

# ALISA A. HOVE

## Curriculum Vitae

Biology Department, Warren Wilson College, CPO # 6217

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### Education

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Ph.D. Evolutionary Biology, University of California, Santa Barbara, June 2012

Department of Ecology, Evolution, and Marine Biology (EEMB)

M.A. Biology, Humboldt State University, Department of Biological Sciences, May 2001

B.S. Biological Sciences, concentration in Evolution and Ecology

University of California, Davis, December 1996

### Professional Appointments

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Sept 2017 – present	Assistant Editor. Madroño, quarterly journal of the California Botanical Society
2017-present	Chair. Biology Department. Warren Wilson College, Asheville, NC.
2012-present	Professor. Biology Department. Warren Wilson College, Asheville, NC.
2016-present	Adjunct Assistant Professor. Department of Agricultural & Environmental Sciences. Clemson University. Clemson, SC.
2007-2012	Graduate Teaching Assistant. EEMB Department. University of California, Santa Barbara.
2008-2011	Graduate Research Assistant. EEMB Department. University of California, Santa Barbara.
2006-2008	Ralph M. Parsons Graduate Fellow. University of California, Santa Barbara

### Peer-reviewed publications

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1. **Hove, A.A.**, C.T. Ivey and S.J. Mazer. 2016. Seed set variation in wild *Clarkia* populations: Teasing apart the effects of seasonal resource depletion, pollen quality, and pollen quantity. *Ecology and Evolution* 6: 6524–6536.
2. Ivey, C.T., L.S. Dudley, **A.A. Hove**, S.K. Emms, and S.J. Mazer. 2016. Outcrossing and photosynthetic rates vary independently within two *Clarkia* species: implications for the joint evolution of drought escape physiology and mating system. *Annals of Botany* 118 (5): 897-905.
3. Mazer, S.J., A. Moghaddasi, A. Bello, and **A.A. Hove**. 2016. Winning in style: longer styles receive more pollen but do not intensify gametophytic competition in wild *Clarkia* populations. *American Journal of Botany*. 103(3):1-15.
4. L.S. Dudley, **A.A. Hove**, S.K. Emms, A. Verhoeven, and S.J. Mazer. 2015. Seasonal changes in physiological performance in wild *Clarkia* populations. Implications for the evolution of a compressed life cycle and self-fertilization in *C. xantiana*. *American Journal of Botany* 102(6):962 – 972.
5. **Hove, A.A.**, and S.J. Mazer. 2013. Pollen performance in *Clarkia* taxa with contrasting mating systems: implications for male gametophytic evolution in selfers and outcrossers. *Plants*. 2(2): 248-278.
6. Dudley, L. S., **A. A. Hove**, and S. J. Mazer. 2012. Physiological performance and mating system in *Clarkia*: does phenotypic selection predict divergence between sister species? *American Journal of Botany* 99(3):488-507.
7. Mazer, S.J., L.S. Dudley, **A.A. Hove**, S.K. Emms, and A. Verhoeven. 2010. Physiological performance in *Clarkia* sister taxa with contrasting mating systems: do early flowering autogamous taxa avoid water stress relative to their pollinator-dependent counterparts? *International Journal of Plant Sciences*. 171(9):1029-1047.

- Mazer, S.J., **A.A. Hove**, B.S. Miller, and M. Barbet-Massein. 2009. The joint evolution of mating system and the male gametophyte: predictions regarding male gametophytic evolution in selfers versus outcrossers. *Perspectives in Plant Ecology, Evolution, and Systematics*. 12(1):31-41.
- Hove, A.A.** 2007. Pollination biology of *Silene lemmonii* (Caryophyllaceae), a montane perennial herb. *Madroño*. 54(4):293-305.

### Book Chapters

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- Haggerty, B.P., **A.A. Hove**, S.J. Mazer, and L.A. Barnett. 2013. Flight of the Pollinators: Plant Phenology from a Pollinator's Perspective *in*: Citizen science: 15 lessons that bring biology to life. National Science Teachers Association (NSTA) Press.
- de Beurs, K.M., R.B. Cook, S.J. Mazer, B.P. Haggerty, **A.A. Hove**, G.M. Henebry, E. Beaubien, L.A. Barnett, C.L. Thomas, and B.R. Pohlrad. 2013. Phenology in higher education: ground-based and spatial analysis tools *in*: Phenology: An Integrative Environmental Science. Second Edition. M. Schwartz, editor. Springer.

