

Elizabeth S. Davenport, Ph.D.

National Science Foundation Postdoctoral Research Fellow in Biology

Cary Institute of Ecosystem Studies

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EDUCATION

University of Michigan May 2025

Ph.D. in Ecology and Evolutionary Biology

Advisor: Dr. Meghan Duffy

Dissertation: Causes and consequences of disease outbreaks in aquatic environments

University of South Carolina May 2020

B.S. Biological Sciences

summa cum laude, with Honors from the South Carolina Honors College

Research Mentor: Dr. Jeffry Dudycha

Honors Thesis: Temperature-dependent effects of spontaneous mutations on life-history traits

* Winner of the William A. Mould Outstanding Senior Thesis Award

PROFESSIONAL APPOINTMENTS

July 2025 - National Science Foundation Postdoctoral Research Fellow, Cary Institute of Ecosystem Studies (Mentor: Dr. Tara Stewart Merrill)

May - June 2025 Postdoctoral Fellow, University of Michigan (Mentor: Dr. Meghan Duffy)

PEER-REVIEWED PUBLICATIONS

6. **Davenport, E.S.**, Dziuba, M.K., Corcoran, F., dos Santos, N.F., Monell, K.J., McCreadie, P., Calhoun, S.K., Nelson, T., Jacobson, L.E., Manuel, R., and Duffy, M.A. 2026. Resource quantity affects infection success and impacts of a microsporidian on hosts. *Oikos* e11412 <http://doi.org/10.1002/oik.11412>
5. **Davenport, E.S.**, Dziuba, M.K., Jacobson, L.E., Calhoun, S.K., Monell, K.J., and Duffy, M.A. 2024. How does parasite environmental transmission stage concentration change before, during, and after disease outbreaks? *Ecology* e4235. <https://doi.org/10.1002/ecy.4235>
* Winner of the ESA Disease Ecology Section Best Student Paper Award
4. **Davenport, E.S.**, Dziuba, M.K., Jacobson, L.E., Calhoun, S.K., Monell, K.J., and Duffy, M.A. 2024. Parasite transmission stage abundance varies in lakes over time and space. *Limnology and Oceanography* 69:2167-2179. <https://doi.org/10.1002/lno.12657>
3. Dziuba, M.K., McIntire, K.M., **Davenport, E.S.**, Baird, E., Huerta, C., Jaye, R., Corcoran, F., McCreadie, P., Nelson, T., and Duffy, M.A. 2024. Microsporidian coinfection reduces fitness of a fungal pathogen due to rapid host mortality. *mBio* 0:e00583-24. <https://doi.org/10.1128/mbio.00583-24>
2. Dziuba, M.K., McIntire, K.M., Seto, K., **Davenport, E.S.**, Rogalski, M.A., Gowler, C.D., Baird, E., Vandraager, M., Huerta, C., Jaye, R., Corcoran, F.E., Withrow, A., Ahrendt, S., Salamov, A., Nolan, M., Tejomurthula, S., Barry, K., Grigoriev, I.V., James, T.Y., and Duffy, M.A. 2024. Phylogeny, morphology, virulence, ecology, and host range of *Ordospora pajunii* (Ordosporidae), a microsporidian symbiont of *Daphnia* spp. *mBio*. e00582-24. <https://doi.org/10.1128/mbio.00582-24>
1. **Davenport, E.S.**, Agrelius, T., Harmon, K., and Dudycha, J. 2021. Fitness effects of spontaneous mutations in a warming world. *Evolution* 75(6):1513-1524. <https://doi.org/10.1111/evo.14208>

PUBLICATIONS IN REVIEW OR ADVANCED PREPARATION

Davenport, E.S., Dziuba, M.K., dos Santos, N.F., McCreadie, P., Huerta, C., Stanton, F., Monell, K.J., and Duffy, M.A. Migration and colder temperatures constrain microsporidian parasite outbreaks in zooplankton populations. In review at *Ecology*.

Davenport, E.S., McIntire, K., Dziuba, M.K., Huerta, C., and Duffy, M.A. No evidence for transgenerational immune priming in *Daphnia dentifera*. Pending acceptance at *Evolution*..

Davenport, E.S., Dziuba, M.K., dos Santos, N.F., McCreadie, P., Huerta, C., Monell, K.J., and Duffy, M.A. Joint effects of a predator and parasites on prey population dynamics. *In revision*.

Dziuba, M.K., McIntire, K.M., **Davenport, E.S.,** Corcoran, F.E., Nelson, T., McCreadie, P., Manuel, R.T., Baird, E., dos Santos, N.F., Robbins, M., Dismondy, E., Monell, K., Huerta, C., Selter, L.C., Deckelbaum, K., Cortez, M.H., and M.A. Duffy. Symbiont virulence is a poor predictor of impacts on host population dynamics. *BioRxiv preprint*:

<https://www.biorxiv.org/content/10.1101/2025.04.10.648206v1>

Sauer, T.A., Monell, K., Dziuba, M., McIntire, K., Sanchez, K., McLean, K., Davenport, E. S., Calhoun, S., and M.A. Duffy. Virulent impacts on reproduction vary by parasite and host species in natural multihost-multiparasite communities. In review at *Ecosphere*.

