

MIRANDA WADE

PhD Candidate · Michigan State University · Department of Integrative Biology · Ecology, Evolution, and Behavior
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EDUCATION

Michigan State University	2017- Present
PhD; Integrative Biology and Ecology, Evolutionary Biology, and Behavior	Expected completion
Dissertation: “The Effects of Anthropogenic Change on Species of Conservation Concern”	July 2023
Advisor: Mariah Meek Committee: Gideon Bradburd (2018-2022), Sarah Fitzpatrick, Cheryl Murphy, Chris Kozakiewicz (2023)	
Colorado State University	2012 - 2016
B.S. Biological Sciences (Honor Scholar)	
Concentrations in Ecology, Anatomy & Physiology	
Honors Thesis: “The Absorption of Omega-3 Fatty Acids in Ruminants”	

PUBLICATIONS

- Wade M**, Moore-O’Leary KA, Grodsky SA, Hernandez RR, Meek MH. Of Mojave milkweed and mirrors: the population genomic structure of a species impacted by solar energy planning. *In review, manuscript available upon request.*
- Wade M**, Bucci K, Rochman C, Meek MH. Quantifying the effects of lifetime microplastics exposure using the model toxicological organism *Pimephales promelas* (fathead minnow). *In prep.*
- Wade M**, Bucci K, Rochman C, Meek MH. The intergenerational effects of microplastics exposure on the model toxicological organism *Pimephales promelas* (fathead minnow). *In prep.*

PRESENTATIONS

- Wade M**, Moore-O’Leary KA, Grodsky SA, Meek MH. (August 2022) Understanding the population genomic structure of rare desert species is vital in low-impact solar energy planning. Oral presentation at the North American Congress on Conservation Biology. Reno, Nevada USA.
- Wade M**, Bucci K, Rochman C, Meek MH. (May 2022) The Effects of Microplastic Exposure across Development, Generations, and Molecular Levels. Oral presentation at the Joint Aquatic Sciences Meeting. Grand Rapids, Michigan USA.
- Wade M**, Moore-O’Leary KA, Grodsky SA, Meek MH. (October 2021) Understanding the population genomic structure of rare desert species is vital in low-impact solar energy planning. Poster presentation at the American Genetics Association President’s Symposium. Snowbird, Utah USA.
- Wade M**, Moore-O’Leary KA, Grodsky SA, Meek MH. (July 2021) Understanding the population genomic structure of rare desert species is vital in low-impact solar energy planning. Oral presentation at Evolution Virtual Conference.
- Wade M**, Moore-O’Leary KA, Grodsky SA, Meek MH. (April 2021) Of milkweed and mirrors: genetics should inform solar installation planning. Oral presentation at the MSU EEB Research Symposium.
- Wade M**, Moore-O’Leary KA, Grodsky SA, Meek MH. (April 2021) Using Population Genomics to Inform Solar Installation Planning. Oral presentation at the MSU EEB Spring Colloquium Series.

Wade M, Bucci K, Rochman C, Meek MH. (October 2019) The Effects of Microplastic Exposure across Development, Generations, and Molecular Levels. Poster presentation at the American Fisheries Society/Wildlife Society Joint Meeting. Reno, Nevada USA.

Wade M, Moore-O'Leary KA, Grodsky SA, Meek MH. (August 2019) Population genetics of Mojave milkweed in the Ivanpah Valley of California. Oral presentation at Midwest Population Genetics VI. Chicago, Illinois USA.

Wade M, Moore-O'Leary KA, Grodsky SA, Meek MH. (April 2018) Effects of Solar Installations on Desert Plants. Poster presentation at the MSU EEB Research Symposium. East Lansing, Michigan USA.

