CURRICULUM VITAE DR. BRONSON P. BULLOCK

1. ACADEMIC HISTORY

Current Position

Professor of Forest Biometrics & Quantitative Forest Management Director, Plantation Management Research Cooperative (PMRC) Warnell School of Forestry and Natural Resources University of Georgia 180 E Green Street Office: (706) 389-9861 Forestry Building, Office # 4-532 Fax: (706) 542-8356 Athens, GA 30602 USA E-mail: BronsonBullock@uga.edu

Education

B.S., Natural Resources Management – Forestry, May 1996 Rutgers, The State University of New Jersey – Cook College, New Brunswick, NJ M.S., Forestry – Biometrics, December 1998 Virginia Polytechnic Institute & State University, Blacksburg, VA M.S., Statistics, May 2000 Virginia Polytechnic Institute & State University, Blacksburg, VA Ph.D., Forestry – Biometrics, February 2002 Virginia Polytechnic Institute & State University, Blacksburg, VA

Professional Experience

- Professor, July 2017 present, University of Georgia, Warnell School of Forestry and Natural Resources, Athens, GA
- Director, July 2023 present, Plantation Management Research Cooperative (PMRC), Warnell School of Forestry and Natural Resources, Athens, GA
- Co-Director, July 2017 June 2023, Plantation Management Research Cooperative (PMRC), Warnell School of Forestry and Natural Resources, Athens, GA
- Associate Professor, August 2014 June 2017, University of Georgia, Warnell School of Forestry and Natural Resources, Athens, GA
- Associate Professor, July 2008 August 2014, NC State University, College of Natural Resources, Department of Forestry and Environmental Resources, Raleigh, NC
- Assistant Professor, March 2002 June 2008, NC State University, College of Natural Resources, Department of Forestry and Environmental Resources, Raleigh, NC
- Research Assistant, August 1996 February 2002, Loblolly Pine Growth & Yield Research Cooperative, Virginia Polytechnic Institute & State University, Blacksburg, VA

2. INSTRUCTIONAL ACTIVITIES

Teaching and Mentoring of Undergraduate and Graduate Students

Through interactive lectures, example problems, and group work, I create an engaging atmosphere for student learning in the classroom and lab environment. I strive to make undergraduate students

proficient in the mensuration and modeling skills they will need as professionals, while developing the leadership and teambuilding skills that will enable them to succeed. In both undergraduate and graduate courses, I continually integrate new material from current research and new operational/management trends.

Courses Taught

I currently teach the following courses at UGA.

- FORS 4610/6610 Forest Mensuration, 4 credit hours with lab. Approximate enrollment of 30 students. Fall semesters. Split-level course.
- FORS 4640/6640 Advanced Forest Inventory, 3 credit hours. Approximate enrollment of 10-15 students. Fall semesters, even years. Split-level course.
- FORS 4650/6650 Forestry Field Camp Measurements and Inventory, 1.3 credit hours (1 week of Forestry Field Camp). Approximate enrollment of 30 students. Summer session. Split-level course.
- FORS 8050 Forest Stand Dynamics, 3 credit hours. Approximate enrollment of 5-10 MS/PhD students. Fall semesters, odd years.
- FORS 3900 Forestry Internship, 3 credit hours. Approximate enrollment of 10 students. Fall semesters.
- FYO 1001 Managing Your Family Forest for Fun and Profit, 1 credit hour seminar course, with some local field trips. Approximate enrollment of 15 students. Fall semesters.

Previously at NC State University I taught the following courses regularly (2002-2014).

- FOR 172, Forest Systems Mapping and Mensuration I, 2 credit hours with lab. Approximate enrollment of 70 students.
- FOR 273, Forest Systems Mapping and Mensuration II, 3 credit hours with lab (3 weeks of Forestry Field Summer Camp). Approximate enrollment of 15-20 students.
- FOR 374, Forest Measurements, Modeling, and Inventory, 3 credit hours with lab. Approximate enrollment of 20 students.
- FOR 502, Forest Measurements, 1 credit hour with lab (graduate level course). Approximate enrollment of 10 students.
- FOR 595, Advanced Forest Modeling, 2-3 credit hours with lab (graduate level course). Approximate enrollment of 5 students.

Academic Advising

I work with my undergraduate and graduate student advisees to be sure that they are making progress towards both their academic and professional goals. Outside of specific class recommendations, I discuss career goals and internship or full-time employment opportunities that might be of interest to them. I currently serve as the advisor for several forestry majors in Warnell. Previously at NCSU, I was the undergraduate Forest Management Program Coordinator and was the advisor for approximately 10 undergraduate forestry students annually.

3. SCHOLARLY ACTIVITIES

a. Books

Burkhart, H. E., Avery, T. E., & Bullock, B. P. (2019). Forest Measurements, Sixth Edition (6th ed.). Waveland Press. 434 p.

b. Original Research Articles – Peer-reviewed

- Peay, W., Bullock, B., & Montes, C. (2023). A maximum entropy approach to defining geographic bounds on growth and yield model usage. *Frontiers in Forests and Global Change*, 15 pages. doi:<u>10.3389/ffgc.2023.1215713</u>
- Zhao, D., Bullock, B. P., & Wang, M. (2023). Long-term dynamics of aboveground carbon stocks in managed loblolly pine plantations in the southeast United States. *Forest Ecology and Management*, 546, 121384. doi:<u>10.1016/j.foreco.2023.121384</u>
- Young, J. B., Bullock, B. P., & Montes, C. R. (2023). Assessing Mid-rotation Loblolly Pine and Competing Vegetation Responses to Post-thin Fertilization and Herbicide Application in the Southeastern United States. *Journal of Forestry*. doi:<u>10.1093/jofore/fvad035</u>
- Shalizi, M. N., Walker, T. D., Heine, A. J., Payn, K. G., Isik, F., Bullock, B. P., & McKeand, S. E. (2023). Performance Based on Measurements from Individual-Tree Progeny Tests Strongly Predicts Early Stand Yield in Loblolly Pine. *Forest Science*, 12 pages. doi:<u>10.1093/forsci/fxad002</u>
- Ramirez, L., Montes, C. R., & Bullock, B. P. (2023). Modeling slash pine mortality rates incorporating responses to silvicultural treatments and fusiform rust infection rates. *Forest Ecology and Management*, 532, 9 pages. doi:<u>10.1016/j.foreco.2023.120832</u>
- 6. Zhao, D., Bullock, B. P., Montes, C. R., & Wang, M. (2022). Production, tree size inequality and growth dominance in loblolly pine plantations under different silvicultural management regimes. *Forest Ecology and Management*, *526*, 13 pages. doi:<u>10.1016/j.foreco.2022.120594</u>
- Kinane, S. M., Montes, C. R., Zapata, M., Bullock, B. P., Cook, R. L., & Mishra, D. R. (2022). Influence of environmental variables on leaf area index in loblolly pine plantations. *Forest Ecology and Management*, 523, 17 pages. doi:<u>10.1016/j.foreco.2022.120445</u>
- 8. Ramirez, L., Montes, C. R., & Bullock, B. P. (2022). Long-term term effect of bedding and vegetation control on dominant height of slash pine plantations in the southeastern United States. *Forest Ecology and Management*, *522*, 11 pages. doi:<u>10.1016/j.foreco.2022.120479</u>
- Wang, M., Montes, C., Bullock, B., & Zhao, D. (2022). An Inverse Growth Curve Representation of the Clutter-Jones Stand Survival Model. *Forest Science*, 68 (3), 239-245. doi:<u>10.1093/forsci/fxac017</u>
- Peay, W. S., Bullock, B. P., & Montes, C. R. (2022). Growth and yield model comparisons for mid-rotation loblolly pine (Pinus taeda L.) plantations in the southeastern US. *Forestry*, 95(5), 616-633. doi:<u>10.1093/forestry/cpac014</u>
- Restrepo, H., Bettinger, P., & Bullock, B. P. (2022). A theoretical minimal solution for heuristics: The case of the spatial harvest timber problem. *Computers & Operations Research*, 143, 8 pages. doi:<u>10.1016/j.cor.2022.105792</u>
- 12. Restrepo, H. I., Montes, C. R., Bullock, B. P., & Mei, B. (2022). The effect of climate variability factors on potential net primary productivity uncertainty: An analysis with a

stochastic spatial 3-PG model. *Agricultural and Forest Meteorology*, *315*, 108812. doi:10.1016/j.agrformet.2022.108812

