Julia R. Butler

Master's Candidate University of Tennessee-Knoxville, Ecology and Evolutionary Biology Department jbutle63@vols.utk.edu

FIELDS OF EXPERTISE

Botany, Bryology, Microbiology, Phylogenetics, Horticulture, Systematics, Evolutionary Biology, Ecology, Educational outreach, Natural History Collections, Field Work, Taxonomy.

EDUCATION

Masters in Ecology and Evolutionary Biology, *University of Tennessee – Knoxville (UTK)*. Aug. 2021- Present. Major: Ecology and Evolutionary Biology. Advisor: Dr. Jessica Budke.

Bachelor of Arts, *Oberlin College of Arts and Sciences*. May 2019. Major: Biology (concentration in Botany), Minor: Geology. Advisor: Dr. Roger Laushman.

AWARDS AND FUNDING

2022. The A. J. & Evelyn Sharp Fund: UTK, EEB Department, \$10,000
2019. Hope Hippard Memorial Scholarship, Oberlin College Biology Department, \$500
2018-2019. Dolores Taylor, MD '67 Scholarship, Oberlin College, \$1,000
2018. National Science Foundation (NSF) Research Experience for Undergraduates (REU), University of Florida (UF) Botany Department, Stuart McDaniel, Dimensions of Biodiversity: Broadening Participation, \$6,000.
2015. Scholarship for Young Language Leaders, Verona Area High School, \$250

SOFTWARE, COMPUTATIONAL, & BENCH SKILLS

R (statistical computing and graphics) – RAxML - MrBayes – MAFFT – Geneious – BLAST – Python – DNA Extraction – DNA Data Analysis – Aseptic Lab Techniques – GLP/GMP – Microbial Culturing and Quantification Techniques – Pipetting Techniques

WORK AND RESEARCH EXPERIENCE

September 2022–Present. Microbiology Intern. SiREM Knoxville, GeoSyntec. Supervisor: Sarah Cronk.

- August 2021–Present. *Teaching Assistant*. University of Tennessee-Knoxville Ecology and Evolutionary Biology Department.
- January 2020–February 2022. *Microbiology Technician*. Microbiology Department, Eurofins Food Integrity & Innovation.
- August 2019–November 2020. *Research Associate*. College of Agriculture & Life Sciences, DeLeon Laboratory, University of Wisconsin-Madison.
- May 2019–August 2019. *Laboratory Technician*. Department of Biology, Oberlin College, Supervisor: Angela Roles.
- June 2018–August 2018. *NSF REU Student Research Assistant*. Department of Botany, University of Florida, Supervisor: Stuart McDaniel.
- January 2018–February 2018. *Laboratory Assistant*. Department of Botany, University of Florida, Supervisor: Stuart McDaniel.

UNDERGRADUATE STUDENT MENTORING

Utilizing and imaging herbarium specimens for the molecular phylogenetic analysis of Fissidens subg. Octodiceras mosses. Independent research project.

Julian Broughton – Major: Biology; Concentration: Biostatistics Sept. 2022 - Present

CONFERENCE ABSTRACTS AND PRESENTATIONS

Butler, Julia; Roles, A. J.; Contreras, J.; Ranathunge, C.; McDaniel, S. 2019. Title: The evolutionary history and genetic diversity of three closely related *Aulacomnium* Species. Botany 2019. Poster Presentation.

Butler, Julia; Roles, A. J.; Contreras, J.; Ranathunge, C.; McDaniel, S. 2019. Community Genomic Drivers of Moss Microbiome Assembly and Function in Rapidly Changing Alaskan Ecosystems. Oberlin Senior Symposium. Oral Presentation.

TEACHING EXPERIENCE

2021- Present: Graduate Teaching Assistant – UTK

- BIO 113 Introduction to Plant Biology I (Lecture, Fall 2022)
- BIO 114 Introduction to Plant Biology II (Lecture, Fall 2023)
- BIO 115 Introduction to Plant Biology (Lab, Fall 2021)

2021 Spring: Graduate Research Assistant - UTK

• HERB – University of Tennessee Herbarium (TENN) researcher (Spring 2022)

GRADUATE COMMITTEE

Dr. Jessica M. Budke, Dr. Randall Small, Dr. Brian O'Meara

FIELD BOTANY EXPERIENCE

Botanical Outreach

Spring Wildflower Pilgrimage	Spring 2023
Great Smoky Mountains National Park: Fern and Moss Walk Lea	ader
WeDigBio	2021-2022
Global data campaign for digital biocollections: Participant and I	Leader

Plant Collection Trips

Chance Creek Nature Preserve, Lorain Co., Ohio, USA 2018-2019

• Analyzed how moss populations have shifted with canopy change due to the Emerald Ash Borer by searching a historical collection site for extant populations. With: Diane H. Lucas (Ohio Moss and Lichen Association).

Multiple locations in Alaska, Seward to Toolik Field Station, USA Summer, 2018

• Assisted with research by collecting *Aulacomnium* mosses across a latitudinal gradient in the McDaniel lab at the University of Florida. With: Stuart McDaniel, Juan Contreras, and Angela Roles.

Highlands, Macon Co., North Carolina, USA

Winter, 2018

• Collected specimens around the Highlands Biological Station to be identified and stored at the herbarium. With: Stuart McDaniel.

PUBLIC AND COMMUNITY OUTREACH

GLOBAL Transcription Weekly Workshops

• Organized a recurring workshop, in collaboration with Miranda Zwingelberg, for citizen scientists to join the effort to transcribe thousands of digitized bryophyte herbarium specimens from all around the world.

Girl Scouts- Math and Science in Nature

• Assisted with a germination experiment that scouts were then able to take home and collect their own data on. National Institute for Mathematical and Biological Synthesis (NIMBioS) event for Knoxville Girl Scout Troop 28005.

LANGUAGE SKILLS

Basic knowledge of written and spoken French.

PROFESSIONAL SOCIETIES

Member: American Society of Plant Taxonomists – Botanical Society of America – Ohio Moss and Lichen Association – American Bryological and Lichenological Society.

Spring 2022

Fall 2022