

Jazlynn Hall

Cary Institute of Ecosystem Studies

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Curriculum Vitae

EDUCATION

2022 PhD Ecology and Evolutionary Biology, Columbia University
MA: 2018, MPhil: 2019

Thesis title: Impacts of Drought and Cyclonic Storms on Vegetation and Streamflow in Puerto Rico

2016 BS Geography, University of Wyoming

2016 BA Anthropology, University of Wyoming

RESEARCH FELLOWSHIPS AND GRANTS

Awarded

- Hansen, W.D., **Hall, J. S.**, Hayes, K. R., and B. M. Rogers. *Informing effective strategies for managing carbon stores with increasing fire in boreal forests of interior Alaska.* Joint Fire Science Program (2024-2027). \$500,000.
- **Hall, J.**, and Hansen, W. D., *Preparing a time series database for applications in forest ecology and wildfire resilience in the Western United States.* FARR (FAIR in ML, AI-readiness and Reproducibility) Research Coordination Network Mini-Research Grant (2024-2025). \$5,000.
- Hansen, W. D., Batterman, S., Lucas, J., and **Hall, J.**, *Filters of post-fire tree regeneration; a carbon-cycle linchpin in the boreal biome.* Cary Institute Science Innovation Fund (2023-2024). \$80,000.
- **Hall, J.**, Saatchi, S., and M. Uriarte, *Characterization of forest degradation from Hurricane Maria in Puerto Rico using optical and SAR imagery.* Non-Academic Research Internship for Graduate Students (INTERN) Supplemental Funding, National Science Foundation (2020). \$25,000.
- **Hall, J.**, Quebbeman, A., and M. Uriarte. *Plot to landscape: The effects of cyclonic winds on tree damage in Puerto Rico.* Earth Institute Travel Grant, Columbia University (2017-2018). \$2,000.
- **Hall, J.** *Puerto Rican Forests and Water Resources Summer Research.* Institute of Latin American Studies Summer Field Research Grant, Columbia University (2017). \$1,600.
- **Hall, J.**, *Graduate Research Fellow (GRFP)*, National Science Foundation (2016-2021). ~\$100,000.
- **Hall, J.**, Beverly, D., and B. Ewers. *Effect of aspect and forest age on tree water use in the Panama Canal Watershed.* Wyoming's Experimental Program to Stimulate Competitive Research (EPSCoR) Undergraduate Fellow, and Wyoming Research Scholars Program, University of Wyoming (2016). ~\$13,000.

Pending

- Hansen, W. D., ... **Hall, J.**, ... *Ecologically engineering forests to avoid catastrophic wildfire emissions.* Schmidt Sciences Virtual Institute for the Carbon Cycle (2025-2027). \$10,000,000.
- Hansen, W. D., **Hall, J.**, and K. C. Weathers. *Harmonizing disparate data sources to accelerate the data-discovery-decision pathway at the fire-water nexus.* Cary Institute Science Innovation Fund (2025-2027). \$80,000.

SCHOLARSHIPS, AWARDS, AND HONORS

2023	Gordon Research Conference in Predictive Ecology early-career award (~\$500)
2016-2021	Dean's Fellow, Columbia University (\$400,000)
2016	Provosts Diversity Award, Columbia University (\$6,000)
2016	Finalist, Rosemarie Martha Spitaleri Award for Outstanding Graduating Woman, University of Wyoming
2016	Own it! Award Winner for Outstanding Undergraduate Female Student in STEM, University of Wyoming
2015-2016	McNair Scholar, University of Wyoming
2015	Phi Beta Kappa, University of Wyoming

