

Curriculum Vitae

Michael L. Yuan

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Education

- 2021 University of California, Berkeley, California
Ph.D. Environmental Science, Policy, and Management
- 2014 Cornell University, Ithaca, New York
B.S. Biological Sciences, Natural Resources
magna cum laude with Distinction in Research

Academic Employment

Current:

- 2023– Postdoctoral Researcher
Institute for Biodiversity Science and Sustainability, California Academy of Sciences

Previous:

- 2021–2023 Center for Population Biology Postdoctoral Fellow
Department of Evolution and Ecology, University of California, Davis
- 2014–2015 Associate in Research
Department of Evolutionary Anthropology, Duke University
- 2014 Herpetology Intern
Archbold Biological Station

Publications

* = equal contribution; § = mentored undergraduate

18. Bishop AP, Westeen EP, **Yuan ML**, Escalona M, Beraut E, Fairbairn C, Marimuthu MPA, Nguyen O, Chumchim N, Toffelmier E, Fisher RN, Shaffer HB, and Wang IJ (2023) Assembly of the largest squamate reference genome to date: the western fence lizard, *Sceloporus occidentalis*. *Journal of Heredity* esad037. DOI: 10.1093/jhered/esad037
17. Wogan GOU, **Yuan ML**, Mahler DL, Wang IJ (2023) Hybridization and transgressive evolution generate diversity in an adaptive radiation of *Anolis* lizards. *Systematic Biology* syad026. DOI: <https://doi.org/10.1093/sysbio/syad026>
16. **Yuan ML**, Jung C[§], Frederick JH, Fenton C, de Queiroz K, Cassius J, Williams R, Wang IJ*, Bell RC* (2023) Parallel and non-parallel phenotypic responses to environmental variation across Lesser Antillean anoles. *Evolution* 77:1031–1042. DOI: 10.1093/evolut/qp018
15. **Yuan ML**, Westeen EP, Wogan GOU, Wang IJ (2022) Female dewlap ornaments are evolutionarily labile and increase diversification rates in *Anolis* lizards. *Proceedings of the Royal Society B* 289:28920221871. DOI:10.1098/rspb.2022.1871
14. **Yuan ML***, Frederick JH*, McGuire JA, Bell RC, Smith SR, Fenton C, Cassius J, Williams R, Wang IJ, Powell R, Hedges SB (2022) Endemism, invasion, and overseas dispersal: the phylogeographic history of the Lesser Antillean frog, *Eleutherodactylus johnstonei*. *Biological Invasions* 24:2707–2722. DOI: 10.1007/s10530-022-02803-9
13. **Yuan ML**, Jung C[§], Bell RC, Nelson JL (2022) Aposematic patterns shift continuously through the life of poison frogs. *Journal of Zoology* 317:241–248. DOI: 10.1111/jzo.12977

12. **Yuan ML**, Jung C[§], Wake MH, Wang IJ (2020) Habitat use, competition, and phylogenetic history shape the evolution of claw and toepad morphology in Lesser Antillean anoles. *Biological Journal of the Linnean Society* 129:630–643. DOI: 10.1093/biolinnean/blz203
11. Wogan GOU, **Yuan ML**, Mahler DL, Wang IJ (2020) Genome-wide epigenetic isolation by environment in a widespread *Anolis* lizard. *Molecular Ecology* 29:40–55. DOI:10.1111/mec.15301
10. **Yuan ML**, White KN, Rothermel BB, Zamudio KR, Tuberville TD (2019) Close-kin mating, but not inbred parents, reduces hatching rates and offspring quality in a threatened tortoise. *Journal of Evolutionary Biology* 32:1152-1162. DOI: 10.1111/jeb.13518
9. **Yuan ML**, Wake MH, Wang IJ (2019) Phenotypic integration between claw and toepad traits promotes microhabitat specialization in the *Anolis* adaptive radiation. *Evolution* 73:231-244. DOI: 10.1111/evo.13673
8. **Yuan ML**, Wang IJ (2018) Sodium ion channel alkaloid resistance does not vary with toxicity in aposematic *Dendrobates* poison frogs: an examination of correlated trait evolution. *PLOS ONE*. DOI: 10.1371/journal.pone.0194265
7. Blekhman R, Tang K, Archie EA, Barreiro LB, Johnson ZP, Wilson ME, Kohn J, **Yuan ML**, Gesquiere L, Grieneisen L, Tung J (2016) Common methods for fecal sample storage in long-term field studies have a minimal impact on gut microbiome profiles. *Scientific Reports* 6:31519. DOI: 10.1038/srep31519
6. Snyder-Mackler N, Majoros WH, **Yuan ML**, Shaver AO, Gordon J, Kopp G, Schlebusch S, Wall JD, Alberts SC, Mukherjee S, Zhou X, Tung J (2016) Efficient genome-wide sequencing and low coverage pedigree analysis from non-invasively collected samples. *Genetics* 203:699-714. DOI: 10.1534/genetics.116.187492
5. **Yuan ML**, Dean SH, Longo AV, Rothermel BB, Tuberville TD, Zamudio KR (2015) Kinship, inbreeding, and fine-spatial structure influence gut communities of a hindgut-fermenting tortoise. *Molecular Ecology* 24:2521–2536. DOI: 10.1111/mec.13169
4. Goyret J, **Yuan ML** (2015) Influence of ambient illumination on the use of olfactory and visual signals by a nocturnal hawkmoth during close-range foraging. *Integrative and Comparative Biology* 55:486-494. DOI: 10.1093/icb/icv009

