPS

U.S. Fish and Wildlife Service, Co-PI, with D. Alvarez-Ponce (PI), C.R. Tracy, K. Hunter, and F.C. Sandmeier: “Genomic and biogeographic analysis of *Mycoplasma agassizii* and *Mycoplasma testudineum*, two pathogens endangering the desert tortoise,” 2018 (\$122,507)

NSF & Smithsonian Tropical Research Institute, Graduate Research Internship, 2015 (\$5000)

UNR, Graduate Student Association Travel Award, annually 2012–2016 (\$250 to \$700)

UNR, Graduate Student Association Spring Research Grant, 2013 (\$2055.60)

NSF Graduate Research Fellowship, 2012–2017 (\$134,000)

Community Foundation, California Desert Research Grant, 2011 (\$2257)

University of Redlands: Johnston Director’s Discretionary Fund, Multi-Cultural Center Grant, Dean of Students Grant, Proudian Honors Program Award, Presidential Scholarship

HONORS AND AWARDS

Desert Tortoise Council Symposium, Best Student Paper, 2015 (\$350)

National Academies Education Fellow, 2013

University of Redlands, Vaje Proudian Interdisciplinary Honors Scholar

University of Redlands, Robert D. Engel Award for outstanding senior science student

SERVICE AND OUTREACH

Virginia Tech Science Fest 2019

Volunteer, Nevada Museum of Natural History 2014–2017

Volunteer, Nevada Bugs and Butterflies 2014–2017

UNR Graduate Program (3 years each):

Peer-Review Group Coordinator, Colloquium Nomination Committee, New Student

Coordination Committee, Outreach Coordinator

PROFESSIONAL SERVICE

Section Editor, Current Research, Herpetological Review. January 2015-present

Reviewer for the following journals: Journal of Animal Ecology, Scientific Reports, Herpetological Conservation and Biology, Biology Letters, PeerJ, Microbial Ecology, Veterinary Microbiology, The Auk, Frontiers in Microbiology, Integrative Zoology, FEMS Microbiology Ecology, Environmental Microbiology

INVITED SPEAKER

Weitzman, C.L. October 2017. Disease ecology in North American tortoises. **Bard College at Simon's Rock**, Great Barrington, MA.

Weitzman, C.L. December 2015. Microbial dynamics in North American tortoises. **Charles Darwin University**, Darwin, NT, Aus.

Weitzman, C.L., F.C. Sandmeier, C.R. Tracy. February 2015. Passengers in a tortoise nose. **Desert Tortoise Council Symposium**. Las Vegas, NV

Weitzman, C.L., F.C. Sandmeier, N. Nieto, C.R. Tracy. October 2012. Disease ecology of the desert tortoise: Phylogeography of a pathogen causing upper respiratory tract disease. **California Desert Research Symposium**. Redlands, CA.

ORAL PRESENTATIONS

Weitzman, C.L., B. Rostama, L. Belden, M. May, D.M. Hawley. January 2021. Protective effects of intact ocular microbiomes in house finches are unrepeatable and not dependent on pathogen dose. **Society for Integrative and Comparative Biology Annual Meeting**, Virtual.

Weitzman, C.L., F.C. Sandmeier, S.J. Snyder, C.R. Tracy. January 2018. A tale of two "pathogens": Disease not predicted by infection or co-infection. **Society for Integrative and Comparative Biology Annual Meeting**, San Francisco, California.

Weitzman, C.L., F.C. Sandmeier, C.R. Tracy. July 2016. Presence and diversity of *Mycoplasma agassizii* in the threatened *Gopherus agassizii*. **Joint Meeting of Ichthyologists and Herpetologists**, New Orleans, Louisiana.

Weitzman, C.L., F.C. Sandmeier, C.R. Tracy. June 2016. What's in a tortoise nose? Microbial patterns across space. **Evolution Meeting**, Austin, Texas.

Weitzman, C., F.C. Sandmeier, S.J. Snyder, C.R. Tracy. January 2014. Comparative microbial community diversity in the upper respiratory tract across *Gopherus* tortoise species. **Society for Integrative and Comparative Biology Annual Meeting**, Austin, Texas.

Weitzman, C. September 2008. Conservation in the Bale Mountains National Park: A statistical analysis of population trends of the Ethiopian Wolf (*Canis simensis*). Bambi Presentation, **Smithsonian Tropical Research Institute**, Barro Colorado Island, Panama.

PROFESSIONAL POSTERS

January 2021, Annual Society for Integrative and Comparative Biology, Virtual.

August 2020, Annual Mtg of the Ecological Society of America, Virtual.

July 2017, Annual Ecology & Evolution of Infectious Disease Mtg, Santa Barbara, CA.

November 2016, University of Nevada Reno Graduate Student Association Poster Symp.

August 2014, Annual Mtg of the Ecological Society of America, Sacramento, CA.

February 2013, Annual Desert Tortoise Council Symp, Las Vegas, NV.

August 2012, World Congress of Herpetology, Vancouver, Canada.

April 2008, Annual West Coast Biological Sci Undergrad Research Conf, San Diego, CA.

PROFESSIONAL MEMBERSHIPS

Society for the Study of Amphibians and Reptiles, Society for Integrative and Comparative Biology, Ecological Society of America, American Association for the Advancement of Science, American Society of Naturalists, Herpetologists' League, Desert Tortoise Council, American Society for Microbiology