

## **JEFFERY B. CANNON, PH.D.**

*Forest Management Scientist*  
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### **EDUCATION**

- 2009 **B.S., Biological Science**, Mississippi State University, Starkville, MS *summa cum laude*
- 2011 **M.S., Biology**, University of Mississippi, Oxford, MS *summa cum laude*
- 2015 **Ph.D., Plant Biology**, University of Georgia, Athens, GA *summa cum laude*

### **RESEARCH APPOINTMENTS**

- 2019 – present **Forest Management Scientist**, Assistant Scientist, The Jones Center at Ichauway. Newton, GA.
- 2018 – 2019 **Assistant Director of Research and Monitoring**, Research Scientist, Colorado Forest Restoration Institute, Dept. of Forest and Rangeland Stewardship, Colorado State University.
- 2016 – 2018 **Research Associate IV**, Colorado Forest Restoration Institute, Dept. of Forest and Rangeland Stewardship, Colorado State University.
- 2011 – 2015 **Doctoral Research**, Department of Plant Biology, University of Georgia. Dissertation: “Crash and burn: Forest tornado damage, its landscape pattern, and its interaction with fire”. Graduate advisor: Chris J. Peterson.
- 2009 – 2011 **Master of Science Research**, Department of Biology, University of Mississippi. Thesis: “Effects of tornado damage, prescribed fire, and salvage logging on oak (*Quercus* spp.) saplings in upland oak forests in northern Mississippi”. Graduate advisor: J. Stephen Brewer.
- 2009 – 2011 **Physical Science Technician**, US Department of Agriculture, Natural Resources Conservation Service, Natural Products Utilization Unit. Project title: “Effects of distillation time on essential oil composition of oil crops in Mississippi”. Research supervisor: Charles L. Cantrell.
- 2008 – 2011 **Assistant Curator**, Institute of Botanical Exploration Herbarium. Under direction of Sidney T. McDaniel† and Robert L. Stewart
- 2007 – 2009 **Undergraduate Research Assistant**, Department of Biological Science, Mississippi State University. Project title: “Soil texture effects on morphology of cockspur pricklypear (*Opuntia pusilla*) morphology”. Research supervisor: Gary N. Ervin

## PUBLICATIONS

### Refereed journal articles

\* denotes student author

18. **Cannon, JB**, RK DeAngelis\*, WT Tinkham, EM Hill, MA Battaglia (in review). Modeling the effects of spatially heterogeneous restoration on the understory light environment in a mixed conifer forest. Invited submission to *Forests* special issue on impacts of complex forest structures on tree regeneration (in review).
17. **Cannon, JB**, BM Gannon, JA Feinstein, BH Wolk (2019) An assessment framework for dry forest conservation. *Rangelands* (in press) [[html](#)].
16. Peterson, CJ, GHP Ribeiro, R Negrón-Juárez, D Marra, JQ Chambers, N Higuchi, A Lima, **JB Cannon** (2019) Estimates of wind speeds necessary to topple central Amazon trees suggest that wind may be an extremely common agent of disturbance. *Forestry: An International Journal of Forest Research* cpz025 [[html](#)]
15. Gannon, BM, Y Wei, LH MacDonald, SK Kampf, KW Jones, **JB Cannon**, BH Wolk, AS Cheng, RN Addington, MP Thompson (2019). Prioritizing fuels reduction for water supply protection. *International Journal of Wildland Fire* (in press). [[html](#)]
14. **Cannon, JB**, SK Henderson\*, MH Bailey\*, CJ Peterson (2019) Interactions between wind and fire disturbance in forests: Competing amplifying and buffering effects. *Forest Ecology and Management*, 436: 117–128. [[pdf](#)]
13. **Cannon, JB**, KJ Barrett, BM Gannon, RN Addington, MA Battaglia, PJ Fornwalt, GH Aplet, AS Cheng, JL Underhill, JS Briggs, PM Brown (2018). Effects of collaborative restoration treatments on forest structure and spatial patterns in ponderosa pine (*Pinus ponderosa*) forests of Colorado. *Forest Ecology and Management* 424: 191–204. [[pdf](#)]
12. Jones KW, **JB Cannon**, FA Saavedra, SK Kampf, RN Addington, AS Cheng, LH MacDonald, C Wilson, B Wolk (2017). Return on investment from fuel treatments to reduce severe wildfire and erosion in a watershed investment program in Colorado. *Journal of Environmental Management* 198: 66–77. [[pdf](#)]
11. **Cannon, JB**, CJ Peterson, JJ O'Brien, JS Brewer (2017). A classification of interactions between forest disturbance from wind and fire. *Forest Ecology and Management* 409: 381–390. [[pdf](#)]
10. **Cannon, JB**, J Hepinstall-Cymerman, CM Godfrey, and CJ Peterson (2016). Landscape-scale patterns of forest tornado damage in mountainous terrain. *Landscape Ecology* 31: 2097–2114. [[pdf](#)]
9. Ribeiro, G, JQ Chambers, CJ Peterson, SE Trumbore, DM Marra, C Wirth, **JB Cannon**, RI Negrón-Juarez, A Lima, E de Paula, J Santos, N Higuchi (2016). Mechanical vulnerability and resistance to snapping and uprooting for Central Amazon tree species. *Forest Ecology and Management* 380: 1–10. [[html](#)]
8. Chaudhary, V, M Rúa, A Antoninka, J Bever, **JB Cannon**, A Craig, et al. (2016). MycoDB: A global database of plant response to mycorrhizal fungi. *Scientific Data* 3: 160028. [[html](#)]

