

Laura M. Boggess, Ph.D.

Assistant Professor of Conservation Biology, Warren Wilson College

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Education

PhD Plant Science 2025

The City University of New York and the New York Botanical Garden. Dissertation: *Disturbance and Diversity: Lichens in Changing Landscapes*. Advisor: Dr. James Lendemer

MS Plant Science 2022

The City University of New York and the New York Botanical Garden. Advisor: Dr. James Lendemer

MS Ecology and Evolution 2013

Appalachian State University. Thesis: *Cliff Ecology of the Big South Fork National River and Recreation Area*. Advisors: Gary Walker and Mike Madritch

BA Biology with a minor in Environmental Science 2006

University of North Carolina, Chapel Hill. With distinction. Morehead-Cain Scholar

Teaching Experience

Assistant Professor, Conservation Biology,

Assistant Professor, Ecology and Conservation Biology, Mars Hill University, May 2023-present

- Plan, prepare and teach biology and environmental science lectures, labs, and honors seminars for undergraduate students. Courses include: Conservation Biology, Population and Community Ecology, Introduction to Geographic Information Systems (GIS), Natural History of the Southern Appalachians, Ecology, Senior Seminar in Scientific Research, Introduction to Biology, Introduction to Environmental Science, First-year Student Success, Honors Seminar in Cliff Ecology, Honors Seminar in Healing Ecogrief, Environmental Studies Practicum

Biology and Environmental Science Instructor, Mars Hill University Aug. 2014-May 2023

- See above for description. Change of title in 2023.

Field Course Instructor, Highlands Biological Station, Highlands, NC July 2016-present

- Design and co-teach a weeklong intensive summer field course in Cliff and Rock Outcrop Ecology (semi-annual)

Field Course Instructor, Great Smoky Mountains National Park, Tremont, TN 2022-present

- Design and lead weekend workshops in lichen appreciation and ecology for Environmental Educators at the Great Smoky Mountains Institute at Tremont

Yoga Instructor, Madison County, NC Sept. 2015-present

- Teach 1-2 classes per week including vinyasa flow, gentle, and restorative practice. Co-coordinate yoga and meditation offerings at MHU through the Breathing Room, 500-hour Registered Yoga Teacher

Naturalist Mentor, Green River Preserve (GRP), Cedar Mountain, NC **Aug. 2014-2017**

- Served as a seasonal naturalist for summer and fall weekend programs with the School for Environmental Education

Graduate Teaching Assistant, Appalachian State University, Boone, NC **Jan. 2011-May 2014**

- Prepared and taught introductory biology labs and supplemental lectures to undergraduate students

Conservation Experience

Consultant, Cliff Ecology, Southern Appalachian Cliff Coalition, Boone, NC **2011-present**

- Sample, analyze data, and provide suggestions for cliff ecosystem management in the Southeastern US
- Conduct vegetation surveys on Southern Appalachian cliffs in locations including Linville Gorge, Hickory Nut Gorge, Eagle Rock, Little Bearwallow Falls, Rocky Fork State Park, Table Rock State Park, Cumberland Gap National Historical Park, the Obed Wild and Scenic River, the Big South Fork National River and Recreation Area, the Ocoee River Gorge, and Great Smoky Mountains National Park

Friends of Bailey Mountain, Conservation and Fundraising Committee Chair **2016-present**

- Founding member of the Friends of Bailey Mountain Preserve, a citizen group formed to support a 200-acre public preserve near Mars Hill with stewardship and development
- Ecology and Education Committee co-chair, focus on ecological restoration, community outreach, and education
- Fundraising committee chair for the purchase of the West Property, a possible 85-acre addition

Climber Conservation Liaison, Carolina Climber's Coalition, and the Access Fund **2016-present**

- Coordinate conservation efforts among the climbing community, land managers, and biologists including presentations, meetings with land managers, cliff vegetation surveys

Roan Mountain Stewardship Committee, Collaborative Working Group **2015-present**

- Recommend management strategies for the Roan Highlands on a landscape scale alongside representatives from 15 non-profits, government agencies, and universities

AmeriCorps Land Protection Associate, Blue Ridge Conservancy, Boone, NC **Sept. 2013-May 2014**

- Monitored conservation easements and assisted with new land conservation projects
- Assisted USFW biologists with VA big-eared bat surveys and monitoring in Watauga and Avery counties

Peace Corps Volunteer in Sustainable Tourism, Uspantán, Guatemala **Jan. 2008-May 2010**