PUBLICATIONS/JOURNAL ARTICLES

Published

- **Hall, J.**, Sandor, M., Harvey, B. J., Parks, S., Trugman, A. T., Williams, A. P., & Hansen, W. D. (**in press**). Forest carbon storage in the Western United States: distribution, drivers, and trends. *Earth's Future*.
- Ankori-Karlinsky, R., **Hall, J.**, Murphy, L., Muscarella, R., Martinuzzi, S., Fahey, R., ... & Uriarte, M. (**2024**). Chronic Winds Reduce Tropical Forest Structural Complexity Regardless of Climate, Topography, or Forest Age. *Ecosystems*, 1-13.
- Quebbeman, A. W., Menge, D. N., Arellano, G., **Hall, J.**, Wood, T. E., Zimmerman, J. K., & Uriarte, M. (**2022**). A severe hurricane increases carbon dioxide and methane fluxes and triples nitrous oxide emissions in a tropical forest. *Ecosystems*, 25(8), 1754-1766.
- **Hall, J.**, Scholl, M., Gorokhovich, Y., & Uriarte, M. (**2022**). Forest cover lessens the impact of drought on streamflow in Puerto Rico. *Hydrological Processes*, 36(5), e14551.
- DeFries, R., A. M. Osuri, and Y. Malhi. (**2021**). The Effects of Forest Degradation on Ecosystem Services. *Changing Wealth of Nations Background Technical Report*.
 - **Hall, J.** is a contributing author
- **Hall, J.**, Muscarella, R., Quebbeman, A., Arellano, G., Thompson, J., Zimmerman, J. K., & Uriarte, M. (**2020**). Hurricane-induced rainfall is a stronger predictor of tropical forest damage in Puerto Rico than maximum wind speeds. *Scientific Reports*, 10(1), 4318.
- Feng, Y., Negron-Juarez, R. I., Patricola, C. M., Collins, W. D., Uriarte, M., **Hall, J. S.**, ... & Chambers, J. Q. (**2018**). Rapid remote sensing assessment of impacts from Hurricane Maria on forests of Puerto Rico. *PeerJ Preprints*, 6, e26597v1.

In Revision

- **Hall, J.**, Scholl, M., Shanley, J., Matt, S., and M. Uriarte. Forest cover lessens hurricane impacts on peak streamflow. *Hydrological Processes*.

PRESENTATIONS

- **Hall, J.**, Sandor, M., Harvey, B. J., Parks, S. A., Trugman, A. T., Williams, A. P., & W. D. Hansen, Forest carbon storage in the Western United States: distribution, drivers, and trends. Fall Meeting, American Geophysical Union Annual Meeting 2023, San Francisco, CA Poster Presentation.
- **Hall, J.**, Sandor, M., Parks, S., Trugman, A. T., Williams, A. P., & W. D. Hansen, Live tree forest carbon storage in the Western United States: distribution, trends, and drivers. Fall Meeting, Ecological Society of America Annual Meeting 2023, Portland OR. Oral Presentation.

- **Hall, J.**, Trugman, A. T., Williams, A. P., & W. D. Hansen, Finding the baseline: Forest carbon storage in the Western United States across climatic gradients and fire legacies. Fall Meeting, American Geophysical Union Fall Meeting. December 2022, Chicago, IL. Poster Presentation.
- Shanley, J., Matt, S., Scholl, M. A., **Hall, J.**, McDowell, W. H, González, G, Uriarte, M. The effect of 2017 Hurricane Maria on streamflow in Puerto Rico. *Frontiers in Hydrology* 2022, Poster Presentation.
- **Hall, J.**, Saatchi, S., & M. Uriarte. Characterization of forest degradation from Hurricane Maria in Puerto Rico using optical and SAR imagery. American Geophysical Union 2021 Fall Meeting, New Orleans, LA. Poster Presentation.
- Ankori-Karlinsky, R., **Hall, J.**, & M. Uriarte. The making of living pillars: Drivers of canopy height and structural complexity of tropical forests. Ecological Society of America Annual Meeting 2021, Virtual. Oral Presentation.
- **Hall, J.**, Scholl, M., Shanley, J., Matt, S., & M. Uriarte. Vegetation damage and forest cover influence streamflow response to Hurricane Maria in Puerto Rico. Ecological Society of America Annual Meeting 2021, Virtual. Oral Presentation.
- **Hall, J.**, Scholl, M. & M. Uriarte. Forest cover mitigates the impacts of rainfall variability on streamflow in Puerto Rico. American Geophysical Union 2019 Fall Meeting, San Francisco, California. eLightning and Poster Presentation.
- **Hall, J.**, Quebbeman, A., Arellano, G. Muscarella, R., Zimmerman, J.K., & M. Uriarte. Impacts of Hurricane Maria on Puerto Rican forests and risk factors for damage. Luquillo Longer-Term Ecological Research Annual Meeting 2019. Poster Presentation
- **Hall, J.**, Quebbeman, A., & M. Uriarte. Plot to landscape: the effects of cyclonic winds on tree damage in Puerto Rico. Earth Institute Symposium 2018. Poster Presentation
- **Hall, J.**, and Uriarte, M. Using estimates of vegetative damage and biomass to explain variation in Streamflow in Puerto Rico after Hurricanes Irma and Maria. Ecological Society of America Annual Meeting 2018, New Orleans, LA. Poster Presentation
- Ewers, B., Bretfeld, M., Millar, D., **Hall, J.**, Beverly, D., Hall, J., Ogden, F., & S. Mackay. Confronting a Process-based Model of Temperate Tree Transpiration with Data from Forests in Central Panama Exposed to Drought. American Geophysical Union 2016 Fall Meeting, San Francisco, California. Poster Presentation
- **Hall, J.**, Ewers, B., & Beverly, D. "Effect of aspect and forest age on tree water use in the Panama Canal Watershed". Ecological Society of America Annual Meeting 2016. Fort Lauderdale, Florida. Poster Presentation.
- **Hall, J.**, Beverly, D., Speckman, H. N., Zelikova, T. J., Ohara, N., & Ewers, B. Primary Drivers of dust deposition within a small subalpine watershed. American Geophysical Union 2015 Fall Meeting, San Francisco, California. Poster Presentation.

