

# Joshua C. Fowler

## *Curriculum vitae*

Department of Biology  
University of Miami  
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(he/him/his)

## Employment

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**Postdoctoral Research Associate** **2023–present**  
– Department of Biology, University of Miami  
– Supervisors: Michelle Afkhami and Chris Searcy

## Education

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**Ph.D** in Ecology and Evolutionary Biology **2018–2023**  
– **Rice University**, Houston, TX  
**BS** in Ecology and Evolutionary Biology and **BA** in French **2013–2017**  
– **University of Arizona**, Tucson, AZ  
**National Student Exchange Program** **2015–2015**  
– **Université de Montréal**, Montréal, Québec, Canada

## Submitted manuscripts

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**Fowler JC**, Ziegler S, Whitney KD, Rudgers JA, Miller TEX (submitted). Microbial symbionts buffer hosts from the consequences of environmental stochasticity.

Bachelot B, Compagnoni A, Brandão-Diaz PFP, Carter SK, Donald ML, **Fowler JC**, Gorczynski D, Grupstra CGB, Neale ZR, Zhang L, Rudgers JA, Zhu K, Miller TEX (in review). Sensitivity to climate variability in North American plant and animal populations.

## Publications

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### 2022

**Fowler JC**, Donald ML, Bronstein JL, Miller TEX (2022). The geographic footprint of mutualism: How mutualists influence species' range limits. *Ecological Monographs*: e1558. doi: [10.1002/ecm.1558](https://doi.org/10.1002/ecm.1558)

### 2021

Dong T, Zhang R, Liu J, **Fowler JC**, Miller TEX, Xu X (2021). Warming alters sex-specific responses in leaf defense against insect herbivory in *Populus cathayana*. *Environmental and Experimental Botany*, 104557. doi: [10.1016/j.envexpbot.2021.104557](https://doi.org/10.1016/j.envexpbot.2021.104557)

### 2020

Liu J, Zhang R, Xu X, **Fowler JC**, Miller TEX, Dong T (2020). Effect of summer warming on growth, photosynthesis and water status in female and male *Populus cathayana*: implications for sex-specific drought and heat tolerances. *Tree Physiology*, 40(9), 1178-1191. doi: [10.1093/treephys/tpaa069](https://doi.org/10.1093/treephys/tpaa069)

### 2018

Evans MEK, Gugger PF, Lynch AM, Guiterman CH, **Fowler JC**, Klesse S, Riordin EC (2018) Dendroecology meets genomics in the common garden: new insights into climate adaptation. *New Phytologist*, 218(2):401–403. doi: [10.1111/nph.14968](https://doi.org/10.1111/nph.14968)

## Presentations and Posters

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### 2023

**Fowler JC**, Moutouama, JK, Miller TEX (2023, June) Increasing prevalence of plant-fungal symbiosis over two centuries of climate change. Contributed virtual presentation for Seed Microbiome Working Group bi-monthly meeting.

### 2022

**Fowler JC**, Donald ML, Bronstein JL, Miller TEX (2022, August) The geographic footprint of mutualism; How mutualists influence species' range limits. Invited to Organized Oral Session on *Theory and Big Data for Species on the Move* at the 2022 Annual meeting of the Ecological Society of America, Montreal.

### 2021

**Fowler JC**, Dufresne LR, Segal EC, Miller TEX (2021, January) Using museum specimens to assess the response of grass-fungal endophytes to climate change. Contributed virtual presentation at 2021 Houston Regional Ecology and Evolution Symposium.

**Fowler JC**, Dufresne LR, Segal EC, Miller TEX (2021, January) Using museum specimens to assess the response of grass-fungal endophytes to climate change. Contributed virtual presentation at American Society of Naturalists 2021 Virtual Asilomar Meeting.

### 2020

**Fowler JC**, Ziegler S, Whitney KD, Rudgers JA, Miller TEX (2020, August) Demographic buffering by context-dependent host-microbe interactions in stochastic environments. Poster session presented at Ecological Society of America 2020 Virtual Annual Meeting.