- Assisted rural communities in the development of sustainable tourism projects to meet conservation and income generation goals and to protect and improve land for the community
- Helped found and lead a Boy and Girl Scout troop, with an emphasis on outdoor and nature connection

Volunteer, SOS Rhino, Sabah, Borneo **summer 2002**

- Tracked Sumatran rhinoceros through Bornean jungle, aided *in situ* conservation efforts and outreach

Research and Field Experience

CUNY Science Fellow, City University of New York Graduate Center, NYC **2019-2025**

- Conducted original research in lichen ecology and conservation at the New York Botanical Garden
- Assisted in the creation of a comprehensive lichen dataset through fieldwork in the southern Appalachian region; project funded by the NSF Dimensions of Biodiversity grant and directed by Dr. James Lendemer

Cliff Ecology Graduate Research, Walker-Madritch Lab, ASU, Boone, NC **2011-2013**

- Conducted a large-scale survey of cliff flora at 60 sites in the Big South Fork National River and Recreation Area, including lichens, bryophytes and vascular plants
- Developed a spatial model to predict diversity of cliff face vegetation to aid in the development of a rock-climbing management plan for the park

Data Carpentries Certified Instructor **May 2024-present**

- Teach weekend workshops in using R for Ecologists, certified by the Carpentries, a global network dedicated to improve pedagogy for teaching data science

Work Study Fellow, Appalachian State Herbarium (BOON), Boone, NC **spring 2013**

Technician, Appalachian State Biology Greenhouse, Boone, NC **spring 2012**

Lab technician and field crew leader, Mitchell Lab, UNC-CH Chapel Hill, NC **summer 2007**

Research Intern, Highlands Biological Station, Highlands, NC **spring 2006**

- Examined pH indicator species in a rich cove forest using the Carolina Vegetation Survey and published a survey of old-growth hemlock forest as a baseline for measuring the impact of the hemlock wooly adelgid

International Research and Teaching

- Puerto Rico: Group leader for MHU undergraduate spring break service trip to the National Estuarine Research Reserve, Jobos Bay (spring 2016, 2017, 2018)
- Vietnam: Teaching assistant for ASU field course in Conservation and Biogeography (summer 2012)
- Guatemala: Research assistant, Herpetology Inventory Project. Guatemala (summer 2009)
- China: English and biology instructor, Eastern Tibetan Language Institute (summer 2005)
- Mexico: Research assistant, Immigration Demographics Project, CARA Center (summer 2004)
- South Pacific Islands: Independent research for a documentary film on ecotourism (summer 2003)

Publications

Boggess, L.M., C.M. McCain, E.A. Manzitto-Tripp, S.M. Pearson, J.C. Lendemer. In prep. *Site-level factors, not landscape-level anthropogenic disturbances, drive lichen community composition in the intact forests of a biodiversity hotspot.*

Cohen, S.

Howland, J., **L.M. Boggess**, J. P. Hollinger, J.C. Lendemer. 2026. *Karinomyces (Pilocarpaceae), a new genus for the Appalachian endemic Schadonia saulskelleyana.* The Bryologist. 129(1), pp. 004–022.

Legere, R., **L.M. Boggess**. 2026. Conservation efforts in Gorongosa National Park: a review. BIOS.

Boggess, L.M. *Disturbance and Diversity: Lichens in Changing Landscapes.* 2025. Dissertation. CUNY Academic Works.

Boggess, L.M., C.M. McCain, E.A. Manzitto-Tripp, S.M. Pearson, J.C. Lendemer. 2024. *Disturbance and diversity: lichen species richness decreases with increasing anthropogenic disturbance.* Biological Conservation.

Boggess, L.M., J.C. Lendemer, G.R. Harrison. 2024. *Cliffs support lichen communities unique from surrounding forests.* Basic and Applied Ecology.

Harrison, G.R., M. March-Salas, **L.M. Boggess**. 2024. *Monitoring and conserving cliff ecosystems: a call to action.* Basic and Applied Ecology.

Langevin, A.L., **L.M. Boggess**, G.R. Harrison, M. D. Madritch. 2024. Avian Guano is an input to cliff-face ecosystems. *Basic and Applied Ecology*.

Harrison, G.R., **L.M. Boggess**, J.M. Budke, M.D. Madritch. 2022. *Rock-climbing shifts cliff-face vegetation community composition based on site characteristics*. *Applied Vegetation Science*.

Boggess, L.M., G.R. Harrison, and G. Bishop. 2021. *Impacts of climbing on cliff vegetation: a methods review and best practices*. *Applied Vegetation Science*.

