

Jennifer L. Chandler, Ph.D.

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CURRENT POSITION

Lecturer

Appalachian State University, Boone NC

August 2016 – Present

Courses taught: BIO 3302 – Ecology Laboratory
BIO 2410 – Genetics Laboratory

RECENT POSITIONS

Plant Scientist

West Virginia University, Morgantown WV

May 2016 – August 2016

Trained and supervised research technicians for the census of 30 natural populations of American ginseng across seven states. Served as project liaison with private landowners and public land managers. Coordinated field research, data entry and archiving, and matching of long-term database.

Arctic LTER Experimental Design and Analysis Consultant

Wilkes University, Wilkes-Barre PA

July 2016 – August 2016

Supervised and instructed undergraduate researchers in the tagging and collection of the demographic data of reciprocally transplanted arctic plants. Provided expertise for an experiment testing the hypothesis that disturbances north of the Brooks Range (northern Alaska) permits colonization of plant ecotypes from south of the Brooks Range.

Graduate Conservation Research Fellow

West Virginia University, Morgantown WV

August 2014 – August 2015

Fellowship included salary (\$33,000) and research funds. Responsibilities included managing a database of >13,000 rows of data, interacting with landowners, and mentoring all graduate and undergraduate students in the lab.

EDUCATION

West Virginia University – GPA: 4.0

Morgantown, West Virginia

Doctor of Philosophy in Biology (2016)

Advisor: James B. McGraw, PhD

Dissertation topic: “Ecological effects of forest canopy disturbance on the herbaceous understory and on American ginseng (*Panax quinquefolius L.*) in central Appalachia.”

Northern Kentucky University

Highland Heights, Kentucky

Bachelor of Science in Ecology, Evolution, and Organismal Biology (2009)

Transylvania University

Lexington, Kentucky

Bachelor of Arts in Business Administration (2004)

PEER-REVIEWED PUBLICATIONS

Chandler JL and McGraw JB. (*in press*) Demographic stimulation of the obligate understory herb, *Panax quinquefolius* L., in response to natural forest canopy disturbances. *Journal of Ecology*.

Chandler JL. (*in press*) A slow opportunist: Physiological and growth response of an obligate understory plant to patch cut harvesting. *Oecologia*.

Chandler JL and McGraw JB. 2015. Variable effects of timber harvest on the survival, growth, and reproduction of American ginseng (*Panax quinquefolius* L.). *Forest Ecology and Management* 344: 1-9. DOI: 10.1016/j.foreco.2015.02.007.

Chandler JL, McGraw JB, Bennington C, Shaver GR, Vavrek MC, Fetcher N. 2015. Tiller population dynamics of reciprocally-transplanted *Eriophorum vaginatum* L. ecotypes in a changing climate. *Population Ecology* 57: 117-126. DOI: 10.1007/s10144-014-0459-9.

McGraw JB and **Chandler JL.** 2015. Flipping the biostatistics classroom, with a twist. *Bulletin of the Ecological Society of America* 96: 375-384. DOI: 10.1890/0012-9623-96.2.375.

McGraw JB, Turner JB, **Chandler JL**, Vavrek MC. 2014. Disturbances as hot spots of ecotypic variation: A case study with *Dryas octopetala*. *Arctic, Antarctic, and Alpine Research* 46(3): 542-547.

McGraw JB, Lubbers AE, Van der Voort M, Mooney EH, Furedi MA, Souther S, Turner J, and **Chandler JL.** 2013. Ecology and conservation of American ginseng (*Panax quinquefolius*) in a changing world. *The Year in Ecology and Conservation Biology, Annals of the New York Academy of Sciences.* 1286: 62-91.

FELLOWSHIPS, GRANTS, and AWARDS

University Provost Graduate Fellowship for Continuing Students

West Virginia University (2015-2016). Fellowship included stipend (\$17,000) and full tuition waiver.

WVU Foundation Distinguished Doctoral Scholarship

West Virginia University (2015 - \$5,000).

Outstanding Graduate Teaching Assistant Award

West Virginia University (2014 - \$1,000).

Earl L. Core Memorial Scholarship

West Virginia University (2014 - \$1,000).

Most Productive WVU Biology Graduate Student Award

West Virginia University (2013 - \$1,000) (2014 - \$1,000) (2015 - \$1,000).

Arctic Climate Change Graduate Research Fellowship

West Virginia University (2011 & 2012). Fellowships included salary each year (\$2000), research expenses, and travel expenses.

Eberly College Doctoral Research Grant

West Virginia University (2012 - \$700) (2013 - \$700) (2014 - \$700) (2015 - \$700).

Eberly College Graduate Travel Award

West Virginia University (2012 - \$400) (2014 - \$400) (2015 - \$750).

Biology Department Research Poster Award

West Virginia University (2014 - \$150).

ORAL PRESENTATIONS and POSTER SESSIONS (*indicates presenter)

Chandler JL*. Forest canopy disturbance and American ginseng: A multidimensional synthesis. Invited seminar speaker, US Forest Service – Northern Research Station. Morgantown, WV. 04/20/16.

