

J Grey Monroe

USDA-NIFA National Needs Fellow
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Graduate Degree Program in Ecology
Colorado State University
Fort Collins, CO 80523

EDUCATION

PhD, Ecology (expected 2019) Colorado State University, Fort Collins

Advisor: John McKay

Dissertation: The biology, genetics, and evolution of drought tolerance in plants

BSc Biology, *cum laude* (2009) Appalachian State University

Advisor: Matt Estep

Concentration: Molecular biology and the evolution of centromeres in the *Andropogoneae*

FELLOWSHIPS

USDA-NIFA National Needs Fellowship (\$138,000) 2015-2018

Program in Molecular Plant Biology Fellowship, CSU (\$39,000) 2014

AWARDS AND HONORS

Ralph Baker Graduate Student Award for Research Excellence, CSU (\$500) 2017

NSF Graduate Research Fellowship (*Honorable Mention*) 2016

Ralph Baker Graduate Student Award for Research Excellence, CSU (\$500) 2016

Evo-Devo-Eco Network Training Grant, Harvard University (\$3,000) 2016

PMPB Research and Scholarly Excellence Award, CSU (\$10,000) 2015

NSF Graduate Research Fellowship (*Honorable Mention*) 2015

GDPE Research and Scholarly Excellence Award, CSU (\$2,500) 2014

Frontiers and Techniques in Plant Science Workshop Scholarship,
Cold Spring Harbor Laboratory (\$750) 2014

PUBLICATIONS

Rockenbach K, Havrid JC, **Monroe JG**, Triant DA, Taylor DR, Sloan DB. 2016. Phylogenetic and Population Genetic Evidence for Positive Selection in Rapidly Evolving Plastid-Nuclear Enzyme Complexes. *Genetics* 204:1507-1522.

Monroe JG, McGovern C, Lasky J, Beck J, Grogan K, McKay JK. 2016. Adaptation to warmer climates by parallel functional evolution of *CBF* genes in *Arabidopsis thaliana*. *Molecular Ecology* 15:3632-3644.

Mojica JP, Mullen J, Lovell JT, **Monroe JG**, Paul JR, Oakley CG, McKay JK. 2016. Genetics of water use physiology in locally adapted *Arabidopsis thaliana*. *Plant Science* 251:12-22.

Zhu M, **Monroe JG**, Suhail Y, Villiers F, Mullen J, Pater D, Hauser F, Jeon BW, Bader JS, Kwak JM, Schroeder JI, McKay JK, Assman SM. 2016. Molecular and Systems Approaches towards Drought-tolerant Canola Crops. *New Phytologist* 210:1169-1189.

PRESENTATIONS

- Monroe JG.** 2016. Evolution of drought tolerance explored using global drought frequency map (poster). Graduate Student Showcase. Fort Collins, CO.
- Monroe JG.** 2016. A global map of drought frequency using the Vegetative Health Index (poster). Genomics of Adaptation to Human Contexts. Fort Collins, CO.
- Monroe JG.** 2016. Adaptation to warmer climates by parallel molecular evolution. Evolution 2016. Austin, TX.
- Monroe JG.** 2015. Patterns of locally adaptive altered function and divergence in cold response genes along a temperature gradient in *Arabidopsis thaliana*. Guild of Rocky Mountain Ecologists and Evolutionary Biologists. Boulder, CO.
- Monroe JG.** 2015. Evolution of the ABA signaling pathway in the Brassicaceae (poster). Evolution 2015. Sao Paolo, Brazil.
- Monroe JG.** 2015. Adaptation to warmer climates by parallel molecular evolution. Evolution 2016. Austin, TX.
- Monroe JG.** 2015. Environmental variability and the evolution of locally adaptive drought responses. MicroMOPRH Phenotypic Plasticity Workshop. Harvard Arnold Arboretum. Boston, MA.
- Monroe JG.** 2015. Teaching plasticity by experiment: "EnvironMentoring" of a high school student (lightening talk) National Evolutionary Synthesis Center Plasticity and Novel Environments Working Group. Durham, NC.

PROFESSIONAL EXPERIENCE

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|---|---|
| R Programmer, <i>Dec. 2016 – August. 2017</i>
<i>John Wesley Powell Center for Analysis and Synthesis</i> | United States Geological Survey
Fort Collins, CO |
| CO-OP in Plant Breeding and Genetics, <i>Sept. 2016 – Feb. 2017</i>
<i>Specialty Seeds and Oil Innovation Center</i> | Cargill
Fort Collins, CO |
| Research Assistant, <i>Sept. 2013 – Apr. 2014</i>
<i>Herman Staats Lab, Pathology Dept</i> | Duke University
Durham, NC |