- Zhao, D., Montes, C. R., Bullock, B. P., Wang, M., Greene, W. D., & Borders, B. (2022). Effects of intensive fertilization, complete competition control and site quality on aboveground net primary production (ANPP) dynamics of loblolly pine plantations. *Forest Ecology and Management*, 506, 10 pages. doi:10.1016/j.foreco.2021.119986
- 14. Raut, S., Dahlen, J., Bullock, B., Montes, C., & Dickens, D. (2022). Models to predict wholedisk specific gravity and moisture content in planted longleaf pine from cutover and old field sites. *Canadian Journal of Forest Research*, 52(1), 1-11. doi:10.1139/cjfr-2021-0092
- Zapata-Cuartas, M., Bullock, B. P., Montes, C. R., & Kane, M. B. (2021). A Dynamic Stand Growth Model System for Loblolly Pine Responding to Mid-Rotation Treatments. *Forests*, 12(5), 29 pages. doi:<u>10.3390/f12050556</u>
- 16. Koirala, A., Montes, C., Bullock, B., & Wagle, B. (2021). Developing taper equations for teak (Tectona grands L.f.) trees of central lowland Nepal. *Trees, Forests and People*, 5. doi:<u>10.1016/j.tfp.2021.100103</u>
- Kinane, S. M., Montes, C. R., & Bullock, B. P. (2021). A non-parametric framework to estimate fertilization response in loblolly pine plantations using environmental covariates. *Forestry*, 94(3), 417-426. doi:10.1093/foresj/cpaa044
- Zapata-Cuartas, M., Bullock, B. P., & Montes, C. R. (2021). A Taper Equation for Loblolly Pine Using Penalized Spline Regression. *Forest Science*, 67(1), 1-13. doi:<u>10.1093/forsci/fxaa037</u>
- Koirala, A., Montes, C. R., & Bullock, B. P. (2021). Modeling dominant height using stand and water balance variables for loblolly pine in the Western Gulf, US. *Forest Ecology and Management*, 479, 10 pages. doi:<u>10.1016/j.foreco.2020.118610</u>
- Walker, T. D., Bullock, B. P., Smith, B. C., & McKeand, S. E. (2020). Modeling Self-Thinning Patterns in Loblolly Pine with Provenance and Family Effects. *Forest Science*, 66(6), 712-725. doi:<u>10.1093/forsci/fxaa030</u>
- Restrepo, H., Mei, B., & Bullock, B. P. (2020). Long-Term Timber Contracts in the Southeastern United States: Updating the Primer Valuation Framework. *Forest Science*, 66(6), 653-665. doi:<u>10.1093/forsci/fxaa020</u>
- 22. Zhao, D., Bullock, B., Montes, C., Wang, M., Westfall, J., & Coulston, J. (2020). Long-term dynamics of loblolly pine crown structure and aboveground net primary production as affected by site quality, planting density and cultural intensity. *Forest Ecology and Management*. 472, 14 pages. <u>https://doi.org/10.1016/j.foreco.2020.118259</u>
- 23. Orrego, S., Montes, C., Restrepo, H.I., Bullock, B.P., & Zapata, M. (2020). Modeling height growth for teak plantations in Colombia using the reducible stochastic differential equation approach. *Journal of Forestry Research*. <u>https://doi.org/10.1007/s11676-020-01174-y</u>
- Wang, M., Bullock, B. P., Montes, C. R., & Zhao, D. (2020). An Empirical Examination of Dominant Height Projection Accuracy Using Difference Equation Models. *Forest Science*. 66(3):267-274. <u>https://doi.org/10.1093/forsci/fxz079</u>
- 25. Zhao, D., Bullock, B., Montes, C., & Wang, M. (2020). Rethinking maximum stand basal area and maximum SDI from the aspect of stand dynamics. *Forest Ecology and Management*. 475, 10 pages. <u>https://doi.org/10.1016/j.foreco.2020.118462</u>

- 26. Hall, K. B., Stape, J. L., Bullock, B. P., Frederick, D., Wright, J., Scolforo, H. F., & Cook, R. (2020). A growth and yield model for Eucalyptus benthamii in the southeastern United States. *Forest Science*. 66(1):25-37. <u>https://doi.org/10.1093/forsci/fxz061</u>
- 27. Restrepo, H., Montes, C., Orrego, S., Salazar, J., Bullock, B., & Montes, C. (2019). Using Biophysical Variables and Stand Density to Estimate Growth and Yield of Pinus spatula: A Case Study in Antioquia, Colombia. *Journal of Forestry Research*. 9:195-213. <u>https://doi.org/10.4236/ojf.2019.93010</u>
- 28. Zhao, D., Bullock, B. P., Montes, C. R., Wang, M., Greene, D., & Sutter, L. (2019). Loblolly pine outperforms slash pine in the southeastern United States A long-term experimental comparison study. *Forest Ecology and Management*, 450, 15 pages. <u>http://dx.doi.org/10.1016/j.foreco.2019.117532</u>
- 29. Gallagher, D. A., Bullock, B. P., Montes, C. R., & Kane, M. B. (2019). Whole Stand Volume and Green Weight Equations for Loblolly Pine in the Western Gulf Region of the United States through Age 15. *Forest Science*, 65(4), 420-428. <u>http://dx.doi.org/10.1093/forsci/fxy068</u>
- Gallagher, D. A., Montes, C. R., Bullock, B. P., & Kane, M. B. (2019). Two-Step Regression Process for Whole Stand Loblolly Pine Survival Projection and Quantifying Uncertainty. *Forest Science*, 65(3), 265-276. <u>http://dx.doi.org/10.1093/forsci/fxy055</u>
- Denham, S. O., Coyle, D. R., Oishi, A. C., Bullock, B. P., Heliovaara, K., & Novick, K. A. (2019). Tree resin flow dynamics during an experimentally induced attack by Ips avulsus, I. calligraphus, and I. grandicollis. *Canadian Journal of Forest Research*, 49(1), 53-63. doi:<u>10.1139/cjfr-2018-0024</u>
- 32. Zhao, D., Westfall, J., Coulston, J. W., Lynch, T. B., Bullock, B., & Montes, C. (2019). Additive Biomass Equations for Slash Pine Trees: Comparing Three Modeling Approaches. Canadian Journal of Forest Research, 49, 27-40. <u>http://dx.doi.org/10.1139/cjfr-2018-0246</u>
- 33. Restrepo, H., Bullock, B., & Montes, C. (2019). Growth and yield drivers of loblolly pine in the southeastern U.S.: A meta-analysis. *Forest Ecology and Management*, 435, 205-218. <u>http://dx.doi.org/10.1016/j.foreco.2018.12.007</u>
- 34. Green, P. C., Bullock, B. P., & Kane, M. B. (2018). Culture and Density Effects on Tree Quality in Midrotation Non-Thinned Loblolly Pine Plantations. *Forests*, 9(2), 16 pages. <u>http://dx.doi.org/10.3390/f9020082</u>
- 35. Kim, T. J., Bullock, B., & Wijaya, A. (2016). Spatial distribution of above-ground biomass in Labanan Concession Forest in East Kalimantan, Indonesia. *Mathematical and Computational Forestry & Natural-Resource Sciences*, 8(2), 27-39.
- Scolforo, H.F., J.R.S. Scolforo, M.R. Raimundo, J.M. Mello, A.P.B. Batista and B.P. Bullock. (2015). Hypsometric approaches to *Eucalyptus* experiments in Brazil. *African Journal of Agricultural Research*. 10(45):4176-4184. <u>https://doi.org/10.5897/AJAR2015.10151</u>
- Kim, T. J., Bullock, B. P., & Stape, J. L. (2015). Effects of silvicultural treatments on temporal variations of spatial autocorrelation in Eucalyptus plantations in Brazil. *Forest Ecology and Management*. 358, 90-97. <u>http://dx.doi.org/10.1016/j.foreco.2015.09.004</u>
- 38. Kim, T. J., Bullock, B. P., & McKeand, S. E. (2015). Spatial Autocorrelation among Different Levels of Genetic Homogeneity and Spacings in Loblolly Pine. *Forest Science*, 61(3), 438-444. <u>http://dx.doi.org/10.5849/forsci.14-034</u>
- 39. Egbäck, S., Bullock, B. P., Isik, F., & McKeand, S. E. (2015). Height-Diameter Relationships for Different Genetic Planting Stock of Lob lolly Pine at Age 6. *Forest Science*, 61(3), 424-428. <u>http://dx.doi.org/10.5849/forsci.14-015</u>

