

STACEY LYNN HALPERN
Curriculum Vita

CONTACT INFORMATION

Biology Department
Pacific University
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EDUCATION

University of Minnesota, Ph.D. in Ecology, Evolution, and Behavior (September 2003)

Evaluating the Potential for Adaptation to Climate Change in Lupinus perennis
Advisors: Ruth G. Shaw, Patrice A. Morrow
Committee members: David Andow, Peter Tiffin

Organization for Tropical Studies, Tropical Ecology Course (Winter 1998)

Carleton College, B.A. in Biology, *summa cum laude* (1993)

FELLOWSHIPS, HONORS, AND AWARDS

Junior Faculty Development Award, Pacific University (May 2009)
L'Oreal Women in Science Postdoctoral Fellowship (April 2005)
National Science Foundation Graduate Research Fellowship (1996)
Distinction in major and on senior comprehensive exercise, Carleton College (1993)
Sigma Xi (1993)
Phi Beta Kappa (1992)
National Merit Scholar (1989)

SUMMARY OF ACADEMIC EMPLOYMENT

2016 - Professor, Biology Department, Pacific University
2012 - 15 Chair, Biology Department, Pacific University
2010 - Associate Professor, Biology Department, Pacific University
2005-2010 Assistant Professor, Biology Department, Pacific University
2008- Courtesy Faculty, Department of Biological Science, Florida State University
2003-05 Postdoctoral Research Associate, Department of Biological Science, Florida State University (Mentor Nora Underwood)
2001-02 Visiting Instructor of Biology, Carleton College
2000 Teaching Assistant, Carleton College, Tropical Biology Seminar (La Selva, Costa Rica)
1999-2001 NSF Graduate Research Fellow
1997-99 Teaching Assistant, University of Minnesota
1996-97 NSF Graduate Research Fellow

RESEARCH**Research Interests**

I am an evolutionary ecologist focused on plant-insect interactions, especially herbivory. Over the past decade, my research program has focused on how herbivores affect plant populations and shape plant traits (ranging from nectar in flowers to chemical defenses). Although my work addresses very fundamental questions (i.e., what determines how big a plant population is?), it has applications to important conservation questions such as controlling invasive species.

Peer-reviewed publications (undergraduate co-authors underlined)

12. Ryan, W.H., E. S. Gornish, L. Christenson, S. L. Halpern, S. Henderson, G. LeBuhn, and T.E. Miller. 2017. A toolbox for initiating and managing long-term data collections with students and citizen scientists. *American Biology Teacher* 79(1): 28-34.
11. Kim, T.N., B.J. Spiesman, A.L. Buchanan, A.S. Hakes, **S.L. Halpern**, B.D. Inouye, A. Kilanowski, N. Kortessis, D.W. McNutt, A.C. Merwin, and N. Underwood. 2015. Selective manipulation of a non-dominant plant and its herbivores influences an old-field plant community. *Plant Ecology* 216:1029–1045 DOI: 10.1007/s11258-015-0487-3
10. **Halpern, S. L.**, D. M. Bednar[‡], A. Chisholm[‡], and N. Underwood. 2014. Plant-mediated effects of host plant density on a specialist herbivore of *Solanum carolinense*. *Ecological Entomology*: 39: 217-225 DOI: 10.1111/een.12088
9. McNutt, D.W., **S.L. Halpern**, K. Barrows[‡], and N. Underwood. 2012. Intraspecific competition increases the evolutionary potential of tolerance to insect herbivory in the perennial plant *Solanum carolinense*. *Oecologia*. 17(4): 1033-1044. DOI 10.1007/s00442-012-2377-x
8. Underwood, N. and **S. L. Halpern**. 2012. Insect herbivores, density dependence, and the performance of the perennial herb *Solanum carolinense*. *Ecology* 93(5): 1026-1035.
7. Underwood, N., **S. L. Halpern**, and Klein, C.[‡] 2011. Effect of host plant genotype and neighboring plants on strawberry aphid movement in the greenhouse and field. *The American Midland Naturalist* 165(1): 38-49.
6. **Halpern, S. L.**, L. S. Adler, and M. Wink. 2010. Leaf herbivory and drought stress affect floral attractive and defensive traits in *Nicotiana quadrivalvis*. *Oecologia* 163: 961-971. doi:10.1007/s00442-010-1651-z
5. Burns, J. H., **S. L. Halpern**, and A. A. Winn. 2007. Do low-quality environments limit the advantages of opportunism in invasive species? *Biological Invasions* 9: 213-225.
4. **Halpern, S. L.*** and N. Underwood*. 2006. Approaches for testing assumptions about the role of herbivores in plant population dynamics. *Journal of Applied Ecology* 43: 922-929.
3. **Halpern, S. L.** 2005. Sources and consequences of variation in seed size in *Lupinus perennis* (Fabaceae): Adaptive and non-adaptive hypotheses. *American Journal of Botany* 92(2): 205-213.
2. McKone, M.M. and **S. L. Halpern**. 2003. The evolution of androgenesis. *The American Naturalist* 161(4): 641-656.
1. Paciorek, C.*, B. Moyer*, R. Levin*, and **S. L. Halpern***. 1995. Pollen consumption by the hummingbird flower mite *Proctolaelaps kirmsei* and possible fitness effects on *Hamelia patens*. *Biotropica* 27(2): 258-262.