Boggess, L. M., G.L. Walker, and M. D. Madritch. 2017. *Cliff flora of the Big South Fork National River and Recreation Area*. *Natural Areas Journal* 37: 200-211.

Walker, G.L., M.D. Madritch, **L.M. Boggess**, E. Purdy, K. Dowdy, M. Funston, *Development of a GIS model to predict information critical for managing rock climbing at Big South Fork National River and Recreation Area*. 2014. United States Department of the Interior, National Park Service Grant Report.

Walker, G.L., M.D. Madritch, J. Harkey, **L.M. Boggess**, *Cliff System Vegetation Communities in Cumberland Gap National Historical Park*. 2013. National Park Service Grant Report.

Boggess, L. M., E.C. Bolas, L.P. Chesnutt, D.A. Eitelberg, K.M. Hines, E.B. Hoekstra, G.Y. Kimmel, K.R. Mcleod, E.K. Meineke, A.M. Nagle, B.A. Purvis, 2006. *A baseline study of the effects of hemlock loss in the Henry Wright Preserve and Kelsey Tract*. Highlands Field Site Capstone.

Boggess, L. M., T.M. Goforth, 2006. *The correlation of pH indicator plant species with the geology of a rich mountain cove*. Highlands Field Site Research Reports.

Presentations, Workshops, and Talks

“Lichens Up Close”, workshop, Asheville Botanical Garden (2026)

“Paths of Enlichenment”, workshop, North Carolina Arboretum (2025)

“Ecology on the Rocks”, Asheville Science Salon (2025)

“Learning from Lichens”, SCUMS (South Carolina Upstate Mycological Society; 2025)

“Vertical Grasslands at the Gap: Exploring Old-Growth Cliffside Grasslands at Cumberland Gap National Historical Park”, Alaina Krakowiak and Laura Boggess, Association of Southeastern Biologists (2025)

“Disturbance and Diversity” dissertation defense talk, City College of New York (2025)

“Lichen Hikin”, field outing and “Life Lessons from Lichens” invited talk, Asheville Mushroom Club (2025)

“Disturbance and Diversity: Lichens in changing landscapes,” invited talk, New York Botanical Garden (2024)

“Bailey Mountain: a case study in local landmark preservation”, Appalachian Studies Assoc. Conference (2024)

“Lichen species richness decreases with increasing anthropogenic disturbance,” invited talk, North American Forest Ecology Workshop (2024)

“Lichens and the Great Turning”, Rare Bird Farm (2024)

“The Lichen Museum”, Firefly Gathering (2024, 2025)

“Disturbance and diversity: lichen species richness decreases with increasing anthropogenic disturbance”, Appalachian Studies Association Conference (2024)

“Using lichens in the classroom” New York State Educators Ecology and Education Workshop (2024)

“Disturbance and Diversity: lichen species richness decreases with increasing anthropogenic disturbance”, Association of Southeastern Biologists Conference (2023)

“Ecology on the Rocks: cliffs, lichens and their allies in WNC”, Big Asheville Science Salon (2023)

“Lichens in changing forests: disturbance in a biodiversity hotspot” Proposal Defense Public Seminar, CUNY Grad Center, NYC (2022)

“The interconnected web of life: what nature can teach us about cooperation” Hoffman Foundation: Monday Seminar Series, Mars Hill University, NC (2020)

“New directions in cliff ecology,” Ecology and Evolutionary Biology Symposium, CUNY Grad Center, NYC (2020)

“Ecology on the Rocks: Stories of cliff ecology in North America,” Torrey Botanical Society, invited talk, New York Botanical Garden, NYC (2019)

“A brief history of cliff ecology,” Botanical Society of America, Botany Conferences, Tucson, AZ (2019)

“For the love of lichens” Marshall Container Company, Naturalist Lecture Series, Marshall, NC (2019)

“Conservation and Climbing: the link between access and stewardship,” Access Fund (national rock climbing advocacy and conservation organization) National Summit, NYC (2018)

“Climbers as Conservationists: how to help your organization work with land managers to protect ecosystem” Access Fund Regional Summit, Breaks Interstate Park, KY (2018)

“Ecological Considerations for Climbing Guides” Outward Bound workshop for climbing instructors (2018)

“Climbers as Conservationists” at Black Dome Mountain Sports, Asheville, NC (2017)

“Unveiling Our Treasures: Bailey Mountain and the history of Land Use in Western North Carolina,” Mars Hill, NC (2017)

“Ecology on the Rocks” Ecology Seminar: ASU Biology Department (2014)