7. **Cannon, JB**, MA Barrett\*, and CJ Peterson (2015). Effect of species, size, failure mode, and fire-scarring on tree stability. *Forest Ecology and Management* 356: 196–203. [[html](#)]
6. **Cannon, JB**, and P Brickman (2015). Helping students save: Assigning textbooks early can save money and enhance learning. *Journal of College Science Teaching* 44: 38–41. [[pdf](#)]
5. **Cannon, JB**, JJ O'Brien, EL Loudermilk, MA Dickenson, and CJ Peterson (2014). The influence of experimental wind disturbance on forest fuels and fire characteristics. *Forest Ecology and Management* 330: 294–303. [[pdf](#)]
4. **Cannon, JB**, and JS Brewer (2013). Effects of tornado damage, prescribed fire, and salvage logging on natural oak (*Quercus* spp.) regeneration in a xeric southern USA coastal plain oak–pine forest. *Natural Areas Journal* 33: 39–49. [[html](#)]
3. **Cannon, JB**, CL Cantrell, T Astatkie, and VD Zheljzakov (2013). Modification of yield and composition of essential oils by distillation time. *Industrial Crops and Products* 41: 214–220. [[html](#)]
2. Brewer, JS, CA Bertz, **JB Cannon**, JD Chesser, and EE Maynard (2012). Do natural disturbances or the forestry practices that follow them convert forests to early-successional communities? *Ecological Applications* 22: 442–458. [[pdf](#)]
1. Zheljzakov, VD, CL Cantrell, T Astatkie, and **JB Cannon** (2011). Lemongrass productivity, oil content, and composition as a function of nitrogen, sulfur, and harvest time. *Agronomy Journal* 103: 805–812. [[pdf](#)]

#### Manuscripts in preparation

3. **Cannon, JB**, BM Gannon, JA Feinstein, LJ Metz, EA Padley (in preparation) Modeling ecological benefits of landscape-scale conservation practices in dry conifer forests of the Colorado Front Range. In preparation for *Landscape Ecology*.
2. **Cannon, JB**, S Elliott\*, JS Briggs (in preparation). Comparing changes in spatial pattern between collaborative restoration treatments and wildfires in the Colorado Front Range. In preparation for submission to *Landscape Ecology*.
1. Barrett, KJ, A Schuetter\*, **JB Cannon**, AS Cheng (in preparation). Effects of collaborative restoration and adaptive management on forest structure and composition the Colorado Front Range. In preparation for submission to *Forest Ecology and Management*.

#### Thesis and dissertation

2. **Cannon, JB** (2015). *Crash and burn: Forest tornado damage, its landscape pattern, and its interaction with fire*. Doctoral Thesis. Department of Plant Biology, University of Georgia, Athens, GA. [[pdf](#)]
1. **Cannon, JB** (2011). Effects of tornado damage, prescribed fire, and salvage logging on oak (*Quercus* spp.) saplings in upland oak forests in northern Mississippi. Master's Thesis. University of Mississippi, University, MS. [[html](#)]

**Technical reports and book chapters**

17. **Cannon, JB**, BM Gannon, Z Wurtzebach (2019). Report on potential application of landscape-scale analyses for assistance with Forest planning. Colorado Forest Restoration Institute. CFRI-1910. [[pdf](#)]
16. **Cannon, JB**, BM Gannon, Z Wurtzebach (2019). Application of CFLRP monitoring to Forest Plan Monitoring of the Arapaho Roosevelt National Forest. Colorado Forest Restoration Institute CFRI-1909. [[pdf](#)]
15. **Cannon, JB** (2019). Application of tools for modeling stand-level restoration effects on landscape-scale heterogeneity: Pilot study for Jefferson County Open Space. CFRI-1907. [[pdf](#)]
14. Morici, K, **JB Cannon**, B Wolk (2019). Mary's Lake Monitoring Summary. Colorado Forest Restoration Institute. CFRI-1906. [[pdf](#)]
13. Morici, K, B Wolk, AS Cheng, **JB Cannon**, EC Williams, MD Caggiano, H Brown, CM Hoffman (2019). Colorado Wildfire Risk Reduction Grant Program Monitoring Final Report. CFRI-1903. [[pdf](#)]
12. Williams, EC, **JB Cannon**, Upper South Platte Partnership Ecological Resilience Monitoring. Colorado Forest Restoration Institute. CFRI-1902. [[pdf](#)]
11. Morici, K, B Wolk, **JB Cannon**, B Gannon, R Addington (2019). 2018 Ecological Monitoring Report for Peaks to People Water Fund Demonstration Sites. Peaks to People Water Fund. CFRI-1901. [[pdf](#)]
10. Morici, K, and **JB Cannon** (2018). Photoload calibration of fine woody fuels in montane forests of Colorado: 2016–2017. Colorado Forest Restoration Institute. CFRI-1812. [[pdf](#)]
9. **Cannon, JB**, KJ Barrett, BM Gannon (2018). Report on the potential application of CFLRP monitoring tools for development of Forest Plan monitoring. Colorado Forest Restoration Institute. CFRI-1811. [[pdf](#)]
8. Chambers, ME, and **JB Cannon** (2018). Uncompahgre Plateau Collaborative Forest Landscape Restoration Program: Ecological Impacts. Colorado Forest Restoration Institute. CFRI-1806. [[pdf](#)]
7. Chambers, ME, and **JB Cannon** (2018). Uncompahgre Plateau CFLRP Gambel oak understory response to mowing and prescribed burning treatments study summary. Colorado Forest Restoration Institute. CFRI-1801. [[pdf](#)]
6. Gannon, B, B Wolk, Y Wei, S Kampf, K Jones, L MacDonald, R Addington, T Cheng, **JB Cannon** (2017). Connecting forests and water: Fuel treatment assessment and planning tools. *Colorado Water* 3: 9–11. [[pdf](#)]
5. Barrett, KJ, PM Brown, J Clement, **JB Cannon**, B Wolk, AS Cheng (2017). Front Range Roundtable Collaborative Forest Landscape Restoration Project: 2017 Ecological Social and Economic Monitoring Plan. Colorado Forest Restoration Institute. CFRI-1705. [[pdf](#)]
4. **Cannon, JB**, ME Chambers, and AS Cheng (2017). Monitoring trends in forest spatial patterns: Uncompahgre Collaborative Landscape Restoration Program. Colorado Forest Restoration Institute. CFRI-1703. [[pdf](#)]

