

Alivia G. Nytko

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Education

Ph.D. Ecology and Evolutionary Biology August 2022 – Present
The University of Tennessee, Knoxville, TN Current GPA 4.00/4.00
Advisors: Joe Bailey & Brian O'Meara

B.S. Biology – Ecology & Evolutionary Biology Concentration May 2022
The University of Tennessee, Knoxville, TN GPA 3.91/4.00
Thesis Advisor: Jen Schweitzer

Software Engineering Bootcamp June 2024
The University of Tennessee, Knoxville, TN
Center for Professional Educational & Lifelong Learning

Research Grants and Fellowships

Active funding

- 2022-2027 \$111,000 NSF Graduation Research Fellowship Program (GRFP)

Completed Funding

- 2021-2022 \$1,500 Faculty Research Assistant Funding (FRAF)
- 2023-2024 \$2,750 UTK EEB Graduate Research Award

Awards

- E. Lucy Braun Award – ESA (2024)
- Tom Hallam Award (2024)
- Ray Holton Plant Science Award (2023)
- Global Catalyst Student International Travel Grant (2023)
- Tennessee Plant Research Center Travel Fellowship (2023)
- Graduate Student Senate (GSS) Travel Award (2023)
- Graduate Researchers in Ecology, Behavior, and Evolution (GREBE) Travel Award (2023)
- Best Science Communication at the 6th Annual EEB Undergraduate Research Symposium (2022)
- Hochman Research Award – Funds Declined (2022)
- Volunteer of Distinction – Extraordinary Academic Achievement (2022)
- Volunteer of Distinction – Extraordinary Professional Promise (2022)

- Best Student Presentation Award in the FEWSUS International Symposium (2021)
- Dean's List at the University of Tennessee – Summa Cum Laude (2019 – 2022)
- Volunteer Scholarship Recipient (2019 – 2022)
- Distinguished Tennessean Award (2019 – 2022)

Publications

Published Manuscripts

- **A.G. Nytko**, J.K. Senior, R.C. Wooliver, J. O'Reilly-Wapstra, J.A. Schweitzer, J. Bailey. An evolutionary case for plant rarity: *Eucalyptus* as a model system. *Ecology and Evolution* (2024), <https://doi.org/10.1002/ece3.11440>.
- **A.G. Nytko**, A.M. Hord, J.K. Senior, J. O'Reilly-Wapstra, J.A. Schweitzer, J. Bailey. Evolution of rarity and phylogeny determine above- and belowground biomass in plant-plant interactions. *PLOS ONE* (2024), <https://doi.org/10.1371/journal.pone.0294839>.
- S.J. Love, J.D. Edwards, C.N. Barnes, T.W. d'Entremont, A.M. Hord, **A.G. Nytko**, N.B. Sero, S.N. Kivlin, J.K. Bailey. Identifying research targets and risks in climate change studies to break barriers to broad inference. *PLOS Climate* (2023), <https://doi.org/10.1371/journal.pclm.0000320>.

Scientific Software

- **GeoFunPhy R package (DOI: 10.5281/zenodo.13845718)**
 - <https://github.com/anytko/GeoFunPhy>
 - Calculates and compares species' geographic range sizes, evolutionary distinctiveness, and functional trait distinctiveness to classify the eco-evolutionary status of species varying in rarity.
- **EcoSMART: Statistics, Modeling, Analysis of Ranges and Traits**
 - <https://anytko.shinyapps.io/ecosmart/>
 - Maps and calculates species native and invasive ranges.
 - Provides animations representing species occurrences through time.
 - Displays connected populations through time and estimates dispersal rates.

Presentations

- Ecological Society of America Conference (2023)
- The 6th Annual EEB Undergraduate Research Symposium (2022)
- NSF FEWSUS international Student Workshop – Co Chair position (2022)

- The 26th Annual Exhibition of Undergraduate Research and Creative Achievement (EUREKA) (2022)
- 12th Annual Undergraduate Research Symposium at The University of Tennessee – Knoxville (2021)
- The 25th Annual Exhibition of Undergraduate Research and Creative Achievement (EUREKA) (2021)
- NSF Student FEWSUS International Symposium (2021)
- University of Tennessee Summer Research Scholars Symposium (2021)

Conferences, Working Groups, & Symposia Organized

- Special Session Organizer (Role: Organizer, Session Chair, ESA 2025) for “Breaking barriers to incorporating phylogenetics in ecology” (proposal submitted, awaiting acceptance)

Teaching Experience

The University of Tennessee, Knoxville, TN Graduate Teaching Assistant Organismal & Ecological Biology – BioLit Ecology	2022 – 2023
The University of Tennessee, Knoxville, TN Undergraduate Teaching Assistant Skills of Biological Investigation Lab	2020 – 2021

Skills

- R
- Python
- ArcGIS
- Ecological Niche Modeling
- JavaScript
- React
- Redux
- Django

Professional Service

Manuscript Review

Proceedings of the National Academy of Sciences (PNAS)
Science of the Total Environment

Professional Society Service

2021 – 2023

President, Delta Alpha Pi Honors Society, University of Tennessee

- Facilitated 3rd Annual DAPi Disability Awareness Seminar

Outreach

Darwin Day committee

2024 – 2025

Sigma Alpha Graduate Application Workshop

UTK College of Arts and Sciences Undergraduate Orientation

Professional Society Membership

- Ecological Society of America
- British Ecological Society
- Delta Alpha Pi Honors Society