

*CURRICULUM VITAE*  
**Katherine D. McLean**

**POSTDOCTORAL RESEARCH FELLOW**

Department of Epidemiology | Institute for Global Change Biology  
University of Michigan | 1415 Washington Heights, Ann Arbor, MI 48109

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**I. EDUCATION**

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**PhD, Ecology and Evolutionary Biology (2022)**

University of Michigan, Ann Arbor, MI

**Bachelor of Science, Biology (2016)**

Westminster College, Salt Lake City, UT

**Associate of Science, Biology (2014)**

Salt Lake Community College, Salt Lake City, UT

**II. AWARDS & FELLOWSHIPS**

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**IGCB Postdoctoral Fellowship, January 2023**

**Conference Travel Award, Society for the Study of Evolution, June 2019**

**Rackham Merit Fellowship, University of Michigan Rackham Graduate School, 2020-2023; 5 terms of fellowship support (tuition, stipend, and benefits)**

**NSF Graduate Research Fellowship, National Science Foundation, 2016-2020; 3 years of fellowship support (tuition, stipend, and benefits)**

**Travel Award, Annual Biomedical Conference for Minority Students, Fall 2015**

**Travel Award, Penn State STEM Open House, Fall 2015**

**McNair Program Scholarship, Westminster College, Summer 2014**

**Transfer Student Presidential Scholarship, Westminster College, Fall 2014**

**III. GRANTS**

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**Travel Grant, Rackham Conference Travel Grant, June 2022 (\$800)**

**Travel Grant, Rackham Conference Travel Grant, June 2019 (\$800)**

**Dr. Nancy Williams Walls Award for Field Research, University of Michigan Ecology and Evolutionary Biology Department, Spring 2019 (\$1925)**

**Block Grant, University of Michigan Ecology and Evolutionary Biology Department, Spring 2018 (\$1865)**

**Travel Grant, Rackham Conference International Travel Grant, June 2018 (\$1300)**

**Travel Grant, Department Conference Travel Award, May 2018 (\$400)**

**Block Grant, University of Michigan Ecology and Evolutionary Biology Department, March 2017 (\$1468)**

**Travel Grant, Department Conference Travel Award, August 2017 (\$400)**

**IV. TEACHING EXPERIENCE**

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**Instructor, course designer**

**Master's-level field ecology weekend course**

Field ecology, data analysis for entering Master's students

**Instructor, course designer**

### **Research Experience for Undergraduates**

Parasite community ecology, University of Michigan, Summer 2020

### **Teaching assistant**

#### **BIO 108: Animal Diversity**

Transitioned course to online format, Summer 2020

### **Wolverine Pathways Lead Instructor**

#### **Prove It! Data Camp**

Wolverine Pathways, University of Michigan, Summer 2017 & 2018

### **Graduate Student Instructor**

#### **BIO 171: Introduction to Ecology, Evolutionary Biology, and Genetics**

Program in Biology, University of Michigan, Fall 2016 - Winter 2017

### **Teaching Assistant**

#### **Quantitative Literacy for the GRE**

Quantitative Analysis and Research Cooperative (QUARC)

Mathematics Department, Westminster College, Summer 2016

### **Teaching Assistant**

#### **Structural Equation Modeling (SEM)**

Biology Department, Westminster College, May 2016

## **V. RESEARCH EXPERIENCE**

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### **PhD candidate in the Duffy Lab**

University of Michigan, Department of Ecology and Evolutionary Biology, August 2016 – November 2022

*PhD student studying ecological and evolutionary dynamics of complex host-parasite systems*

### **Undergraduate Research Assistant**

#### **Salterra Research Group**

Westminster College, Biology Department, January 2015 - May 2016

*Undergraduate student spearheaded interdisciplinary project studying the impact of urbanization on microbial communities in agricultural soil*

### **Student Statistical Consultant**

#### **Quantitative Analysis and Research Cooperative (QUARC)**

Westminster College, Mathematics Department, August 2015 - June 2016

*Assisted with undergraduate experimental design and data analysis*

### **Field Studies – Grand Staircase-Escalante National Monument**

Salt Lake Community College, May 2011

*Collected and analyzed field data on the water quality and plant biodiversity within the Grand Staircase-Escalante National Monument*