3. Chambers, ME, **JB Cannon** (2016). Uncompahgre Plateau CFLRP Gambel oak understory response to mowing and prescribed burning treatments study summary. Colorado Forest Restoration Institute. CFRI-1603. [[pdf](#)]
2. **Cannon, JB**, KJ Barrett (2016). 2016 Front Range CFLRI Monitoring: Progress, Outcomes, and Recommendations. Colorado Forest Restoration Institute. CFRI-1601. [[pdf](#)]
1. Peterson, CJ, **JB Cannon**, and CM Godfrey (2016). First steps toward defining the wind disturbance regime in Central Hardwoods Forests. In *Natural Disturbances and Historic Range of Variation: Type, Frequency, Severity, and Post-disturbance Structure in Central Hardwood Forests, USA*, C. Greenberg and V Collins, eds. Springer. [[html](#)]

### Science outreach publications

5. Cannon, JB, JS Briggs, and ME Chambers (2018). Effects of forest restoration treatments and wildfires on tree spatial patterns in the Colorado Front Range. 2017 Association of Fire Ecologists, Fire Congress Research Highlight. [[pdf](#)]
4. **Cannon, JB** (2015) “Superstorms: Are natural disasters becoming stronger?” UGA Science Observer [[html](#)]
3. **Cannon, JB** (2015) “Why is a Nigerian prince sending me money? The economics of email scams,” UGA Science Observer [[html](#)]
2. **Cannon, JB** (2015) “Why are some species so invasive?” UGA Science Observer [[html](#)]
1. **Cannon, JB** (2014) “Are all forest fires bad?” UGA Science Observer [[html](#)]

## CONFERENCE PRESENTATIONS

### Invited oral presentations

\* denotes student co-author

22. **Cannon, JB**, G-h Kim\*, CJ Peterson (forthcoming, November 2019). The role of buffering effects in compounded disturbances from wind and fire. Special session “Towards a mechanistic understanding of interactions between fire and previous disturbances: Recent advances and new surprises”. 8<sup>th</sup> International Fire Ecology and Management Congress, Association for Fire Ecology. Tucson, AZ.
21. **Cannon, JB**, R DeAngelis\*, WT Tinkham, MA Battaglia (forthcoming, November 2019). Variability in mixed conifer forest structure changes understory light environments. Special session “Restoring structure and pattern to frequent fire forests in the western U.S.: Moving from historical data to implementation” 8<sup>th</sup> International Fire Ecology and Management Congress, Association for Fire Ecology. Tucson, AZ.
20. Barrett, KJ, A Schuetter\*, **JB Cannon**, AS Cheng (September 2018). Effects of collaborative restoration and adaptive management on forest structure and composition the Colorado Front Range. 2019 Front Range Collaborate Forest Landscape Restoration Program (CFLRP) Annual Monitoring Meeting. September 2019. Golden, CO.

19. **Cannon, JB**, KJ Warnick, S Elliott\*, JS Briggs (September 2018). Comparing the impacts of restoration treatments and low to moderate severity wildfire on spatial patterns in Front Range forests. 2019 Front Range Collaborative Forest Landscape Restoration Program (CFLRP) Annual Monitoring Meeting. September 2019. Golden, CO.
18. Hill, EM, S Ex, **JB Cannon**, C Prolic (2019). Observational and experimental approaches to understanding conifer regeneration in managed stands of western Colorado. Special session “Developing insight on dryland forest regeneration through multiple pathways”. 12<sup>th</sup> North American Forest Ecology Workshop, Flagstaff, AZ. June 2019.
17. **Cannon, JB** (2019). Wind, fire, and forest restoration: Linkages between spatial patterns and forest dynamics following disturbances. School of Forestry and Wildlife Sciences, Auburn University. April 2019.
16. Gannon, BM, Z Wurtzebach, **JB Cannon** (2019). Application of CFRLP tools for the development of Forest Plan monitoring: Wildfire risk and WUI hazard. Presented to Arapaho-Roosevelt National Forest Staff. March 2019, Fort Collins, CO.
15. **JB Cannon**, BM Gannon, JA Feinstein, L Metz, Padley (2018). Assessing tradeoffs among conservation practices in southern Rocky Mountain dry forests: A framework for NRCS. Conservation Effects Assessment Program: Grazing Lands Component. Webinar. October 2018.
14. **JB Cannon**, BM Gannon, KJ Barrett (2018). Developing a framework for landscape-scale monitoring: Lessons from CFLRP. Partners and data providers in landscape-scale monitoring: Peer learning session. Ecological Research Institute and National Forest Foundation. July 2018. Webinar, Missoula, MT.
13. **JB Cannon**, BM Gannon, KJ Barrett (2018). Application of CFLRP tools for the development of Forest Plan monitoring. 2018 National Resource Inventory and Monitoring Coordinators Meeting, US Forest Service. April 2018. Fort Collins, CO.
12. **JB Cannon**, S Elliott\*, JS Briggs (2018). Adaptive management in the Front Range CFLRP: Assessing changes in stand-scale spatial patterns. 2018 Front Range Collaborate Forest Landscape Restoration Program (CFLRP) Annual Monitoring Meeting. April 2018. Golden, CO.
11. Barrett, K, A Schuetter\*, **JB Cannon** (2018). Adaptive management in the Front Range CFLRP: Assessing changes in stand-scale forest structure and composition. 2018 Front Range Collaborate Forest Landscape Restoration Program (CFLRP) Annual Monitoring Meeting. April 2018. Golden, CO.
10. **JB Cannon**, KJ Barrett (2018). Application of CFLRP tools for the development of forest plan monitoring: Landscape monitoring of forest structure, composition, and heterogeneity. Presented to the staff of the Arapaho-Roosevelt National Forest. February 2018, Fort Collins, CO.
9. **Cannon, JB**, ME Chambers, JS Briggs (2017) Effects of forest restoration treatments and wildfires on tree spatial patterns in the Colorado Front Range. Association for Fire Ecology Fire Congress. December 2017, Orlando, FL.

