

# ALLISON K. BARNER

James S. McDonnell Foundation Postdoctoral Fellow  
Department of Environmental Science, Policy, and Management  
University of California, Berkeley

## EDUCATION

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- Oregon State University** 9/2010-6/2016  
Ph.D., Zoology, Minor in Statistics  
Dissertation: *Predictability and constraints on the structure of ecological communities in the context of climate change*  
Co-Advisors: Dr. Sally Hacker, Dr. Bruce Menge
- University of Chicago** 9/2005-6/2009  
B.A. with Honors, Biological Sciences with Honors  
Specialization in Ecology and Evolution  
Thesis: *The mixed mating system of the sea palm kelp*  
Advisor: Dr. Catherine Pfister

## PROFESSIONAL APPOINTMENTS

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- University of California, Berkeley** 9/2016-Present  
James S. McDonnell Foundation Postdoctoral Fellow  
Department of Environmental Science, Policy & Management  
Mentor: Dr. Carl Boettiger
- Oregon State University**
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| Instructor, Department of Integrative Biology                      | 2017      |
| Research Assistant in Science Policy, Mentor: Dr. Jane Lubchenco   | 2015-2016 |
| U.S. Environmental Protection Agency STAR Graduate Research Fellow | 2012-2015 |
| Research Assistant, Department of Integrative Biology              | 2011-2012 |
| Teaching Assistant, Department of Integrative Biology              | 2010-2012 |

## SCHOLARSHIP

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Total number of citations: 109 | h-index: 6 | i10-index: 5

Accessed from Google Scholar 24 Aug. 2018

### Peer-Reviewed Publications

- Hutchinson, M., B. Mora, S. Pilosof, **A. Barner**, S. Kéfi, P. Jordano, D. Stouffer, E. Thébault. Seeing the forest for the trees: making multilayer networks work for community ecology. In revision at *Functional Ecology*. *Contribution: writing*
- Barner, A.**, F. Chan, A. Hettinger, S. Hacker, B. Menge, K. Marshall\*. 2018. Generality in multispecies responses to ocean acidification revealed through multiple hypothesis testing. *Global Change Biology*, doi: 10.1111/gcb.14372.
- Barner, A.**, K. Coblenz, S. Hacker, B. Menge. 2018. Fundamental contradictions among observational and experimental estimates of non-trophic species interactions. *Ecology* 99: 557-566.

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\* Undergraduate mentee

7. Hughes, B., R. Beas-Luna, **A. Barner**, K. Brewitt, D. Brumbaugh, E. Cerny-Chipman, S. Close, K. Coblenz, K. de Nesnera, S. Drobnitch, J. Figurski, B. Focht, J. Freiwald, M. Friedman, K. Heady, W. Heady, K. Karr, A. Hettinger, A. Johnson, B. Mahoney, M. Moritsch, A. Osterback, J. Reimer, J. Robinson, T. Rohrer, J. Rose, M. Sabal, L. Segui, C. Shen, J. Sullivan, R. Zuercher, P. Raimondi, B. Menge, K. Grorud-Colvert, M. Novak, M. Carr. 2017. Long-term studies contribute disproportionately to ecology and policy. *Bioscience* 67: 271-281. *Contribution: data management, data analysis*
6. Grorud-Colvert, K., J. Lubchenco, **A. Barner**. 2017. Seas the day: a bluer, saltier second century for American Parks. In *Science, Conservation, and National Parks*. Editors: S. Beissinger, D. Ackerly, H. Doremus, G. Machlis. University of Chicago Press, Chicago IL. *Contribution: writing*
5. **Barner, A.**, S. Hacker, B. Menge, K. Nielsen. 2016. The complex net effect of reciprocal interactions and recruitment facilitation maintains an intertidal kelp community. *Journal of Ecology* 104: 33-43.
4. **Barner, A.**, J. Lubchenco, C. Costello, S. Gaines, A. Leland, B. Jenks, S. Murawski, E. Schwabb, M. Spring. 2015. Solutions for recovering and sustaining the bounty of the ocean: reforming fisheries and pairing rights-based fisheries management with marine reserves. *Oceanography* 28: 252-263.
3. Piacenza, S., **A. Barner**, C. Benkwitt, K. Boersma, E. Cerny-Chipman, K. Ingeman, T. Kindinger, J. Lee, A. Lindsley, J. Reimer, J. Rowe, C. Shen, K. Thompson, L. Thurman, S. Heppell. 2015. Patterns and variation of benthic biodiversity in a large marine ecosystem. *PLoS ONE* 10: e0135135. *Contribution: project development, data analysis lead, writing*
2. Piacenza, S., L. Thurman, **A. Barner**, C. Benkwitt, K. Boersma, E. Cerny-Chipman, K. Ingeman, T. Kindinger, A. Lindsley, J. Nelson, J. Reimer, J. Rowe, C. Shen, K. Thompson, S. Heppell. 2015. Evaluating temporal consistency in marine biodiversity hotspots. *PLoS ONE* 10: e0133301. *Contribution: project development, writing*
1. **Barner, A.**, C. Pfister, J. Wootton. 2011. The mixed mating system of the sea palm *Postelsia palmaeformis*: few costs to selfing. *Proceedings of the Royal Society B* 278: 1347-1355.

