

Nathan C. Emery

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Education

University of California Santa Barbara Ph.D. in Ecology, Evolution and Marine Biology Title: "Summer fog and live fuel moisture in coastal California shrublands." Certificate in College and Undergraduate Teaching (CCUT)	September 2016
Duke University B.S. Biology, Graduation with Distinction Thesis: "Functional diversity and invasibility of <i>Microstegium vimineum</i> ."	Spring 2007
Organization for Tropical Studies Costa Rica study abroad program in Tropical Ecology	Fall 2005

Professional Appointments

Postdoctoral Research Associate , Plant Biology Department, Michigan State University. Project titled: "Longitudinal study of teaching practices in early-career biology faculty."	2016 - present
Data Support Team Member , NSF Arctic Data Center, National Center for Ecological Analysis and Synthesis	2016
Isotope Inter-University Training for Continental-scale Ecology Fellow , Research-in-Residence at UC Berkeley, University of Utah	2014
Research Assistantship , California Energy Commission, Ecology, Evolution and Marine Biology Department, UC Santa Barbara	2011-2013
Eastern Oregon Field Ecologist , The Nature Conservancy of Oregon	2008

Teaching Experience

Instructor , Introductory Biology 162, Michigan State University <ul style="list-style-type: none">Taught a 200-student introductory biology course	Fall 2018
Instructor , Introductory Biology 162, Michigan State University <ul style="list-style-type: none">Co-taught a 200-student introductory biology courseCo-designed and implemented a course-long project consisting of students collecting, visualizing, and analyzing tree phenology patterns.	Fall 2017
Instructor , General Plant Ecology, UC Santa Barbara <ul style="list-style-type: none">Designed and taught a course for 50-85 upper-division ecology studentsDeveloped a course-long research proposal writing assignment.	Winter 2014, 2015, 2016
Instructor , Ecology and Management of California Wildlands, UC Santa Barbara <ul style="list-style-type: none">Led a 24-student field course with weekly field trips to California's ecosystems	Fall 2015
Academic Coordinator , Introductory Biology Lab Course, UC Santa Barbara <ul style="list-style-type: none">Train and manage eight teaching assistants to teach lab exercisesDevelop lab quizzes, coordinate grading and maintain course website	Summer 2015
Graduate Student Association Excellence in Teaching Award , UC Santa Barbara	2013

Curriculum development for Teaching Assistants, UC Santa Barbara	2012-2013
<ul style="list-style-type: none"> • Co-developed a curriculum for the “Teaching Techniques for Teaching Assistants” course for the Biology departments with the course instructor 	
Teaching Assistant, UC Santa Barbara	2010-2016
<ul style="list-style-type: none"> • Introductory Biology Lab Series 1, 2 and 3 • Foundations of Ecosystem Restoration (2012,2013,2014) • Ecology and Management of California Wildlands • Introduction to Ecology 	

Pedagogy/Training

Students as Ecologists: Collaborating with Undergraduates from Scientific Question to Publication, ESA Annual Meeting	Summer 2018
<ul style="list-style-type: none"> • Organizer/Moderator for Inspire Session 	
Backward Design for Teaching Ecology, ESA Annual Meeting	Summer 2018
<ul style="list-style-type: none"> • Leading a professional development workshop for ESA attendees 	
Student Success Summit and 2018 Teaching & Learning Spring Conference, Michigan State University	Spring 2018
<ul style="list-style-type: none"> • Participated in workshop on data-driven assessment of student learning 	
Biology Curriculum committees, Michigan State University	2017-present
<ul style="list-style-type: none"> • Participating in committees dedicated to curricula alignment 	
BioQuest/QUBES Workshop, Making Meaning through Modeling: Problem solving in biology	Summer 2017
Advanced Learning through Evidence-Based STEM Teaching Course, Center for the Integration of Research Teaching and Learning.	Spring 2017
Backward Design Workshop, UC Santa Barbara	Spring 2017
<ul style="list-style-type: none"> • Designed and led a professional development workshop for graduate students, postdocs and early-career faculty in the STEM disciplines 	
Universal Design in Learning: Reaching and Teaching Diverse Learners, Center for the Integration of Research, Teaching and Learning	Fall 2016
STEM Teaching Essentials, Michigan State University	Fall 2016
<ul style="list-style-type: none"> • Tips for Successful Team Teaching • Strategies for Implementing Student Teams 	
TA Orientation Workshop Leader and Panelist, UC Santa Barbara	2012, 2013
Summer Teaching Institute for Associates, UC Santa Barbara	Summer 2013