### 2019

**Fowler JC**, Whitney KD, Rudgers JA, Miller TEX (2019, January) Vertically transmitted symbionts buffer host demographic variability. Poster session presented at the Sixth Annual Evolutionary Demography Society Meeting, University of Miami, Coral Gables, FL.

## Academic Awards, Grants and Scholarships

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2023	2023 Annual Meeting Registration Grant	Ecological Society of America
2023	Outstanding EEB PhD Thesis Award	Rice, Dept. of BioSciences
2022	PPE Student Travel Award	Plant Pop. Ecology Section, ESA (\$600)
2022	Graduate Student Travel Award	Rice, Dept. of BioSciences (\$300)
2022	Joe Davies Prize for Outstanding Service as a TA	Rice, Dept. of BioSciences
2022	Texas Ecolab Program Grant	(\$2000)
2021	EEB Peter Savvas Nelson Award	Rice, Dept. of BioSciences
2021	Texas Ecolab Program Grant	(\$4855)
2020	NSF Graduate Research Fellowship	Honorable Mention
2020	Texas Ecolab Program Grant	(\$6147)
2019	Student Travel Award	EvoDemo Society Meeting (\$150)
2018	East-DeMarco Graduate Student Academic Scholarship	Rice, Dean of Natural Sciences (\$2000)
2018	First Year Graduate Student Scholarship	Rice, Dean of Graduate Studies (\$2000)
2013–2017	National Merit Finalist Scholarship, Dean's List	University of Arizona

## Mentoring and Teaching Experience

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### Courses taught

2022	Teaching Assistant	Coral Reef Ecosystems (Rice University)
2020	Coordinator	BioSciences Professional Development Series (Rice University)
2019	Teaching Assistant	Advanced Communication in Biological Science (Rice University)
2018	Teaching Assistant	Ecology (Rice University)
2017	Undergraduate Preceptor	Conservation Biology (University of Arizona)

### Undergraduate research mentorship

2023-present	Anastasia Chiarini (U. of Miami)	Undergrad. Ind. Res.
2023-present	Esequiel Gonzalez(U. of Miami)	Undergrad. Ind. Res.
2023-present	Lucy Xu (U. of Miami)	Undergrad. Ind. Res.
2022 –present	Mallory Tucker (Rice U.)	Undergrad. Ind. Res.
2022	Emma Scales (Rice U.)	Undergrad. Ind. Res.
2021	Ava Johnson (Rice U.)	Undergrad. Ind. Res.
2021	Arinze Appio-Riley (Rice U.)	Rice Summer Undergraduate Research Fellow
2020–2021	Ella Segal (Rice U.)	Undergrad. Ind. Res. /Miller Lab REU
2020	Bella Gutierrez (Rice U.)	Undergrad. Ind. Res.
2019–2020	Lani Dufresne (Rice U.)	Undergrad. Ind. Res. /Miller Lab REU
2019	Kyle Dickens (Rice U.)	Miller Lab REU

### Other teaching experience

2015	Tutor	Strategic Alternative Learning Techniques Center, University of Arizona
2014–2015	French Counselor	Les Voyageurs, Concordia Language Villages, Bemidji, Minnesota

## Community Involvement and Service

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### Positions held

2020–2021	President	EEB Graduate Student Association
2019–2020	Treasurer	EEB Graduate Student Association
2019–2021	President	Rice University Cycling and Triathlon

### Scientific journal reviews

2020	<i>Proceedings B., Oecologia</i>
2023	<i>Ecology, Ecology Letters, Proceedings B.</i>

### Science outreach

02/2022	Debakay High School Annual Scientific Symposium - STEM career outreach event about succeeding in college and graduate school
2019–2023	Rice EEB Owls Outreach Program - Engaging underserved Houston area middle and high school students in hands-on science learning
12/2018	Houston Science Olympiad Exam writer - Writing questions for the herpetology exam Houston's Science Olympiad competition