### Commentary and Technical Reports

4. Lubchenco, J. **A. Barner**, E. Cerny-Chipman, J. Reimer. 2015. Sustainability rooted in science. *Nature Geoscience* 8: 741-745.
3. Reimer, J., K. Grorud-Colvert, **A. Barner**, J. Lubchenco. 2015. Healthy oceans, healthy people, healthy economies: integrating fisheries management and protected areas for environmental, economic, and social benefits. *Science Brief for the UN High Level Political Forum on the Sustainable Development Goals*.
2. Whelan, C., M. Sandor, **A. Barner**. 2015. Birds and rails. *Illinois Natural History Survey Reports* 413: 7-8.

- Whelan, C., L. Leong, M. Sandor, **A. Barner**, D. Maddox. 2014. Assessment of the composition and reproductive ecology of breeding bird assemblages at selected natural areas potentially impacted by the EJ&E Line, 2009-2013. *Impacts of the EJ&E on Natural Areas Report, Section 4: Avian Ecology*.

## GRANTS

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<b>JSMF Postdoctoral Fellowship in Studying Complex Systems</b>	2016-2019
Project: Climate change, stability, and interaction networks, \$200,000	
<b>EPA STAR Graduate Research Fellowship in Global Change</b>	2012-2015
Project: Species interactions in a changing climate, \$126,000	
<b>Hatfield Marine Science Center Mamie Markham Grant</b>	2012-2015
Project: Disentangling species responses to ocean acidification, \$5,852	
<b>Sigma-Xi Grant-in-Aid of Research</b>	2012
Project: Generating climate-novel communities in the field, \$550	
<b>University of Chicago Biological Sciences Research Fellowship</b>	2008
Project: Population ecology of self-fertilization, \$3,500	

## AWARDS, FELLOWSHIPS, RECOGNITION

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Oregon State University Lenore Bayley Graduate Fellowship	2015-2016
Ecological Society of America Aquatic Section Best Student Talk Award	2015
Oregon Lottery/Oregon State University Graduate School Merit Scholarship	2013
Oregon State University College of Science Travel Award	2013
Oregon State University Integrative Biology Annual Grant	2011-2015
National Science Foundation Graduate Fellowship Honorable Mention	2011
University of Chicago College Honors and Research Honors	2009

## TEACHING EXPERIENCE

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### Instructor

#### Oregon State University, Hatfield Marine Science Center

*Marine Biology & Ecology* (BI 450: phycology) 2017

Designed and taught two-week module of upper-division field course for marine biology majors. The course focused on fundamental physiology, taxonomy, and ecology of marine seaweeds and aquatic plants, with lab, lecture, field, writing, and independent group research components, with an emphasis on peer-teaching, active learning, and measurable learning objectives

### Teaching Assistant

#### Oregon State University

*Marine Biology & Ecology* (BI 450: marine invertebrates, independent research) 2011, 2012

Ran the invertebrate lab, designed and implemented assessments, mentored student data analysis and scientific writing, coordinated logistics for the entire 10 week course.

*Introductory Biology Lab* for non-majors (BI 102: genetics, evolution, behavior) 2012  
Facilitated multiple large-enrollment laboratory sections per week, assisted with grading

*Principles of Biology II Lab* for majors (BI 212: plant and animal physiology) 2011

*Principles of Biology I Lab* for majors (BI 211: evolution, biodiversity) 2010, 2011  
Ran large-enrollment sections, designed curriculum components and assessment, wrote lectures

#### University of Chicago

*Ecology & Evolution Lab* for majors (BIOS 20185) 2009  
Facilitated upper-division laboratory focused on independent learning, assisted with grading

