

## Nathan C. Emery

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### Education

<b>University of California Santa Barbara</b> 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
<b>Duke University</b> B.S. Biology, Graduation with Distinction Thesis: "Functional diversity and invasibility of <i>Microstegium vimineum</i> ."	Spring 2007
<b>Organization for Tropical Studies</b> Costa Rica study abroad program in Tropical Ecology	Fall 2005

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### Professional Appointments

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

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### Teaching Experience

<b>Instructor</b> , Introductory Biology 162, Michigan State University <ul style="list-style-type: none"><li>Co-taught a 200-student introductory biology course</li><li>Co-designed and implemented a course-long project consisting of students collecting, visualizing, and analyzing tree phenology patterns.</li></ul>	Fall 2017
<b>Instructor</b> , General Plant Ecology, UC Santa Barbara <ul style="list-style-type: none"><li>Designed and taught a course for 50-85 upper-division ecology students</li><li>Developed a course-long research proposal writing assignment.</li></ul>	Winter 2014, 2015, 2016
<b>Instructor</b> , Ecology and Management of California Wildlands, UC Santa Barbara <ul style="list-style-type: none"><li>A 24-student field course with weekly field trips to California's ecosystems</li></ul>	Fall 2015
<b>Academic Coordinator</b> , Introductory Biology Lab Course, UC Santa Barbara <ul style="list-style-type: none"><li>Train and manage eight teaching assistants to teach lab exercises</li><li>Develop lab quizzes, coordinate grading and maintain course website</li></ul>	Summer 2015
<b>Graduate Student Association Excellence in Teaching Award</b> , UC Santa Barbara	2013
<b>Curriculum development for Teaching Assistants</b> , UC Santa Barbara	2012-2013

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- 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
- Introductory Biology Lab Series 1, 2 and 3
  - Foundations of Ecosystem Restoration (2012,2013,2014)
  - Ecology and Management of California Wildlands
  - Introduction to Ecology

### *Publications*

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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*

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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*.

**Emery, N.**, C. M. D’Antonio, and C. J. Still. Fog and live fuel moisture in coastal California shrublands. *BioRxiv* <doi: <https://doi.org/10.1101/171850>> *In Review (Ecosphere)*

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. *In Review (International Journal of Wildland Fire)*

### *Selected Scientific Presentations*

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| <b>Ecological Society of America:</b> 102 <sup>nd</sup> 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>  |             |
| <b>SABER West</b> (Society for the Advancement of Biology Education Research)         | Winter 2017 |
| Poster: <i>Contextual factors that impact early-career faculty teaching practices</i> |             |

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<b>Ecological Society of America: 100<sup>th</sup> Annual Meeting</b> Co-organizer and presented in the Organized session: “ <i>Head in the clouds: How fog and dew affects ecosystems around the world.</i> ”	Summer 2015
<b>American Geophysical Union: Fall Meeting</b> Poster: <i>Fog Water Use in Coastal California Shrub Species</i>	Fall 2014
<b>MEDECOS XIII: Crossing Boundaries across Disciplines and Scales</b> Talk: <i>Coastal fog effects on live fuel moisture of California shrublands</i>	Fall 2014
<b>Ecological Society of America 99<sup>th</sup> Annual Meeting</b> Talk: <i>Foliar uptake and physiology of California shrub species</i>	Summer 2014
<b>Mildred Mathias Symposium, UC Natural Reserve System</b> Talk: <i>Quantifying patterns of coastal fog deposition</i>	Spring 2014
<b>Ecological Society of America 98<sup>th</sup> Annual Meeting</b> Talk: <i>Fog water use in coastal California shrublands</i>	Summer 2013
<b>Ecological Society of America 97<sup>th</sup> Annual Meeting</b> Talk: <i>Fog and fuel moisture in California shrublands</i>	Fall 2012
<b>California Native Plant Society Conservation Conference</b> Talk: <i>How does fog affect fuel moisture?</i>	Winter 2012
<b>MEDECOS XII: Linking science with resource management</b> Poster: <i>How does fog affect the fire regime?</i>	Fall 2011

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

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

*Relevant Coursework*

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

*Pedagogy Workshops/Training*

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<b>BioQuest/QUBES Workshop, Making Meaning through Modeling: Problem solving in biology</b>	Summer 2017
<b>Advanced Learning through Evidence-Based STEM Teaching Course, Center for the Integration of Research Teaching and Learning.</b>	Spring 2017

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<b>Backward Design Workshop</b> , UC Santa Barbara	Spring 2017
<ul style="list-style-type: none"> <li>Designed and led a professional development workshop for graduate students, postdocs and early-career faculty in the STEM disciplines</li> </ul>	
<b>Universal Design in Learning: Reaching and Teaching Diverse Learners</b> , Center for the Integration of Research, Teaching and Learning	Fall 2016
<b>STEM Teaching Essentials</b> , Michigan State University	Fall 2016
<ul style="list-style-type: none"> <li>Tips for Successful Team Teaching</li> <li>Strategies for Implementing Student Teams</li> </ul>	
<b>TA Orientation Workshop Leader and Panelist</b> , UC Santa Barbara	2012, 2013
<b>Summer Teaching Institute for Associates</b> , UC Santa Barbara	Summer 2013

### *Mentorship*

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<b>Research Mentor</b> , Michigan State University	2017-2018
<ul style="list-style-type: none"> <li>Mentoring a student for Plant Biology senior project on leaf hydrophobicity</li> </ul>	
<b>Research Mentor</b> , UC Santa Barbara	2011-2016
<ul style="list-style-type: none"> <li>Mentored three undergraduates through senior thesis projects. One has been published, another is in prep.</li> <li>Involved over 15 other students in my research program</li> </ul>	
<b>Summer Institute for Math and Science Mentor</b> , UC Santa Barbara	Summer 2013
<ul style="list-style-type: none"> <li>Mentored four incoming freshmen on an independent research project to demonstrate the scientific method</li> </ul>	
<b>Jack Kent Cooke Bridges Mentor</b> , UC Santa Barbara	July 2012
<ul style="list-style-type: none"> <li>Mentored several community college students for a one-week intensive program to learn about research methods and the scientific process.</li> </ul>	
<b>Summer Research Mentorship Program</b> , UC Santa Barbara	Summer 2012
<ul style="list-style-type: none"> <li>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.</li> </ul>	

### *Professional Services*

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<i>Reviewed for:</i> 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
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*

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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*

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

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### *Language Skills*

Language fluency: Reading, writing and speaking Spanish.