*co-authors contributed equally

[‡]author was an undergraduate when research was conducted

Grants—Research

- Pacific Research Institute in Science and Mathematics (PRISM) Summer Research Grant, supplement to NSF (2016, \$4500)
- National Science Foundation (Invited Proposal August 2014, preproposal January 2013, \$156,999 to SLH and \$569,999 to collaborators, April 2015 – March 2020)
“Collaborative Research: Measuring And Modeling The Ecological Consequences Of Associational Effects”
- Murdock PRISM Summer Research Grant (2014, \$11,000), “Secrecy, eavesdropping, and defense signaling in a clonal plant network”
- REU Supplement to NSF (2010, \$7500)
- REU Supplement to NSF (2009, \$12,500)
- REU Supplement to NSF (2008, \$7000)
- National Science Foundation (2007-2011, \$78,075 to SLH and \$467,728 to collaborators at Florida State University)
“Collaborative Research: A role for insect herbivores in plant population growth and regulation: density manipulations and demographic models.”
- United States Department of Agriculture (2006-2008, \$124,987)
“Density Dependent Effects of Herbivory on *Solanum Carolinense*: Implications for Plant Population Regulation and Biocontrol”
- L’Oreal Women in Science Postdoctoral Fellowship, Florida State University (2005-2006, \$20,000)
“Do insect herbivores contribute to population regulation in *Solanum carolinense*?”

Grants—Institutional

- Murdock Charitable Trust Research Start-up Grant (2014-16, \$30,000 for new hire (C. Templeton))
- Murdock Charitable Trust Research Start-up Grant (2014-16, \$30,000 for new hire (J. Odden))
- Murdock Charitable Trust Research Start-up Grant (2013-15, \$30,000 for new hire (K Clark))

Invited Presentations

- Ecological Society of America Symposium (A Toolbox for Initiating and Managing Long-Term Data Collections), “Training and data management strategies from a multi-year experimental plant demography project involving teams of undergraduate researchers,” ESA (Sacramento, 2014)
- Faculty Forum, The enemy of my enemy is my friend? Herbivore effects on a weedy invasive plant,” Pacific University (2014)
- Department of Biology, “Herbivore effects on population dynamics of the perennial herb *Solanum carolinense*” Portland State University (2011)
- Natural Sciences, “Evaluating the potential for adaptation to climate change in *Lupinus perennis*,” Western Oregon University (2008)
- Biology Department, “Evaluating the potential for adaptation to climate change in *Lupinus perennis*,” Muhlenberg College. (2005)
- Biology Department, “Evaluating the potential for adaptation to climate change in *Lupinus perennis*,” College of St. Catherine. (2005)
- Biology Department, “Evaluating the potential for adaptation to climate change in *Lupinus perennis*,” Pacific University. (2005)
- Biology Department, “Evaluating the potential for adaptation to climate change in *Lupinus perennis*,” Denison University. (2004)
- Department of Biological Science, “Evaluating the potential for adaptation to climate change in *Lupinus perennis*,” Florida State University. (2004)

Presentations at Meetings (* indicates oral presentation, ‡ indicates undergraduate co-author)