8. **Cannon, JB**, ME Chambers, JS Briggs (2017) Comparing changes in spatial patterns between restoration treatments and wildfires in the Colorado Front Range. Natural Areas Association Conference. October 2017, Fort Collins, CO.
7. Addington, R, **JB Cannon**, and C Ekarius (2017) **Testimony to Colorado Congress**, “Benefits from and barriers to expand application of prescribed fire and mechanical forest treatments”. Wildfire Matters Review Committee, September 8, 2017. State Capitol, Denver, CO.
6. **Cannon JB**, ME Chambers, AS Cheng (2017). Monitoring trends in forest patterns: Uncompahgre Collaborative Landscape Restoration Program. Uncompahgre Plateau Collaborative Forest Landscape Restoration Annual Stakeholder's Meeting. March 6, 2017. Montrose, CO.
5. **Cannon, JB**, BM Gannon, MA Battaglia, PM Brown, PJ Fornwalt (2016). Effect of collaborative forest restoration treatments on fine-scale spatial heterogeneity in the Colorado Front Range. 3<sup>rd</sup> Southwest Fire Ecology Conference, Association of Fire Ecologists. Tucson, AZ.
4. **Cannon, JB** (2016). Are CFLRP treatments restoring desired stand spatial heterogeneity? 2016 Front Range Collaborate Forest Landscape Restoration Program (CFLRP) Annual Monitoring Meeting. Lakewood, CO.
3. **Cannon, JB** (2015). Forest disturbances and interactions in a changing world. Presented at the National Parks Conservation Association Southeast Regional Council meeting, Gatlinburg, TN.
2. **Cannon, JB**, CJ Peterson, and J Hepinstall–Cymerman (2014). Wind disturbance in a changing world: Wind damage patterns in Great Smoky Mountains National Park. Presented at the Climate Change in America's National Parks Webinar Series.
1. **Cannon, JB**, CJ Peterson, and J Hepinstall–Cymerman (2014). Oh the damage done: Assessing patterns of wind damage in the Great Smoky Mountains. Presented at the Great Smoky Mountains National Park Science Colloquium, Gatlinburg, TN.

#### Contributed oral presentations

18. Peterson, CJ, **JB Cannon**, CM Godfrey. (October 2019). Estimates of the range of wind speeds that cause tree failure for specific trees within forest stands in Brazil and Georgia. Tornado Hazard Wind Assessment and Reduction Symposium. Champaign, IL.
17. **Cannon, JB**, R DeAngelis\*, WT Tinkham, MA Battaglia (April 2019). Spatial patterns of restoration treatments in a mixed-conifer forest: impact on forest structure and light availability. 2019 Annual meeting of the US Chapter of the International Association for Landscape Ecology. Fort Collins, CO.
16. Barrett, KJ, A Schuetter\*, **JB Cannon**, (March 2019). Effects of collaborative restoration and adaptive management on forest structure and composition in the Colorado Front Range. 2019 HAR-CeRSER Conference. High Altitude Revegetation Committee and Central Rockies chapter of the Society for Ecology Restoration. Fort Collins, CO.

