

# Evan E Batzer

Email: [ebatzer@ucdavis.edu](mailto:ebatzer@ucdavis.edu)  
Website: [www.evanbatzer.com](http://www.evanbatzer.com)

Department of Plant Sciences  
University of California, Davis  
Davis, CA 95616

---

## EDUCATION

Ph.D. Ecology University of California, Davis  
*Advisor: Valerie Eviner* 2020 (Expected)

M.S. Statistics University of California, Davis  
2020 (Expected)

B.S. Ecology and Evolutionary Biology University of Michigan  
*with distinction* 2012

## PROFESSIONAL EXPERIENCE

Graduate Student Researcher, 09/2014 - Present University of California, Davis  
*Plant community ecology* Davis, CA

Graduate research in plant community ecology, soil ecology, and restoration of grassland ecosystems. Current projects include assessment of temporally and spatially scale-dependent patterns of plant biodiversity in California grasslands. Emphasis on statistical methodology and data analysis techniques.

Graduate Student Affiliate, 09/2018 - Present University of California, Davis  
*Data Science Initiative* Davis, CA

Membership in the UC Davis Data Science Initiative affiliate program. Regularly attended meetings with the Davis R Users Group to assist undergraduate, graduate, and postdoctoral researchers in data analysis. Participated in workshops and reading groups on statistical methodology, data science skills, and effective communication.

Data Analyst, 06/2015 - 09/2015 Ecological Society of America  
*ESA Centennial Survey* Davis, CA

Data analyst for the Ecological Society of America's Centennial Survey, an effort to gauge the important discoveries and pressing concerns in the last 100 years of ecological science. Evaluated survey responses, assisted in production of presentation materials, and worked with a team of researchers to produce multiple white papers.

Lead Research Technician, 01/2013 - 05/2014 University of Michigan  
*Plant invasions in the Great Lakes* Ann Arbor, MI

Lead technician for a multi-year NSF funded research project exploring the impacts of *Typha* and *Phragmites* invasions on community diversity, hydrology, and biogeochemical cycling. Responsible for sample processing, data analysis, and coordination of field researchers.

Undergraduate Researcher, 09/2012 - 01/2013 University of Michigan  
*Plant community ecology* Ann Arbor, MI

Undergraduate research on growth patterns of clonal plants, in addition to support with field sampling, laboratory processing, production of figures and statistical analyses, and assistance with ongoing graduate student research.

Research Technician, 04/2012 - 09/2012 Archbold Biological Station  
*Plant population biology* Venus, FL

Research technician for a plant biology laboratory studying endemic plant demography and fire dynamics in the Florida scrub. Gained experience in field research techniques, data management, and production of visual materials.

## PUBLICATIONS and TECHNICAL REPORTS

- E. Batzer**, C. Malmstrom, and V. Eviner. Climate drives transitions between dominant species groups in California Annual Grasslands. *In prep.*
- Michaels, J., **E. Batzer**, S. Harrison, and V. Eviner. Understanding the Drivers of Landscape Diversity in Grazed Ephemeral Wetlands. *In prep.*
- Goldberg, D., **E. Batzer**, K. Elgersma, J. Martina, and W. Currie. Allocation to clonal growth: approaches and questions. *Perspectives in Plant Ecology, Evolution, and Systematics. Accepted.*
- Batzer, E.**, J. Martina, K. Elgersma, and D. Goldberg. 2017. Effects of nutrient addition on clonal allocation and ramet morphology within *Cyperaceae*. *Plant Ecology* 218(11), 1299-1311,
- Batzer, E.**, G. Congdon, R. Hillabrand, and D. Labuz. 2011. Current and future status of the *Fraxinus nigra* swamp in the Bessey Creek Nature Preserve, Cheboygan County, MI. *Available at <http://hdl.handle.net/2027.42/89429>*
- Batzer, E.**, M. Busch, N. Neuman, and V. Quach. 2011. Social hierarchies and shelter preference within *Orconectes virilis*. *Available at <http://hdl.handle.net/2027.42/89434>*

