

# 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

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## 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

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## 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 6<sup>th</sup> 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

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### 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

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- **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

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

- The 26<sup>th</sup> Annual Exhibition of Undergraduate Research and Creative Achievement (EUREKA) (2022)
- 12<sup>th</sup> Annual Undergraduate Research Symposium at The University of Tennessee – Knoxville (2021)
- The 25<sup>th</sup> 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**

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

## **Teaching Experience**

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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**

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

## **Professional Service**

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### **Manuscript Review**

Science of the Total Environment

**Professional Society Service**

President, Delta Alpha Pi Honors Society, University of Tennessee

2021 – 2023

- Facilitated 3<sup>rd</sup> Annual DAPi Disability Awareness Seminar

**Outreach**

Darwin Day committee

Sigma Alpha Graduate Application Workshop

2024 – 2025

UTK College of Arts and Sciences Undergraduate Orientation

**Professional Society Membership**

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