Chandler JL*. Demographic response of American ginseng (*Panax quinquefolius* L.) to climate-altered natural disturbances in a mixed mesophytic forest. Presentation. Pioneer Showcase. Glenville, WV. 04/19/16.

Chandler JL*. Response of American ginseng to Changes in Canopy Dynamics. Presentation. Ginseng Mini-Conference. West Virginia University. Morgantown, WV. 10/29/15.

Chandler JL*. Ecotype performance in a changing climate: A test of the adaptational lag hypothesis using the arctic sedge, *Eriophorum vaginatum* L. Invited seminar speaker. Glenville State College. 10/22/15.

Chandler JL*. Variable effects of timber harvest on the survival, growth, and reproduction of American ginseng (*Panax quinquefolius* L.). Presentation. Ecological Society of America. Baltimore, MD. 8/13/15.

Chandler JL*. A multifaceted response of American ginseng (*Panax quinquefolius* L.) to canopy gaps formed during timber extraction. Presentation. WVU Three-Minute Thesis Competition. West Virginia University. Morgantown, WV. 4/9/15.

Chandler JL*. Response of American ginseng (*Panax quinquefolius* L.) to timber harvest. Invited seminar speaker. University of Akron. Akron, OH. 2/19/15.

Chandler JL*. Effects of forest logging on the survival and growth of American ginseng (*Panax quinquefolius* L.). Presentation. North American Congress for Conservation Biology. Missoula, MT. 7/15/14.

Chandler JL*. Sugarbush for syrup and stewarding 'sang: A workshop discussing two major economic uses of a woodlot. Presentation. Buckeye Trailfest. Hocking Hills, OH. 4/25/2014.

Chandler JL*, Burnham M, Hruska A, Mathias J, and Walter, C. Tree Damage from Superstorm Sandy Across Cutting Treatments. Presentation. Superstorm Sandy - Fernow Experimental Forest Research Conference. Morgantown, WV. 1/24/14.

Chandler JL* and Turner JB. Cross-Boundary Conservation: Working Together to Improve our Future. Invited Guest Lecturer. Osher Lifelong Learning Institute at West Virginia University. Morgantown, WV. 2013.

Chandler JL and Turner JB*. Conservation Catalyst – Non Timber Forest Products. Invited Guest Lecturer. Osher Lifelong Learning Institute at West Virginia University. Morgantown, WV. 2013.

Chandler JL* and McGraw JB. Short-term effects of timber harvest on the survival and growth of American ginseng (*Panax quinquefolius* L.). Poster. Maryland Native Plant Society Annual Conference. Frostburg, MD. 9/21/13.

Chandler JL, McGraw JB, Fetcher N*, Turner JB, Bennington CC, Shaver G, and Vavrek M. Evaluating the ecotypic response of *Eriophorum vaginatum* L. to shifts in high latitude climate patterns using a Leslie matrix model of tiller populations. Poster. Arctic LTER Conference. Woods Hole, MA. 3/4/13 – 3/7/13.

Chandler JL*, McGraw JB, Fetcher N, Turner JB, Bennington CC, Shaver G, and Vavrek M. Evaluating the ecotypic response of *Eriophorum vaginatum* L. to shifts in high latitude climate patterns using a Leslie matrix model of tiller populations. Ecological Society of America. Poster. Portland, OR. 8/5/12 – 8/10/12.

Turner JB*, Fetcher N, McGraw JB, **Chandler JL**, Bennington CC, Shaver G, and Vavrek M. A test of the adaptational lag hypothesis using a long-term reciprocal transplant study with an arctic sedge (*Eriophorum vaginatum*). Presentation. Ecological Society of America. Portland, OR. 8/5/12 – 8/10/12.

Chandler JL*, Turner JB, and McGraw JB. Ecotypic differentiation and climate change in Alaskan tundra plants. Poster. Research Horizons. Morgantown, WV. 4/5/12.

UNIVERSITY TEACHING EXPERIENCE

Bio 593H/302 (*Biometry*) Graduate Teaching Assistant **2013**

West Virginia University

Restructured course into a “flipped classroom” wherein students viewed lecture videos outside the classroom and received hands-on statistical training and practice inside the classroom.

Bio 321 (*Total Science Experience – senior capstone*) Graduate Teaching Assistant **2012, 2013, 2014**

West Virginia University

Mentored undergraduate students as they developed grant proposals, performed scientifically rigorous, independent research, and produced research manuscripts. Trained students to foster positive interpersonal relationships and to work as a group to solve difficult scientific problems.

Bio 106L (*Environmental Biology*) Graduate Teaching Assistant **2012**

West Virginia University

Bio 115L (*Principles of Biology*) Graduate Teaching Assistant **2011**

West Virginia University

Bio 151L (*Intro to Biology II*) Undergraduate Teaching Assistant **2008**

Northern Kentucky University

Student Educator, International Service Learning **2009**

Northern Kentucky University

Building Peace Through Nature Conservation and Environmental Education in the Andes of Ecuador.

