

Gaurav S. Kandlikar

gkandlikar@missouri.edu · 952.288.7351 · gauravsk.gitlab.io

CURRENT POSITION

Postdoctoral Fellow

September 2020 - Present

University of Missouri, Columbia
Divisions of Biological Sciences & Plant Sciences
Postdoctoral Program for Faculty Diversity

EDUCATION

University of California, Los Angeles

2015 - 2020

PhD in Ecology and Evolutionary Biology
Committee: Dr. Nathan Kraft (Chair), Dr. Priyanga Amarasekare, Dr. Jennifer Martiny,
Dr. Lawren Sack, Dr. Felipe Zapata

University of Maryland, College Park

2014 - 2015

PhD in Biological Sciences
Moved to UCLA in 2015 with Dr. Nathan Kraft's lab

University of Minnesota, Twin Cities

2010 - 2013

B.S. in Ecology, Evolution & Behavior and Plant Biology

AWARDS AND FELLOWSHIPS

- 2020 **Postdoctoral Program for Faculty Diversity Fellow**, University of Missouri, Columbia
(*\$170,000, + \$25,000/yr x 3 years in research funds*)
- 2020 **Murray F. Buell Award for Excellence in Ecology**, Ecological Society of America
- 2019 **Student Research Award**, American Naturalist Society
- 2019 UCLA Josephine Reich Quarter Fellowship
- 2019 Scherbaum Award for excellence in graduate research, UCLA-EEB
- 2019 Special Faculty Award for outstanding service to students and faculty, UCLA-EEB
- 2015 Graduate Research Presentation Award, University of Maryland GRID conference
- 2014 **NSF Graduate Research Fellowship**, (*\$120,000*)
- 2014 University of Maryland Flagship Fellowship (*\$10,000/yr x 5 years, accepted 1 year*)
- 2014 University of Maryland Dean's Fellowship (*\$5,000/yr x 3 years, accepted 1 year*)
- 2014 Undergraduate Research Prize and Travel Award, American Society of Plant Taxonomists
- 2013 NSF-REU, Smithsonian National Museum of Natural History, Dept. of Botany
- 2013 Hamm Memorial Scholarship in Plant Research Sciences, University of Minnesota
- 2013 Undergraduate Leadership Fellow, University of Minnesota Institute on the Environment

GRANTS

- 2019 UCLA EEB Departmental Research Award (*\$4500*)
- 2018 La Kretz Center for Conservation Science - Student Research Award (*\$3000*)
- 2018 Ecological Society of America Plant Population Ecology travel award
- 2017 Ecological Society of America Plant Physiological Ecology travel award
- 2017 UCLA EEB Vavra Research Award (*\$2500*)
- 2016 UCLA EEB Vavra Research Award (*\$1000*)

PUBLICATIONS

Peer-reviewed publications

10. **Kandlikar, G.S.**, Yan, X.* , Levine, J.M., and Kraft, N.J.B. 2020. Soil microbes generate stronger fitness differences than stabilization among California annual plants. *The American Naturalist*.
* X. Yan was my undergraduate mentee.
9. Meyer, R.S., and 15 others, including **Kandlikar, G.S.**. The California environmental DNA “CALeDNA” Program. In press at *California Agriculture* for a special issue on Citizen Science. Pre-print available on BioRxiv.
8. Sura, S.A., and 14 others, including **Kandlikar, G.S.**. 2019. Ten simple rules for giving an effective academic job talk. *PLoS Comput Biol* 15(7): e1007163.
7. Curd, E.E., Gold, Z.* , **Kandlikar, G.S.***, Gomer, J.* , and 13 others. Anacapa: an environmental DNA toolkit for processing multi-locus metabarcode datasets. *Methods in Ecology and Evolution* 10:9, 1469-1475.
* These authors contributed equally. Featured cover article and short-listed for Robert May Prize.
6. **Kandlikar, G.S.**, Johnson, C., Yan, X.* , Kraft, N.J.B., and Levine, J.M. 2019. Winning and losing with microbes: how microbially mediated fitness differences influence plant community dynamics. *Ecology Letters* 22:8, 1178-1191.
* X. Yan was my undergraduate mentee. Recommended on F1000.
5. **Kandlikar, G.S.**, Gold, Z.J., Cowen, M.C., Meyer, R., Friese, A.C., Kraft, N.J.B., Moberg-Parker, J., Sprague, J., Kushner, D., and Curd, E.E. 2018. Ranacapa: an R package for interactive visualization and exploratory analysis of environmental DNA data. *F1000 Research* 7:1734.
4. Petry, W., **Kandlikar, G.S.**, Kraft, N.J.B., Godoy, O., and Levine, J.M. 2018. A competition–defence trade-off both promotes and weakens coexistence in an annual plant community. *Journal of Ecology* 106:5, 1806-1818.
3. **Kandlikar, G.S.***, Vaz, M.C*., Kriebel, R., Vargas, G., Michelangeli, F., Cordero, R., Avalos, G., Almeda, F., Fetcher, N., Kraft, N.J.B. 2018. Low functional and phylogenetic turnover of melastomes along a Costa Rican elevational gradient. *Journal of Tropical Ecology* 34:3, 204-208.
* These authors contributed equally.
2. Hanson, W., and 14 others, including **Kandlikar, G.S.** 2018. Student reflections on careers and culture of 21st century ecology. *Ecosphere* 9:2, e02099.
1. Yan, M., **Kandlikar, G.S.**, Jacobson, L., Clanton, C., and Hu, B. 2014. Lab simulation to determine the factors affecting swine manure foaming. *Trans of the Am. Soc. of Agricultural and Biol. Engineers* 57(3): 907–914.