15. **Cannon, JB**, R DeAngelis\*, WT Tinkham, MA Battaglia, (2019). Modeling the effects of heterogeneous restoration treatments on understory light environment in a mixed-conifer forest. 2019 HAR-CeRSER Conference. High Altitude Revegetation Committee and Central Rockies chapter of the Society for Ecology Restoration. Fort Collins, CO.
14. Lalande, B\*, **JB Cannon**, SA Ex, C Hoffman, WT Tinkham, JE Stewart (2018). Understanding soil microbial communities to assist in management of Colorado's forests. Society of American Foresters Convention. Oct 2018. Portland, OR.
13. Wei, Y, B Gannon, S Kampf, M Thompson, L MacDonald, **JB Cannon**, BH Wolk, AS Cheng, K Jones, R Addington (2017). A mixed integer programming model to prioritize fuel treatments across two Colorado municipal watersheds. Symposium on Systems Analysis in Forest Resources. Suquamish, WA.
12. Wilson, C\*, Jones, K, R Addington, **JB Cannon**, A Cheng, B Gannon, SK Kampf, F Saavedra, Y Wei, B Wolk. (2017). Do investments in wildfire risk reduction lead to downstream watershed service outcomes? An integrated wildfire-erosion-economic analysis of return on investment from fuel treatments in Colorado. 37th Annual American Geophysical Union Hydrology Days Conference. Fort Collins, CO.
11. **Cannon, JB**, KJ Barrett, BM Gannon, RN Addington, MA Battaglia, PJ Fornwalt, GH Aplet, JS Briggs, P Brown (2017). Outcomes of collaborative forest restoration in Colorado: Assessing changes in forest composition and spatial structure from the Front Range CFLR Program. 2017 High Altitude Revegetation Workshop and Central Rockies Chapter of the Society for Ecological Restoration, Fort Collins, CO.
10. Jones, K, R Addington, **JB Cannon**, A Cheng, B Gannon, SK Kampf, F Saavedra, C Wilson, Y Wei, B Wolk (2016). Do investments in wildfire risk reduction lead to downstream watershed service outcomes? An integrated wildfire-erosion-economic analysis of return on investment from fuel treatments in Colorado. 2016 Annual Meeting of the American Geophysical Union. San Francisco, CA. [[Abstract](#)]
9. Peterson, CJ, CM Godfrey, FT Lombardo, **JB Cannon** (2016). Energy dissipation by tornadoes in heavily-forested landscapes. Presented at the 28<sup>th</sup> Conference on Severe Local Storms, Portland, OR. [[pdf](#)]
8. Wolk, B, A Kimple, R Addington, **JB Cannon**, A Cheng, B Gannon, K Jones, S Kampf, F Saavedra, Y Wei, C Wilson (2016). Wildfire watershed risk assessments: Challenges, opportunities, and the latest science to inform water protection management strategies. 2016 Sustaining Colorado Watersheds Conference. Avon, CO.
7. **Cannon, JB**, MA Barrett\*, and CJ Peterson (2015). Wind and fire interactions: Does prescribed fire reduce tree stability in windstorms? Presented at the 12<sup>th</sup> Annual Southeastern Ecology and Evolution Conference Annual Meeting, Athens, GA.
6. Chaudhary, VB, A Antoninka, J Bever, **JB Cannon**, A Craig, et al. (2015). MycoDB: a global database for mycorrhizal meta-analyses. Presented at the 8<sup>th</sup> Annual International Conference of Mycorrhiza, Flagstaff, AZ.



5. Ribeiro, GHM, JQ Chambers, CJ Peterson, **JB Cannon**, DM Marra, RI Negron–Juarez, AJN Lia, EVCM de Paula, J Santos, and N Higuchi (2015). Vulnerability of *Scleronema micranthum* (Ducke) a resistant tree species to wind disturbance in Central Amazon. Presented at the Association of Tropical Biology and Conservation Annual Meeting, Honolulu, HI.
4. **Cannon, JB**, J Hepinstall-Cymerman, EL Loudermilk, JJ O'Brien, and Peterson, CJ (2014). Crash and burn: The influence of wind damage and landscape pattern on forest fuels and fire behavior. Presented at the Ecological Society of America Annual Meeting, Sacramento, CA.
3. **Cannon, JB**, LJ Snyder, J Hepinstall–Cymerman, and CJ Peterson (2013). Landscape-scale-patterns of forest tornado damage in mountainous terrain. Presented at the Southeastern Ecology and Evolution Conference Annual Meeting, Orlando FL.
2. Peterson, CJ, **JB Cannon**, and LJ Snyder (2012). Estimated biomass and carbon committed to decomposition in a north Georgia tornado swath. Presented at the North American Carbon Program, All-Investigators Meeting, Albuquerque, NM.
1. Brewer, JS, and **JB Cannon** (2012). Can disturbance increase competition? Presented at the Ecological Society of America Annual Meeting, Portland, OR.

#### Poster presentations

14. Kim, G-h\*, **JB Cannon** (2019). National analysis of interactions between compounded forest disturbances from tornado and fire over 30 years (1984-2014). 2019 Annual meeting of the US Chapter of the International Association for Landscape Ecology. Fort Collins, CO.
13. Hartman, WM\*, **JB Cannon**, S Bradfield (2019). Using open-source abiotic sensors to monitor forest restoration treatments. Front Range Student Ecology Symposium, Colorado State University. February 2019 Fort Collins, CO.
12. Schuetter, A\*, **JB Cannon**, KJ Barrett (2018). Effects of restoration treatments and adaptive management on forest structure in ponderosa pine forests of the Colorado Front Range. Celebrate Undergraduate Research and Creativity Showcase. April 2018. Fort Collins, CO.
11. DeAngelis\*, R, **JB Cannon**, WT Tinkham, SA Ex (2018) Effects of spatial heterogeneity on understory solar radiation in a mixed conifer forest. Front Range Student Ecology Symposium, Colorado State University, February 2018, Fort Collins, CO.
10. Elliott, S\*, **JB Cannon**, JS Briggs (2018) Spatial and temporal effects of collaborative restoration on Front Range ponderosa pine dominated forests. Front Range Student Ecology Symposium, Colorado State University, February 2018, Fort Collins, CO.
9. **Cannon JB**, ME Chambers, AS Cheng (2018). Monitoring fine-scale spatial patterns of restoration treatments in the Uncompahgre Plateau. Uncompahgre Plateau Collaborative Forest Landscape Restoration Annual Stakeholder's Meeting. Feb 13, 2018. Montrose, CO.