Technical & Natural History Notes:

3. **Yuan ML**, Crews SC, Esposito LA, Allen LC, Bell RC (2023) Presence of the Island Least Gecko, *Sphaerodactylus sputator* (Reptilia: Sphaerodactylidae), confirmed for Saba, Caribbean Netherlands. *Herpetology Notes* 16:1-4
2. **Yuan ML**, Frederick JH, Bell RC (2020) A novel color morph of *Sphaerodactylus sabanus* Cochran 1938 from Sint Eustatius. *Herpetology Notes* 13:1035-1039
1. **Yuan ML**, Wogan GOU, Wang IJ (2018) Trehalose improves PCR amplification of vertebrate nuclear DNA from historical allozymes. *Conservation Genetics Resources* 10:313-315. DOI: 10.1007/s12686-017-0811-4

Forthcoming (available upon request):

- A1. Jung C[§], Frederick JH, Graham NR, Wang IJ, Fenton C, de Queiroz K, Bell RC, **Yuan ML** (In Review) Environmentally-associated color divergence is maintained at small geographic scales despite ongoing gene flow in Lesser Antillean anoles.
- A2. Stroud JT, Giery ST, Heathcote RJP, Tiatragul S, **Yuan ML**, Feeley KJ, Losos JB (In Review) Natural selection drives ecological character displacement in the wild

Grants and Fellowships

Fellowships:

2021–2023 Center for Population Biology Postdoctoral Fellowship, UC Davis

2021 Junea W. Kelly Graduate Fellowship, Museum of Vertebrate Zoology, UC Berkeley
 2018–2020 Philomathia Fellowship in the Environmental Sciences, UC Berkeley
 2018–2019 Smithsonian Institution Predoctoral Fellowship, National Museum of Natural History
 2017 Smithsonian Institution Graduate Fellowship, National Museum of Natural History

Grants:

2019 Dave and Marvalee Wake Fund, Museum of Vertebrate Zoology
 2018 Lewis and Clark Field Scholar, American Philosophical Society
 Student Research Award, American Society of Naturalists
 Berkeley Chapter Grant-in-Aid of Research, Sigma Xi
 Dave and Marvalee Wake Fund, Museum of Vertebrate Zoology
 2017 Grant-in-Herpetology, Society for the Study of Amphibians and Reptiles
 Louise Kellogg Fund, Museum of Vertebrate Zoology
 Rosemary Grant Award, Society for the Study of Evolution
 2016 Graduate Dean’s Summer Research Grant, UC Berkeley
 2015 ESPM Departmental Starter Grant, UC Berkeley
 2013 Jane E. Brody Undergraduate Research Award, Cornell University
 Fredric N. Gabler ’93 Memorial Research Honors Grant, Cornell University
 CALS Alumni Association Academic Enrichment Program, Cornell University
 Cornell Chapter Grant-in-Aid of Research, Sigma Xi
 Grant-in-Aid of Research, Sigma Xi
 Chicago Herpetological Society Research Grant
 2012 Dextra Undergraduate Research Endowment, Cornell University
 J. Larry Landers Student Research Award, Gopher Tortoise Council