- 40. Wood, E. R., Bullock, B. P., Isik, F., & McKeand, S. E. (2015). Variation in Stem Taper and Growth Traits in a Clonal Trial of Loblolly Pine. *Forest Science*, 61(1), 76-82. http://dx.doi.org/10.5849/forsci.12-068
- 41. Smith, B. C., Bullock, B. P., Isik, F., & McKeand, S. E. (2014). Modeling genetic effects on growth of diverse provenances and families of loblolly pine across optimum and deficient nutrient regimes. *Canadian Journal of Forest Research*, 44(11), 1453-1461. <u>http://dx.doi.org/10.1139/cjfr-2013-0379</u>
- 42. Green, E. J., & Bullock, B. (2014). Assessing Sampling and Model Error in Standing Green Weight Estimation for a Loblolly Pine Plantation. *Forest Science*, 60(4), 623-627. <u>http://dx.doi.org/10.5849/forsci.13-007</u>
- 43. Alvarez, J., H.L. Allen, T.J. Albaugh, J.L. Stape, B.P. Bullock, and C. Song. (2013). Factors influencing the growth of radiata pine plantations in Chile. *Forestry An International Journal of Forest Research*. 86:13-26. <u>https://doi.org/10.1093/forestry/cps072</u>
- 44. Keto, E.M., M.R. McHale, G.R. Hess, B.P. Bullock, and G.B. Blank. (2012). Design Choices and Urban Forest Characteristics in Raleigh, North Carolina, U.S. Parking Lots. *Arboriculture & Urban Forestry*. 38(2): 50–57.
- 45. Aspinwall, M.J., J.S. King, S.E. McKeand, and B.P. Bullock. (2011). Genetic effects on standlevel uniformity and above- and belowground dry mass production in juvenile loblolly pine. *Forest Ecology and Management*. 262:609–619.
- 46. Sherrill, J.R., B.P. Bullock, T.J. Mullin, S.E. McKeand, R.P. Purnell. (2011). Total and Merchantable Stem Volume Equations for Mid-Rotation Loblolly Pine (*Pinus taeda* L.). Southern Journal of Applied Forestry. 35(3):105-108.
- Eckard, J.T., F. Isik, B.P. Bullock, B. Li, and M.L. Gumpertz. (2010). Selection Efficiency for Solid Wood Traits in Pinus Taeda using Time-of-Flight Acoustic and Micro-Drill Resistance Methods. *Forest Science*. 56(3):233–241.
- 48. Jackson, B.C., J.D. Pittillo, H.L. Allen, T.R. Wentworth, B.P. Bullock, and D.L. Loftis. (2009). Species Diversity and Composition in Old Growth and Second Growth Rich Coves of the Southern Appalachian Mountains. *Castanea*. 74(1):27-38.
- 49. Boone, E.L. and B.P. Bullock. (2008). Spatial Correlation Matrix Selection Using Bayesian Model Averaging to Characterize Inter-Tree Competition in Loblolly Pine Trees. *Journal of Applied Statistics*. 35(9):967-977.
- Sherrill, J.R., T.J. Mullin, B.P. Bullock, S.E. McKeand, R.C. Purnell, M.L. Gumpertz, and F. Isik. (2008). An Evaluation of Selection for Volume Growth in Loblolly Pine. *Silvae Genetica*. 57(1):22-28.
- 51. Bullock, B.P. and E.L. Boone. (2007). Deriving Tree Diameter Distributions Using Bayesian Model Averaging. *Forest Ecology and Management*. 242:127-132.
- 52. Bullock, B.P. and H.E. Burkhart. (2005). An evaluation of spatial dependency in juvenile loblolly pine stands using stem diameter. *Forest Science*. 51(2):102-108.
- 53. Clayton, P.H., S.L. Ash, L.G. Bullard, B.P. Bullock, M.G. Day, A. Moore, W. O'Steen, S.P. Stallings, and R. Usry. (2005). Adapting a core service-learning model for wide-ranging implementation: An institutional case study. *Creative College Teaching Journal*. 2(1):10-26.
- 54. Bullock, B.P. and H.E. Burkhart. (2005). Juvenile diameter distributions of loblolly pine characterized by the two-parameter Weibull function. *New Forests*. 29:233-244.

55. Bullock, B.P. and H.E. Burkhart. (2003). Equations for predicting green weight of loblolly pine trees in the South. *Southern Journal of Applied Forestry*. 27(2):153-159.

c. Published Proceedings (peer-reviewed)

- 56. Zhao, D., Bullock, B., & Montes, C. (2021). New findings on loblolly pine plantations from long-term experimental field studies. In *XV WORLD FORESTRY CONGRESS* (pp. 7 pages)
- 57. Zhao, D., Bullock, B., Montes, C., Wang, M., Greene, W., & Sutter, L. (2019). Why does loblolly pine outperform slash pine in the southeastern United States? –A long-term experimental comparison study. In *Proceedings of the 20th Biennial Southern Silvicultural Research Conference*. Louisiana Tech University
- 58. Zapata Cuartas, M., Bullock, B., & Montes, C. (2019). Approaches to model mid-rotation treatment effects in loblolly pine plantations in the southeastern U.S.. In *Proceedings of the 20th Biennial Southern Silvicultural Research Conference* (pp. 9 pages). Louisiana Tech University
- 59. Zhao, D., Montes, C., Bullock, B., Wang, M., Sutter, L., & Markewitz, D. (2018). Comparison of loblolly and slash pine plantation ecosystems: a long-term well-designed experimental study. In <u>https://eco.confex.com/eco/2018/meetingapp.cgi/Person/89403</u>
- 60. Restrepo, H., Bullock, B., & Montes, C. (2017). Contribution of silviculture to loblolly pine growth and yield in the southern U.S.: A meta-analysis. In *Proceedings of the 19th Biennial Southern Silvicultural Research Conference* (pp. 11 pages). Blacksburg, VA
- 61. Gallagher, D., Montes, C., Bullock, B., & Kane, M. (2017). Predicting future volume yield and uncertainty using maximum likelihood estimation. In *Proceedings of the 19th Biennial Southern Silvicultural Research Conference* (pp. 10 pages). Blacksburg, VA
- 62. Walker, T., McKeand, S., Isik, F., & Bullock, B. (2016). Seed Source Influences on Height-Diameter Relationships in Loblolly Pine Plantations. In *Proceedings of the 33rd Southern Forest Tree Improvement Conference* (pp. 17-20)

d. Grants

External

I have applied for numerous external grants totaling over \$35,000,000 and have collaboratively secured approximately \$12 million in external funding from various sources.

