Jacob D. J. Peters

Contact Information

360 Prospect St
The Forest School at the Yale School of the Environment
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1-276-219-1757

Education

Ph.D., Remote Sensing and Applied Forest Ecology, **May 2028**
Yale School of the Environment, New Haven, CT, USA

Dissertation Advisor: Profs. Mark Ashton and Xuhui Lee

Dissertation Title: *Temperate liana distributions, impacts, and remote sensing*

M.S., Biology, James Madison University, Harrisonburg, VA, USA **May 2020**

Honors: *Summa cum laude*, outstanding first year graduate student

Thesis Advisor: Dr. Heather Griscom

B.S., Environmental Science, UVA at Wise, Wise, VA, USA **May 2018**

Honors: *Magna cum laude*, Joseph C. Smiddy Outstanding Scientist Award

Employment

Teaching Fellow, Yale University, New Haven, CT, USA **January 2024–Present**

Geospatial Consultant, Yale University, New Haven, CT, USA **August 2023–August 2025**

Adjunct Instructor, Ecology, James Madison University, Weyers Cave, VA, USA **January 2022–May 2022**

Adjunct Instructor, Biology, Blue Ridge Community College, Weyers Cave, VA, USA **August 2020–May 2022**

GIS Intern, Smithsonian Conservation Biology Institute, Front Royal, VA, USA **March 2021–December 2021**

Teaching Assistant, James Madison University, Harrisonburg, VA, USA **August 2018–May 2020**

Vegetation Survey Crew Lead, The Pennsylvania State University, State College, PA, USA **May 2018–July 2018**

Assistant Ecological Steward, UVA at Wise, Wise, VA, USA **November 2016–May 2018**

Park Ranger Career Path Intern, Virginia State Parks, USA **May 2015–August 2016**

Research Interests

My research interests revolve around using big data, traditional field methods, and remote sensing to study a range of forest phenomena. I currently study temperate liana (woody vine) ecology, impacts, and distributions using field experiments as well as satellite and UAV remote sensing. I am testing the effect of releasing temperate forests from lianas, creating large scale species distribution models for lianas using Google Earth Engine, and quantifying liana abundance from UAV LiDAR and

multispectral imagery using machine learning and artificial intelligence. Additional interests include silviculture, agroforestry, urban forestry, forest restoration, microclimates, and forest regeneration.

Honors and Awards

Student presentation winner (2nd), Society of American Foresters Natl. Convention **2025**

Best doctoral student presentation, Yale School of the Environment Research Day **2023**

Outstanding first-year graduate student, James Madison University **2019**

Three Minute Thesis People's Choice Award, James Madison University **2019**

Joseph C. Smiddy Outstanding Scientist Award, UVA at Wise **2018**

Grants and Scholarships

$5,000 — Yale Center for Geospatial Solutions Affiliated Students Grant **2025**

$20,000 — Childs Forestry Research Fund, The Forest School at the Yale School of the Environment **2024**

$200,000 — Yale Center for Natural Carbon Capture, Yale School of the Environment **2022**

$1,000 — Norlyn L. Bodkin Botany Scholarship, James Madison University **2019**

Teaching Experience

Teaching Fellow, Yale School of the Environment

- ENV 660, Forest Dynamics **Fall 2025**
- Yale Geographic Information Systems Accelerator **Springs 2024–2025**
- ENV 726, Observing Earth From Space **Springs 2024–2025**
- ENV 955, Seminar in Research Analysis & Communication in Forest Ecology **Spring 2024**

Guest Lectures, Yale School of the Environment

- ENV 704, Workshop on Remote Sensing and Photogrammetry with Drones **Fall 2023, Fall 2024**
- ENV 955, Seminar in Research Analysis & Communication in Forest Ecology **Spring 2024**

Adjunct Instructor, James Madison University

- BIO 250L, Quantitative Ecology and Evolution Lab **Spring 2022**

Adjunct Instructor, Blue Ridge Community College, VA

- BIO 101, General Biology I **Fall 2020–Spring 2022**

Teaching Assistant, James Madison University

- BIO 140L, Foundations of Biology Lab **Fall 2018–Spring 2020**

Mentoring/ Supervision

Graduate students

- Louis Cimmino, Yale School of the Environment **Fall 2025–Present**
- Kumba Jammeh, Yale School of the Environment **Fall 2024–Present**
- Nate McMullen, Yale School of the Environment **Fall 2024–2025**

Jackson Cooper, Yale School of the Environment	**Summer 2024–2025**
Cindy Cifuentes, Yale School of the Environment	**Summer 2024–2025**
Yeim We, Yale School of the Environment	**Summer 2024**
Sangam Paudel, Yale School of the Environment	**Summer 2024**
Michael Freiburger, Yale School of the Environment	**Fall 2022–Spring 2023**

Undergraduate students

Riley Johnson, Washington College, MD	**Summer 2024**
Emilie Fowler, James Madison University, VA	**Fall 2018–2019**
Zachary Warning, SUNY ESF, NY	**Summer 2018**
Kaj Overturf, University of Maine, ME	**Summer 2018**
Rosa Kome, Clemson University, SC	**Summer 2018**

Memberships

President, UVa-Wise Environmental Club	**Spring 2017–2018**
Darden Society member	**2016–Present**

Computer Skills

Languages—Expert in R. Proficient in Javascript, Bash, Python, Git.
Markup languages: LaTeX, HTML, Markdown.