Publications

Emery, N., C. M. D'Antonio, and C. J. Still. 2018. Fog and live fuel moisture in coastal California shrublands. *Ecosphere*, 9(4) <<https://onlinelibrary.wiley.com/doi/full/10.1002/ecs2.2167>>

Ebert-May, D. and **N. Emery**. 2017. Teaching like a scientist: assessing your assessments. *Frontiers in Ecology and the Environment*, 15(5), 227-227. <<http://onlinelibrary.wiley.com/doi/10.1002/fee.1496/full>>

Emery, N. 2016. Foliar uptake in coastal California shrub species. *Oecologia*. 182(3), 731-742. <<http://link.springer.com/article/10.1007/s00442-016-3712-4>>

Emery, N. 2016. Writing an Ecology Research Proposal. *EcoEDigital Library. Ecological Society of America*. <<http://ecoed.esa.org/index.php?P=FullRecord&ID=574>>

Emery, N and J. Lesage*. 2015. Late summer fog use in the drought deciduous shrub, *Artemisia californica* (Asteraceae). *Madroño*. 62: 150-157.
<<http://www.bioone.org/doi/abs/10.3120/madr-62-03-150-157.1>>

Chen, X., **Emery, N.**, Garcia, E. S., Hanan, E. J., Hodges, H. E., Martin, T., ... & Tague, C. 2013. Perspectives on disconnects between scientific information and management decisions on post-fire recovery in western US. *Environmental management*, 1-12. doi:10.1007/s00267-013-0165-y

* indicates undergraduate author

Publications in progress

Ma, S., D'Antonio, C. M., and **N. Emery**. Effects of Short Interval Wildfires on Southern California's Shrubland Communities. *In prep for Landscape Ecology*.

Pivovarovoff, A., **Emery, N.**, Sharifi, M. R., Witter, M., Keeley, J. E., and P. W. Rundel. Live fuel moisture: The physiology of a fire fuel trait. *Accepted (International Journal of Wildland Fire)*

Selected Scientific Presentations

Teaching & Learning Spring Conference , Michigan State University	Spring 2018
Poster:	
Ecological Society of America: 102nd Annual Meeting	Summer 2017
Talk: <i>Coastal fog and plant flammability in California shrublands</i>	
Talk: <i>Factors that predict teaching practices of early-career biology faculty</i>	
SABER West (Society for the Advancement of Biology Education Research)	Winter 2017
Poster: <i>Contextual factors that impact early-career faculty teaching practices</i>	
Ecological Society of America: 100th Annual Meeting	Summer 2015
Co-organizer and presented in the Organized session: " <i>Head in the clouds: How fog and dew affects ecosystems around the world.</i> "	
American Geophysical Union: Fall Meeting	Fall 2014
Poster: <i>Fog Water Use in Coastal California Shrub Species</i>	
MEDECOS XIII: Crossing Boundaries across Disciplines and Scales	Fall 2014
Talk: <i>Coastal fog effects on live fuel moisture of California shrublands</i>	
Ecological Society of America 99th Annual Meeting	Summer 2014
Talk: <i>Foliar uptake and physiology of California shrub species</i>	
Mildred Mathias Symposium , UC Natural Reserve System	Spring 2014
Talk: <i>Quantifying patterns of coastal fog deposition</i>	
Ecological Society of America 98th Annual Meeting	Summer 2013
Talk: <i>Fog water use in coastal California shrublands</i>	
Ecological Society of America 97th Annual Meeting	Fall 2012
Talk: <i>Fog and fuel moisture in California shrublands</i>	
California Native Plant Society Conservation Conference	Winter 2012
Talk: <i>How does fog affect fuel moisture?</i>	
MEDECOS XII: Linking science with resource management	Fall 2011
Poster: <i>How does fog affect the fire regime?</i>	

Mentorship

Instructor , Plant Biology 498, Michigan State University	Spring 2018
<ul style="list-style-type: none">Guided a senior plant biology major through an independent research project complete with poster, oral presentation, and writing of a manuscript for publication	
Research Mentor , UC Santa Barbara	2011-2016
<ul style="list-style-type: none">Mentored three undergraduates through senior thesis projects. One has been published, another is in prep.Involved over 15 other students in my research program	
Summer Institute for Math and Science Mentor , UC Santa Barbara	Summer 2013
<ul style="list-style-type: none">Mentored four incoming freshmen on an independent research project to demonstrate the scientific method	
Jack Kent Cooke Bridges Mentor , UC Santa Barbara	July 2012
<ul style="list-style-type: none">Mentored several community college students for a one-week intensive program to learn about research methods and the scientific process.	
Summer Research Mentorship Program , UC Santa Barbara	Summer 2012
<ul style="list-style-type: none">Paired with a highly motivated high school student interested in academic research. We developed a research study, conducted fieldwork, analyzed data and she gave a final presentation to her peers.	