### Manuscripts in Preparation or in Review

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- Emms, S.K., **A.A. Hove**, L.S. Dudley, and S.J. Mazer. Responses to artificial selection on flowering time and herkogamy in an annual plant: implications for trait evolution in a seasonally deteriorating environment. *Annals of Botany (In review)*.
- Hove, A.A.**, L.S. Dudley, and S.J. Mazer. Phenotypic selection on ecophysiological and life history traits in *Clarkia xantiana* subspecies with contrasting mating systems. *International Journal of Plant Sciences (In prep)*.
- Hove, A.A.** and S.J. Mazer. Physiological and parental effects on pollen performance in *Clarkia* taxa with contrasting mating systems. *(In prep)*.
- Kessler, M. and **A.A. Hove**. Effects of culturing indigenous microorganisms on yield and soil quality in vegetable crop production. *(In prep)*
- Pischedda A. and **Hove A.A.** Sexual selection on male gametes: comparisons between plant and animal systems. *(In prep)*.

### Extra-mural research grants

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2015-2018	<i>A CEREUS (Consortium Exchanging Research Experiences for Undergraduate Students) Approach to Assessing Ecological Responses to Global Change in the Southern Appalachians</i> . National Science Foundation. Division of Undergraduate Education. Collaboration with UNC Asheville, East Tennessee State University, and Appalachian State University (NSF-DUE 1525063). <b>\$129,000</b>
2015	<i>Cultivating Science: Work Learning through Greenhouse Curation and Management</i> . Work Colleges Consortium Grant. <b>\$3,000</b>

### Recent funding

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2015	Warren Wilson College Pugh Grant	\$500
2012	Li-Cor Biosciences LEEF Instrumentation Grant	\$52,140
2011	EEMB Departmental Block Grant	\$10,800
2011	Philip and Aida Siff Educational Foundation Graduate Fellowship	\$5,000
2011	UCSB Affiliates Graduate Dissertation Fellowship	\$3,000
2010	EEMB Departmental Partial Fee Fellowship	\$720
2009	EEMB Departmental Partial Fee Fellowship	\$650
2008	EEMB Departmental Partial Fee Fellowship	\$650

2008	EEMB Graduate Student Travel Grant	\$500
2008	Luce Environmental Science to Solutions Fellowship	\$6,000
2007	California Native Plant Society Education Grant	\$600
2006-2009	Ralph M. Parsons Fellowship	\$50,000

### Recent awards

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2017	Warren Wilson College Diversity Fellowship
2016	Warren Wilson College Dean's Commendation in Research
2016	Warren Wilson College Dean's Commendation in Teaching
2016	Andy Summers Award for Faculty Leadership in Service
2013	Warren Wilson College Service Learning Fellowship
2012	UCSB Academic Senate Outstanding Teaching Assistant Award
2011	Worster Award for Undergraduate Research Mentorship

### Teaching

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**Adjunct Assistant Professor.** Department of Agricultural and Environmental Sciences. Clemson University. Clemson, SC. 2016 - present

- Member of PhD dissertation committee
- Collaborate on project investigating speciation in *Micranthes petiolaris*

**Professor.** Biology Department. Warren Wilson College. Asheville, NC 2012 – present

- Current and past teaching responsibilities include: Biology of Sex (BIO 190), Evolutionary Biology (BIO 402), General Biology (BIO 116), Genetics (BIO 322), Plant Ecology (BIO 340), Plant Physiology (BIO 342), Plant Taxonomy (BIO 440), and Research Design (SCI 390)
- Serve as a primary advisor or research committee member for students in WWC's three-semester Natural Science Undergraduate Research Sequence (approximately 18-20 students per year)
- Serve as academic advisor to undergraduate students (approximately 15-20 students per year)
- Conduct research that offers educational opportunities to undergraduates interested in plant biology, evolutionary biology, and citizen science

