

**Ashley E. Larsen**  
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Bren School of Environmental Science & Management  
UC Santa Barbara  
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## EDUCATION

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PhD	9/2015	<i>Ecology, Evolution &amp; Marine Biology</i> University of California, Santa Barbara
MA	6/2012	<i>Economics</i> University of California, Santa Barbara
BS	12/2008	<i>Ecology &amp; Evolutionary Biology</i> University of Michigan, Ann Arbor High honors & Distinction

## PROFESSIONAL APPOINTMENTS

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2016-	Assistant Professor, Bren School of Environmental Science & Management, UCSB
2018-	Environmental Markets Lab Fellow, UCSB
2018-	Affiliated appointment, Geography Department, UCSB
2015-2016	UC President's Postdoctoral Fellow, UC Berkeley
2014-2015	Environmental Protection Agency STAR Fellow, UCSB
2014-2015	Broom Center for Demography Graduate Research Fellow, UCSB
2009-2012	National Science Foundation Graduate Research Fellow, UCSB
2009-2011	Graduate Student Advisory Committee, UCSB

## PUBLICATIONS

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### In review or revisions

1. **A.E Larsen**, D.N. Farrant\*, A. J. MacDonald. Juxtaposition of pesticide use and biodiversity hotspots in California. *Agriculture, Ecosystems, and Environment (in review following revisions)*.
2. J. Vandermeer, I. Armbrrecht, A. de la Mora, K.K. Ennis, D.J. Gonthier, Z. Hajian-Forooshani, H. Hsieh, A. Iverson, D. Jackson, S. Jha, E. Jiménez-Soto, G. Lopez-Bautista, **A. Larsen**, K. Li, H. Liere, A. MacDonald, L. Marin, K.A. Mathis, I. Monagan, J. Morris, T. Ong, G.L. Pardee, I. Saraeny Rivera, K. Williams-Guillen, S. Yitbarek, S. Uno, A. Zemenick, S.M. Philpott, I. Perfecto. The community ecology of herbivore regulation in an agroecosystem: Lessons from complex systems. *BioScience (in review following revisions)*.

### Accepted or Published

1. D. Matteo [...] **A.E. Larsen** et al. [working group]. A global synthesis reveals biodiversity-mediated benefits for crop production. *Science Advances* (accepted).
2. A.J. Macdonald, C. O'Neill\*, M. H. Yoshimizu, K.A. Padgett, **A.E. Larsen**. Tracking the seasonal ecological niche of the western blacklegged tick. *Journal of Applied Ecology* (accepted).
3. F. Noack, **A.E. Larsen**. The contrasting effects of large farms on farmer and consumer welfare. *Environmental Research Letters* (accepted).
4. **A.E. Larsen**, K. Meng, B.E. Kendall. (2019) Causal Analysis in Control-Impact Ecological Studies with Observational Data. *Methods in Ecology & Evolution*, 00:01-11.
5. K. Bourque\*, A. Schiller\*, C. Loyola Angosto\*, L. McPhail\*, W. Bagnasco\*, A. Ayres\*, **A.E. Larsen**. Balancing agricultural production, groundwater management, and biodiversity goals: A multi-benefit optimization model of agriculture in Kern County, California. *Science of the Total Environment*, 670:865-875.
6. C. Runge, J. Withey, D. Naugle, J. Fargione, K. Helmstedt, **A.E. Larsen**, S. Martinuzzi, J.Tack. (2019). Single species conservation as an umbrella for management of landscape threats. *PLoS One* 14(1) e0209619.
7. **A.E. Larsen**, M. Patton\*, E.A. Martin. (2019). High highs and low lows: Elucidating striking seasonal variability in pesticide use and its environmental implications. *Science of the Total Environment*, 651(1), 828-837.
8. A. MacDonald, **A.E. Larsen**, A. Plantinga. (2019) Missing the people for the trees: Identifying coupled natural-human system feedbacks driving the ecology of Lyme disease. *Journal of Applied Ecology* 56(2), 354-364.
9. C. Runge, A.J. Plantinga, **A.E. Larsen**, D.E. Naugle, K. Helmstedt, S. Polasky, P. Donnelly, J.T. Smith, T. Lark, J.L. Lawler, S. Martinuzzi, J. Fargione. (2019). Unintended habitat loss on private land from grazing restrictions on public rangelands. *Journal of Applied Ecology* 56, 52-62.
10. D.S. Karp [...] **A.E. Larsen** et al. [SESYNC working group]. (2018). Crop pests and predators exhibit inconsistent responses to surrounding landscape composition. *Proceedings of the National Academy of Science, USA* 115 (33) E7863-E7870.
11. D. Mall\*, **A.E. Larsen**, E.A. Martin. (2018). Investigating the (mis) match between natural pest control knowledge and the intensity of pesticide use. *Insects*, 9(1), 2.
12. K.J. Helmstedt, J.R. Stokes, **A.E. Larsen**, M.D. Potts. (2018). Innovating at the urban food, water, energy interface. *Journal of Environmental Management*, 209:17-22.
13. **A.E. Larsen**, S. Gaines, O. Deschenes. (2017). Agricultural pesticide exposure and adverse birth outcomes in the San Joaquin Valley, CA. *Nature Communications*, 8(1) 302.
14. **A.E. Larsen** & F. Noack. (2017). Landscape drivers of agricultural insecticide use: Evidence from 100,000 fields. *Proceedings of the National Academy of Science, USA* 114(21): 5473-5478.