- Halpern, S. L.** and N. Underwood. 2013. Developing ecologists: a professional development seminar for summer undergraduate researchers. Ecological Society of America (ESA), Minneapolis, MN
- ***Halpern, S. L.**, N. Underwood, and B. D. Inouye. 2012. Insect herbivore effects on population dynamics of the clonal weed *Solanum Carolinense*. ESA, Portland, OR
- Halpern, S. L.**, D. McNutt, K. Barrows‡, M. Martinez‡, and N. Underwood. 2009. Effects of plant density on tolerance to herbivore damage in *Solanum carolinense*. ESA, Albuquerque, NM
- Halpern, S. L.** and N. Underwood. 2008. Herbivore and density effects on plant performance in *Solanum carolinense*: Implications for population dynamics. ESA, Milwaukee, WI.
- Halpern, S. L.**, N. Underwood, and D. Bednar‡. 2007. Plant density affects interactions between *Solanum carolinense* and its insect herbivores: implications for plant population regulation. ESA, San Jose, CA.
- Halpern, S. L.** & N. Underwood. 2007. Developing Density-Dependent Models of Herbivore Effects on Population Dynamics in Horsenettle (*Solanum carolinense*). Weed Science Society of America, San Antonio, TX.
- N. Underwood and **Halpern, S. L.** 2005. Aphid movement and acclimation to host plant quality: Implications for the effects of host plant variation on herbivore population dynamics. ESA, Montreal, Quebec, Canada, August 2005.
- ***Halpern, S. L.** 2004. Selection on morphology and phenology across water environments: Possible responses to climate change in *Lupinus perennis*. ESA, Portland, OR.
- ***Halpern, S. L.** 2002. Evaluating the potential for adaptive evolution in *Lupinus perennis*: Genetic variation and drought response in juvenile traits. ESA, Tucson, AZ.
- Halpern, S. L.** 2001. Drought effects on *Lupinus perennis*: Implications for prairie plants in future climates. ESA, Madison, WI.
- Halpern, S. L.** and K. Oberhauser. 1999. Monarch Monitoring: A Collaborative Teacher/Student/Scientist Research Project. ESA, Spokane, WA, 1999.

Coauthored presentations at meetings

- Hakes, A. S, N. Underwood, **S. L. Halpern**, and B. Inouye. 2011. Effects of insect damage and plant density on the spatial patterns of plant populations. Ecological Society of America (ESA), Austin, TX.
- Huot, O.B.‡, T. Kim, **S.L. Halpern**, and N. Underwood. 2010. Induced response of *Solanum carolinense* to dispersed and aggregated leaf damage. ESA, Pittsburgh, PA.
- Staver, K.‡, D.W. McNutt, **S.L. Halpern**, and N. Underwood. 2010. Effect of herbivore density on *Leptinotarsa juncta* oviposition preference and larval performance on its host plant, *Solanum carolinense*. ESA, Pittsburgh, PA.
- *Underwood, N., **S. L. Halpern**, and B. Inouye. 2009. Herbivory influences population dynamics of the perennial herb *Solanum carolinense*. Ecological Society of America (ESA), Albuquerque, NM
- *Burns, J. H., A. A. Winn, **S. L. Halpern**, and T. E. Miller. 2006. The effect of environment on invasibility in the Commelinaceae. ESA, Memphis, TN.

TEACHING

Courses at Pacific University

- BIOL 200 Intro Biol: Flow of Energy (Lower division, with lab, Fall 2015, Spring 2016, Spring 2017)
- BIOL 202 General Biology I (Lower division, with lab, Spring 2006 – 2015)
- BIOL 305/404 Ecology (Upper division, with lab, Fall 2005, 2006, 2008, 2010, 2012, 2014, 2015, 2016)
- BIOL 426 Plant-Animal Interactions (Upper Division, with lab, Fall 2016)
- BIOL 444 Evolution (Upper division, Spring 2007, Fall 2007, Fall 2008, Fall 2009, Fall 2010)

BIOL 360: Economic and Cultural Botany (Upper division, with lab, Fall 2013)
BIOL 304 Research Methods (Upper division, workshop course, Spring 2008, Fall 2010)
BIOL 365 Junior Seminar (Upper division seminar course, Fall 2009, Spring 2010, Fall 2010)
BIOL 495 Senior Capstone Seminar (Upper division, Spring & Fall 2007, Spring 2008, Spring 2009, Spring 2010, and annually since 2010 without teaching credit)
BIOL 316 Plant Biology (Upper division, with lab, Spring 2005, Fall 2007, Fall 2009)
BIOL 155 Plants and Civilization (Non-majors course, Fall 2006)
BIOL 155 Global Change Biology (Non-majors course, Fall 2005)

Undergraduate Research Advisees, REUs, and Research Assistants (*indicates woman, †indicates student of color, ¹indicates first generation college student)