Software—ArcGIS, QGis, ENVI, Google Earth Engine, Agisoft Metashape, OpenDroneMap, DJI Terra, R, Adobe Photoshop and Illustrator, GIMP, Inkscape, Microsoft Suite.

Operating systems— Windows, Mac OS, Linux.

Publications in Progress

7. **Peters, J.D.J.**, Grant Connette, Xuhui Lee, Bronson W. Griscom, P. Mark Ashton (2025) *North American Liana Distributions Highlight Significant Opportunities for Improved Carbon Sequestration.*

Publications

6. Freiburger, M., Danica Doroski, Colleen M. Dunning, P. Mark Ashton, **Jacob D. J. Peters** (2025) *The 10/20/30 Planting Rule Aligns with Traditional Plant Diversity Metrics across Spatial Scales*, Urban Forestry and Urban Greening *114*.
5. Schnitzer, Stefan A., Begüm Kaçamak, Isaac Zombo, et al., including **Jacob D. J. Peters** ... (2025) *The Search for Champion Lianas: The Largest Lianas on Six Continents.*, Biotropica *57(6)*.
4. **Peters J.D.J.**, J.M. Portmann, B.W. Griscom (2023) *Lianas (Vitis spp.) reduce growth and carbon sequestration of light-demanding tree species in a temperate forest*, Restoration Ecology *31(5)*, 1-10.
3. **Peters J.D.J.**, H. Griscom (2021) *Highlighting an overlooked hotspot for American ginseng (Panax quinquefolius L.) in Virginia*, Natural Areas Journal *42(2)*, 209-119.
2. **Peters J.D.J.**, S. Schoen, M. Rhodes, H. Griscom (2021) *Up Smith Creek without a paddle: a case study on the barriers to stream restoration assessment*, Journal of Ecological Restoration *39(3)*, 151-155. Alternative link to avoid paywall.
1. **Peters J.D.J.**, R. Huish, D. Taylor, B. Munson (2020) *Comparative Analysis of Four Maple Species for Syrup Production in South-Central Appalachia*, Journal of Agriculture, Food Systems, and Community Development *9(2)*, 267-276.

Invited Talks

1. Yale Environmental Training Initiative's Forest Monitoring Workshop — June 2025
2. Smithsonian Conservation Biology Institute's Conservation Ecology Center — January 2025
3. "Upgoer 5" at Yale School of the Environment Research Day — April 2023
4. Smithsonian Conservation Biology Institute's Conservation Ecology Center — August 2021
5. Research Day, University of Virginia's College at Wise — April 2018
6. Virginia Master Naturalists, Clinch Valley Chapter — December 2017
7. Clinch River Valley Initiative Youth Summit — March 2017
8. Letcher Co. KY Maple School — December 2016

Contributed Talks (selected)

1. Society of American Foresters National Convention — October 2025
2. New England Society of American Foresters Annual Meeting — March 2025
3. Yale Center for Geospatial Solution Affiliated Students Luncheon — October 2024
4. Yale Center for Natural Carbon Capture Showcase — September 2024
5. Yale Center for Natural Carbon Capture Showcase — October 2023
6. Yale School of the Environment Research Day — April 2023
7. Annual Conference for the Assoc. of Southeastern Biologists — April 2019
8. Annual Conference for the Assoc. of Southeastern Biologists — March 2018
9. Annual North American Agroforestry Conference — April 2017
10. National Conference on Undergraduate Research — April 2017
11. Annual Conference for the Assoc. of Southeastern Biologists — March 2017
12. Annual Conference Society of Economic Botany — June 2016
13. National Conference on Undergraduate Research — April 2016

References

Dr. P. Mark Ashton, Professor of Silviculture and Director of Yale Forests, Yale School of the Environment
email: mark.ashton@yale.edu
office phone: 203-432-9835

Dr. Xuhui Lee, Professor of Meteorology, Yale School of the Environment
email: xuhui.lee@yale.edu
office phone: 1-203-432-6271

Dr. Heather Griscom, Professor of Biology, James Madison University
email: griscohp@jmu.edu
office phone: 1-540-568-5525

Dr. Ryan Huish, Associate Professor of Biology, University of Virginia's College at Wise
email: rdh5b@uvawise.edu
office phone: 1-814-883-2069