15. T. Tscharrntke, D. Karp, R. Chaplin-Kramer, P. Batáry, F. DeClerck, C. Gratton, A. Ives, M. Jonsson, **A. Larsen**, E. Martin, A. Martínez-Salinas, T. D. Meehan, M. O'Rourke, K. Poveda, J.A. Rosenheim, A. Rusch, N. Schellhorn, S. Wratten, W. Zhang. (2016). When natural habitat fails to enhance biological pest control. *Biological Conservation* 204:449-458.
16. R. Selden, S. Valencia, **A.E. Larsen**, J. Cornejo-Donoso, A. Wasserman\*. (2015). Evaluating seafood eco-labeling as a mechanism to reduce collateral impacts of fisheries in an ecosystem-based fisheries management context. *Marine Policy* 64: 102-115.
17. **A.E. Larsen**, B.T. Hendrickson\*, N Dedeic\*, A.J. MacDonald. (2015). Taken as a given: Evaluating the accuracy of remotely sensed crop data. *Agricultural Systems* 141: 121-125.
18. **A.E. Larsen**, S. Gaines, O. Deschenes. (2015). Spatio-temporal variation in the relationship between landscape simplification and insecticide use. *Ecological Applications* 25(7): 1976-1983.
19. **A.E. Larsen**<sup>‡</sup>, A. MacDonald<sup>‡</sup>, & A. Plantinga<sup>‡</sup> (2014). Lyme disease risk influences human settlement in the wildland urban interface: Evidence from a longitudinal analysis of counties in the northeastern U.S. *The American Journal of Tropical Medicine & Hygiene* 91(4): 747-755.
20. **A.E. Larsen**. (2013). Agricultural landscape simplification does not consistently drive insecticide use. *Proceedings of the National Academy of Science, USA* 110(3): 15330-15335.
21. C. Costello, O. Deschenes, **A.E. Larsen**, S. Gaines (2013). Removing biases in forecasts of fisheries status. *Journal of Bioeconomics* 16:213-219.
22. **A.E. Larsen**. (2012) Modeling multiple non-consumptive effects in simple food webs; a modified Lotka-Volterra approach. *Behavioral Ecology* 23 (5): 1115-1125.
23. N.L. Gutiérrez, S.R. Valencia, T.A. Branch, D.J. Agnew, P. L. Bianchi, J. Cornejo-Donoso, C. Costello, O. Defeo, T.E. Essington, D.D. Hoggarth, **A. E. Larsen**, C. Ninnis, R. L. Selden, S.Sistla, A.D.M. Smith, A. Stern-Pirilot, S. J. Teck, J.T. Thorson, N.E. Williams. (2012). Eco-labels convey reliable information on stock status to seafood consumers. *PLoS One* 7 (8) e43765. doi:10.1371/journal.pone.0043765.
24. **A.E. Larsen** & S.M. Philpott. (2010). Twig-nesting ants: the hidden predators of the Coffee Berry Borer, *Hypothenemus hampei* in Chiapas, Mexico. *Biotropica* 42(3): 342–347.
25. H. Liere & **A.E. Larsen**. (2010). Cascading trait-mediation: disruption of a trait-mediated mutualism by parasite-induced behavioral modifications. *Oikos* 119: 1394–1400.