**Graduate Student Teaching Assistant.** UC Santa Barbara. 2007-2012  
Plant Ecology (EEMB 140), World Agriculture (ES 149/GEO 161/ANT 149), Plant Biology & Biodiversity (EEMB 127), Introductory Biology Laboratories (EEMB 2L, EEMB 3L)

**Graduate Student Lecturer (Instructor on Record).** UC Santa Barbara. Summer 2011  
Freshman Seminar: Introduction to Research in the Sciences (EEMB 4FS)

**Graduate Student Lecturer (Instructor on Record).** UC Santa Barbara. Winter 2011  
Plant Biology & Biodiversity (EEMB 127)

**Head Science Educator.** USA National Phenology Network and UC Santa Barbara. 2010 - 2011  
Nature Sleuths Science Education Program at the Westside Boys and Girls Club. Santa Barbara, CA.

<b>Head Teaching Assistant.</b> UC Santa Barbara. Introductory Biology (EEMB 3L)	Fall 2008, Fall 2009
<b>Reader.</b> UC Santa Barbara. Plant Biology & Biodiversity (EEMB 127)	Summer 2008
<b>Adjunct Faculty.</b> Humboldt State University. Arcata, CA General Botany	Summer 2007  2004-2006
<b>Adjunct Faculty.</b> Humboldt State University. Arcata, CA General Botany	2001-2002
<b>Adjunct Faculty.</b> Humboldt State University. Arcata, CA General Botany, Plant Ecology	Summer 2002
<b>Science Instructor.</b> Upward Bound Program, Humboldt State University Botanical Diversity of Coastal Northern California	
<b>Associate Faculty.</b> College of the Redwoods, Eureka, CA. Botany for Non-majors	Fall 2001
<b>Graduate Teaching Associate.</b> Humboldt State University. Arcata, CA Introductory Botany, Plant Taxonomy	1998-2001

### Professional Experience

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<b>Scientific Outreach Coordinator/Curriculum Development Specialist.</b> Phenology Literacy: Understanding through Science and Stewardship (PLUSS) program. USA National Phenology Network and UC Santa Barbara.	2010-2012
<b>Coordinator,</b> EEMB Departmental Seminar Series. UC Santa Barbara.	2010 - 2012
<b>Graduate Student Researcher.</b> Project studying the joint evolution of mating system, life history, and ecophysiological traits in the wildflower genus <i>Clarkia</i> . PI's: Drs. Susan Mazer and Leah Dudley, UC Santa Barbara.	2008- 2011
<b>Botanical Consultant.</b> Winzler & Kelly Consulting Engineers. Eureka, CA.	2001
<b>Botanical Consultant.</b> Galea Wildlife Consultants. Crescent City, CA.	2000
<b>Graduate Research Assistant.</b> Project studying the diet of salmonid fishes of the Smith River Estuary, CA. Humboldt State University.	2000
<b>Fisheries and Wildlife Scientific Aide.</b> Endangered Salmonid Coordination Unit. Inland Fisheries Division, California Dept. of Fish and Game.	1996-1998
<b>Post Graduate Researcher.</b> Project studying ant-plant interactions in, <i>Acacia drepanolobium</i> . PI: Dr. Maureen Stanton, UC Davis.	1996

**Post Graduate Researcher.** Project studying the behavioral genetics of the paper wasp, *Polybia occidentalis*. PI: Sean O'Donnell, UC Davis. 1996

**Research Assistant.** Project studying the evolution of stress tolerance in *Sinapis arvensis*. PI's: Maureen Stanton & Barbara Roy, UC Davis. 1995

### Invited Presentations

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1. Biology Department Weekly Seminar Series. East Carolina University. Greenville, NC. "The joint evolution of mating system and pollen performance: A case study in *Clarkia*" February 2017.
2. Biology Department Weekly Seminar Series. Appalachian State University. Boone, NC. "The joint evolution of mating system and pollen performance in *Clarkia*" November 2016.
3. Plant Research Center Seminar. University of Tennessee, Knoxville, TN. "The joint evolution of mating system and pollen performance in *Clarkia*" November 2015.
4. Biology Department Seminar. Western Carolina University, Cullowhee, NC. "The joint evolution of mating system and pollen performance in *Clarkia*" March 2014.
5. Department of Biology Weekly Seminar Series. University of North Carolina, Asheville. "The joint evolution of mating system and pollen performance in *Clarkia*" March 2013.