## GRANTS and FELLOWSHIPS

2019	UC Davis Plant Sciences Travel Award (\$1,500)
2019	Kit Rice Award (\$4,000)
2018	UC Davis Plant Sciences Travel Award (\$1,000)
2018 - 2019	Henry A. Jastro Research Fellowship (\$2,100)
2017	UC Davis Plant Sciences Madson Award (\$5,000)
2017 - 2018	University of California Natural Reserves Grant (\$500)
2016	UC Davis Plant Sciences Madson Award (\$2,000)
2016	UC Davis Plant Sciences Travel Award (\$1,000)
2016 - 2017	University of California Natural Reserves Grant (\$1,700)
2016 - 2017	Henry A. Jastro Research Fellowship (\$2,100)
2015 - 2016	California Native Plant Society Hardman Research Award (\$1,000)
2015 - 2016	University of California Natural Reserves Grant (\$2,400)
2015 - 2019	Plant Sciences Graduate Student Research Fellowship (\$185,803)
2014 - 2016	UC Davis Graduate Group in Ecology Fellowship (\$58,172)

## PRESENTATIONS

- E. Batzer**. 2019. Davis R Users Group. Davis, CA.  
*Title:* Basics of Linear Modeling in R.
- J. Liu, L. Nguyen, **E. Batzer**, D. Caillaud, N. Fangue, and A. McInturf. 2019. American Fisheries Society. Reno, NV.  
*Title:* Identifying known unknowns: Addressing features contributing to data deficiency in conservation status of shark species.
- E. Batzer** and V. Eviner. 2019. Society for Ecological Restoration World Conference. Cape Town, South Africa.  
*Title:* Climate drives transitions between dominant species groups in California Annual Grasslands.
- E. Batzer** and V. Eviner. 2018. Ecological Society of America Annual Meeting. New Orleans, LA.  
*Title:* Nitrogen enrichment effects on grassland plant diversity are dependent on spatial scale.
- D. Goldberg, **E. Batzer**, J. Martina, and K. Elgersma. 2018. 12th Clonal Plant Symposium. Brunswick, ME.  
*Title:* Allocation to clonal growth: Approaches and questions.
- E. Batzer** and V. Eviner. 2016. California Invasive Plant Council. Yosemite, CA.  
*Title:* Spatial patterns of diversity in California annual grasslands.

- E. Batzer.** 2016. Ecological Society of America Annual Meeting. Fort Lauderdale, FL.  
*Title:* Perennial grasses in annual-dominated communities: Tradeoffs between invasive species suppression and fecundity
- Eviner, V., **E. Batzer**, E. Bennet, K. Garbach, L. Gerber, and D. Scholes. 2015. Ecological Society of America Annual Meeting. Baltimore, MD.  
*Title:* Ecological Society of America Centennial Survey
- Batzer, E.**, D. Goldberg, J. Martina, and K. Elgersma. 2014. Ecological Society of America Annual Meeting. Sacramento, CA.  
*Title:* Clonal reproduction within *Cyperaceae*: Allocation, translocation, and response to nutrient availability
- Batzer, E.**, M. Busch, N. Neuman, and V. Quach. 2011. University of Michigan Biological Station Research Symposium. Pellston, MI.  
*Title:* Social hierarchies and shelter preference within *Orconectes virilis*

## TEACHING EXPERIENCE

Teaching Assistant, 9/2019 - 12/2019 University of California, Davis  
*PLS 206: Applied Multivariate Modeling*

Teaching assistant for graduate course in applied statistics for environmental scientists. Gave guest lectures, assisted in assignment design, and held weekly office hours on subjects covering linear regression, ordination, and multivariate ANOVA.

Instructor of Record, 1/2019 - 4/2019 University of California, Davis  
*BIT 171: Ethics of Biotechnology*

Instructor of record for scientific ethics course required for undergraduates studying biology. Responsible for giving multiple weekly lectures, facilitate student discussion, and schedule guest speakers for a course of 85 - 100 students.