PUBLIC SERVICE and SCIENTIFIC OUTREACH

Biometry for High School Students - Tutorial Video Series **2015-2016**

Developed and produced a series of twenty-one instructional biostatistics videos aimed at helping high school students build their statistical “toolbox” so that they are well equipped both to design and perform scientific research and to analyze scientific data.

Conservation Consultant – Canadian Ministry of Natural Resources & Forestry **2014-2015**

Advised the Ministry on the best forest management strategies to conserve wild ginseng in Canada. Consulting work will shape timbering and development policy in areas of Ontario that contain wild American ginseng.

WVU Arboretum and Green Space Committee. Morgantown, WV **2014-2015**

Developed plans and protocol to preserve land at the Core Arboretum and to create a new urban arboretum in Morgantown, West Virginia.

EnvironMentors, West Virginia University. Morgantown, WV 2013-2014
Mentored high school students and provided one-on-one guidance through each stage of scientific research, including developing an environmental science-based research question, performing a literature review on the topic, devising a scientifically rigorous experiment to test the original hypothesis, and presenting research at a conference.

Parsons Arboretum Project - Collaborative & Community-Based Conservation. Parsons, WV 2013
Collaborated with community stakeholders to identify baseline issues, concerns, and opportunities for a community arboretum conservation project. Produced an interpretive signage plan aimed at enhancing the community's awareness, appreciation, and respect for the biological and cultural heritages unique to the arboretum site. Presented the interpretive plan to the United States Forest Service Northern Research Station.

Experimental and Statistical Design Consulting. Morgantown, WV 2013
Provided consulting services and expertise in experimental design (both statistical and methodological) to the director of the West Virginia University chapter of EnvironMentors.

Research Manager – Multi-state Medicinal Plant Reintroduction. 2012
Organized and was personally accountable for volunteers in a large-scale medicinal herb reintroduction effort. This project was implemented to develop an indicator of ecological recovery in the herbaceous understory, and was a collaborative effort among West Virginia University, The Wilds Conservation Area, and the Forks of Cheat Nature Preserve.

Survey Consultant – Conservation of Ginseng in Appalachia. Morgantown, WV 2012
Analyzed and revised a doctoral dissertation survey that examined the conservation knowledge and harvesting behaviors surrounding medicinal plants.

Research Manager – Small Mammal Seed Dispersal. WV & NY 2012 – 2014
Independent field study investigating whether small mammals were dispersers or predators of American ginseng seeds. Duties included set up and maintenance of field equipment, small mammal tracking, and willingness to adapt to experimental changes required due to environmental uncertainty.

Reforest Northern Kentucky Initiative. Boone County, KY 2009
Guided students (elementary through college) in a reforestation effort in the suburbs of Cincinnati, OH.

NKY Chemistry Demonstration Database Project. Northern Kentucky University. Highland Heights, KY 2009
Featured in a short video demonstrating simple chemistry concepts that middle school teachers can use to engage their science classrooms.

UNIVERSITY SERVICE and LEADERSHIP

Committee Member, WVU undergraduate honors thesis	2015-2016
Honors student: Anne Jarrell. Thesis title: Herbaceous understory dynamics: Consequences of overtopping for germination, growth, and survival of American ginseng (<i>Panax quinquefolius</i> L.).	
Committee Member, WVU undergraduate honors thesis	2013-2015
Honors student: Michael Elza. Thesis title: Spatial analyses of the dispersal of American ginseng (<i>Panax quinquefolius</i>) via the wood thrush (<i>Hylocichla mustelina</i>).	
President, WVU Biology Graduate Seminar Planning Committee	2014
Hiring committee, WVU arboretum specialist and lecturer	2014
Graduate Coordinator, WVU Biology Colloquium Committee	2013-2014
Treasurer, WVU Graduate Student Advancement Society	2013-2014
Minorities in Agriculture, Natural Resources, and Related Sciences	2013
Invited Speaker “Life as a Graduate Student,” WVU	2013 & 2014
WVU Biology Graduate Student Association Executive Council	2012-2013
Peer Mentor (2013)	
Peer Mediator (2013)	
Social Coordinator (2012-2013)	
Fundraising Committee – WVU Graduate Student Networking	2012

MEDIA COVERAGE

“You Can See Ginseng in America” World Today – Korean Broadcasting System (2013).

SOFTWARE and EQUIPMENT

LiCor LI6400XT – Portable Photosynthesis System
 GPS navigation
 Microsoft Excel, Word, and PowerPoint
 SAS JMP, Statistical discovery software
 MATLAB
 ArcGIS, ESRI Geographic Information Systems (GIS) software
 Gap Light Analyzer, Canopy structure and gap light transmission index software
 Blackboard Learning Management System

PROFESSIONAL AFFILIATIONS

Ecological Society of America (ESA)
Society for Conservation Biology (SCB)
Association for Women in Science (AWIS)

VOLUNTEER POSITIONS

Friends of Decker's Creek. Morgantown, WV
Animal Husbandry Volunteer – Newport Aquarium, Newport, KY
Urban Forestry Initiative Park Restoration Project. Denver, CO
Emergency Communities Hurricane Katrina rehabilitation. New Orleans, LA