

## Jessica L. Allen

Curriculum Vitae

The New York Botanical Garden, Bronx, NY 10458

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### EDUCATION

- Expected 2017 PhD Candidate, The City University of New York and The New York Botanical Garden  
Expected degree: PhD in Biology  
*Conservation in the Time of Climate Change: Case Studies on Coastal and Montane Lichens in Eastern North America*  
Advisor: Dr. James C. Lendemer
- 2015 Master of Philosophy, The City University of New York Graduate Center, NY  
Biology.
- 2011 Bachelor of Science, Eastern Washington University, WA  
Biology Major, Chemistry Minor. *Summa Cum Laude ad Maxima Valorem*

### LICHEN COLLECTIONS

- Five years of experience in curating lichen collections.
- Over 4,900 lichen collections from throughout North America (e.g., Alaska, the Pacific Northwest, and the southeastern United States), and a small number from Europe (Finland and Switzerland).
- Over 60 weeks of field work experience in North America, Central America, and Europe, most weeks spent collecting lichens in North America.

### COMPUTER SKILLS

- Expertise in statistical and spatial analysis in R, QGIS, ArcGIS.
- Proficiency in Bash scripting, and genomic and phylogenetic analyses.

### CONSERVATION KNOWLEDGE AND SKILLS

- Expertise in International Union for the Conservation of Nature Red-Listing and United States Endangered Species Act.
- Member of IUCN lichen specialist group.
- Three years of experience conducting research on ESA protected lichen species.
- Participated in two IUCN red-listing workshops and lead author on assessment for one red-listed lichen.

### PUBLICATIONS (All titles link to publications)

- **Allen, J.L.**, and J.C. Lendemer. 2016. [Quantifying the impacts of sea-level rise on coastal biodiversity: A case study in eastern North America](#). *Biological Conservation* 202: 119-126.
- **Allen, J.L.**, and N. Howe. 2016. [Landfill Lichens: A checklist for Freshkills Park, Staten Island, New York](#). *Opuscula Philolichenum*, 15: 82-91.
- **Allen, J.L.**, and J.C. Lendemer. 2016. [Loss of high-elevation, endemic lichens predicted in a biodiversity hotspot](#). *Biodiversity and Conservation* 22: 555-568.
- McMullin, R.T., J.L. Allen, and J. Pagé. 2016. [Physconia subpallida new to Québec, from Gatineau Park](#). *Opuscula Philolichenum* 15: 132-135.
- **Allen, J.L.**, J.C. Lendemer, and R.T. McMullin. 2015. [Cetradonia linearis](#). The IUCN Red List of Threatened Species 2015: e.T70386009A70386019.
- **Allen, J.L.**, and J.C. Lendemer. 2015. [Fungal Conservation in the United States](#). *Endangered Species Research* 28: 33-42.
- **Allen, J.L.**, and J.C. Lendemer. 2015. [Japewiella dollypartoniana](#), a new crustose lichen widespread in the [Appalachian Mountains of eastern North America](#). *Castanea* 80: 59-65.
- **Allen, J.L.**, and R.T. McMullin. 2015. [Chaenotheca balsamconensis](#), a new calicioid lichen on *Trichaptum abietinum* from North America that is benefiting from widespread conifer fatalities. *The Bryologist* 118: 54-58.