## **VI. PUBLICATIONS**

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McLean, K.D., Gowler, C.D., Dziuba, M.K., Zamani, H., Hall, S.R., Duffy, M.A. (2022) Sexual recombination and temporal gene flow maintain host resistance and genetic diversity. *Evol Ecol*  
<https://doi.org/10.1007/s10682-022-10193-6>

McLean K.D., Duffy M.A. (2019) Ecological context influences evolution in host-parasite interactions: insights from the *Daphnia*-parasite model system In: Evolution in Action – Past, Present, and Future, W. Banzhaf *et al.* ed., Springer Nature Switzerland AG.

## VII. PRESENTATIONS

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June 2022. **McLean, K.D.** Exposure dose alters within-host interactions between parasites, with consequences for parasite prevalence and host abundance. Poster presentation at the 2022 Ecology and Evolution of Infectious Disease Conference, Atlanta, GA.

April 2019. **McLean, K.D.**, Gowler, C., Duffy, M.A. How Do Sex and Migration from the Past Impact the Diversity of Resistance?, Oral presentation at 2019 Evolution Conference, Providence, RI.

June 2018. Bouman, J., Erten, Y. E., Bergar, P. M., **McLean, K. D.** Evolution of interdependencies as a driver of stability in cooperative systems. Oral presentation at the Guarda Evolutionary Biology Workshop, Guarda, Switzerland

March 2018. **McLean, K.D.** Eco-evolutionary Dynamics of Parasites and Their Hosts. Oral presentation for the Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI

May 2018. **McLean, K.D.** Meng, J., Bilich R., Hunsberger K., Duffy, M.A. Implications of within-host parasite interactions for parasite fitness and virulence. Poster presentation at the 16th Ecology and Evolution of Infectious Disease Conference, Glasgow, UK

August 2017. **McLean, K.D.**, Gowler, C.D., Hall, S.R., Duffy, M.A. How is Host Diversity Maintained Despite Strong Selective Pressure From Parasites? Poster presentation at the Annual Meeting of the Ecological Society of America, Portland, OR.

November 2015. **McLean, K.D.** The Effects of Urbanization on the Genetic Composition of Microbial Communities in Agricultural Soil. Poster presentation at the Annual Biomedical Research Conference for Minority Students, Seattle, WA

August 2015. **McLean, K.D.** The Influence of Urbanization on Bacterial Communities in Agricultural Soil. Oral presentation at the 23<sup>rd</sup> Annual University of California Berkeley McNair Symposium, Berkeley, California

July 2015. **McLean, K.D.** Getting the Dirt on Our Sustainable Future: The Influence of Urbanization on the Soil Microbiome. Oral presentation at the Westminster McNair Scholar Symposium, Salt Lake City, Utah

April 2015. **McLean, K.D.** Soil Community Composition in Rural, Suburban, and Urban Agriculture. Poster presentation at the 14th Annual Westminster Undergraduate Research Fair, Salt Lake City, Utah

## VIII. PROFESSIONAL SOCIETIES

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Society for the Study of Evolution (2018 – present)

American Association for the Advancement of Science (2018 – present)

Association for Women in Science (2018 – present)

Ecological Society of America (2017)

American Chemical Society (2014)

## IX. SERVICE & OUTREACH

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2018 – 2020 Admissions Committee member  
Department of Ecology and Evolutionary Biology

2018 – 2021 Point person for focus group addressing gender-based harassment in academia  
Graduate Researchers in Ecology and Evolutionary Biology (GREEBs)

2018 Lead instructor  
Females Excelling More in Math, Engineering, and Science (FEMMES)

2017 SEEDS mentor  
Ecological Society of America Conference (ESA)

2017, 2018 Volunteer timekeeper and science judge  
National Ocean Sciences Bowl (NOSB)

2016, 2017 Assistant instructor  
Females Excelling More in Math, Engineering, and Science (FEMMES)