

# Ava Hoffman

## ECOLOGIST

Department of Biology · 1878 Campus Delivery · Fort Collins, CO 80523  
 ✉ avamariehoffman@gmail.com ☎ +1 804 687 7476 🌐 avahoffman.com

## EDUCATION

2018	Ph.D. Ecology (in progress)	Colorado State University · Fort Collins, CO
2012	B.S. Biology with Distinction	University of Virginia · Charlottesville, VA

## PROFESSIONAL EXPERIENCE

2017-2018	<b>US Department of Agriculture</b> · NIFA-AFRI Predoctoral Fellow · Colorado State University · Fort Collins, CO
2012-2013	<b>DuPont Pioneer</b> · Laboratory Assistant · Biotechnology Division · Wilmington, DE
2011-2012	<b>University of Virginia</b> · Undergraduate Researcher · Department of Biology · Charlottesville, VA
2011	<b>Coweeta Hydrologic Laboratory LTER and United States Forest Service</b> · Research Intern · Otto, NC
2010	<b>Virginia Commonwealth University</b> · Research Assistant · Richmond, VA

## FELLOWSHIPS | GRANTS | AWARDS

Total received: \$118,112

2018	<b>Colorado State University</b> · Research Mentoring to Advance Inclusivity in STEM Research Grant (\$2500)
2017-2018	<b>Colorado State University</b> · School of Global Environmental Sustainability Leadership Fellowship
2016-2018	<b>United States Department of Agriculture</b> · NIFA-AFRI Predoctoral Fellowship (\$94,999)
2016	<b>City of Boulder Open Space and Mountain Parks</b> · Research Grant (\$5669)
2016-2017	<b>Colorado State University</b> · Vice President of Research Graduate Fellow (\$3125)
2016	<b>The Nature Conservancy</b> · J.E. Weaver Competitive Grant (\$1000)
2016	<b>The Ecological Society of America</b> · 'Hackathon' beginner app developer first place award
2016	<b>Colorado State University</b> · Graduate Degree Program in Ecology Small Research Grant (\$2000)
2016	<b>Colorado State University</b> · Graduate Degree Program in Ecology Travel Grant (\$175)
2015-2016	<b>Colorado State University</b> · Graduate Degree Program in Ecology Teaching Fellowship
2015	<b>Colorado State University</b> · Harold Harrington Fellowship (\$1900)
2014-2015	<b>Colorado State University</b> · Stavros Family Fund Recipient (\$3021)
2014-2015	<b>Colorado State University</b> · Department of Biology Travel Awards (\$2258)
2014	<b>National Science Foundation</b> · Graduate Research Fellowship Program (Honorable Mention)
2014	<b>Colorado State University</b> · Sharon E. and David E. Kabes Scholarship (\$590)
2013	<b>Colorado State University</b> · Graduate Fellowship Award (\$1000)
2012	<b>University of Virginia</b> · Undergraduate Research Travel Grant (\$1000)

## PUBLICATIONS

2018	Griffin-Nolan, RJ, JA Bushey, CJW Carroll, A Challis, J Chieppa, M Garbowski, <b>AM Hoffman</b> , AK Post, IJ Slette, D Spitzer, D Zambonini, TW Ocheltree, DT Tissue, and AK Knapp. Trait selection and community weighting are key to understanding ecosystem responses to changing precipitation regimes. <i>Functional Ecology</i> .
2018	<b>Hoffman, AM</b> , ML Avolio, AK Knapp, and MD Smith. Co-dominant grasses differ in gene expression under experimental climate extremes in native tallgrass prairie. <i>PeerJ</i> .
2017	<b>Hoffman, AM</b> and MD Smith. Gene expression differs in codominant prairie grasses under drought. <i>Molecular Ecology Resources</i> .
2017	Avolio, ML, <b>AM Hoffman</b> , MD Smith. Linking gene regulation, physiology, and plant biomass allocation in <i>Andropogon gerardii</i> in response to drought. <i>Plant Ecology</i> .
2016	Lemoine, NP, <b>AM Hoffman</b> , A Felton, L Baur, F Chaves, J Gray, Q Yu, and MD Smith. Underappreciated problems of low statistical power in ecological field studies. <i>Ecology</i> .