‡Jared Kawatani (2016, graduated spring 2017)
‡Esteban Olea (2016)
*Stacy Friscia (2014, currently a senior at PU)
‡Rodney Racaza (2010, graduated from pharmacy school)
*Rachel Atkinson (2010, lab technician for D. Schemske)
*Anastasia Rahlin (2010, field technician (birds))
*‡Emily Sipe (2009, taught English in Korea, MA in ESL, Assistant Director of International Studies at Concordia Univ.)
*¹Katie Staver (2009, environmental consultant, MS in Environmental Studies at Ohio University, SEEDS participant who presented at the Ecological Society of America meeting in 2010)
*¹Odom Huot (2009, graduate student in Ecology at Texas A&M, SEEDS participant who presented at the Ecological Society of America meeting in 2010)
*‡Kahaili Barrows (2008, currently in Hawaii and planning to apply to PA school)
*Audry Hite (2008)
*Jessica Swihart (2008, enrolled in MS program at UWashington in fisheries)
Joel Weekley (2007, graduated from Naturpathic school in 2015)
*Amanda Chisholm (2007, currently a naturalist and environmental educator)
*‡Katty Paulino (2007 & 2009, currently working for the Catholic church)
David Bednar (2006, PhD in entomology at North Carolina State University, currently working for USDA)
*‡Maria Sardi (2005-2006, currently a graduate student at the University of Minnesota)
*¹Lauren Brothers (2005, environmental lawyer)
Brian Bielfelt (2004-05, MS student at Texas A&M-Kingsville, currently a biologist with Southern California Edicson)
Bill Severud (2001, currently a graduate student at University of Minnesota in wildlife biology)
*Zdanna King (2001, MA Physical Anthropology at Tulane, currently Assistant Manager of Research and Evaluation at Science Museum of Minnesota)
*Valerie Kurth (1999, MS Forestry from University of Montana, PhD from Northern Arizona University, currently Resource Conservationist at Flathead Conservation District)

SERVICE

Service to my academic institutions

Biology Mentoring Teams, organizer & participant (2015 -)
Biology Department Chair (2012-2015)
Civic Engagement Task Force, Pacific University (2009)
Steering Committee, Pacific University (2008 – 2010)
Standards & Advising Committee, Pacific University (2007- 2010, chair beginning fall 2008)

Human Physiology Search Committee, Pacific University (2007-08)
Chemistry Introductory Specialist Search Committee, Pacific University (2008)
Gender and Sexuality Studies Committee, Pacific University, (2007 - 2009)
Focus the Nation Planning Committee, Pacific University (2006-07)
Darwin Day Celebration Planner (2007 – 2011)
Biology Seminar Series Coordinator (2006 – 2011)
Greenhouse supervisor, Pacific University (2006- present)
Library Liaison, Biology Department, Pacific University (2007 - present)
Environmental Science Steering Committee, Pacific University (2006-07)
Center for Women and Gender Equity Advisory Board, Pacific University (2006-07)
Student Judicial Review Board, Pacific University (2006-2009)
Environmental Science Committee, *ad hoc* member, Pacific University (2006)

Outreach

Invited speaker, Portland Garden Club, Plants and climate change, January 2014
Science Fair judge, Oregon Episcopal School, March 2011
Invited speaker, Our Cosmic History lecture series (teacher enrichment program sponsored by Portland State University and supported by the Oregon Department of Education). February 2009.
Weekend workshop mentor, ScienceWorks (NSF-supported program for hands-on science education in elementary schools), University of Minnesota and Minneapolis Public Schools (1999-2000).

Professional Organizations and Service

- Mentor, Future Faculty Fellows, University of Washington (2013)
- Judge, Buell Award for Excellence in Ecology, given for the outstanding oral paper presented by a graduate student at the Ecological Society of America Annual Meeting (2010)
- NSF panelist, DEB Population and Ecology Processes, April 2009
- Reviewed manuscripts for Teaching Issues in Ecology and the Environment (2008), Annals of the Entomological Society of America (2009), Ecology (2010), Oecologia (2010, 2012), Biological Conservation (2011, 2011), International Journal of Plant Science (2012), Evolutionary Ecology (2013), Biological Invasions (2013), Arthropod-Plant Interactions (2014), Conservation Biology, Journal of the Torrey Botanical Society, Evolutionary Ecology Research, Plant Ecology, American Journal of Botany (?)
- Proposal review, National Science Foundation (2008-2010), L’Oreal Postdoctoral Fellowship (2013-15), Murdock Life Sciences Research Grant (2012)
- Membership: Ecological Society of America, Botanical Society of America, Aldo Leopold Foundation.