

# Ava Hoffman

## ECOLOGIST

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## EDUCATION

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|------|-------------------------------|--|
| 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

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

## FELLOWSHIPS | GRANTS | AWARDS

Total received: \$118,112

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

## PUBLICATIONS

- |      |  |
|------|--|
| 2018 | Hoffman, AM and MD Smith. Thinking inside the box: Tissue culture for plant propagation in a key ecological species, <i>Andropogon gerardii</i> . <i>American Journal of Plant Sciences</i> .  |
| 2018 | 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? <i>Ecology</i> .   |
| 2018 | Griffin-Nolan, RJ, JA Bushey, CJW Carroll, A Challis, J Chieppa, M Garbowski, AM Hoffman, AK Post, IJ Slette, D Spitzer, D Zamboni, 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 | Hoffman, AM, 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> .  |

## PUBLICATIONS (CONTINUED)

- 2017 **Hoffman, AM** and MD Smith. Gene expression differs in codominant prairie grasses under drought. *Molecular Ecology Resources*.
- 2017 Avolio, ML, **AM Hoffman**, MD Smith. Linking gene regulation, physiology, and plant biomass allocation in *Andropogon gerardii* in response to drought. *Plant Ecology*.
- 2016 Lemoine, NP, **AM Hoffman**, A Felton, L Baur, F Chaves, J Gray, Q Yu, and MD Smith. Underappreciated problems of low statistical power in ecological field studies. *Ecology*.
- 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 review Bushey, JA, **AM Hoffman**, TW Ocheltree, S Gleason, and MD Smith. Is it plastic or just fantastic? Evidence of plasticity and local adaptation in the drought tolerance strategies of *Bouteloua gracilis*. *Annals of Botany*. 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 **Hoffman, AM**, H Perretta\*, and MD Smith. Patterns of grasshopper palatability and preference in blue grama grass. *Acta Oecologia*. 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