

Curriculum Vitae

Laary J. Cushman

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EDUCATION

Ph.D. Student, Biological Sciences, Clemson University, 2015 – present, Department of Biological Sciences

Research Focus: the population structure of high elevation *Micranthes petiolaris* (raf.) Bush and it's relation to a low-elevation subspecies with unique floral morphology and a shifted life history. I'm investigating if the subspecies has resulted due to adaptive divergence, and what genomic changes have occurred. The project involves novel use of RADseq methodologies, NGS, and bioinformatics. To date I've sampled 17 high elevation peaks in the southern Blue Ridge mountains, collecting over 500 plant samples for this genome wide study.

M.S., Plant & Environmental Sciences, Clemson University, 2012-2015, College of Agriculture, Forestry and Life Sciences. *Thesis:* A New, Low-Elevation Appalachian Saxifrage (*Hydatica* Necker Ex. Gray 1821) in South Carolina.

B.S., Biology & Technical Writing, USC-Aiken, 1998, Biological Sciences.

Study focus: intraspecific competition among wetland species within South Carolina Coastal plains and swamps.

TEACHING EXPERIENCE

Graduate Teaching Assistant, Clemson University, Clemson, SC, 2014 – Present

BIOL 1050: Introductory Biology Lab for Science Majors

BIOL 1060: Introductory Biology Lab II for Science Majors

BIOL 3201: Spring Field Botany Lab

WFB 8610: Plant Taxonomy & Lab

Adjunct Faculty, Anderson University, SC, 2015 – Present

BIO 160: Introduction to Life Sciences, Lecture and Lab

BIO 170: Introduction to Environmental Sciences, Lecture

SCI 101: Introduction to the Sciences, Lecture

Guest Lecturer, Warren Wilson, Asheville, NC, Spring 2015

BIO 441: Genetics of Plant Development

Graduate Teaching Assistant & Guest Lecturer, Highlands Biological Station, NC, 2016

Conservation Genetics of Salamanders

WORK EXPERIENCE

Interim Herbarium Curator, Clemson Herbarium (CLEMS), Clemson University Campbell Museum of Natural History, 2014 – 2015

Plant Problem Clinic technician/taxonomist, Clemson Extension, 2014 - Present

Museum assistant, Clemson University Arthropod Collection, Summer 2015

Senior Environmental Scientist and Owner, Cushman Consulting Group, LLC. 2005 - Present

AWARDS

Heather P. Hilliard Annual Fellowship for Conservation Genetics, \$12,000 2015 – current

Wade T Batson Grant Recipient for Field Botany Research, \$2000 2014, 2015

Highlands Biological Station Summer Studies Invitation & Financial Aid Award, \$4000 2014

PUBLICATIONS

Cushman, Laary J. and Patrick D. McMillan. 2019. A New Subspecies of the genus *Micranthes* (Section *Stellaris*, Saxifragaceae) from South Carolina.. *PhytoTaxa*. (Accepted with Revisions)

FORTHCOMING PAPERS UNDER RESEARCH

Genotyping of southern Appalachian populations of *Micranthes petiolaris* (Raf.) Bush. Cushman, Laary J, Antonio Baeza, Vincent Richards.

Variation in seasonal physiological performance of southern Appalachian *Micranthes* populations: Implications for a drought escape strategy. Laary Cushman, Alisa Hove, Vincent Richards

Nuclear genome size variation within southern Blue Ridge Saxifragales and phylogenetic trends since the last glacial maximum. Laary Cushman, Justin Scott, Rhonda Powell.

PRESENTATIONS

Cushman, Laary J, Patrick D. McMillan, and Kathy G. Mathews. 2014. Incipient Speciation in *Hydaticea* Necker. Poster presented at: Association of Southeastern Biologists 75th Annual Meeting; Spartanburg, SC.

Cushman, Laary J. & Harry E. Shealy, Jr. 1998. Tree ring studies of *Taxodium distichum* L. and the effects of community types upon their growth rates. Association of Southeastern Biologists 59th Annual Meeting; Monroe, Louisiana.

Cushman, Laary J. & Harry E. Shealy, Jr. 1998. A comparison of *Taxodium distichum* L. growth-rates due to environmental influences within two South Carolina swamps. Presented at: USC-Aiken Open Science Forum; Aiken, SC.

Speer, Jim, Laary Cushman, Jose Negron, Nicole Davi, Andrew Schauer, Robyn Darbyshire. 1997. Pandora Moth Outbreak Chronology for the Eastern Cascades. Presented at: 8th Annual North American Dendroecological Fieldweek; H.J. Andrews Experimental Forest, Deschutes National Forest, Oregon.

Cushman, Laary J. & Harry E. Shealy, Jr. 1996. Old growth floodplain forests: Growth rates of *Taxodium distichum* L. in different ecological settings of the Congaree Swamp National Monument. Presented at: USC-Aiken Open Science Forum; Aiken, SC.

AFFILIATIONS

Memberships

Society for Freshwater Science, Association of Southeastern Biologists, Partners in Amphibian and Reptile Conservation, SC Native Plant Society, GA Native Plant Society

SERVICES

Diagnostic Taxonomist, Plant Problem Clinic, Clemson University Extension Services, 2014 - Present
Volunteer, Clemson University Biology Merit Exam, 2015

SPECIALIZED TRAINING

Certified Macroinvertebrate Taxonomist, Society for Freshwater Science, 2015

USACE Regulatory Training - Savannah District USACE, 2005

Conservation & Land Trust Law - Greenville DOC, SC DNR, & SCLOA, 2002

Army Corps of Engineers Wetland Delineation / Regional Supplement / Waters of the United States Training, 38 Hrs, -
Environmental Training, Inc., 2001

Stream Restoration Fundamentals - Clemson University, SC, 2001

Hazardous Site Access and Safety Training, Savannah River Site - DOD, New Ellington, SC, 2001