FELLOWSHIPS, GRANTS, AND AWARDS

Dissertation Completion Fellowship (\$10000)	2022
EEB Summer Fellowship (\$7500)	2022
Dissertation Continuation Fellowship (not selected)	2022
American Genetics Association EECG (\$6000)	2022
EEB Summer Fellowship (\$7500)	2021
EEB Summer Fellowship (\$2100)	2020
Department of Integrative Biology John R. Shaver Award (\$1050)	2019
MSU Integrative Biology Travel Grant (\$200)	2019
Michigan Sea Grant (not selected)	2019
ESPP Summer Research Fellowship (not selected)	2019
Humphrys Fellowship (not selected)	2019
EEB Summer Fellowship (\$2000)	2019
MSU College of Graduate Studies Travel Fellowship (\$350)	2019

RESEARCH EXPERIENCE

Michigan State University Department of Integrative Biology PhD; Integrative Biology and Ecology, Evolutionary Biology, and Behavior, Meek Lab Performed DNA & RNA extraction and library preparation for population genomics, transcriptomics, and methylomics studies. Also carried out bioinformatic analyses in a Unix environment on a high-performance computing cluster as well as statistical analysis in R and Python. Focus on conservation biology, small populations, and ecotoxicology.	2017- Present
University of Toronto Department of Ecology and Evolutionary Biology International Visiting Graduate Student, Rochman Lab Raised second-generation Fathead Minnows (<i>Pimephales promelas</i>) for microplastics study in collaboration with the Ontario Ministry of the Environment and Climate Change (MECC).	June – July 2019
Colorado State University Department of Biology Undergraduate Research Assistant, Funk Lab Performed DNA extraction and ddRadSeq library preparation pumas (<i>Puma concolor</i>) native to the Rocky Mountain region of the United States to determine the effects of landscape structure on puma disease dynamics. Completed the same library preparation for Anthony's poison arrow frog (<i>Epipedobates anthonyi</i>) to determine population structure for conservation purposes.	2016-2017
Colorado State University Department of Bioagricultural Science and Pest Management Undergraduate Research Assistant, Hufbauer Lab	2016

Processed and analyzed leaf tissue samples of common mullein (*Verbascum thapsus*) using various ImageJ and JMP software. Investigated questions regarding herbivory and allocation of resources in invasive common mullein.

Colorado State University | Department of Animal Science

2015-2016

Undergraduate Research Assistant, Archibque and Engle Labs

Performed weighing, bleeding, and liver biopsies in cattle, and took measurements for water quality study to determine the effects of high levels of minerals in feedlot cattle. Performed regular maintenance on nutrition study cattle by cleaning and replacing fistulas, weighing, and placing bolus magnets in cattle. Completed the research aspect of Senior Honors Thesis by taking rumen samples, incubating samples with various feed treatments, and analyzing the Omega-3 and -6 levels post-incubation.

TEACHING EXPERIENCE

Graduate Teaching Assistant , Evolution Michigan State University Department of Integrative Biology	2021 & 2022
Graduate Teaching Assistant , Marine Biology Michigan State University Department of Integrative Biology	2019 & 2020
Guest Lecturer , Fundamentals of Genetics Michigan State University Department of Integrative Biology	2018
Presented two lectures covering population genetics	
Graduate Teaching Assistant , Fundamentals of Genetics Michigan State University Department of Integrative Biology	2018 & 2022
Graduate Teaching Assistant , Cell and Molecular Biology Lab Michigan State University Biological Sciences Program	2017
Undergraduate Learning Assistant , Physics Colorado State University Department of Physics	2016

SERVICE, OUTREACH, AND PROFESSIONAL DEVELOPMENT

<i>Biology on Tap Presenter</i> Lansing, Michigan	2023
<i>MI DNA Day Presenter</i> Pontiac High School, Michigan	2022
<i>President</i> EEB Graduate Group, Michigan State University	2020 - 2021
<i>Invited Reviewer</i> Journal of Biological Conservation	2020
<i>Invited Reviewer</i> Journal of Conservation Genetics	2019
<i>Research Symposium Committee Co-Chair</i> EEB Graduate Group, Michigan State University	2018-2019
<i>Poster Evaluator</i> Mid-Michigan Symposium for Undergraduate Research Experiences (SURE)	2018
Michigan State University Undergraduate Research & Arts Forum	

RELATED COURSEWORK

Statistical Methods in Ecology & Evolution	Molecular Ecology & Conservation Genetics
Population & Community Ecology	Professional Development
Pathways to Scientific Teaching in Biology	Chromatin Dynamics and Gene Expression in Development
Evolutionary Biology	New Approaches to Ecological Risk Assessment
Bioinformatics	Molecular Ecology & Conservation Genetics

MEMBERSHIPS

Society for Conservation Biology
Society for the Study of Evolution

American Genetics Association
American Fisheries Society