GRANTS AND FELLOWSHIPS (Total Amount Awarded: \$374,046)

2025-2028	NSF Postdoctoral Research Fellowship in Biology (PRFB) (\$270,000)
2024	UM Rackham Graduate School Candidate Research Award (\$3,000)
2021-2024	UM Dr. Nancy Williams Walls Award for Field Research (\$6,596)
2021	UM Rackham Graduate School Pre-Candidate Research Award (\$1,500)
2018	UofSC Science Undergraduate Research Fellowship (\$2,950)

AWARDS

2024	Thomas M. Frost Award for Excellence in Graduate Research, Ecological Society of America Aquatic Ecology Section
2024	Ecological Society of America Disease Ecology Best Student Paper Award
2024	Rackham Graduate School One-Term Fellowship, University of Michigan
2021	NSF Graduate Research Fellowship Program (GRFP) Honorable Mention
2020	William A. Mould Outstanding Senior Thesis Award (awarded to one senior per year)
2020-	Phi Beta Kappa, Alpha Chapter, University of South Carolina
2020	President's Award, University of South Carolina Demonstrated major achievements in service, leadership, academics, and research
2020	Outstanding Senior Award, University of South Carolina
2019	Ellen E. Look and Anthony J. Cavalieri Endowed Scholarship Biological Sciences Departmental Scholarship
2019	South Carolina Honors College Research Travel Grant
2016-2020	Carolina Scholarship (highest merit-based award for in-state students)
2016-2020	South Carolina Palmetto Fellows Scholarship (in-state merit-based award)
2016-2020	President's List [6x], University of South Carolina
2016-2020	Alpha Lambda Delta Honors Society

INVITED PRESENTATIONS

2025 **IGB Leibniz-Institute of Freshwater Ecology and Inland Fisheries**, Disease Evolutionary Ecology Research Group, Berlin, Germany (seminar)

DynaSym Kick-off Meeting, Konstanz, Germany (seminar)

CONTRIBUTED PRESENTATIONS

- 2026 Migration and colder temperatures constrain microsporidian parasite outbreaks in zooplankton populations. Ecology & Evolution of Infectious Disease Conference, Blacksburg, VA (poster)
- 2025 Parasites mediate predator impacts on prey density. Ecological Society of America Meeting, Baltimore, MD (talk)
- ‘Sloppy’ predation affected infectious disease dynamics of obligate killer and continuous shedder parasites differently. Ecology & Evolution of Infectious Disease Conference, South Bend, IN (poster)
- 2024 How does parasite environmental transmission stage concentration change before, during, and after disease outbreaks? Unifying Ecology Across Scales, Gordon Research Conference, Hooksett, NH (poster)
- 2023 How does parasite environmental transmission stage concentration change before, during, and after disease outbreaks? Ecological Society of America Meeting, Portland, OR (talk)
- 2022 Does seasonal variation in parasite transmission stage distribution influence the timing and location of disease outbreaks? Ecological Society of America Meeting, Montreal, Canada (talk)
- Linking parasite transmission stage concentration to epidemics in zooplankton populations. Ecology & Evolution of Infectious Disease Conference, Atlanta, GA (poster)
- 2021 Fitness effects of spontaneous mutations. Asilomar (virtual talk during COVID-19)
- 2019 Do warmer temperatures increase the effects of spontaneous mutations in *Daphnia pulex*? Evolution Meetings, Providence, RI (poster)
- Do warmer temperatures increase the effects of spontaneous mutations in *Daphnia pulex*? Southeastern Population Ecology and Evolutionary Genetics Conference, Pendleton, SC (poster)

TEACHING & MENTORING EXPERIENCE

Graduate Student Instructor, University of Michigan August 2020 – April 2021
 Fall 2020 BIO 171: Introductory Biology: Ecology and Evolution
 Winter 2021 BIO 130: Animal Behavior

Graduate Teacher Certificate, University of Michigan August 2020 – May 2025

- Refining teaching skills through two semesters of teaching, five workshops, mentorship from faculty members, consultations on classroom teaching, developing new course materials, and writing a teaching philosophy statement

Graduate Mentor, University of Michigan August 2021 – May 2025

- Mentored three undergraduates on independent research projects
- EEB Big Sib for a first-year Ph.D. student

CURRENT MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society of Naturalists
 Association for the Sciences of Limnology and Oceanography
 Ecological Society of America
 Phi Beta Kappa Honor Society

OUTREACH & SERVICE ACTIVITIES

Peer-Reviewing November 2022 – present

- Manuscript reviewer for: *BMC Biology*, *Ecology*, *Ecology & Evolution*, *Ecology Letters*, *Freshwater Biology*, *International Journal for Parasitology*, *Journal of Applied Ecology*, and *Oecologia*

Letters to a Pre-Scientist Program August 2025 - present

- Pen pal program designed to humanize scientists, demystify STEM careers, and empower all students to consider a future in STEM

Science Communication Fellow, University of Michigan

January 2024 – May 2024

- Designed, created, and led an interactive science activity about lake food webs and life as an ecologist for the general public at libraries and museums

Diversity, Equity, and Inclusion Certificate, University of Michigan September 2023 - April 2024

- Wrote a diversity statement, conducted an informational interview, completed 10 workshops on topics such as bystander intervention, unconscious bias, and creating inclusive environments

Michigan DNA Day Ambassador, University of Michigan

April 2024

- Composed and taught DNA-focused science lessons for three high school science classes

Park Steward, Natural Area Preservation (NAP), Ann Arbor, MI

August 2020 – May 2025

- Developed and executed a workplan for invasive species removal at a local oak savannah