#### **Mentoring**

“EEB Mentor Match” Program Mentor 2017  
Ecological Society of America SEEDS Annual Meeting Undergraduate Mentor 2017  
University of Chicago Women’s Athletic Association Alumni Mentor 2014-2016  
Undergraduate students mentored at Oregon State University 2012-2017

#### **Guest Instructor**

*Marine Ecology* (Oregon State University, BI 351) 2015  
*Ecology* (Oregon State University, BI 370) 2014  
*Marine Biology & Ecology* (Oregon State University, BI 450) 2013-2016

#### **Grader**

*Ecology* (Oregon State University, BI 370) 2012, 2014-2016

#### **Training**

Graduate science communication 10-week course, COMPASS 2012  
Oregon State University Team Liberation facilitator training 2012  
Oregon State University graduate teacher training seminar (AHE 507, 3 terms) 2010, 2011

#### **Public Education and Outreach**

Speaker at East Bay Taste of Science Festival 2018  
Host of @RealScientists (rotating educational Twitter account, 60k audience) 2018  
Letters to a Pre-Scientist pen pal program 2017-Present  
Public lecture, Corvallis Chapter Native Plant Society of Oregon 2015  
Coastal climate change lectures, Tillamook High School, Oregon 2012  
Public outreach booth and Family Science Days, AAAS Vancouver BC 2012  
OSU Winter Wonderings, weekend education for grade school program 2012  
OSU Darwin’s Legacy, outreach event for rural high school students 2011-2012

#### **SEMINARS & CONFERENCE PRESENTATIONS**

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##### **Invited Seminars**

University of California, Merced 2018  
University of Illinois Urbana-Champaign 2017  
University of California, Davis, Bodega Marine Laboratory  
NOAA Southwest Fisheries Science Center, Santa Cruz CA  
University of San Francisco  
University of California, Santa Barbara, Bren School  
Oregon State University 2015

##### **Invited Symposia**

“The missing theory for species co-occurrence in ecology” 2018  
*On the shoulders of giants: the future of The American Naturalist* Symposium

## American Society of Naturalists Asilomar Meeting

“Dynamics of complex species interaction networks undergoing change” 2017  
*Seeing the forest for the trees: the possibilities and challenges*  
*of merging ecological networks across interaction types* Symposium  
 Ecological Society of America Annual Meeting

**Contributed Talks**

Ecological Society of America. 2018. Can species interactions and species co-occurrence be reconciled? Theory, experiments, and network approaches to a problem of causal inference.

Western Society of Naturalists. 2016. Beyond idiosyncrasy in ocean acidification research: a case study with coralline algae.

Ecological Society of America. 2015. Predicting species response to climate change: The role of evolutionary relatedness, environmental distribution, and physiology.

Ecological Society of America. 2014. Scaling and spatial patterns of species co-occurrence in a rocky intertidal meta-community.

Western Society of Naturalists. 2013. Dominant algal canopy-understory interaction modified by small-scale environmental conditions.

Ecological Society of America. 2013. Positive or negative canopy-understory interactions? A test using the comparative-experimental approach.

Western Society of Naturalists. 2012. Community structure and diversity across environmental stress gradients and scale in the Pacific Northwest rocky intertidal.

Western Society of Naturalists. 2011. Few costs to selfing? Lessons on inbreeding from an intertidal kelp.

**Selected Co-authored Talks**

Lubchenco, J., **A. Barner**, K. Grorud-Colvert. 2015. Seas the day: a bluer, saltier second century of interdependent science, parks, and people. Science for Parks and Parks for Science: The Next Century Conference. University of California, Berkeley.

Lubchenco, J., **A. Barner**. Delivering on Science’s Social Contract.

- Second International Ocean Research Conference. Barcelona, Spain (2014)
- International Alliance of Research Universities Congress on Global Challenges. Copenhagen, Denmark (2014)
- The World Academy of Sciences 25th Meeting. Muscat, Oman (2014)
- Academic Engagement in Public and Political Discourse, University of Michigan (2015)

**PREVIOUS FIELD RESEARCH EXPERIENCE**

<b>Rocky intertidal marine community ecology</b>	2011-2015
Oregon State University/Partnership for Interdisciplinary Studies of Coastal Oceans	
<b>Benthic ecology of marine invasions with climate change</b>	2010
University of Connecticut, Avery Point, PI: Dr. Robert Whitlatch	
<b>Anthropogenic impacts on urban breeding bird communities</b>	2009
Illinois Natural History Survey/University of Illinois, PI: Dr. Christopher Whelan	