- Zhao, D., Aubrey, D., Bullock, B.P., Callaham, M., Lu, G., Markewitz, D., and Kinane, S.M. Filling Knowledge Gaps for Climate-Smart Pine Plantation Management. USDA NIFA AFRI. 2024-2027. \$749,425. *Pending*.
- Bettinger, P., Bullock, B.P., Kinane, S.M., Merry, K.L., and Siry, J.P. Carbon additionality estimates and mixed species management in eYield. USDA NIFA AFRI. \$637,583. *Pending*.
- Bolding, M.C., Bullock, B.P., Conrad, J.L., Eliasson, L., Hansson, L., Kinane, S.M., Mohtashami, S., and Munro, H.L. PARTNERSHIP: Sustainable Forest Management through Enhanced Harvest Planning and Modeling to Minimize Impacts on Forest Soils and Tree Growth. USDA NIFA AFRI. 2024-2028. \$900,000. *Pending*.
- Gandhi, K., Bullock, B.P., Kinane, S.M., and Villari, C. Pine Needle Diseases in the Southeast: A Test Case for the Pine Pandemic Preparedness Plan and Development of a Surveillance System to Aid in Early Detection. USDA Forest Service. 2023-2025. \$270,400. *Funded. 40% Effort.*

- Bolding, M.C., Bullock, B.P., and Kinane, S.M. Effect of machine traffic intensity on soil compaction from forest harvesting operations. National Council for Air and Stream Improvement (NCASI). 2023-2024. \$ 30,000. Funded. 30% Effort.
- Bettinger, P.S., Merry, K.L., Boby, L.A., Irwin, K.M., Siry, J.P., Bolding, M.C., Peduzzi, A., Bullock, B.P., Zhao, D., et al. Promoting Economic Resilience and Sustainability of the Eastern US Forests (PERSEUS). USDA NIFA. 2023-2028. \$2,714,283. Funded. 5% Effort.
- Villari, C., Bullock, B.P., and Kinane, S.M. Monitoring and evaluation of needle disease defoliation effects on the yearly growth rate of loblolly pine. USDA Forest Service. 2023-2026. \$94,047. *Funded. 3% Effort.*
- B.P. Bullock, C.R. Montes, E.D. Dickens, D. Clabo, and D. Zhao. Phase II Expanded Development of a Planted Longleaf Pine Growth and Yield Model System for Cutover Sites in the Southeast US. USDA NRCS. 2022-2025. \$135,000. Funded. 40% Effort.
- B.P. Bullock, C.R. Montes, E.D. Dickens, D. Clabo, and D. Zhao. Development of a Planted Longleaf Pine Growth and Yield Model System for Cutover Sites in the Southeast US. National Fish and Wildlife Foundation. 2020 – 2023. \$244,000. *Funded. 40% Effort.*
- B.P. Bullock, C.R. Montes, D. Zhao and M.B. Kane. Plantation Management Research Cooperative (PMRC). 2021-2025. Biometrics research related to PMRC priorities set by member organizations. \$2,829,600. *Funded.* 30% Effort.
- K. Gandhi, B.P. Bullock, and D.M. Johnson. Regional Assessment of Catastrophic Wind Damage (RACD): Development of Sampling Protocols and Impacts on Ground-dwelling Arthropods and Tree Physiology. USDA Forest Service. 2020 – 2023. \$511,000. Funded. 33% Effort.
- C.R. Montes, B.P. Bullock and J. Dahlen. (2019-2025). IUCRC Proposal Phase III University of Georgia: Center for Advanced Forestry Systems (CAFS). National Science Foundation. \$500,000. Funded. 33% Effort.
- J. Dahlen, B.P. Bullock, C.R. Montes, D. Dickens., Y. Li. 2017-2020. Planted Longleaf Pine Tonnage and Value Estimation for Making Informed Long-term Management Decisions. USDA NRCS. \$200,000. Funded. 20% Effort.
- P. Bettinger, B.P. Bullock, C.R. Montes, W.G. Hubbard, W.K. Clatterbuck. 2018-2023. Improved forest management for small forest landowners through a new decision-making model. USDA NIFA. \$498,304. *Funded.* 20% *Effort.*
- ▶ B.P. Bullock, and L. Tetting. 2016-2018. International Masters Graduate Student Exchange between the Swedish University of Agricultural Sciences (SLU) and the University of Georgia, Warnell School of Forestry and Natural Resources. European Commission, Erasmus+ Programme, €63,442 (EU). *Funded. 50% Effort.*
- M.B. Kane, D. Zhao, B.P. Bullock, and C.R. Montes. Plantation Management Research Cooperative (PMRC). 2016-2020. Biometrics research related to PMRC priorities set by member organizations. \$1,750,000. *Funded. 20% Effort.*
- M.B. Kane, J.M. Dahlen, B.P. Bullock, D. Zhao and R.F. Daniels. National Science Foundation (NSF), Center for Advanced Forestry Systems (CAFS). Phase II proposal. 2014 – 2019. Developing growth and yield predictions for enhanced genotypes. \$300,000. *Funded.* 21% Effort.

- M.B. Kane, D. Zhao, B.P. Bullock, and C.J. Cieszewski. Plantation Management Research Cooperative (PMRC). 2011-2015. Biometrics research related to PMRC priorities set by member organizations. \$342,145. *Funded. 29% Effort (Bullock 2014-2015 only).*
- McKeand, S.E., B.P. Bullock, R. Whetten, and F. Isik. Loblolly Pine Biomass Genetics/Cropping Study. Biofuels Center of North Carolina, \$148,419. *Funded*. April 2011 – June 2014. 20% Effort.
- Bullock, B.P. Economic Assessment of Stand-Level Treatments for Southern Pine Beetle Prevention. U.S. Dept. of Agriculture, U.S. Forest Service. \$65,000. *Funded*. August 2009 – August 2011. No cost extension granted until March 2012. 100% Effort.
- Roise, J., S. Warren, B. Bullock, F. Cubbage, E. Sills, T. Steelman, N. Peterson. Graduate Education in Forest Resource Decision Sciences: Preparing professionals to meet global needs. U.S. Dept. of Agriculture, CSREES, National Needs Fellowship. \$172,000. *Funded*. October 2008 - September 2013.
- ➢ Bullock, B.P., M. Lindbladh, S. Joshi, and O. Orenius. EU-US Transatlantic Masters Degree Program in Forest Resources (EU-US TMDPFR). U.S. Dept. of Education, Fund for the Improvement of Postsecondary Education (FIPSE), EU-U.S. Atlantis Program. Joint with NCSU, SLU in Sweden, Univ. of Helsinki in Finland, and Michigan Tech. U.S. – \$448,000; EU – €428,000; Total – \$1,115,680. *Funded* October 2008 – August 2012. One year no-cost extension granted until August 2013. 60% Effort.
- Isik, F., B. Li, B.P. Bullock, A. Clark, III, H. Chang, and P.M. Dougherty. Prediction of whole-stem wood quality of superior loblolly pine clones for deployment. USDA Forest Service Agenda 2020, Sustainable Forestry Research, Physiology of Forest Productivity. \$169,124. *Funded* August 2005 – September 2008. 50% Effort.