“Ecology on the Rocks: Community composition and climbing impact on the Big South Fork.” Association of Southeastern Biologists (ASB) Annual Meeting, Charleston WV (2013)

“Community composition of cliff vegetation in the Big South Fork,” Poster presentation, ASB, Athens, GA (2012)

Popular Media

Blue Ridge Outdoors. “The Search for Vertical Grasslands: Two climber-scientists explore Tennessee’s Cumberland Gap to find traces of forgotten Southeastern ecosystems.” Suzy Hodges, March 2026

CUNY Graduate Center News. “A Lichen Life: Lessons from the Edge”. Shantal Riley, May 2025

Mountain Invasion Research Network (MIREN) Rocks cliff sampling methodology, Laura Boggess and Georgia Harrison, March 2024

Tapping Into Conservation podcast interview with JJ Apodaca, 2026 (forthcoming)

The Guardian. “Rock climbers like to connect with nature – but are they also destroying it?”, Jack McGovern, November 2023

The Climbing Initiative: *Guide to Climbing Best Practices*. “Monitoring Cliff Ecosystems,” Laura Boggess and Georgia Harrison, December 2022

The Magazine of Mars Hill University. “She’s really likin’ the lichens”, Theresa Buckner, Spring 2022

Filling the Void: Climbing and Conservation at Rumbling Bald, NC. Interview in a documentary film about climber conservation. Steep South Film Company. November 2022

Science Friday, “The Rare Native Species Haunting the Appalachian Mountains.” Lauren J. Young, October 2019

Climbing Magazine, “The Trace We Leave: Climbing’s Impact on Crag Flora.” Marion Renault, July 2019

Mountain Xpress, “Likin’ Our Lichens: Sustainable Harvest of *Usnea* in WNC,” Laura Boggess, James Lendemer, and Jessi Allen, October 2018

The Climbing Advocate: Cliff Ecology podcast interview with Pete Horgan, 2018

The High Country Cragger. “High Country Ecology” section. Laura Boggess and Matthew Paden. Full Mantle Press, 2018

Southern Pisgah Rock and Ice: A Climber's Guide. Mike Reardon. "Pisgah Ecology" section. Ground Up Publishing, 2018

Blue Ridge Outdoors, "These 7 women are forces of nature", Jess Daddio, Feb. 2018

Asheville Citizen Times, "Asheville women bust gender stereotypes in No Man's Land of Outdoor Adventure," Karen Chavez, May 2018

PLOS Ecology Community blog, "Are we playing too hard? Recreation, Ecology and Recreation Ecology" Caitlin McDonough MacKenzie, Nov. 2017

Service to Mars Hill University and Warren Wilson College

Environmental Studies Program Coordinator, recruit and advise students, coordinate event series and student internships, oversee curriculum development and program assessment, organize annual program retreat at Roan Mountain and graduation celebrations etc. (2014-2026)

Faculty Mentor to the Environmental Action Club, MHU's student environmental club (2017-2026)

Research Mentor for 3-6 Ecology and Conservation Biology majors per semester conducting junior or senior seminar research projects (2019-2026)

Co-curricular Connections Faculty Standing Committee, member (2025-2026)

Plans and Policies Faculty Standing Committee, member (2020-2025)

Visiting Artists and Lecturer Faculty Standing Committee member (2018-19, 2025-2026)

Heritage Garden volunteer, seed-saving garden with heirloom crop varieties, coordinated by the MHU honors program (2016-present)

Appalachian Studies Faculty Steering Committee member (2016-2026)

HEART Hub Museum Steering Committee, faculty members planning student exhibitions at the Appalachian Heritage Museum (2022-23)

Mentor for new MHU Faculty bi-monthly meetings to orient a new MHU faculty member to campus and improve teaching through a monthly book club (2022-2024)

Retirement Committee member, provide oversight of MHU retirement offerings as part of workplace benefits (2022-2025)

Sustainability Steering Committee co-founder 8-person faculty/staff/administration committee to promote campus sustainability initiatives (2018-2020)

Outdoor Programs consultant for climbing equipment and programming (2020-2022)

Wellness Committee member, promote wellness awareness and activities across campus (2016-2020)

Mindfulness for Teaching, created and co-led through MHU's Center for Teaching and Learning (2020)

Yoga Instructor, 1-2 donation-based classes per week in MHU's Breathing Room (2016-2024)

Breathing Room Coordinator, yoga and meditation space at MHU offering free weekly classes (2017-2018)

Search committee member for Inorganic Chemistry ('22), Director of the Ramsey Center for Regional Studies ('18) and MHU wind symphony conductor ('19)

