Blair Young

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EDUCATION

2022 **B.S. Ecology, Evolution, & Natural Resources** - Rutgers University – New Brunswick, New Jersey

2024- **Graduate Program in Ecology and Evolution** - Rutgers University – New Brunswick, New Jersey
Advisor: Lena Struwe

RESEARCH INTERESTS

Bryology; Bacterial Endophytes; Bacteria-Plant Mutualisms; Taxonomy & Systematics of Bryophytes; Evolutionary Processes in Plants; Plant Macroevolution; Collections-based Research; Botanical Biodiversity

SKILLS

• Light Microscopy • Confocal Microscopy • Fluorescent Staining Techniques • Axenic Plant Culture • Plant Specimen Collections • Collection Curation • Symbiota Database • R Programming Language • Taxonomic Interpretation • Bryophyte Identification • Field Surveying

ARTICLES

Published

Young B, Thiers B, Struwe L, and White J. 2025. Endophytic bacteria discovered in oil body organelles of the liverworts Marchantia polymorpha and Radula complanata. American Journal of Botany 112(3): e70017.

Chang X, **Young B**, Vaccaro N, Strickland R, Goldstein W, Struwe L, and White J. 2023. Endophyte symbiosis: evolutionary development and impacts of plant agriculture. Grass Research 3:18.

SCIENTIFIC PRESENTATIONS

Young B, Vaccaro N, Struwe L, and White J. A Potential Symbiosis of Nitrogen Fixing Bacterial Endophytes and Their Bryophyte Hosts. Botany 2023 conference, (Boise, Idaho), 22-26 July 2023. (presentation)

Vaccaro N, **Young B**, Struwe L, and White J. Novel Research into Bacterial Nitrogen Fixation in Vegetative Cells of Mosses and Liverworts. Botany 2023 conference (Boise, Idaho), 22-26 July 2023. (poster)

Young B. The Biogeography of Ploidy & Reproductive Mode in the Xeric-Adapted Fern *Myriopteris alabamensis* (Buckley) Grusz & Windham. Texas Plant Conservation Conference 2022 (Fort Worth, Texas), 14-15 August 2022. (poster)
Young B and Struwe L. Non-Target Lichen & Bryophyte Incidence Patterns and Diversity of NJ Woody Angiosperm Herbarium Specimens. Botany 2022 conference (Anchorage, Alaska), 24-27 July 2022. (presentation)
Young B. A Bryologist's Brochure: Mosses of New Jersey and Where to Find Them. New Jersey Natural Lands Trust Annual Report 2022. New Jersey Natural Lands Trust, NJDEP. (article)

AWARDS & HONORS

2023 **A. J. Sharp Award**, research award for the best student paper at Botany 2023 in the Bryological/Lichenological Section for the "Bacterial Endophytes of Liverwort Oil Body Organelles" presentation, 25 July 2023.

2024 **ASPT Undergraduate Research Award**, research award for the undergraduate research "Non-Target Lichen & Bryophyte Incidence Patterns and Diversity of NJ Woody Angiosperm Herbarium Specimens".

2024 **Dean's Fellowship**, Rutgers University, fellowship funding one year of graduate school.

RESEARCH EXPERIENCE

2021-2022 **Non-Target Lichen & Bryophyte Incidence Patterns and Diversity of NJ Woody Angiosperm Herbarium Specimens.** Independent research project. Rutgers University, New Brunswick, NJ. Woody herbarium specimens were examined for occurrences of bryophyte and lichen epiphytes to tackle the problem of poor data resolution in under-collected taxonomic groups.

2022 **The Biogeography of Ploidy & Reproductive Mode in the Xeric-Adapted Fern *Myriopteris alabamensis* (Buckley) Grusz & Windham.** Professional Research Project. University of Texas Herbarium, Austin, Texas.
Examined spore samples from several hundred specimens of the fern *Myriopteris alabamensis* from Texas and the surrounding regions to assess the ranges of the sexual diploid and apomictic triploid lineages within the species complex.The rarer sexual diploid cytotype was confirmed to exist only in the Sierra Madre Oriental mountains in Nuevo Leon, Mexico.

2023 **A Potential Symbiosis of Nitrogen Fixing Bacterial Endophytes and Their Bryophyte Hosts.** Professional Research Project. White Lab, Rutgers University, New Brunswick, New Jersey.

Initiated an effort to catalogue and characterize occurrences of intracellular bacterial endophytes in specific bryophyte tissues across a diverse array of phylogenetically distinct species using light microscopy and various staining techniques.

2025 **Endophytic Bacteria Discovered in Oil Body Organelles of the Liverworts Marchantia polymorpha and Radula complanata.**
Professional Research Project. White Lab, Rutgers University, New Brunswick, New Jersey.
Used fluorescent staining with confocal microscopy to show the presence of endophytic bacteria in oil body organelles of the two study species.
Advisors: Lena Struwe and James White

WORK EXPERIENCE

2021-2022 **Herbarium Intern**, Chrysler Herbarium, Rutgers University
2022 **Herbarium Intern**, University of Texas Herbarium, University of Texas at Austin
2022 **Herbarium Volunteer**, Chrysler Herbarium, Rutgers University
2022 **Lab Volunteer**, White Lab, Rutgers University
2022-2023 **Curatorial Assistant**, Chrysler Herbarium, Rutgers University
2022-2023 **Laboratory Technician**, White Lab, Rutgers University

TEACHING EXPERIENCE

2024 **Plant Diversity & Evolution (11:216:411)**, Grader, Rutgers University
2024 **Plant Diversity & Evolution Lab (11:216:412)**, Invited Lecturer, Rutgers University

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Botanical Society of America, 2023-present
- Bryological and Lichenological Society, 2022-present
- American Fern Society, 2022-present
- American Society of Plant Taxonomists 2024-Present

PROFESSIONAL EDUCATION

- Andrew’s Foray Workshop 2023
- Crum Workshop 2024
- Crum Workshop 2025