### Campus or Departmental Presentations

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1. Faculty Seminar Series. Warren Wilson College. "The joint evolution of mating system and pollen performance in *Clarkia*" April 2016.
2. Natural Science Division Weekly Seminar. Warren Wilson College, Asheville, NC. "The joint evolution of mating system and pollen performance in *Clarkia*" Dec 2013.
3. Writing Across the Curriculum Faculty Development Short Course. Warren Wilson College, Asheville, NC "Disciplinary writing: using mini-reviews to foster active learning through writing and research" Aug 2013.

### Conference Presentations

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1. Association of College and University Biology Educators (ACUBE) Meeting. Columbia, SC. "Using classroom-based undergraduate research to enhance student learning while examining global change". Oct 2017.
2. Botanical Society of America (BSA) National Meeting. Savannah, GA: "Seed set variation in wild *Clarkia* populations: Teasing apart the effects of seasonal resource depletion, pollen quality, and pollen quantity." Poster. July 2016.
3. Envisioning the Future of Undergraduate STEM Education (ENFUSE): Research and Practice Symposium. Hosted by the American Association for the Advancement of Science (AAAS) and the National Science Foundation (NSF). Washington DC. "A CERES Approach to Assessing Ecological Responses to Global Change in the Southern Appalachians." J.R. Ward, **A.A. Hove**, Z.E. Murrell, A.C. Hiatt. Poster. April 2016.
4. Ecology, Evolution, and Marine Biology (EEMB) Department Graduate Student Research Symposium. UC Santa Barbara: "Differences in pollen performance between *Clarkia* taxa with contrasting mating systems: implications for male gametophytic evolution in selfers versus outcrossers." Feb 2011.
5. California Botanical Society Meeting. San Jose State University. San Jose, CA: "Seasonal variation in pollen limitation in two pollinator-dependent *Clarkia* Taxa: implications for the evolution of selfing in early-flowering taxa" Feb 2010.
6. EEMB Department Graduate Student Research Symposium. UC Santa Barbara: "Seasonal variation in pollen limitation in *Clarkia*: does timing matter?" Feb 2009.

7. EEMB Department Graduate Student Research Symposium. UC Santa Barbara: "The pollination biology of *Silene lemmonii*, a montane perennial herb." Feb 2007.

#### Contributed Talks at National or International Conferences

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1. Aug 2017. Using classroom-based undergraduate research to enhance student learning while examining global change. A.E. Boyd, J.R. Ward, **A.A. Hove**, D. Clarke, A.C. Hiatt, J. Horton, Z.E. Murrell. Ecological Society of America Meeting. Portland, OR.
2. Mar 2017. Using classroom-based undergraduate research to enhance student learning while examining global change. J.R. Ward, A.E. Boyd, D. Clarke, A.C. Hiatt, J. Horton, **A.A. Hove**, Z.E. Murrell. Association of Southeastern Biologists Meeting. Montgomery, AL.
3. Aug 2014. A test for an association between outcrossing rate and photosynthetic rate within populations of two mixed-mating *Clarkia*. Ivey, C.T., L.S. Dudley, **A.A. Hove**, S.K. Emms, and S.J. Mazer. Ecological Society of America Meeting. Sacramento, CA.
4. Aug 2014. Winning in style: do longer styles intensify gametophytic selection in wild *Clarkia* populations? Mazer, S.J. and **A.A. Hove**. Botanical Society of America Meeting. Boise, ID.
5. July 2013. Instantaneous and long-term water use efficiencies in two pairs of *Clarkia* taxa with contrasting mating systems. L. A. Dudley, S. K. Emms, **A. A. Hove**, A. Verhoeven, and S. J. Mazer. Botanical Society of America. New Orleans, LA.
6. Jun 2013. Are photosynthetic rates and outcrossing rates associated within populations? A test using two mixed-mating *Clarkia* taxa. Ivey, C.T., L.S. Dudley, **A.A. Hove**, S.K. Emms, and S.J. Mazer. Society for the Study of Evolution Meeting. Snowbird, UT.
7. June 2011. From elegant to slender, does phenotypic selection on leaf physiological traits predict the divergence between *Clarkia sister species*, *C. unguiculata* and *C. exilis*? Leah S. Dudley, Susan J. Mazer, **Alisa A. Hove**. Society for the Study of Evolution, St. Louis, MO.
8. Jun 2010. Does reproductive assurance explain the absence of pollen limitation in early flowering *Clarkia unguiculata* and *Clarkia xantiana* ssp. *xantiana*? Ivey, C.T., **A.A. Hove**, and S.J. Mazer. Society for the Study of Evolution Meeting. Portland, OR, Poster Presentation.