Grants, Fellowships and Awards (total = \$44,578)

Vernon Cheadle Award , CCBER, UCSB (\$500)	2016
Coastal Fund Grant , UCSB Associated Students (\$584)	2016
Doctoral Student Travel Grant , UCSB (\$685)	2015
Ecology, Evolution and Marine Biology Block Grant , UCSB (\$10,000)	2014-2015
Isotope Inter-University Training for Continental-scale Ecology Fellowship (\$4,043)	Summer 2014
Ecology, Evolution and Marine Biology Block Grant , UCSB (\$1,500)	2013-2014
Instruction Improvement Grant , Office of Instructional Development, UCSB (\$2,000)	2013
Ellen Schamberg Burley Graduate Scholarship , UCSB (\$700)	2013
NSF Doctoral Dissertation Improvement Grant , NSF (\$16,766)	2013
Mildred Mathias Research Grant , UC Natural Reserve System (\$1,900)	2013
California Native Plant Society Education Award , CNPS (\$500)	Winter 2012
Worster Award for Graduate and Undergraduate Research Pairing, UCSB (\$5,400)	2011, 2013

Professional Services

Reviewed for: International Journal of Wildland Fire (2), American Journal of Botany, CBE Life Sciences, Tree Physiology	
Vice-Chair , Ecological Society of America Early-Career Section	2017-present
<ul style="list-style-type: none">Organized and led a professional development webinar series	
Alumni interviewer , Duke University	2009-2016
UC Natural Reserve System Graduate Student Representative , UC Santa Barbara	2013-2014
Departmental Seminar Series Coordinator , EEMB, UC Santa Barbara	2011-13
Biogeosciences Seminar Coordinator , UC Santa Barbara	2011
Graduate Student Symposium Coordinator , EEMB, UC Santa Barbara	2011

Professional Associations

Ecological Society of America	2010-present
California Native Plant Society	2010-present
California Botanical Society	2015-2017
Botanical Society of America	2012-2014

Public Outreach

#ClimateChanged Blog author , Plant People < http://www.plantpeopleblog.com/ >	2017-present
Skype a Scientist , < https://www.skypeascientist.com/ >	2018-present
Biology on Tap , Lansing, Michigan.	Spring/Summer 2017
<ul style="list-style-type: none"> Two different science café talks on wildfires and non-native plants 	2017
SciTrek , UC Santa Barbara Chemistry Department.	Fall 2015
<ul style="list-style-type: none"> Taught 7th graders about electrochemistry 	
Science on Site , SB Museum of Natural History.	Summer 2015
<ul style="list-style-type: none"> Taught visitors how to do stomatal peels to learn about gas exchange 	
Scienceline contributor for educational outreach, UCSB	2013-2016
<ul style="list-style-type: none"> Answered science questions from students of all ages 	
Santa Barbara County Science Fair Judge (High school students) , UCSB	2010-2016
SciencePub hosted by the Santa Barbara Natural History Museum	Fall 2014
Talk: <i>California on Fire: How native plants respond to wildfire</i>	
Santa Barbara Native Plant Society , Talk about fog use in shrub species	Summer 2014
Santa Barbara Fire Safety Council , Talk about fuel moisture research	Summer 2014
Master Gardeners of Santa Barbara County , Talk about fire disturbance	Summer 2013
SciencePub hosted by the Santa Barbara Natural History Museum	Spring 2013
Talk: <i>I invade with a little help from my friends: How plants have moved around the world</i>	
The Santa Barbara Sentinel article about my research, pg. 23	March 2013
Title: <i>June Gloom is Good (Sort Of)</i>	

Relevant Coursework

Pathways to Scientific Teaching Course , Michigan State University	Fall 2016
Geographic Information Systems , Bren School of the Environment, UC Santa Barbara	Spring 2016
Software Carpentry R workshop , UC Santa Barbara	Spring 2015
Advanced Remote Sensing , UC Santa Barbara	Winter 2015
Stable Isotopes in Ecology , University of Utah	Spring 2011
Advanced Biostatistics , UC Santa Barbara	Spring 2011

Language Skills

Language fluency: Reading, writing and speaking Spanish.