8. Henderson, S\*, MH Bailey\*, **JB Cannon**, and CJ Peterson (2015). Assessing the effects of simulated wind disturbance on sapling structure and composition at the Piedmont National Wildlife Refuge. Presented at the Southeastern Ecology and Evolution Conference Annual Meeting, Athens, GA.
7. White, B\*, Nagendra, UJ, **JB Cannon**, and CJ Peterson (2015). Effects of wind damage on soil respiration in northeast and central Georgia forests. Presented at the Southeastern Ecology and Evolution Conference Annual Meeting, Athens, GA.
6. Peterson, CJ, **JB Cannon**, and J Hepinstall–Cymerman (2013). Carbon transferred from living to decomposing in the late April 2011 tornado outbreak. Presented at the American Geophysical Union Annual Meeting, San Francisco, CA.
5. Barrett, MA\*, **JB Cannon**, LJ Snyder, and CJ Peterson (2013). Experimentally evaluating tree stability in the Central Georgia Piedmont. Presented at the Southeastern Ecology and Evolution Conference Annual Meeting, Orlando, FL.
4. **Cannon, JB**, J Hepinstall–Cymerman, LJ Snyder, and CJ Peterson (2012). Patch characteristics of forest tornado damage in rugged terrain. Presented at the Ecological Society of America Annual Meeting, Portland, OR.
3. Barrett, MA\*, **JB Cannon**, S Khan, and CJ Peterson (2012). Windfirmness of loblolly pine trees tested by static winching. Presented at the Ecological Society of America Annual Meeting, Portland, OR.
2. **Cannon, JB**, and JS Brewer (2010). Effects of tornado damage and salvage logging on recruitment in an upland oak–shortleaf pine forest in Mississippi. Presented at the Ecological Society of America Annual Meeting, Pittsburg, PA.
1. **Cannon, JB**, and GN Ervin (2009). Soil texture effects on *Opuntia pusilla* morphology. Presented at the Mississippi State University Biology Undergraduate Research Showcase, Mississippi State, MS.

### **GRANTS, CONTRACTS, AND FELLOWSHIPS**

**Total grants: \$875,479;** as PI (\$287,479); as Co-PI (\$588,000)

22. “Development of tools for assessing restoration effects on landscape-scale processes in Jefferson County Open Space (2019) PI: **JB Cannon**, Co-PI: EC Williams (\$9,524).
21. “Expansion of Conservation Effectiveness Assessment Program for forests of the Colorado Front Range” Cooperative Ecosystem Studies Unit agreement, Natural Resources Conservation Service, (2018 – 2020). PI: **JB Cannon** (\$55,000).
20. “Tree regeneration niches and microsites are the keys to maintaining resilience of Colorado forests to disturbance” MacIntire–Stennis Grant, Warner College of Natural Resources, Colorado State University (2018 – 2019). PI: SA Ex, Co-PIs: **JB Cannon**, T Ocheltree (\$100,000).
19. “Conservation effects assessment for forests of the Colorado Front Range” Cooperative Ecosystem Studies Unit agreement, Natural Resources Conservation Service, (2017 – 2019). PI: **JB Cannon**, Co-PI: AS Cheng, B Wolk (\$172,000).

18. “Comparing changes in spatial patterns between collaborative restoration treatments and wildfires in the Colorado Front Range” Cooperative Ecosystem Studies Unit agreement, Geosciences and Environmental Change Science Center, US Geological Survey (2017 – 2018). PI: **JB Cannon**, Co-PI: AS Cheng (\$25,000).
17. “Does the spatial pattern of forest restoration treatments impact treatment longevity outcomes? A mechanistic approach to understanding the influence of restoration treatments on forest stand dynamics” McIntire–Stennis Grant, Warner College of Natural Resources, Colorado State University (2017 – 2018). PI: SA Ex, Co-PIs: **JB Cannon**, T Ocheltree, J Stewart, W Tinkham (\$8,000).
16. “Science-Based Support to Sustain the Resilience of Colorado's Front Range Forests, Watersheds and Communities to Wildfire”. (2017 – 2020). PI: AS Cheng, Co-PIs: B Wolk, M Caggiano, **JB Cannon** (\$400,000)
15. “Modeling conservation effects in Rocky Mountain dry forest systems”, National Resource Conservation Service. (2016 – 2017). PI: Tony Cheng, Co-PIs: B Wolk, **JB Cannon** (\$75,000)
14. “Development of an integrated system to maximize the return of investing in fire resilient watersheds in the Interior West”, Pre-Catalyst for Innovative Partnerships, Colorado State University. (2016 – 2017). PI: Yu Wei, Co-PIs: AS Cheng, B Wolk, H Miao, **JB Cannon**, K. Jones, S Kampf (\$5,000).
13. Dissertation Completion Award for excellence in research, teaching, and service. Graduate School, University of Georgia (2015; one-year fellowship).
12. UGA Graduate School Travel Award (2014). University of Georgia, Graduate School (\$400)
11. “Tornado damage risk and patterns in Great Smoky Mountains National Park”, George Menendez Wright Climate Change Youth Initiative Fellowship, National Park Service. (2013 – 2015). **JB Cannon**, CJ Peterson (\$18,921).
10. “Crash and burn: Fuel mediated interactions between tornado damage and fire disturbances,” Research Assistance Award, Plant Biology Graduate Student Association, Dept. of Plant Biology, University of Georgia. (2013). **JB Cannon** (\$400)
9. “Oh the damage done: Assessing the patterns of tornado damage in Great Smoky Mountains National Park,” Haines Family Field Botany Award, Dept. of Plant Biology, University of Georgia. (2013). **JB Cannon** (\$1,434).
8. “Forest disturbances: Testing for ecological interactions between tornado damage and fire,” Alan Jaworski Travel Award, Dept. of Plant Biology, University of Georgia. (2013). **JB Cannon** (\$1,050).
7. “Interacting disturbances: The effects of a simulated tornado and prescribed fire on plant composition in an open pine–hardwood forest. Sigma Xi Grant-in-Aid of research. (2012). **JB Cannon** (\$550).
6. “Forest disturbances: Testing for ecological interactions between tornado damage and fire,” Research Assistance Award, Plant Biology Graduate Student Association, Dept. of Plant Biology, University of Georgia (2012). **JB Cannon** (\$250).
5. Graduate School Fellowship, Graduate School, University of Georgia. (2011 – 2012). **JB Cannon** (2-year academic fellowship).
4. William Gardiner Scholarship for Undergraduate Research in Plant Biology, Dept. of Biology, Mississippi State University. (2008) **JB Cannon** (\$1,500; Academic scholarship).