## PUBLICATIONS (CONTINUED)

- 2016 Smith, MD, **AM Hoffman**, and ML Avolio. Gene expression patterns of two dominant tallgrass prairie species differ in response to warming and altered precipitation. *Scientific Reports*.
- 2012 Mellor, KE, **AM Hoffman**, and MP Timko. Use of ex vitro composite plants to study the interaction of cowpea (*Vigna unguiculata* L.) with the root parasitic angiosperm *Striga gesnerioides*. *Plant Methods*.
- 2012 **Hoffman, AM** Estimating tree transpiration accurately depends on wood type and species: a study of four southern Appalachian tree species. *The Oculus*.
- 2011 Zinnert, JC, JD Nelson, **AM Hoffman**. Effects of salinity on physiological responses and the photochemical reflectance index in two co-occurring coastal shrubs. *Plant & Soil*.
- 2010 Zinnert, JC, JD Nelson, JK Vick, **AM Hoffman** and DR Young. Rethinking chlorophyll responses to stress: Fluorescence and reflectance remote sensing in a coastal environment. *Proceedings of the 4th International Workshop on Remote Sensing of Vegetation Fluorescence*, Valencia, Spain.
- In prep. **Hoffman, AM**, NP Lemoine, TW Ocheltree, MD Smith. Metabolomes of prairie species *Bouteloua gracilis* and *Spheralcea coccinea* are resilient to nitrogen deposition. *Manuscript available upon request*.
- In prep. **Hoffman, AM** and MD Smith. Genotypes of a tallgrass prairie species respond differently to drought, despite high plasticity in populations. *Manuscript available upon request*.
- In prep. Smith, MD, SE Koerner, AK Knapp, ML Avolio, JM Briggs, FA Chaves, E Denton, J Dietrich, DJ Gibson, J Gray, **AM Hoffman**, DL Hoover, KJ La Pierre, A Silletti, KR Wilcox, Q Yu, and JM Blair. Mass ratio effects underlie ecosystem responses to environmental change. *Manuscript available upon request*.
- In prep. Bushey, JA, **AM Hoffman**, TW Ocheltree, S Gleason, and MD Smith. Is it plastic or just fantastic? Understanding the role of plasticity and local adaptation in the drought tolerance of *Bouteloua gracilis*. *Manuscript available upon request*.
- In review **Hoffman, AM**, CC Hoffman, F Chaves, A Felton, JE Gray, W Mao, A Tatarko, L Vilonen, L Gerhardt, MD Smith. Predicting dryland ecosystem responses to global change through dominant grasses. *Functional Ecology*. *Manuscript available upon request*.
- In review Knapp, AK, C Carroll, RJ Griffin-Nolan, IJ Slette, F Chaves, L Baur, AJ Felton, JE Gray, **AM Hoffman**, NP Lemoine, W Mao, A Post, and MD Smith. A reality check for climate change experiments: do they reflect the real world? *Ecology*. *Manuscript available upon request*.
- In review **Hoffman, AM**, H Perretta\*, and MD Smith. Patterns of grasshopper palatability and preference in blue grama grass. *Arthropod-Plant Interactions*. *Manuscript available upon request*.