- Carvalho, A., G.V. Somner, and **J.L. Allen**. 2015. [Is the phenology of all restinga species the same? A taxonomically-focused study of Sapindaceae in a highly threatened coastal environment](#). *Flora* 215: 92-101.
- Lendemer, J.C., and **J.L. Allen**. 2015. [Reassessment of \*Hypotrachyna virginica\*, an endangered, endemic Appalachian macrolichen, and the morphologically similar species with which it has been confused](#). *Proceedings of the Academy of Natural Sciences* 164: 279-289.
- Lendemer, J.C., **J.L. Allen**, and N. Noell. 2015. [The \*Parmotrema\* Acid Test: a look at species delineation in the \*Parmotrema perforatum\* group forty years later](#). *Mycologia* 107: 1120-1129.
- Marks, J.A., J. Pett-Ridge, S.S. Perakis, **J.L. Allen**, and B. McCune. 2015. [Response of the nitrogen-fixing lichen \*Lobaria pulmonaria\* to phosphorus, molybdenum, and vanadium](#). *Ecosphere* 6:art155.
- Hodkinson, B.P., **J.L. Allen**, L.L. Forrest, B. Goffinet, E. Sérusiaux, Ó.S. Andrésón, V. Miao, J.-P. Bellenger, and F. Lutzoni. 2014. [Lichen-symbiotic cyanobacteria associated with \*Peltigera\* have an alternative vanadium-dependent nitrogen fixation system](#). *European Journal of Phycology* 49:11-19.
- Lendemer, J.C., and **J.L. Allen**. 2014. [Cryptic Biodiversity under threat from Sea-Level Rise in the North American Atlantic Coastal Plain](#). *Bioscience* 64: 923-931.
- **Allen, J.L.**, and J.C. Lendemer. 2013. [Uncovering chemical variability: molecular data reveal the identity of a sterile crustose lichen from the Yukon and affirm an expanded circumscription for \*Buellia griseovirens\*](#). *North American Fungi* 8(12): 1-14.
- **Allen, J.L.**, B.P. Hodkinson, and C.R. Björk. 2012. [A major range expansion for \*Platismatia wheeleri\*](#). *North American Fungi* 7(10): 1-12.

## GRANTS AND FELLOWSHIPS

- 2015 American Bryological and Lichenological Society Student Research Grant, \$500
- 2015 Highlands Biological Stations Grant-in-Aid of Research, \$1,400
- 2014 National Science Foundation Graduate Research Fellowship, ~\$132,000
- 2014 Highlands Biological Station Science and Society Fellowship, \$1,200
- 2014 Southern Appalachian Botanical Society Earl Core Student Research Award, \$500
- 2014 The City University of New York Graduate Center Student Research Grant, \$1,400
- 2011 Eastern Washington University Alumni Association Student Mini Grant, \$300
- 2011 Washington Native Plant Society Northeast Chapter Student Research Grant, \$300

## INVITED TALKS

- 2016 The impacts of climate change on lichens in the southeastern United States. The Canadian Museum of Nature, Gatineau, Québec. September 28, 2016.
- 2016 The impacts of sea level rise on coastal biodiversity: A case study in the Mid-Atlantic Coast Plain, West Virginia University, West Virginia. April 8, 2016.

## PRESENTATIONS (Presenting author listed first)

- **Allen, J.L.** and J.C. Lendemer. 2016. The impacts of sea level rise on coastal biodiversity: A case study in the Mid-Atlantic Coast Plain. *International Association of Lichenologists*, Helsinki, Finland [Oral Presentation]
- **Allen, J.L.** and J.C. Lendemer. 2016. The impacts of sea level rise on coastal biodiversity: A case study in the Mid-Atlantic Coast Plain. *Association of Southeast Biologists Conference*, Concord, NC [Oral Presentation]
- **Allen, J.L.** 2015. High Elevation Endemics and Climate Change: The Future of Rare Lichens in the Southern Appalachians. *International Congress on Conservation Biology*, Montpellier, France [Poster Presentation]
- **Allen, J.L.** 2015. High Elevation Endemics and Climate Change: The Future of Rare Lichens in the Southern Appalachians. *Association of Southeast Biologists Conference*, Chattanooga, TN [Oral Presentation]
- **Allen, J.L.**, and J.C. Lendemer. 2014. Species distribution modeling and conservation: How well do modern techniques work for lichens? *Botany*, Boise, ID [Oral Presentation]
- **Allen, J.L.**, and J.C. Lendemer. 2014. Lichen diversity imperiled by sea-level rise in the Mid-Atlantic Coastal Plain. *Botany*, Boise, ID [Poster Presentation]
- **Allen, J.L.**, and J.C. Lendemer. 2014. Cryptic biodiversity loss from sea-level rise in the North American Atlantic coastal plain. *Biodiversity responses to climate change: perspectives from the southeastern U.S.*, Greenville, NC [Poster Presentation]