3. Sudduth Scholarship for Upperclassmen, Dept. of Biology, Mississippi State University. (2008) **JB Cannon** (\$1,500 academic scholarship).
2. Mississippi Eminent Scholar's Grant, Mississippi State University **JB Cannon** (2005 – 2009; 4-year academic scholarship).
1. Mississippi State Academic Scholarship, Mississippi State University **JB Cannon** (2005 – 2009; 4-year academic scholarship).

## TEACHING AND ADVISING

### Courses taught

*Directed Independent Study* (CSU Dept. of Forest & Rangeland Stewardship, 2017–present, F495). Instructor of Record. Directed independent study course (Semester of Undergraduate Research in Forest Ecology and Restoration, SURFER). Advised undergraduate students in independent research projects exploring ecological outcomes of forest restoration activities in Colorado. Tools used include classroom discussions, literature reviews, student-designed experiments and analysis, individual writing assignments and research reports, posters, and/or presentations. To date, five students have completed or are in progress of completing at least one semester of the program.

*Directed Independent Study* (UGA Dept. of Plant Biology, 2013–2015, BIOL 4960). Advisor. Directed independent study course. Advised undergraduate students in independent research projects related to disturbance impacts of on vegetation and ecosystem dynamics. Tools used include classroom discussions, literature reviews, student-designed experiments and analysis, individual writing assignments and research reports, and poster, presentations. Three students completed one summer semester of the program.

*Natural History of Georgia Plants* [Online Course] (UGA Dept. of Plant Biology, 2015, PBIO 2500E). Instructor of Record, Online course focusing on the ecological concepts governing plant distribution and vegetation habitats across Georgia. Included online lectures, discussions, debates, and outdoor assignments. 3 credit hours.

*Plant Taxonomy* (UGA Dept. of Plant Biology, 2015, PBIO 4650/6650). Teaching Assistant, Laboratory course focused on plant collection, identification using published flora, evolutionary relationships between plants, and floristic studies.

*Principles of Plant Biology Laboratory* (UGA Dept. of Plant Biology, 2014, PBIO 1210L). Instructor of Record. Inquiry-based laboratory course for non-majors focusing on exercises in plant structure, function, and life cycles to model the scientific method. Tools used in the classroom include discussions, student-designed experiments, and individual writing assignments.

*Principles of Biology II Laboratory* (UGA Division of Life Sciences, 2013–2014, BIOL 1108). Instructor of Record. Writing-intensive, inquiry-based laboratory course for biology majors centering on terrestrial and aquatic organisms to convey principles of experimental design and enhance scientific writing. Classroom tools include discussion, debates, group and individual writing assignments and presentations, as well as traditional lab exercises.

*Principles of General Ecology Laboratory* (UM Department of Biology, 2009–2011, BIO 322). Teaching Assistant. Laboratory course for biology majors combining field data collection, analysis, and computer

modeling to convey concepts from population ecology to climate change. Tools used in the classroom include field trips, position paper, discussion, debates, and computer exercises.

### Research advisees

Geon Ho Kim, Undergraduate independent study advisor, Fall 2018–Spring 2019. Dept. of Forest and Rangeland Stewardship, CSU. F495 Semester of Undergraduate Research in Forest Ecology and Restoration. Project title: “National analysis of interactions between compounded forest disturbances from tornado and fire over 30 years (1984-2014)”.

Wesley Hartman, Undergraduate independent study advisor, Spring–Fall 2018. Dept. of Forest and Rangeland Stewardship, CSU. F495 Semester of Undergraduate Research in Forest Ecology and Restoration. Project title: “Effect of tree spatial patterns on microsite conditions following restoration treatments in the Colorado Front Range” [[pdf](#)]

Alexandra Schuetter, Undergraduate independent study advisor, Spring 2018. Dept. of Forest and Rangeland Stewardship, CSU. F495 Semester of Undergraduate Research in Forest Ecology and Restoration. Project title: “Effect of adaptive management on the evolution of collaborative restoration treatments” [[pdf](#)]