Internal

I have also applied for internal grants and eleven of them were funded (all at NCSU) for a total of **\$77,233**. Not shown – list available upon request.

e. Recognitions and Outstanding Achievements

- 2022 Herrick Superior Teaching Award, University of Georgia, Warnell School of Forestry & Nat. Res., Athens, GA
- > 2022 Student Career Success Influencer Award, University of Georgia, Athens, GA
- 2021 Southeastern Society of American Foresters (SESAF) Research and Development Award of Excellence
- > 2019 Xi Sigma Pi Outstanding Professor of the Year, Univ. of Georgia, Athens, GA
- > 2016 Outstanding Teaching Recognition, Warnell School of Forestry & Nat. Res., UGA
- Fulbright Scholar at the Swedish University of Agricultural Sciences (SLU). US Dept. of State Bureau of Educational and Cultural Affairs and the J. William Fulbright Foreign Scholarship Board, August 2009 – December 2009.
- > Distinguished Service Award, Institute for Advanced Analytics, NCSU, 2009
- > Leadership Award, Society of American Foresters, Appalachian SAF, NC Division, 2008
- Distinguished Civically Engaged Scholar, NCSU Center for Excellence in Curricular Engagement, 2007

f. Areas in which research is done

My research interests include more traditional forest biometry topics, such as volume, taper, and weight equations derived for various species and regions; statistical sampling and inventory issues; and the impacts of various silvicultural treatments on stand development. Further, I have more wide ranging research interests, e.g., quantitative issues relating to the growth and yield of forest stands with an emphasis on the spatial relationships between individual trees in a stand; evaluating the differences between different levels of genetic homogeneity at the individual tree and stand-level and the impacts on wood quality and quantity; and modeling diameter distributions for a range forest stand conditions.

g. Supervision of student research (including theses and dissertations)

Chairman of Graduate Committee at <u>UGA</u>:

- Corey Green, MS, (co-chair) May 2015
- Derrick Gallagher, MS, July 2016
- Walker Jennette, MFR For. Bus., May 2018
- Hector Restrepo, Ph.D., May 2019
- Spencer Peay, MS, July 2019
- Melissa Shockey, Ph.D., August 2020
- Thomas Harris, MS, August 2020
- Mauricio Zapata, Ph.D., December 2020
- Henry Morris, MFR For. Bus., December 2020
- Locke Williamson, MFR For. Bus., May 2022
- Thomas Humphries, MFR For. Bus., December 2022
- Kunal Sinha, MFR For. Bus., May 2023
- Ben Protzman, MS, August 2023
- John Young, Ph.D., December 2023
- Caddis Fulford, MS, expected May 2024
- Lance Rogers, MFR For. Bus., *expected May 2025*
- Coleman Enloe, MFR For. Bus., expected May 2025
- Raleigh Payne, MFR For. Bus., *expected May 2025*
- Gabriel Maciel, MS, expected May 2025
- Hyatt Tripp, MS, *expected December 2025*

Chairman of Graduate Committee at NCSU:

- John Adams, Master of Science in Forestry, August 2005
- Josh Sherrill, Master of Science in Forestry, (co-chair) May 2005
- Aimee' Rockhill, Master of Science in Forestry, May 2007
- Ben Smith, Master of Science in Forestry, June 2007
- Cristin Conner, Master of Science in Forestry, (co-chair) August 2008
- Jonathan Tyler Eckard, Master of Science in Forestry, (co-chair) January 2008
- Elizabeth Wood, Master of Science in Forestry, July 2009
- Matt Cuneo, Master of Science in Forestry, May 2009
- Ben Smith, Ph.D. in Forestry, (co-chair) September 2010
- Mark Brand, Master of Science in Forestry, May 2012

- Blake Jordan, Master of Science in Forestry, May 2012
- Nathaniel Naumann, Master of Science in Forestry, May 2012
- Josh Steiger, Master of Science in Forestry, May 2013
- Travis Norman, Master of Science in Forestry, August 2014
- Sander Denham, Master of Science in Forestry, January 2015
- Taek-Joo Kim, Ph.D. in Forestry, May 2015

Committee Member at UGA:

- Kathleen Garcia, MFR For. Bus., May 2016
- Charlie Todd, MFR, December 2017
- Shanti Shrestha, MS, December 2017
- Brad Coley, MFR For. Bus., May 2017
- Chase Bettis, MFR For. Bus., May 2017
- Samuel Turner, MFR For. Bus., May 2017
- Derek Dougherty, Ph.D. Silviculture, August 2018
- Ryan Carter, MFR, May 2019
- Allison Gordy, MS, May 2019
- Åsa Ramberg, MS, SLU-Umeå, May 2019
- Derrick Gallagher, Ph.D., December 2019
- Sameen Raut, MS, August 2020
- Mark Porter, MS, August 2020
- Doug Dobson, NCSU, MS, August 2020 external.
- Stephen Kinane, Ph.D., December 2020
- Tyler Smith, MFR For. Bus., December 2020
- Holly Munro, Ph.D., May 2021
- Hunter Miles, MFR, May 2021
- Craig Marshall, Ph.D., September 2021
- Joseph Brown, MFR, December 2021
- Allison Sheeks, MS, December 2021
- Anil Koirala, Ph.D., May 2022
- Charles Peroyea, MFR, May 2022
- Josh Sego, MFR, December 2022
- Laura Ramirez, Ph.D., May 2023
- Grayson Shackelford, MFR, May 2023
- Cam Chandler, MFR, May 2023
- Zack Evans, MFR For. Bus., expected December 2023
- Angel Adhikari, Ph.D. Precision Forestry, expected December 2023
- Thomas Black, MFR For. Bus., expected December 2024
- Claudio Cabezas, Ph.D. For. Finance, expected May 2024
- William Skinner, MFR For. Bus., expected May 2024
- Bobby Mooreman, MFR For. Bus., expected May 2025
- Jackson O'steen, MFR For. Bus., expected May 2025
- Madison Dingle, MFR For. Bus., expected May 2025
- Michael Strickland, MFR For. Bus., expected May 2025

Committee Member at <u>NCSU</u>:

- William McKenzie III, Master of Forestry, May 2003
- Mike Gaillard, Master of Natural Resources, May 2004
- Nekesha Williams, Master of Science in Natural Resources, May 2005
- Julio Rojas, Ph.D. in Forestry, July 2005
- Ben Vierra, Master of Science in Natural Resources, August 2007
- Clay Jackson, Ph.D. in Forestry, May 2008
- Zachary Arcaro, Master of Natural Resources, May 2008
- Evan Keto, Master of Science in Forestry, November 2009
- Jose Alvarez, Ph.D. in Forestry, July 2010
- Nate Osborne, Master of Science in Forestry, May 2012
- Annika Altamae, Master of Science in Forestry, May 2012
- Cristian Montes, Ph.D. in Forestry, January 2012
- Navinder Singh, Master of Science in Forestry, August 2012
- Chris Clary, MNR Policy and Admin, December 2012
- Stephen Bazemore, MF in Forestry, July 2013
- Eric Jaeschke, Master of Science in Forestry, August 2013
- Aliisa Harjuniemi, Master of Science in Forestry, July 2014
- Kevin Hall, Master of Science in Forestry, May 2015

h. Post-Doctoral Supervision

- Mauricio Zapata, Postdoctoral Research Associate in Forest Biometrics, 2020
- Holly Munro, Postdoctoral Research Associate in Forest Biometrics, 2021
- Simone Lim-Hing, Postdoctoral Research Associate in Forest Biometrics, 2023-present

i. Editorship of Journals

- > Associate Editor in Forest Biometrics, Forest Science. 2011 present.
- > Associate Editor in Forest Biometrics, Forests. 2016 present.
- > Associate Editor in Forest Measurements, Southern Jor. of Applied Forestry. 2005–2014.
- **Fulbright Discipline Peer Review Committee Member**, 3-year term 2013 -2016.
 - Institute of International Education, Council for International Exchange of Scholars (CIES) • Fulbright Applications in the Environmental Sciences Section
- **Guest Associate Editor, Forest Science**. Special section on Forest Biometrics. 2005.

j. Presentations

Research Abstracts and Presentations (150+)

Zhao, D., Bullock, B., Westfull, J., & Coulston, J. (2023). Developing flexible systems of taper, volume, and biomass equations to meet diverse management objectives. In 2023 SAF National Convention. Sacramento, CA National

- Bullock, B., Montes, C., Zhao, D., Dickens, E., & Clabo, D. (2023). Longleaf pine growth and yield over a range of site conditions in the southeastern US. In 2023 SAF National Convention National
- Young, J., Bullock, B., & Montes, C. (2023). Stand-level growth and yield model incorporating competing vegetation at mid-rotation. In 2023 SAF National Convention National
- Wang, M., Bullock, B., & Zhao, D. (2023). Further Development of Clutter-Jones Model. In 2023 SOMENS & NEMO Joint Meeting. Knoxville, TN International
- Fulford, C., & Bullock, B. (2023). The effects of dominant tree height definition on loblolly pine growth and yield model outputs in the southeast US. In 2023 SOMENS & NEMO Joint Meeting. Knoxville, TN International
- Lim-Hing, S., Munro, H., Bullock, B., Johnson, D., Gandhi, K., & Vogt, J. (2023). Tornados in pine plantations - Assessing losses and subsequent stand recovery. In 2023 SOMENS & NEMO Joint Meeting. Knoxville, TN International
- Zhao, D., Bullock, B., & Wang, M. (2023). Volume-to-Weight Conversions for Loblolly and Slash Pine Plantations – Be cautious to derive new models from existing statistical models. In 2023 SOMENS & NEMO Joint Meeting. Knoxville, TN National
- Zhao, D., Bullock, B., & Wang, M. (2023). Modeling Thinning Responses: Overview and Future Directions. In 2023 PMRC Annual Meeting. Athens, GA National
- Protzman, B., & Bullock, B. (2023). Assessing the influence of planting density and rotation length on economic returns given stochastic stumpage prices and tree quality. In 2023 PMRC Annual Meeting. Athens, GA National
- Fulford, C., & Bullock, B. (2023). The effects of dominant tree height definition on loblolly pine site index estimations in the Southeast. In 2023 PMRC Annual Meeting. Athens, GA National
- Bullock, B. (2023). PMRC Overview, Updates, and Strategic Research Priorities. In 2023 PMRC Annual Meeting. Athens, GA National
- Young, J., & Bullock, B. (2023). A loblolly pine growth and yield model accounting for competing vegetation at mid-rotation. In 2023 PMRC Annual Meeting. Athens, GA National

- Ramirez, L., Montes, C., & Bullock, B. (2023). Modeling site preparation for slash pine. In 2023 PMRC Annual Meeting. Athens, GA National
- Young, J., Montes, C., & Bullock, B. (2023). Western Gulf growth and yield base model system for loblolly pine. In 2023 PMRC Annual Meeting. Athens, GA National
- Zhao, D., Bullock, B., & Montes, C. (2022). Synthesizing long-term responses to silvicultural treatments from multiple regional experiments. In 2021 PMRC Contact Meeting National
- Baker, K., Cannon, J., Scully, S. H., Bullock, B., Gandhi, K., Vogt, J., & Johnson, D. (2021). Simulated Wind Damage on Longleaf Pine Trees: What Doesn't Kill You, Might Kill You Slowly. In *American Geophyical Union* International
- Harris, T., Bullock, B., Montes, C., Dahlen, J., Raut, S., & Dickens, E. (2021). Stem taper, volume, and green weight equations for defective stems in longleaf pine plantations. In 2021 Southern Mensurationists Conference. Blacksburg, VA National
- Zhao, D., Montes, C., Wang, M., & Bullock, B. (2021). Long-term response of aboveground net primary production (ANPP) of loblolly pine plantations to repeated fertilization and complete vegetation control. In *Southern Mensurationists (SOMENS) Meeting*. Blacksburg, VA National
- Protzman, B., Bullock, B., & Montes, C. (2021). Evaluating the effect of planting density, rotation length, and stumpage pricing on economic returns. In 2021 Southern Mensurationists Conference. Blacksburg, VA National
- Young, J., Bullock, B., & Montes, C. (2021). Evaluating loblolly pine (Pinus taeda) volume responses to mid-rotation competing vegetation control using Generalized Additive Modeling. In 2021 Southern Mensurationists Conference. Blacksburg, VA National
- Koirala, A., Montes, C., & Bullock, B. (2021). Simultaneous prediction and projection basal area equations with uncertainty estimators. In 2021 Southern Mensurationists Conference. Blacksburg, VA National
- Munro, H., Bullock, B., Johnson, D., Gandhi, K., & Vogt, J. T. (2021). Reconstructing loblolly pine plantations for the rapid assessment of tornado damage. In 2021 Southern Mensurationists Conference. Blacksburg, VA National
- Zapata, M., Bullock, B., & Montes, C. (2021). A flexible Weibull-based basal area modifier for mid-rotation loblolly pine silvicultural treatments. In 2021 Southern Mensurationists