#### Professional Affiliations

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- Botanical Society of America

**Foreign Language Proficiency:** French, Spanish

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#### Journal Manuscript Review Service

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- AoB Plants
- American Journal of Botany
- Annals of Botany
- Ecology and Evolution
- International Journal of Plant Sciences

#### Institutional Service

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Warren Wilson College

- Social Work Advisory Committee (2017-present)
- Language Acquisition Innovation Committee (2017-present)
- Search Committee for Biology/ENS Animal Science Faculty (2017-present)
- Host and co-organizer. STEM Major Declaration Celebration (2017)
- Natural Sciences Undergraduate Capstone Planning Committee (2013-present)

- Search Committee for Biology/ENS Animal Science Faculty (2017-present)
- Search Committee for Biology/ENS Department Manager (2017)
- Host and Organizer, LAURELS (Learning About Undergraduate Research from Last Summer) Poster Session (2016)
- Host and Organizer, LAURELS (Learning About Undergraduate Research from Last Summer) Poster Session (2015)
- Search Committee for Development Director (2015)
- Search Committee for Director of Major Gifts and Planned Giving (2015)
- Writing Across the Curriculum (WAC) Committee (2015 – 2016 )
- Search Committee for Sustainable Agriculture Faculty (2015-2016)
- Foreign Language General Education Committee (2014-2015)
- Race and Ethnicity Committee (2014-2016)
- Chair, Biology Sabbatical Replacement Faculty Search Committee (Spring 2014)
- Service Program Advisory Board (2013-2015)
- General Education Writing Across the Curriculum Aim 2 Committee (2012-2013)

#### University of California, Santa Barbara

- Graduate Student Advisory Committee for the EEMB Department (2007-2010)
- Co-chair. EEMB Graduate Student Research Symposium Planning Committee (2007-2008)
- Graduate Student Representative. Campus Childcare Advisory Committee (2006-2008)

#### **Community Engagement and Service**

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Board of Directors. Franklin School of Innovation. Asheville, NC	Jan 2016-present
School Improvement Team (SIT) Member. Franklin School of Innovation. Asheville, NC.	Dec 2015-present
Mentor. Girls Rocking Invention, Technology, and Science (GRITS). ArtSpace Charter School. Swannanoa, NC	2015-2016
Online Science Mentor. ScienceLine, a scientific outreach project aimed at K-12 students in the Santa Barbara area. Materials Research Lab, UC Santa Barbara.	2011 - present
Learning Partner. Alternative Fall Break trip with 8 students to the Camphill Village community for individuals with different abilities, Kimberton, PA. Warren Wilson College.	Oct 2014
Learning Partner. <i>Seeds of Altruism</i> alternative Fall Break trip with 10 students to Koinonia Farm, Americus, GA. Warren Wilson College.	Oct 2013
Research Mentor. California Alliance for Minority Participation (CAMP). Materials Research Lab. UC Santa Barbara.	2010-2011
Research Mentor. Internships in Nanosystems Science, Engineering and Technology (INSET). California NanoSystems Institute (CNSI). UC Santa Barbara.	2010

Research Mentor. Research Experience for Teachers Program (RET). Materials Research Lab. UC Santa Barbara.

2010

High School Student Research Mentor. Apprentice Researchers (AR) Program. California NanoSystems Institute (CNSI). UC Santa Barbara.

2010

Mentor. Santa Barbara County Science Fair. Santa Barbara, CA.

2007