\*Denotes undergraduate mentee

## TEACHING

2016	<b>Data visualization using R and ggplot (guest lecture)</b>	Colorado State University
2014-2016	<b>Molecular and General Genetics (Recitation)</b>	Colorado State University
2016	<b>Community Ecology (Recitation)</b>	Colorado State University
2015	<b>Foundations of Ecology (Recitation, guest lectures)</b>	Colorado State University
2012	<b>Organic Chemistry Lab II</b>	University of Virginia
2011	<b>Organic Chemistry Lab I</b>	University of Virginia

## STUDENT MENTORING

2018	<b>Maddie Swall</b> · RMAIS mentee	Colorado State University
2016-2017	<b>Holly Perretta</b> · REU student	Colorado State University
2017	<b>Abigail Lock</b> · Research Assistant	Colorado State University
2016	<b>Brigitte Gaudreault</b> · Laboratory Research Assistant	Colorado State University
2015	<b>Daniel Robotham</b> · Honors Thesis student <i>Thesis committee member</i>	Colorado State University
2014-2015	<b>Brianna Magbual</b> · Research Assistant	Colorado State University
2014	<b>Destiny Brown</b> · Research Assistant	Colorado State University

## PRESENTATIONS

- 2018 **Front Range Student Ecology Symposium** · Fort Collins, CO  
Dominant grasses in drylands: linking species and traits to global change in ecosystems.
- 2017 **Colorado State University Drought Symposium** · Fort Collins, CO  
Phenotypic diversity within dominant blue grama grass across an aridity gradient. **Third place winner**
- 2017 **Front Range Open Space Research Symposium** · Boulder, CO  
Phenotypic diversity within dominant blue grama grass across an aridity gradient. **Invited speaker**
- 2017 **Ecological Society of America** · Portland, OR  
Phenotypic diversity within dominant blue grama grass across an aridity gradient.
- 2017 **Front Range Student Ecology Symposium** · Fort Collins, CO  
Phenotypic diversity within dominant blue grama grass across a precipitation gradient.
- 2016 **Ecological Society of America** · Fort Lauderdale, FL  
Thresholds of drought response differ in a tallgrass prairie population.
- 2016 **Vice President Office of Research Fellowship Symposium** · Fort Collins, CO  
Breaking down the drought portfolio in grasslands. **3-Minute Thesis Invited Speaker**
- 2015 **Graduate Student Forum** · Fort Collins, CO  
ETX: Introduction and tricks of the trade. **Invited speaker**
- 2015 **Ecological Society of America** · Baltimore, MD  
Genotypes of a tallgrass prairie species respond differently to drought, despite high plasticity within populations. **Invited Speaker**
- 2015 **Front Range Student Ecology Symposium** · Fort Collins, CO  
Genotypes of a tallgrass prairie species respond differently to drought, despite high plasticity in populations.
- 2015 **Graduate Student Forum** · Fort Collins, CO  
Predicting diversity: Old hypotheses, new critiques, and why you should be paying attention. **Invited speaker**
- 2014 **Colorado State University Plant Supergroup** · Fort Collins, CO  
Within-population variation under drought in a tallgrass prairie species. **Invited speaker**
- 2014 **Ecological Society of America** · Sacramento, CA  
Gene expression in co-dominant prairie grasses: comparing transcriptomes using RNA-seq and de novo assembly.
- 2012 **Ecological Society of America** · Portland, OR  
Composite plants: A novel method for gene screening in cowpea.

## PROFESSIONAL SERVICE

- Peer review: *Global Change Biology* · *Journal of Ecology* · *New Phytologist* · *Plant Ecology* · *Plos One*
- 2011 - 2018 **Ecological Society of America** · Student member
- 2016 - 2017 **Front Range Student Ecology Symposium** · Undergraduate research poster judge
- 2015 - 2016 **Graduate Degree Program in Ecology** · Executive Committee Student Representative
- 2015 - 2016 **Front Range Student Ecology Symposium** · Abstract Selection and Review Committee member
- 2015 **Colorado State University Department of Biology** · Faculty search committee student organizer
- 2014 - 2015 **Front Range Student Ecology Symposium** · Executive Board Member
- 2013 - 2014 **Front Range Student Ecology Symposium** · Webmaster
- 2011 - 2014 **Ecological Society of America** · Student Volunteer

## COMMUNITY ENGAGEMENT

- 2016 **Colorado Odyssey of the Mind** · Science fair judge · Fort Collins, CO
- 2014-2015 **Bella Romero Elementary School** · science fair judge and guest educator · Greeley, CO