Conference. Blacksburg, VA National

- Ramirez-Quitero, L., Montes, C., & Bullock, B. (2021). Modeling Slash Pine mortality rates (relative to height growth) including response to silvicultural treatments. In *Southern Mensurationists Meeting*. Blacksburg, VA National
- Montes, C., Zhao, D., Bullock, B., & Wang, M. (2021). Modeling stand mortality in loblolly pine using environmental variables. In *Southern Mensurationists Meeting*. Blacksburg, VA National
- Koirala, A., Montes, C., & Bullock, B. (2021). Simultaneous prediction and projection basal area equations for mixed southern hardwood stands incorporating uncertainty estimators. In *Southern Mensurationists Meeting*. Blacksburg, VA National
- Restrepo, H., Montes, C., Bullock, B., & Mei, B. (2021). The effect of the changing climatic system on forest productivity and its uncertainty: a stochastic spatial model. In 2021 Spatial Statistics Conference: Climate and the Environment International
- Zhao, D., Markewitz, D., Greene, D., Bullock, B., Montes, C., Wang, M., . . . Coulston, J. (2021). Variation of C:N and N:P stoichiometric ratios in mid-rotation loblolly and slash pine plantations. In 2021 PMRC Advisory Board Meeting. Athens, GA National
- Wang, M., Zhao, D., Montes, C., & Bullock, B. (2021). Another look at the Clutter-Jones stand mortality model. In 2021 PMRC Advisory Board Meeting. Athens, GA National
- Zhao, D., Montes, C., & Bullock, B. (2021). New understandings of loblolly pine plantations. In *The 21st Biennial Southern Silvicultural Research Conference* National
- Harris, T. B., Bullock, B., Montes, C., Dahlen, J., Raut, S., & Dickens, E. (2021). Stem taper, volume, and green weight equations for defective stems in longleaf pine plantations. In *Southern Mensurationists Meeting* Regional
- Dahlen, J., Montes, C., Bullock, B., Markewitz, D., & et al. (2021). Quantifying carbon sequestration as a function of silvicultural treatment in loblolly pine. In NSF Center for Advanced Forestry Systems 2021 Annual Meeting National
- Dahlen, J., Montes, C., Bullock, B., & et al. (2021). Quantifying silvicultural treatment effect on lumber quantity and quality in loblolly pine. In NSF Center for Advanced Forestry Systems 2021 Annual Meeting National

- Montes, C., Dahlen, J., & Bullock, B. (2021). Environmental predictors of form and quality. In NSF Center for Advanced Forestry Systems 2021 Annual Meeting National
- Raut, S., Dahlen, J., Dickens, E., Bullock, B., & Montes, C. (2021). Modeling planted longleaf pine wood and bark specific gravity and moisture content. In *Warnell Graduate Student Symposium. February 11-12, 2021.* School/College
- Montes, C., Dahlen, J., & Bullock, B. (2020). Environmental predictors of form and quality. In NSF Center for Advanced Forestry Systems Winter 2020 Meeting. Virtual National
- Montes, C., Dahlen, J., & Bullock, B. (2020). Environmental predictors of form and quality. In NSF Center for Advanced Forestry Systems Summer 2020 Meeting. Virtual National
- Porter, M., Montes, C., Bullock, B., Dahlen, J., & Dickens, E. (2020). Diameter and height estimation using a lightweight handheld terrestrial laser scanner in longleaf pine plantations. In *Plantation Management Research Cooperative Annual Meeting*. Virtual Regional
- Zhao, D., Bullock, B., Montes, C., & Wang, M. (2020). Rethinking the Maximum Stand Basal Area and SDI from the Aspect of Stand Dynamics. In SAF 2020 National Convention. Virtual National
- Young, J., Bullock, B., & Montes, C. (2020). Assessing the potential of competing vegetation indices in growth and yield model systems. In 2020 PMRC Advisory Board Meeting. Virtual National
- Zapata, M., Bullock, B., & Montes, C. (2020). Dynamic stand growth and yield system for loblolly pine plantations managed with mid-rotation treatments. In 2020 PMRC Annual Advisory Board Meeting. Virtual National
- Montes, C., Wang, M., Bullock, B., & Zhao, D. (2020). Do we need more growth areas for our G&Y models?. In *PMRC 2020 Advisory Committee Meeting*. Virtual Regional
- Zhao, D., Bullock, B., Montes, C., & Wang, M. (2020). Rethink Maximum Stand BA and Maximum SDI. In *PMRC 2020 Advisory Committee Meeting*. Virtual Regional
- Wang, M., Montes, C., Zhao, D., & Bullock, B. (2020). An update on the PMRC loblolly pine baseline BA models for prediction and projection. In *PMRC 2020 Advisory Committee Meeting*. Virtual Regional
- Montes, C., Wang, M., Bullock, B., & Zhao, D. (2020). New calibration of Site Index modes for the southeast, using explicit uncertainty. In *PMRC 2020 Advisory Committee Meeting*.

Virtual Regional

- Harris, T., Bullock, B., Montes, C., Dahlen, J., & Dickens, E. (2020). Taper, volume, and green weight in planted longleaf pine. In *Plantation Management Research Cooperative Annual Meeting*. Virtual National
- Bullock, B., & Montes, C. (2020). PMRC Overview and 2020 Updates. In 2020 PMRC Advisory Board Meeting. Virtual National
- Shockey, M., Montes, C., & Bullock, B. (2020). Capturing genetic improvement and competition control treatments in GADA SI models. In 2020 PMRC Advisory Board Meeting. Virtual National
- Raut, S., Dahlen, J., Harris, T., Porter, M., Dickens, E., Bullock, B., . . . Montes, C. (2019). Compression wood quantification in longleaf pine, and opportunities for loblolly pine. In *Wood Quality Consortium Annual Meeting*. Athens, GA
- Montes, C., Dahlen, J., & Bullock, B. (2019). Environmental predictors of form and quality in loblolly pine. In NSF Center for Advanced Forestry Systems Annual Meeting. Athens, GA
- Zapata Cuartas, M., Bullock, B., & Bueno, J. (2019). Size and vertex degree effect on probability of performance when solving spatial-explicit harvest scheduling. In SOFORGIS 2019. Athens, GA
- Zhao, D., Bullock, B., & Montes, C. (2019). Long-term dynamics of loblolly pine crown structure as affected by planting density and cultural intensity. In XXV IUFRO Congress. Curitiba, Brazil, International
- Koirala, A., Montes, C., & Bullock, B. (2019). Developing site index equation for loblolly pine using climatic water balance components. In XXV IUFRO World Congress, Curitiba, Brazil International
- Harris, T., Zapata Cuartas, M., Bullock, B., & Montes, C. (2019). Evaluating a new taper equation for planted longleaf pine: applying penalized spline regression. In Society of American Foresters National Convention. Louisville, KY
- Porter, S., Montes, C., Bullock, B., & Dahlen, J. (2019). Estimating height from multiple diameters. In 2019 Southern Mensurationists. Asheville, NC
- Wang, M., Zhao, D., Montes, C., & Bullock, B. (2019). Stand survival projection as a function of ages versus dominant heights. In 2019 Southern Mensurationists. Asheville, NC