- **Allen, J.L.**, R. McCourt, and K. Karol. 2013. Structural evolution of mitochondrial genomes in early diverging algal lineages. *Botany*, New Orleans, LA [Oral Presentation] and *The Phycological Society of America Conference*, Orlando, FL [Poster Presentation]
- O'Quinn, R., T. Stoughton, and **J.L. Allen**. 2013. Chasing clade resolution in *Claytonia* section *Claytonia* (Montiaceae). *Botany*, New Orleans, LA [Oral Presentation]
- Noell, N., **J.L. Allen**, R. O'Quinn, and J. Hollinger. 2013. Lichens of Turnbull National Wildlife Refuge: A lichen inventory in the channeled scablands of Eastern Washington state. *Botany*, New Orleans, LA [Poster Presentation]
- **Allen, J.L.**, and J.C. Lendemer. 2012. Uncovering chemical variability: molecular data reveal the identity of a sterile lichen from the Yukon, suggesting an expanded circumscription for *Buellia griseovirens* and reevaluation of the role of chemistry in delineating lichen species. *Biodiversity: From Evolutionary Origins to Ecosystem Function, A Bicentennial Symposium to Celebrate 200 Years of Research at the Academy of Natural Sciences of Drexel University*, Philadelphia, PA [Poster Presentation]
- **Allen, J.L.** 2011. Two variable cpDNA markers suitable for phylogeny reconstruction in *Claytonia* sect. *Claytonia* (Montiaceae). *Eastern Washington University Student Research and Creative Works Symposium*, Cheney, WA [Oral Presentation]
- **Allen, J.L.** 2010. Species delimitation in melanelioid lichens (Ascomycota: Lecanorales: Parmeliaceae). *The Field Museum Undergraduate Research Symposium*, Chicago, IL [Oral Presentation]
- **Allen, J.L.** 2010. One small branch on the tree of life: assessing marker utility for phylogeny reconstruction in perennial spring beauties. *National Conference on Undergraduate Research*, Missoula, MT [Poster Presentation]

#### TEACHING EXPERIENCE

- **Highlands Biological Station, Highlands, NC**  
Lichen Biology and Conservation (Summer 2016)  
Introduction to Lichen Identification (Summer 2015)  
Rare Lichens of the Southern Appalachians (Summer 2015)
- **Baruch College, New York, NY**  
Science and Technology in New York City (Fall 2014 and 2015)
- **Wrangell Mountain Center, McCarthy, AK**  
Introduction to Lichen Identification (Summer 2013)
- **Eastern Washington University**  
Private Biology and Chemistry Tutor (2010-2011)  
Chemistry Laboratory Teaching Assistant (2009)

#### RESEARCH EXPERIENCE

- **Defenders of Wildlife, Washington, D.C.**  
Title: Data Analyst Intern (2016)  
Wrote R scripts to use optical character recognition to extract text from United States Fish and Wildlife documents on endangered species.
- **Oregon State University, Corvallis, OR**  
Title: Research Assistant, Botany and Plant Pathology Department, McCune Lab (2011)  
Set up transplant experiment to test the influence of nutrient treatments on lichen growth.
- **The Field Museum, Chicago, IL**  
Title: NSF Research Experience for Undergraduates Intern, Botany Department (2010)  
Generated a DNA sequence data set to investigate the systematics of melanelioid lichens.
- **Eastern Washington University, Cheney, WA**

Title: Research Assistant, Plant Systematics Lab (2008-2011)

Developed microsatellite markers for using in delimiting species in the plant genus *Claytonia*.

- **Pacific Northwest National Laboratory, Richland, WA**

Title: Technical Intern IV, Ecology Group (2008-2009)

Assisted with salmon tagging efforts on the Columbia River and vegetation surveys on the Hanford Site.

### **RELEVANT JOB EXPERIENCE**

- **The New York Botanical Garden, Bronx, NY**

Title: Specimen digitizer for Lichens, Bryophytes and Climate Change project (2012)

Digitized the lichen collection at The New York Botanical Garden (>100,000 specimens) and bryophyte collections shipped from the University of Vermont. Managed data uploads to the Darwin core server.

Trained and managed one employee.

Title: Herbarium Intern for the Kohlmeyer Marine Fungi collection (2011)

Databased and digitized the marine fungal collection with a team of interns. Created educational videos about the collection with fellow interns.