Manuscripts in review or preparation

2. Sandel, B., and 11 others, including **Kandlikar, G.S.**. Predicting intraspecific trait variation among California’s grasses. *In revision*.
1. **Kandlikar, G.S.**, Kleinhesselink, A., and Kraft, N.J.B. 2020. Functional traits predict species responses to environmental variation in a California grassland annual plant community. *Pre-print on bioRxiv*.

TEACHING EXPERIENCE

Instructor of Record:

Graduate-level course on Teaching in the Life Sciences (25 students)

UCLA, Winter 2018

Guest lectures:

“Coexistence in plant communities” for Upper-division UCLA course on plant ecology.

“From taxon tables to biological understanding” for Lower-division UCLA course on biodiversity.

“How soil microbes affect plant communities” for Upper-division UCLA course on environmental soil microbiology.

Teaching Assistant:

Plant Physiology (Upper Division, 120 students). *Online due to pandemic.* UCLA, 2020

Plant Ecology (Upper Division, 40 students). UCLA, 2019

Practical Computing in Biology (Upper Division/Graduate Students; 50 students). UCLA, 2017

I developed the syllabus and all activities for the lab component.

Calculus for Life Sciences (Lower Division, 40 students). UCLA, 2017

Principles of Molecular Biology (Lower Division, 60 students). U. Maryland, 2015

Principles of Ecology (Upper Division, 60 students). U. Maryland, 2014

Principles of Ecology and Evolution (Lower Division, 40 students) U. Minnesota, 2013

Organized workshops:

Two-day Software Carpentry workshop on Shell, R, and Git UCLA, 2020

Various workshops on R, shiny, markdown, and reproducible research UCLA EEB Dept, 2017-2020

Pedagogical workshops and teaching certificates:

Certified Instructors with the Software Carpentry Consortium 2019

Center for the Integration of Research, Teaching, and Learning (CIRTL) Associate UCLA, 2017

Educational Development Summer Institute CEILS, UCLA, 2017

MENTORING EXPERIENCE

Mentor to graduate/undergraduate students through the following programs:

Ecological Society of America SEEDS program 2018, 2019, 2020

UCLA Graduate Student Writing Center 2018-2020

Developed a new workshop on “Creating effective figures for scientific presentations and publications”.

UCLA PEERS program, Graduate mentor for “Calculus for Life Sciences” 2017

UCLA-PEERS is a program aimed at supporting undergraduate students from disadvantaged backgrounds.

Research mentor:

I have mentored 8 undergraduate student research projects at UCLA. My mentee Xinyi Yan received the UCLA Undergraduate Research Fellowship and the UCLA CAL-eDNA Summer Research Internship, and is now a PhD student at UT-Austin’s Integrative Biology program. My mentees Xinyi Yan and Jonathan Shi received 2019 UCLA EEB First place undergraduate poster award.