<sup>‡</sup> indicates equal contribution of authors, \* indicates student author.

#### INVITED WORKING GROUPS

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| 2017      | <i>The Bridge Collaborative</i> working group member, Sustainable Food subgroup.   |
| 2015-2017 | <i>Science for Nature &amp; People (SNAP)</i> working group titled, “Land-use Change and Conservation Policy in Brazil and the US for Biodiversity, Ecosystem Services and Economic Returns” |

- 2014-2016 *National Socio-Environmental Synthesis Center (SESYNC)*. Working group titled, “Evidence and Decision-Support Tools for Controlling Agricultural Pests with Conservation Interventions”.
- 2010-2012 *National Center for Ecological Analysis & Synthesis (NCEAS)*  
Working group entitled “Can eco-labeling drive conservation and sustainable harvesting of marine fisheries?”.

#### INVITED SEMINARS

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UC Berkeley (Environmental Science, Policy & Management), UC San Diego (School of Global Policy & Strategy), UC Santa Barbara (Environmental Studies), UC Santa Barbara (Geography), Virginia Tech (Crop & Soil Environmental Science), International Food Policy Research Institute (Ecosystem Services, \*weather cancellation), Dartmouth College (Environmental Studies), UBC (Land and Food Systems).

#### CONFERENCE PRESENTATIONS & POSTERS

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- A.E. Larsen.** Spatiotemporal overlap of pesticide use and species richness in California, USA. World Congress of the International Association for Landscape Ecology 1-4 July 2019.
- A.E. Larsen.** Drivers and consequences of pesticide use. SESYNC Boundary Spanning Symposium. 11-13 June 2018.
- A.E. Larsen & F. Noack.** Landscape Drivers of Agricultural Insecticide Use: A Data Driven Approach Across Scales. US Regional Association of the International Association for Landscape Ecology (US-IALE) 8-12 April, 2018.
- A.E. Larsen, M. Patton, E.A. Martin.** *Invited talk within Pesticide use determinants and human health.* Elucidating the striking seasonal variability in agricultural pesticide use and the implications for surrounding communities. Integrated Pest Management, 19-22 March, 2018.
- A.E. Larsen & O. Deschenes.** Weather and climate change drivers of agricultural pesticide use in the US. American Geophysical Union (AGU) Annual Meeting 12-16 December, 2016 (Poster).
- A.E. Larsen, O. Deschenes & S.D. Gaines.** *Invited talk within the Organized Symposium: “Agricultural Intensification and Insect Communities: Production Trade-Off Challenges With 9 Billion on the Horizon”.* Agricultural landscape simplification and insecticide use. Entomological Society of America Annual Meeting. 16-19 November, 2014.
- A.E. Larsen, S.D. Gaines & O. Deschenes.** Spatiotemporal variation in the relationship between landscape simplification and insecticide use. Ecological Society of America Annual Meeting. Sacramento, CA. 10-15 August 2014.
- A.E. Larsen.** Pesticides and low birth weight in the San Joaquin Valley, CA. 9<sup>th</sup> Summer Institute on Health & Migration. Oakland, CA. 16-19 June 2014.
- A.E. Larsen, O. Deschenes & S.D. Gaines.** A statistical analysis of pesticide exposure and low birth weight in the San Joaquin Valley, CA. UC Global Health Day. Davis, CA. 26 April 2014 (Poster).

- A.E. Larsen.** Not so simple: Landscape simplification does not consistently drive insecticide use. Ecological Society of America Annual Meeting. Minneapolis, MN. 4-9 August 2013.
- A.E. Larsen.** Revisiting “Does landscape simplification drive insecticide use?”: Insights from the USDA Census of Agriculture 1987-2007. Ecology, Evolution & Marine Biology Graduate Student Symposium, 12 February, 2013.
- A.E. Larsen & A.J. MacDonald.** Non-consumptive effects maintain coexistence of a weaker competitor on a shared resource. Ecological Society of America Annual Meeting, Austin, TX. 8-12 August, 2011.
- A.J. MacDonald & A.E. Larsen.** What drives dominant ant foraging in coffee? Ecological Society of America Annual Meeting, Austin, TX. 8-12 August, 2011 (Poster).
- A.E. Larsen & H. Liere.** Effects of phorid flies (*Pseudacteon* sp.) on the foraging and persistence of the ladybeetle (*Azya orbigera*) in an organic coffee system. Entomological Society of America Annual Meeting, Reno, NV 16-19 November, 2008.