Service to the Community

- Co-Founder, Friends of Bailey Mountain**, Mars Hill, NC 2016-present
- Public preserve near Mars Hill devoted to stewardship of existing trails, trail and infrastructure improvement, community outreach and education, fundraising for park expansion
 - Coordinator of the Ecology and Education subcommittee overseeing the ecological restoration of Banjo Branch
- Yoga Instructor, Light a Path, Youth at Risk Program**, Madison High School, NC Aug. 2018-2019
- Asheville-based non-profit bringing healing modalities to underserved populations
- Board Member, Carolina Climbers Coalition** 2013-2018
- Regional rock climbing access organization devoted to protecting and stewarding climbing areas.
- Board Member, Becas Especiales Uspantan**, Uspantan, Guatemala 2008-2016
- Scholarship program founded by Peace Corps volunteers and local residents to support middle and high school students from low-income families in rural Guatemala
- Upward Bound Mentor, Appalachian State University**, Boone, NC 2013
- Mentored 7 high school students in research and lichen biology for the Upward Bound program
- ESL instructor, PRODESSA Institute**, Uspantán, Guatemala 2009-2010
- Proyecto de Desarrollo Santiago*: Guatemalan non-profit dedicated to rural development and education
- ESL instructor, Eastern Tibetan Language Institute (ETLI)**, Yunnan China June-Aug. 2006
- Non-profit in western China dedicated to economic development of rural communities through education
- Visiting Plants Program Instructor, NC Botanical Garden**, Chapel Hill, NC 2004
- Led classroom and field sessions introducing middle-school students to local flora and native plants

Other Experience

- Yoga Instructor: Magictown Movement Studio, Burnsville YMCA, Neighborhood Yoga, May 2014-present
- Spanish Instructor: Mayland Community College, Burnsville, NC Aug. 2014-Aug. 2015
- Community Services Coordinator: *Centro de Enlace*, Latino Outreach Center, Burnsville, NC May-Sept. 2014
- English as a Second Language (ESL) Instructor: Mayland Community College, Burnsville, NC Aug.-Dec. 2014

Skills

- Experienced field crew leader: technical rope skills, comfortable spending long hours in the field: operating field equipment, monitoring wildlife, conducting vegetation surveys etc.
- Statistical analysis in R and PC-ORD (community analysis software)
- Using and teaching spatial analysis in QGIS
- Fluent in Spanish, written, spoken, and professional
- Extensive international experience in development and conservation in countries including Vietnam, Guatemala, China, Ecuador, Mexico, the South Pacific and Malaysian Borneo

Certifications

- RYT-500, Registered Yoga Teacher: Yoga Alliance
- Data carpentries certified instructor
- Academic Community Engagement (ACE) Fellow: training to promote and sustain community-engaged teaching, research, and scholarship through a cohort-based program
- Ecotourism training including trail-building, nature programming, interpretive signs: US Peace Corps
- TESOL (Teaching English as a Second Language)—School for International Training (SIT)
- Other Certifications: Class A Sawyer—USFS; Open Water Diver—PADI; Disaster Preparedness—American Red Cross; Wilderness First Aid—SOLO; CPR—American Red Cross

Honors and Awards

- CUNY Dissertation Research Fellowship (2024): 24k to support dissertation completion from the City University of New York
- Appalachian College Association Faculty Fellowship (2023): funding for course release to facilitate dissertation completion
- Teaching awards: CETL Student Award (nominated by a student, 2024); Creating Community in the Classroom (2022), Outside the Classroom Excellence, Mars Hill University (2021)
- City University of New York, Doctoral Student Research award (2021): 8k for travel and research supplies
- CUNY Science Fellow (2019-2020): 60k for research and tuition at the City University of New York
- Bryan Caring Award, (2019): honor for a faculty member who shows outstanding service to the campus community and surrounding region, Mars Hill University
- Hart-Melvin archival research fellowship, (2016-2017): year-long funding for a research project involving primary materials from the Southern Appalachian Archives
- Do Unto Others Scholarship, (2012-2013): funding for graduate studies at ASU based on demonstrated service to the community
- Morehead-Cain Scholarship, (2002-2006): a four-year merit scholarship to the University of North Carolina at Chapel Hill, awarded based on scholarship, leadership, character, and physical vigor

Professional Society Memberships

American Bryological and Lichenological Society

Association of Southeastern Biologists

Botanical Society of America

Ecological Society of America

NC Friends of Plant Conservation

Southern Appalachian Botanical Society