Spencer Elliott, Undergraduate independent study advisor, Fall 2017. Dept. of Forest and Rangeland Stewardship, CSU. F495 Semester of Undergraduate Research in Forest Ecology and Restoration. Project title: “Spatial and temporal effects of collaborative restoration on Front Range ponderosa pine dominated forests.” **2018 Warner College of Natural Resources Undergraduate Research Award** [[pdf](#)]

Ryan DeAngelis, Undergraduate independent study advisor, Fall 2017. Dept. of Forest and Rangeland Stewardship, CSU. F495 Semester of Undergraduate Research in Forest Ecology and Restoration. Project title: “Effects of spatial heterogeneity on understory solar radiation in a mixed conifer forest” [[pdf](#)]

Brandon White, Undergraduate independent study co-advisor, Summer 2015. Dept. of Plant Biology, UGA. PBIO 4960 Directed Independent Study. Project title: “Effects of wind damage on soil respiration in northeast and central Georgia forests”

Suzie Henderson, Undergraduate independent study advisor, Summer 2014. Dept. of Plant Biology, UGA. . PBIO 4960 Directed Independent Study Project title: “Assessing the effects of simulated wind disturbance on sapling structure and composition at the Piedmont National Wildlife Refuge”

Michael Bailey, Undergraduate independent study advisor, Summer 2013. Dept. of Plant Biology, UGA. . PBIO 4960 Directed Independent Study Project title: “Development and application of allometric equations for understanding plant community responses following wind and fire disturbance in forests”

## LEADERSHIP, OUTREACH, AND SERVICE

### Professional affiliations and outreach roles

2018 – 2019 Front Range Roundtable, Landscape Resilience Team Chair

2017 – present Association of Fire Ecologists, Member

2017 – present Natural Areas Association, Member

2016 – present Front Range Roundtable, Monitoring Symposium Organizer

- 2016 – present Front Range Roundtable, Landscape Resilience Team Member
- 2013 – present Wildland Firefighter (Certified FFT2)
- 2014 – 2015 Editor-in-Chief and Co-founder, *Athens Science Observer*
- 2013 – 2014 Treasurer, UGA Plant Biology Graduate Student Association
- 2010 – 2015 Ecological Society of America, Member
- 2010 – 2011 Oxford Natural History Club, Member
- 2010 – 2011 Mississippi Native Plant Society, Honorary Member
- 2008 – 2009 MSU Society of Scholars, Inductee
- 2008 – 2009 Phi Kappa Phi Honor Society, Member
- 2005 – 2009 Mississippi State University Honors Program, Member

**Departmental service**

- 2018 – present Forest and Rangeland Stewardship Undergraduate Faculty Mentor
- 2018 – present FRS Online Silviculture Certificate Steering Committee, Member
- 2017 – present Founder/Coordinator, FRS Semester of Undergraduate Research in Forest Ecology and Restoration (SURFER) Program
- 2016 – 2017 Faculty Search Committee Member, CSU Dept. of FRS
- 2013 – 2015 Research Mentor, UGA Peterson Lab Undergraduate Research Program

**Scholarly service**

- 2019 – present Manuscript Reviewer for *Nature: Scientific Reports, Biodiversity and Conservation; New Forests; and Diversity* [[Publons profile](#)]
- 2018 – present Manuscript Reviewer for *Journal of Forestry Research; Forests; and Ecological Restoration*
- 2014 – 2015 Co-organizer, Southeastern Ecology and Evolution Conference
- 2013 – 2015 Georgia Science and Engineering Fair, Jr. Division Botany Judge
- 2011 – 2012 Regional Mississippi Science and Engineering Fair, Botany Judge

**Professional development and trainings attended**

- 2019 Mindset for Supervisors training workshop, Supervisor Development Program, Colorado State University, Fort Collins, CO.
- 2019 Search Chair training session, Office of Equal Opportunity, Colorado State University, Fort Collins, CO.
- 2019 “Inclusive Communications”. Professional Development Institute, Colorado State University, Fort Collins, CO.

- 2019 “Invisible Diversity: Examining the Online CSU Student”. Professional Development Institute, Colorado State University, Fort Collins, CO.
- 2019 “Encouraging metacognitive reflection in your large undergraduate course”. Professional Development Institute, Colorado State University, Fort Collins, CO.
- 2018 Prescribed Fire Red Card Certification Refresher (RT-130) and Pack test training. The Nature Conservancy. Loveland, CO.
- 2018 Natural Resources Leadership Academy. Organized by Colorado and Wyoming Society of American Foresters. Fort Collins, CO.
- 2018 Early Career Investigator Grant Seminar. CSU Office of the Vice President for Research. Fort Collins, CO.
- 2017 NSF Day. Organized by National Science Foundation and University of Wyoming, Laramie, WY.
- 2017 Prescribed Fire Red Card Certification Refresher (RT-130) and Pack test training. The Nature Conservancy. Loveland, CO.
- 2017 Search Committee training session, Office of Equal Opportunity, Colorado State University, Fort Collins, CO.

### **AWARDS AND CERTIFICATES**

- 2019 Colorado State University, Career Impact Award, Nominee
- 2015 Graduate portfolio in teaching, Graduate School, University of Georgia
- 2013 – present Certified wildland firefighter (FFT2)
- 2012 Best graduate student oral presentation, Southeastern Ecology and Evolution Conference, Georgia Southern University
- 2009 2<sup>nd</sup> place Poster presentation, Biology Undergraduate Research Showcase, Mississippi State University
- 2005 Award for outstanding scholastic achievement, MSU Honors Program
- 2001 1<sup>st</sup> degree black belt, Pasaryu, Shiloh Martial Arts, Southaven, MS.