ACCOMPLISHMENTS

2021 Public Outreach Grant. E3B Urban Ecology Summer Program. Center for Science and Society, Columbia University

A group of Columbia ecology graduate students partnered with the Lamont-Doherty's Secondary School Field Research Program (SSFRP) to develop an urban ecology summer program which began July 2021. This program gave Black people, Indigenous people, People of Color and other underrepresented high school students a hands-on understanding of the scientific process while engaging in field research. I suggested the partnership, coordinated the initial meetings between SSFRP representatives and our working group, and contributed to a written proposal that was later funded.

TECHNICAL SKILLS AND EXPERIENCE

R Statistical Software, ArcGIS, Google Earth Engine, statistical and spatial modeling, optical remote sensing, Jupyter Notebook, Synthetic aperture radar analysis, LiDAR point cloud analysis, Python, time series analysis, forest field survey

VOLUNTEER AND COMMUNITY SERVICE

- 2023-present Chair, Cary Institute Postdoc, Research Associate, and Data Analyst/Scientist Committee
- Coordinated activities to facilitate community building and establish formal communication channels between the committee and individuals represented by the committee.
 - Led efforts to draft and distribute a handbook meant to guide new Postdoctoral Associates through the onboarding process and throughout their time at the Cary Institute.
 - Represented Postdoctoral Associate interests during committee meetings and additional events such as meetings with the Cary Institute Board of Trustees and President.
 - Wrote an annual report to the President detailing committee activities and progress.
- 2023 Visiting Scientist, Cary Institute Summer Camp
- Planned ecology-related activities for students (2nd-4th grade) in science summer camp and led students through activities, encouraging them to think about the role of fire in forest ecosystems.
- 2023 Riverkeeper Sweep at Kaal Rock
- Participated in a trash clean-up day near Poughkeepsie, NY.
- 2020 Outreach Outside of Columbia Working Group Volunteer, Department of Ecology, Evolution, and Environmental Biology, Columbia University
- Established a summer urban field ecology program for high school students, in partnership with local majority-BIPOC schools and organizations.
 - Participated in drafting a letter to our faculty on necessary department diversity and inclusion goals and requirements.
- 2017, 2019 Section volunteer, Girls Science Day. Columbia University
- 2013 Biological Anthropology Volunteer. Excavation of human remains involved in a missing persons cold case. University of Wyoming Department of Anthropology
- 2013 Rimac Valley Bioarchaeological Project: Lima Peru
- 2013 Laboratory Assistant. University of Wyoming Department of Anthropology