Teaching Assistant, 3 quarters 2017-2019 University of California, Davis  
*BIT 171: Ethics of Biotechnology*

Teaching assistant for scientific ethics course required for undergraduates studying biology. Gave lectures, presented frameworks to explore ethical issues in scientific research, and assisted students in effective written communication.

Teaching Assistant, 2 quarters 2017-2019 University of California, Davis  
*ENH 160: Restoration Ecology*

Teaching assistant for restoration ecology course for upper level undergraduates. Assisted students with individual project development, scientific communication, and understanding of concepts used in environmental restoration. Completed student project compiled into a report presented to the Yolo County Resource Conservation District.

Teaching Assistant, 6/2014 - 9/2014 University of Michigan Biological Station  
Pellston, MI  
*ECL 390: General Ecology*

Summer field ecology course teaching assistant for junior and senior undergraduates. Helped students understand basic ecological concepts, experimental design, and research methodology.

## MENTORING

2015-Present University of California, Davis Graduate Student Peer Mentorship Program  
 Peer mentor to incoming graduate students in the Ecology Graduate Program at the University of California, Davis. Attended training workshops on effective mentorship. Certified graduate student peer mentor through UC Davis Department of Graduate Studies.

- 2013-2014 University of Michigan Undergraduate Research Opportunity Program  
Assisted two undergraduate students in design and presentation of an independent research project.
- 2013 University of Michigan Summer Research Opportunity Program  
Assisted an undergraduate student in design and implementation of a summer research project.

## **SERVICE**

- 2018-2019 Graduate Group in Ecology Statistical Support Group  
*University of California, Davis*  
Organizer of a student-led statistical analysis club, covering quantitative methods, experimental design, and best practices in ecological data analysis. Coordinated guest lectures, code reviews, and collaborative re-analysis projects of publicly available datasets.
- 2014-2018 Student and Landowner Education and Watershed Stewardship  
*Center for Land-Based Learning, Winters, CA*  
Served as a volunteer mentor and guest lecturer for the SLEWS program, which pairs local high school biology students with scientists and land managers in collaborative environmental restoration projects.
- 2017-2018 UC Davis Graduate Group in Ecology Symposium  
*University of California, Davis*  
Served on the planning committee of the 2018 Graduate Group in Ecology Symposium. Coordinated an invited speaker, presentation scheduling, and general meeting logistics for an academic conference.
- 2016-2017 UC Davis Graduate Group in Ecology Admissions  
*University of California, Davis*  
Served as a graduate student admissions committee member for the Graduate Group in Ecology at the University of California, Davis. Reviewed and scored applications from prospective graduate students, attended workshops on implicit biases in applicant evaluation.
- 2015-Present Kids into Discovering Science  
*Lower Lake Elementary, Lower Lake, CA*  
Gave lectures to 5th grade classes geared towards developing a basic understanding of the scientific process, exploring California natural history, and conducting research projects. Course designed to foster connection between local research institutions and underserved communities.
- 2015-2016 Team WILD  
*The Center for Biological Diversity*  
Distributed informational materials and organized presentations to promote public awareness of global biological diversity decline and endangered species conservation.

## **PROFESSIONAL MEMBERSHIPS**

- 2014-Present Ecological Society of America  
2014-Present California Native Plant Society  
2015-Present California Invasive Plant Council  
2018-Present Society for Ecological Restoration

## SKILLS

<i>Quantitative Methods</i>	Applied statistical modeling (Bayesian and frequentist), multivariate statistics, hierarchical and mixed effects models, spatial statistics, natural language processing, web scraping, machine learning
<i>Programming Tools</i>	R (Package development, Shiny web applications, RMarkdown, tidyverse, data.table, ggplot2, RStan), Python (NumPy, SciPy, pandas, matplotlib, Seikit-Learn, NLTK), JAGS, WinBUGS, Git
<i>Field Methods</i>	Plant identification, vegetation sampling, plant population demography, soil chemistry