## GRANTS & AWARDS

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### In review

NSF CAREER: CAREER: An ecoinformatics approach to understanding the distribution, revegetation, and ecological impacts of abandoned agricultural land in the US.

### Awarded

- 2019 \*Co-I. SSHRC (Canada): Rural-Urban Migration and the Environment. (Early career award, Total budget, C\$244,138).
- 2018 UC Women’s Initiative
- 2018 UCSB Academic Senate Research Grant
- 2015-2016 \*UC President’s Postdoctoral Fellowship, UC Berkeley
- 2015 \*CU Boulder Chancellor’s Postdoctoral Fellowship (*Declined*)
- 2014-2015 \*2013 EPA STAR (awarded 2014)  
Worster Family Mentorship Award, UCSB  
\*UC President’s Dissertation Year Fellowship, UCSB
- 2013 \*Graduate Division Fellowship Year, UCSB  
Broom Center for Demography Travel & Research Grant, UCSB
- 2012 Ecology, Evolution & Marine Biology Block Grant, UCSB
- 2010-2012 Luce Environmental Science to Solutions Fellowship, UCSB
- 2009-2012 \*NSF Graduate Research Fellowship Program
- \* Indicates grants >30,000\$

## MENTORING, TEACHING & OUTREACH

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- 2018 Science advisor, Conservation International: Yield Gaps & Biodiversity
- 2017- Instructor, *Conservation Planning Practicum*.
- 2017- Instructor, *Conservation Planning Theory & Practice*.

- 2017- Specialization advisor, Conservation Planning.  
2016 *Undergraduate Research Apprentice Program (URAP)*. Co-mentoring two UC Berkeley students on food waste & biodiversity project.  
Pre-2015 Teaching Assistant: *Ecology of Managed Systems; Ethology & Behavioral Ecology*. Mentoring: 3 UCSB Biology majors, 2 UCSB Economics Majors, Jack Kent Cooke Bridges Program-Mentored 4 transfer students through their first research experience.

#### RELATED EXPERIENCE

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- 2018 SESYNC Data to Motivate Synthesis Workshop, Annapolis, MD.  
2016 Google Earth Engine users group meeting, Mountain View, CA  
2015 K.J. Helmstedt, K.A. Jagannathan, **A.E. Larsen**, L.C. Moreno, M.J. Ohnesorge, L. Sakaguchi, A.B. Siegner, J.R. Stokes, M.D. Potts. (2015). Designing intelligent food, energy, and water systems (DIFEWS). A whitepaper funded by National Science Foundation Award CBET-1541880  
2014 *Software Carpentry Technical Computing Bootcamp*  
2013 *International Summer Academy on Spatial Ecotoxicology and Ecotoxicological Risk Assessment - Using an Open Community Approach*. Universität Koblenz-Landau, Landau, Germany.  
2011 Enhancing Linkages Between Mathematics and Ecology. Kellogg Biological Station, Michigan State University.  
2010 *COMPASS Science Communication & COMPASS Science Policy Workshop*  
2009 *Biomechanics, Ecological physiology and Genetics of Intertidal Communities*. Hopkins Marine Station, Stanford University.  
2008 *Field Course in Resource Management and Sustainable Development*. Institute of Central American Development Studies.  
*Honors Thesis* “Effect of intraspecific variation in caudal fin size on the steady swimming kinematics of goldfish (*Carassius auratus*)”.  
2007 *NSF Research Experience for Undergraduates: Ecosystem Ecology*. Toolik Lake Research Station, AK. Marine Biological Laboratory.

#### COMPUTATIONAL SKILLS

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Near fluent in STATA, highly proficient in ArcGIS, Python, QGIS, working knowledge of R, MaxEnt, Marxan.