

CHRIS TALBOT | CV

Ph.D. Student in Computational Biology, Cornell University
National Science Foundation Graduate Research Fellow

Status: Ph.D. Student in Computational Biology at Cornell University, Messer Lab

Fields: Population Genetics, Computational Biology, Evolutionary Ecology

Interests: Population genetics, global change, community ecology, stochastic modeling

Techs: Python, R, C++, Rust, TypeScript, SLiM

Ithaca, New York

chris-a-talbot.com

christopher.a.talbot@gmail.com

(269) 751-9444

Summary

- First-gen academic and biologist with years of experience in lab, field, and computational work.
- Interested in patterns and drivers of ecological organization across spatiotemporal scales under global change.
- Exploring emerging methods for complex systems, including community science and machine learning.

Education

Ph.D. Computational Biology - Cornell University

2025-Present

· Advisor: Dr. Philipp Messer

· Key Funding: National Science Foundation Graduate Research Fellowship Program (2025-2030)

B.S. Ecology, Evolution, and Biodiversity - University of Michigan (UMich) - GPA 3.74

2024

· Graduated with **Highest Honors** under the supervision of Dr. Marjorie Weber

· Honors Thesis: Patterns of floral color in communities of common Northeast American wildflowers

· Coursework: Statistics & probability, programming & data structures, genetics, macroevolution, ethnobotany

Associates of General Studies - Grand Rapids Community College (GRCC) - GPA 3.9

2020

· Computer Science & Mathematics Concentration

· Coursework: C++ programming, database development, web application programming, information security

Research

Doctoral Researcher-Messer Lab - Cornell University-Computational Biology

2025-Present

Research Programmer-Bradburd Lab - UMich-Ecology & Evolutionary Biology (EEB)

2024-2025

· Project: Testing, documenting, and visualizing novel geographic evolutionary inference methods

Lab Technician-Weber Lab - UMich-EEB

2022-2025

· Project: "Patterns of floral color in communities of common Northeast American wildflowers"

Undergraduate Researcher-Márquez Lab - UMich-EEB

2021-2022

· Project: "Optimizing CRISPR-Cas9 genetic modification in *Phylllobates* poison-dart frogs"

Publications

Published:

2025 – Graham, C. D. K., ..., Talbot, C. A., Yerks, A. L., & Weber, M. G. Mite domatia and associated mite density in a North American Eastern Deciduous Forest in Michigan. **Published in Ecology and Evolution.**

Pre-prints/In Review:

2025 – Talbot, C. A., Bradburd, G.S. ARGscape: A modular, interactive tool for manipulation of spatiotemporal ancestral recombination graphs. arXiv:2510.07255 [q-bio.PE]. **Submitted to Bioinformatics.**

2025 – Talbot, C. A., Weber, M. G. Opposing seasonal dynamics in phylogenetic and flower color diversity of co-flowering wildflower assemblages. bioRxiv 2025.10.21.683724. **Submitted to Ecology.**

In Prep:

2025 – Talbot, C. A., Bradburd, G. S. Optimizing temporal sampling strategies for spatial population genetic inference using ancestral recombination graphs. **In Preparation for Genetics.**

Software Development

Open-Source Contributor - "SLiM" simulator, Messer Lab, Cornell University	2025-Present
Primary Developer - "ARGscape" software	2025-Present

Funding

Total: \$174,280

Graduate Research Fellowship - National Science Foundation (\$159,000)	2025-2030
Graduate School Dean's Scholar Fellowship - Cornell University (\$2,000)	2025
Chancellor's Fellowship - University of California-Berkeley (Declined)	Offered 2025
Eugene Cota-Robles Fellowship - University of California-Davis (Declined)	Offered 2025
Eugene Cota-Robles Fellowship - University of California-Santa Cruz (Declined)	Offered 2025
Biological Station Student Fellowship - UMich Biological Station (\$1,680)	2023
Student Research Grant - UMich UROP (\$5,000)	2022-2023
Travel Grant - SACNAS (\$2,500)	2022
Biomedical & Life Sciences Summer Fellowship - UMich UROP (\$4,000)	2022
Community College Summer Institute Fellowship - UMich-School of Info (\$100)	2019

Invited Talks

tskit-dev Seminar - Virtual (Invited Talk)	2025
ARGEvol Conference - Porto, Portugal (Invited Talk)	Upcoming 2025

Contributed Talks

Third Joint Congress on Evolutionary Biology - Montreal, QC (Talk)	2024
Botany 2024 - Grand Rapids, MI (Lightning Talk)	2024
UMich Ecology & Evolutionary Biology - Ann Arbor, MI (Honors Thesis Defense)	2024

Posters

Third Joint Congress on Evolutionary Biology - Montreal, QC	2024
Botany 2024 - Grand Rapids, MI	2024
UMich Undergraduate Research Opportunity Program Symposium - Ann Arbor, MI	2022

Honors & Awards

President's Scholar - 1 semester, Grand Rapids Community College (GRCC)	2020
Dean's Scholar - 4 semesters, GRCC	2019-2020
Phi Theta Kappa Honors Society - Invited Member, GRCC	2019

Teaching & Mentoring

Assistant Percussion Manager - Auburn Enlarged City School District, Auburn, NY	2025-Present
Docent (Volunteer Educator) - Matthaei Botanical Gardens & Nichols Arboretum	2023-Present
Test Writer & Proctor, Forestry & Botany (Volunteer) - UMich Science Olympiad	2023-2025

Director of Percussion - Lake Orion Community Schools, Lake Orion, MI	2022-2023
Transfer Student Peer Mentor - UMich-LSA Transfer Bridges Program	2022-2023
Director of Percussion - Spring Lake Public Schools, Spring Lake, MI	2019-2022
Freelance Percussion Instructor & Composer - 8 school districts across Michigan	2018-2022
Professional Peer Tutor - GRCC Drop-in Tutoring Labs - Mathematics, Language Arts	2019-2020

Professional & Service

Percussionist - Straits of Mackinac Concert Band, Mackinaw City, MI	2024-2025
Co-Founder, President, and Volunteer - Students for Public Power @UM	2023-2025
Shift Leader - Biggby Coffee, Grand Rapids, MI	2021-2023
Seasonal Retail Lead - John Ball Zoo, Grand Rapids, MI	2019

Languages

R - Advanced	C1
German - Intermediate	B2
C++ - Intermediate	B2
Python - Intermediate	B2
TypeScript - Intermediate	B1
Nishnaabemwin (Eastern Ojibwe) - Beginner	A1

Certifications

Certified Michigan Naturalist - Michigan State University Extension	2024
--	------

Professional Memberships

American Society of Naturalists - Student Member	2024-Present
Botanical Society of America - Student Member	2024-2025
Society for the Study of Evolution - Student Member	2022-Present

Extracurriculars

Founding Member - UMich Ecological Restoration Club	2023-2025
Vice President - GRCC Programmers	2019-2020
Ensemble & Section Leader, Performer - Genesis Percussion Ensemble	2014-2020