Teaching Experience

Teaching Appointments:

2016–2017 Graduate Student Instructor, Wildlife Ecology, UC Berkeley
 2016 Graduate Student Instructor, Molecular Approaches to Environmental Problem Solving,
 UC Berkeley

Guest Lectures:

2022 Conservation Genetics, Conservation Biology, UC Davis
 2016 Methods in Conservation Genetics and Genomics, Molecular Approaches to
 Environmental Problem Solving, UC Berkeley

Workshops:

2023 Introduction to Geometric Morphometrics, UC Davis
 2023 Techniques in Field Herpetology, Veterinary and Livestock Division, Government of
 Antigua and Barbuda

Graduate Mentorship:

Ayanna Browne San Francisco State University (Committee Member)

Undergraduate Mentorship:

Maryam Mahmood UC Davis
 Catherine Jung UC Berkeley (Honors Thesis)
 Joseph Toman UC Berkeley
 Donya Partovi UC Berkeley
 Nicole Kim UC Berkeley

Isaias Hernandez UC Berkeley
Jacqueline Edinger UC Berkeley

Other Mentorship:

Dominique Bird Antigua State College (Field Assistant)
Trinity Archibald Antigua State College (Field Assistant)

Presentations

Invited:

2023 Veterinary and Livestock Division, Government of Antigua and Barbuda
2023 Division of Biological and Environmental Sciences, University of Stirling (UK)
2023 Department of Biology, Purdue University
2023 Division of Biological Sciences, University of Missouri
2023 Department of Ecology and Evolutionary Biology, Cornell University
2021 Center for Population Biology, University of California, Davis
2019 California Academy of Sciences
2018 Losos Lab, Organismic and Evolutionary Biology, Harvard University

Contributed:

2023 Evolution, Albuquerque, NM (Talk)
2022 Evolution, Cleveland, OH (Talk)
2019 Evolution, Providence, RI (Talk)
2018 Society for Integrative and Comparative Biology, San Francisco, CA (Talk)
2016 Evolution, Austin, TX (Talk)
2014 Gopher Tortoise Council, Albany, GA (Poster)

Service & Outreach

Reviewer: Asian Herpetological Research, Biological Journal of the Linnean Society (3), Journal of Biogeography (2), Canadian Journal of Microbiology, Evolution (3), Integrative Organismal Biology, Microbial Ecology (2), Molecular Ecology (6), Molecular Ecology Resources, PLOS ONE (3), Systematic Biology (2)

Service:

2021–2023 Organizer, Center for Population Biology Seminar Series, UC Davis
2021–2022 Center for Population Biology Postdoctoral Fellow Search Committee, UC Davis
2020–2021 ESPM Buddy Program, UC Berkeley
2017–2018 Graduate Admissions Committee, Division of Ecosystem Sciences, UC Berkeley
2013–2014 Student Advisor, Office of Undergraduate Biology, Cornell University
2013–2014 Undergraduate Research Committee, Office of Undergraduate Biology, Cornell University

Outreach:

2023 Guest Speaker, Antigua State College
2023– Night Life, California Academy of Sciences
2022– Guest Expert, St. Martin Nature Foundation (Elementary School Visits & Guided Hikes)
2021–2023 Mentor, EEB Mentor Match
2021 Guest Expert, Saba Sea and Learn (Elementary School Visits & Guided Hikes)
2021 Guest Speaker, Scientist Spotlight, Biology Undergraduate Scholars Program, UC Davis
2019 Contributor, Anole Annals Blog

2018 Bay Area Scientists in Schools, Community Resources for Science
2018 Contributor, Biodiversity of Montserrat Exhibit, Montserrat National Trust
2018 Cal Day, Museum of Vertebrate Zoology (Designed Anole Ecomorph Exhibit)
2014 Herpetology Section, Archbold Ecology Summer Camp

Society Memberships:

American Society of Naturalists (since 2015)
Society for the Study of Evolution (since 2015)
Society for the Study of Amphibians and Reptiles (since 2016)
Society for Integrative and Comparative Biology (since 2018)