### **SERVICE TO PROFESSION**

2016-2017 Program Director, Torrey Botanical Society, NY

2015-2019 Council Member, Torrey Botanical Society, NY

Reviewer for *Methods in Ecology and Evolution*, *Herzogia*, and *Journal of the Torrey Botanical Society*

### **SERVICE TO INSTITUTION**

2014-2016 Graduate Student Council Member, CUNY Graduate Center, NY

2015 Lead tours of the Pfizer Laboratory for Science Open House, The New York Botanical Garden, NY

Oct 2014 Exploring America's Wilderness: Lichens of the Boreal Forest and Alpine Tundra, Invited talk for members at The New York Botanical Garden, NY

Sep 2013 From Coast to Coast: My Scientific Journey, Invited talk for the board of directors of The New York Botanical Garden, NY

Jun 2012 Informational video on the Kohlmeyer Collection of marine fungi at The New York Botanical Garden, NY

### **OUTREACH**

Dec 2016 Fungal Diversity Lecture, Botany Course, Sarah Lawrence College, NY

Apr 2016 Central Park Lichen Walk, The Metropolitan Society of Natural Historians, NY

Mar 2016 Workshop leader, plant evolution for 7th grade girls, Experience Your Options, New York, NY

Feb 2016 Volunteer, Rainforest Action Network Annual Awards Banquet, NY

Aug 2015 Freshkills Bioblitz taxon leader, Staten Island, NY

Mar 2015 Workshop leader, plant evolution for 7th grade girls, Experience Your Options, New York, NY

2014-2015 Travel and housing coordinator, The Tuckerman Workshop, NC and MI

Jun 2014 Public lichen displays and lessons, Highlands Biological Station, NC

Feb 2014 High-elevation endemic lichens in the Southern Appalachians, Presentation for teacher's workshop on climate change, The Smoky Mountains Institute at Tremont, TN

Jan 2014 Lichens and Science Presentation, Bronx high school students, NY

2012-2014 Event organizer and trip leader, The Metropolitan Society of Natural Historians, NY

Aug 2013 Lichen Taxonomic Expert, Central Park Bioblitz, NY

Jun 2012 Kings Gap State Park Bioblitz, Kings Gap Environmental Education Center, PA

2010-2012 Washington Native Plant Society, native plant garden and member recruitment volunteer, WA

### **RELATED PROFESSIONAL SKILLS**

- Using the IUCN Red List categories and criteria to assess extinction risk of species for global and national red lists, Training at the International Congress on Conservation Biology (2015)

- North American Lichen Red List Workshop, The New York Botanical Garden (2015)
- College Reading and Learning Association, International Tutor Program Certified Levels I, II and III (2011)
- SOLO Wilderness First Aid (2011)

### **AWARDS AND HONORS**

Apr 2015	Windler Award for best systematic botany paper of the year in the journal <i>Castanea</i> , Association of Southeast Biologists Conference, Concord, NC
Apr 2015	Best student oral presentation, The Botanical Society of America southeast chapter, Association of Southeast Biologists Conference, Chattanooga, TN
2012-2014	Milne Fellow
2012-2013	CUNY Science Scholarship
2006-2011	Dean's List
2007-2011	Fluor Academic Scholarship
2010-2011	Cheney Environmental Scholarship
2009-2010	Trustee's Scholarship
2008-2009	High-Demand Majors Scholarship
2006-2008	Academic Honors Scholarship

### **MEDIA CONTRIBUTIONS FOR NON-SCIENTIFIC AUDIENCES** (All titles link to blogs/videos)

- Interview for the [In Defense of Plants](#) podcast. 2016.
- [Lichens Hold On Along America's Vanishing Coast](#). 2016.
- [The Rock Gnome](#). 2016.
- [New Jersey Transplants "Lichen" Their New Home](#). 2015.
- [Mission Possible: NYBG Scientists Boost Conservation of Fungi](#). 2015.
- [Honoring a Music Legend of the Southern Appalachians](#). 2015.
- [Transplants: New Jersey Lichens Find New Home at NYBG](#). 2015.
- [Bringing Lichens Down to Earth](#). 2012. The New York Botanical Garden Plant Science Blog.
- Videos on the marine fungi collection at The New York Botanical Garden. 2011. [Video 1](#) and [Video 2](#).
- Allen, J.L., and J. Downs. 2009. Greetings from the chair. *The Phlox Phlyer* 15(1): 1.

### **PROFESSIONAL MEMBERSHIPS**

- American Bryological and Lichenological Society
- Association of Southeast Biologists
- Phi Kappa Phi Honors Society
- Southern Appalachian Botanical Society
- Torrey Botanical Society