PRESENTATIONS

Invited presentations

2. Plant ecology from the ground up: integrating theory and experiment for quantifying the effect of soil microbes on plant diversity. 2020. University of Illinois, Urbana Champaign.
1. Plant ecology from the ground up: integrating theory and experiment for quantifying the effect of soil microbes on plant diversity. 2020. Integrative Plant Group, University of Missouri, Columbia.

Contributed presentations as presenting author

9. EcoEvoApps: Interactive apps for teaching ecology and evolution. Poster at 2020 ESA Annual Meeting (online).

8. Winning and losing with microbes: how microbially mediated fitness differences influence plant diversity. Talk at 2019 ESA Annual Meeting in Louisville, KY. **Buell Award for Excellence in Ecology**.
7. Using R for teaching ecology. Talk at 2019 Los Angeles SatRday conference, Los Angeles, CA.
6. Winning and losing with microbes: how microbially mediated fitness differences influence plant diversity. Poster at 2018 Gordon Research Conference on Plant-Herbivore Interactions.
5. Functional traits help explain plant demographic responses to variation in soil abiotic characteristics and microbial composition. Talk at 2018 ESA Annual Meeting in New Orleans, LA.
4. Functional traits and the drivers of plant species coexistence across a heterogeneous landscape. Talk at 2018 California Native Plants Society Annual Meeting in Los Angeles, CA. composition. Poster at 2018 ESA Annual Meeting in New Orleans, LA.
3. Functional traits and the drivers of plant species coexistence across a heterogeneous landscape. Talk at 2017 ESA Annual Meeting in Portland, OR.
2. High phylogenetic but low functional turnover of melastomes along a tropical elevational gradient. Poster at 2015 ESA Annual Meeting in Baltimore, MD.
1. Chloroplast DNA reveals uniparental plastid inheritance from *Isoetes engelmannii* in two allotetraploid speciation events. Poster at 2014 Botany Annual Meeting in Boise, ID.

WORKING GROUPS

Future of Synthesis in Science (NCEAS Workshop)	planned for 2021
Re-Envisioning Culture Network	2020-present
Enhancing Black undergraduate student experiences in biology.	
Invited by Dr. Terrell Morton.	
Causes and consequences of functional rarity from local to global scales	2018-present
Invited by Dr. Cyrille Violle.	
UC-Conservation Genomics Consortium Environmental DNA working group	2017-2018
Invited by Dr. Rachel Meyer.	
Ecological Society of America EcoFutures working group	2015-2016

PROFESSIONAL SERVICE

University service

- Founder and Organizer of Graduate student and Postdoc co-working space/“Hacky Hours”, Dept. of Ecology and Evolutionary Biology, UCLA. 2017-2020.
- Graduate student representative for Faculty search committee for Quantitative Microbial Ecology or Evolution position, Dept. of Ecology and Evolutionary Biology and Institute for Quantitative and Computational Biology, UCLA. 2018.
- Graduate student representative for Department seminar committee, Dept. of Ecology and Evolutionary Biology, UCLA. 2016-2017.
- Panelist for TA Panel for “Teaching in Life Sciences” course (3 times); Graduate Student Panel for “Professional Skills for Biological Research” course
- Graduate Assistant for R Bootcamp for incoming graduate students, Dept. of Ecology and Evolutionary Biology, UCLA. 2016-2018.

Extramural service

- Peer review for *American Journal of Botany*; *Annals of Botany*; *Ecology*; *Ecology Letters*; *Functional Ecology*; *Oecologia*; *Journal of Applied Microbiology*; *Journal of Ecology*
- SEEDS Mentor for Ecological Society of America Annual Meeting (2018, 2019, 2020)

Secretary for Plant Population Ecology section, Ecological Society of America (2020-present)
Co-organizer of Organized Oral Session "Examining the Role of Spatial Variation in Maintaining
Plant Community Diversity" for Ecological Society of America Annual Meeting, 2018.
Vice President of Partnership for Academic Competition Excellence, 2016-17
Head Editor for Academic Competition Federation's ACF Fall tournament, 2014-17

SOCIETY MEMBERSHIP

Ecological Society of America (2015-Present); American Society of Naturalists (2018-present); California Native Plants Society (2016-2018)