<b>Rocky intertidal population and community ecology</b>	2008-2009
University of Chicago, PIs: Drs. Catherine Pfister, J. Timothy Wootton	
<b>Historical resurvey of benthic invasions</b>	2008
Friday Harbor Laboratories, University of Washington	
<b>Mycology collections and fungal ecology of Illinois</b>	2007
Department of Botany, Field Museum of Natural History, PI: Dr. Gregory Mueller	

## PROFESSIONAL SERVICE

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### Society

Ad-hoc Diversity & Conduct Committee, Western Society of Naturalists	2017
Student Awards Judge, Western Society of Naturalists	2016
Co-organized and moderated an Organized Oral Session at the Ecological Society of America Meeting: <i>“The role of biotic interactions in structuring species distributions”</i>	2015
Phycological Society of America Grants & Fellowships Committee	2013-2016

### University

Founding co-president, OSU IB Graduate Student Association	2014-2015
Thesis documentation committee, Department of Integrative Biology	2013-2014
Panelist on “community building”, OSU Graduate Student Orientation	2013
Lead organizer, OSU Women in Science/Women in Policy public panel discussion <i>“Breaking down the wall: communication at the interface of environmental science &amp; policy”</i>	2012
Graduate professional development committee, Department of Integrative Biology	2012-2014
Co-President, Oregon State University Women in Science	2011-2013
Admissions Interviewer, University Chicago Alumni Schools Committee	2011-2015

### Peer Review

Conservation Biology, Ecography, Ecology, Ecology & Evolution, Estuarine Coastal and Shelf Science, Fish and Fisheries, Global Change Biology, Global Ecology and Biogeography, Journal of Animal Ecology, Methods in Ecology and Evolution, Oecologia, PeerJ, PLOS Computational Biology, PLOS One, Proceedings of the Royal Society B

### External reviews

Ocean Science Trust/Ocean Protection Council California Ocean Acidification Indicators Report, COMPASS Science Communication Message Box Workbook

### Grant reviews (*ad hoc*)

National Geographic Society, National Science Foundation Biological Oceanography

## PROFESSIONAL SOCIETIES, WORKING GROUPS, WORKSHOPS

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### Society Membership

Ecological Society of America, Phycological Society of America, Western Society of Naturalists

### Meetings Attended

Ecological Society of America	2012-2015, 2017-2018
Gordon Research Conference: Unifying Ecology Across Scales	2014
Pacific Northwest Climate Science Conference	2013
Western Society of Naturalists	2011-2014, 2015-2016

**Working Groups**

NSF Dimensions of Biodiversity Distributed Graduate Seminar	2011-2014
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**Relevant Training & Workshops**

Business Fundamentals, Haas School of Business, UC Berkeley	2017
Reproducible and Collaborative Data Science, UC Berkeley	2017
Current Issues in Statistical Ecology workshop	2015
National Institute for Mathematical and Biological Synthesis Science Policy & Law seminar, Oregon State University	2014
Introduction to Marine Macroalgae field course, Hatfield Marine Science Center, OSU	2011
Marine Invertebrate Zoology field course, Friday Harbor Laboratories, U. Washington	2008

**INTERVIEWS & PRESS**

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**Profiles**

Interview and fieldwork featured in <i>Fisheries</i> 41:155-156	2016
Guest on station KBVR's <i>Inspiration Dissemination</i>	2014, 2016
Graduate biodiversity working group featured in <i>Nature</i> 499:115-117	2013

**Research Press**

Barner et al. 2018 Global Change Biology: *Forbes Science* (2018)  
 Barner et al. 2015 Oceanography: *Terra Magazine* (2016), *The Conversation* (2015),  
 Lubchenco et al. 2015 Nature Geoscience: Interview on KBVR's *Chariots of Curiosity* (2015)

**REFERENCES**

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**Dr. Carl Boettiger**, Postdoctoral Mentor

Assistant Professor

Department of Environmental Science, Policy, and Management

University of California, Berkeley

**Dr. Bruce Menge**, Doctoral Co-Advisor

Wayne and Gladys Valley Professor of Marine Biology and University Distinguished Professor

Department of Integrative Biology

Oregon State University

**Dr. Sally Hacker**, Doctoral Co-Advisor and Teaching Supervisor

Associate Department Head and Professor

Department of Integrative Biology

Oregon State University

**Dr. Jane Lubchenco**, Collaborator and Mentor in Science Policy

University Distinguished Professor

Department of Integrative Biology

Oregon State University