- Koirala, A., Montes, C., & Bullock, B. (2019). A review of growth and yield modeling studies on southern hardwoods.. In 2019 Southern Mensurationists Meeting and Conference. Asheville, NC
- Raut, S., Dahlen, J., Montes, C., Bullock, B., Dickens, E., Li, Y., ... Porter, M. (2019). Bioimaging techniques for accurate quantification of compression wood and wood to bark volume ratios in longleaf pines. In *Southern Mensurationists Conference*. Asheville, NC
- Zapata Cuartas, M., Bullock, B., & Montes, C. (2019). Modeling basal area growth after thinning – an alternative approach. In 2019 Southern Mensurationists' Conference. Asheville, NC
- Zhao, D., Bullock, B., Montes, C., & Wang, M. (2019). Long-term dynamics of loblolly pine crown structures. In *Southern Mensurationists Conference*. Asheville, NC
- Harris, T., Bullock, B., Montes, C., & Dickens, E. (2019). Planted longleaf pine growth and yield model comparison. In 2019 Southern Mensurationists. Asheville, NC
- Wang, M., Zhao, D., Montes, C., & Bullock, B. (2019). Stand survival projection as a function of ages versus dominant heights. In *PMRC 2019 Advisory Board Meeting*. Athens, GA
- Zhao, D., Bullock, B., Montes, C., & Wang, M. (2019). Quantifying Basal Area, Volume, and Biomass Mortality in Loblolly Pine Plantations. In *PMRC 2019 Advisory Board Meeting*. Athens, GA
- Zhao, D., Bullock, B., Montes, C., Wang, M., Greene, W., & Sutter, L. (2019). Why does loblolly pine outperform slash pine in the southeastern US? – Management implications. In *PMRC 2019 Advisory Board Meeting*. Athens, GA
- Bullock, B., Shockey, M., Montes, C., Kane, M., & Zhao, D. (2019). Assessing stand characteristics of enhanced genetics in Loblolly Pine Plantations in the Southeast. In NSF Center for Advanced Forestry Systems. Athens, GA
- Restrepo, H., Mei, B., & Bullock, B. (2019). Long-term timber cutting contracts in the southeastern U.S.: Updating the primer valuation framework. In 2019 International Society of Forest Resource Economics (ISFRE). Columbus, OH, International
- Harris, T., Bullock, B., Montes, C., & Dickens, E. (2019). Growth and yield model comparison for planted longleaf pine to inform long-term management decisions. In 20th Biennial Southern Silvicultural Research Conference. Shreveport, LA
- Restrepo, H., Bullock, B., Lazar, N., Park, C., Montes, C., & Kinane, S. (2019). Prediction of sawtimber potential for loblolly pine in the southeastern U.S.. In 20th Biennial Southern Silvicultural Research Conference. Shreveport, LA

- Zhao, D., Bullock, B., Montes, C. R., & Wang, M. (2019). Why does loblolly pine outperform slash pine in the southeastern US?. In 20th Biennial Southern Silvicultural Research Conference. Shreveport, LA
- Peay, W., Bullock, B., & Montes, C. (2018). A Maximum Entropy Approach to Defining Geographic Bounds on Growth and Yield Model Usage.. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Restrepo, H., Bullock, B., Lazar, N., & Montes, C. (2018). Prediction of Timber Product Class Proportions for Loblolly Pine in the Southeastern U.S.. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Wang, M., Montes, C., Bullock, B., & Zhao, D. (2018). Understanding Dominant Height Projection Accuracy of Anamorphic Models.. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Zhao, D., Westfall, J., Coulston, J., Lynch, T., Bullock, B., & Montes, C. (2018). More Discussion on the Compatibility and Additivity of Tree Tape, Volume and Biomass Equations.. In 018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Zapata Cuartas, M., Bullock, B., & Montes, C. (2018). A New Taper Equation for Loblolly Pine Using Penalized Spline Regression. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Ramberg, Å., Bullock, B., Lind, T., & Montes, C. (2018). Production Potential of Loblolly and Slash Pine in the Southeastern USA and a Comparison to the Potential of Scots Pine in Sweden. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Harris, T., Bullock, B., & Montes, C. (2018). Methods for Developing New Longleaf Pine Individual Tree Taper, Green Weight, and Volume Equations. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Ramirez, L., Orrego, S., Restrepo, H., Montes, C., & Bullock, B. (2018). Spatial Financial Analysis of Potential Forest Plantations in Antioquia, Colombia. In 2018 Joint Southern and Northeastern Mensurationists and IUFRO 4.01 Conference. Blacksburg, VA, International
- Zhao, D., Bullock, B., Montes, C., & Wang, M. (2018). Long-term Growth Dynamics of Loblolly and Slash Pine Plantations. In *The 4th International Congress on Planted Forests*. Beijing, China, International
- Montes, C., Strimbu, B., Kinane, S., Bullock, B., & Dahlen, J. (2018). An Algorithm for Taper Estimation Using Handheld LiDaR Data in Loblolly Pine Plantations. In Society of American Foresters National Convention. Portland, Oregon USA

- Montes, C., Kinane, S., & Bullock, B. (2018). Assimilating dominant height models in space and time, to reduce measurement cost while reducing overall projection uncertainty. In *New Frontiers in Forecasting Forests 2018.* Stellenboch, South Africa, International
- Zhao, D., Montes, C., Bullock, B., Wang, M., Sutter, L., & Markewitz, D. (2018). Comparison of loblolly and slash pine plantation ecosystems: a long-term, well-designed experimental study. In 2018 Ecological Society of America (ESA) Annual Meeting. New Orleans, LA, International
- Bullock, B., Zhao, D., Kane, M., & Dahlen, J. (2018). Assessing stand characteristics of enhanced genetics in loblolly pine plantations in the Southeast. In NSF Center for Advanced Forestry Systems Annual Meeting
- Montes, C., Dahlen, J., & Bullock, B. (2018). Environmental predictors of form and quality in loblolly pine. In NSF Center for Advanced Forestry Systems Annual Meeting
- Gallagher, D. A., Montes, C., & Bullock, B. (2017). Spatial interpolation of volume yield prediction error using environmental covariates. In 11th Southern Forestry and Natural Resource Management GIS Conference. Athens, GA
- Restrepo, H. I., Montes, C., & Bullock, B. (2017). Loblolly pine potential timber production and its uncertainty in the southeastern U.S.: Stochastic spatial 3-PG model. In 11th Southern Forestry and Natural Resource Management GIS Conference. Athens, GA
- Montes, C., & Bullock, B. (2017). Significant changes in rainfall and temperature in the southeast US: Implications for loblolly pine production. In 11th Southern Forestry and Natural Resource Management GIS Conference. Athens, GA
- Shockey, M., Bullock, B., & Montes, C. (2017). Establishing a benchmark for planted loblolly pine. In 2017 Southern Mensurationists Conference. Athens, GA
- Walker, T., McKeand, S., Smith, B., Bullock, B., & Isik, F. (2017). Investigating Genetic Variation in Self-Thinning of Loblolly Pine Planted on a Very Infertile Dry Site in the Sandhills of North Carolina. In 2017 Southern Mensurationists Conference. Athens, GA
- Restrepo, H., Bullock, B., & Montes, C. (2017). Stochastic Loblolly Pine Yield in the Southeastern United States: Spatial Monte Carlo 3PG Model. In 2017 Southern Mensurationists Conference. Athens, GA
- Zapata Cuartas, M., Bullock, B., & Montes, C. (2017). Bayesian SUR approach to modeling additivity in biomass equations of Slash Pine. In 2017 Southern Mensurationists Conference. Athens, GA
- Peay, S., Bullock, B., Montes, C., & Kane, M. (2017). Growth and Yield Model Comparisons for loblolly pine in the Piedmont of the Southeastern United States. In 2017 Southern Mensurationists Conference. Athens, GA

- Restrepo, H., Bullock, B., & Montes, C. (2017). A meta-analysis of loblolly pine growth and yield studies in the southern U.S. In *IUFRO 125th Anniversary Congress 2017; International Union of Forest Research Organizations*. Freiburg, Germany, International
- Shockey, M., Bullock, B., Montes, C., & Kane, M. (2017). Stand dynamics of enhanced genetics loblolly pine - OP Benchmark Study. In NSF Center for Advanced Forestry Systems Annual Meeting. Portland, OR
- Burkhart, H., Fox, T., Wynne, R., Amateis, R., Kane, M., & Bullock, B. (2017). Developing a region-wide modeling system for estimating future productivity of loblolly pine plantations. In NSF Center for Advanced Forestry Systems Annual Meeting. Portland, OR
- Kane, M., Zhao, D., Wang, M., Montes, C., & Bullock, B. (2017). Productivity of loblolly pine thinned plantations with different cultural regimes and planting densities. In 19th Biennial Southern Silvicultural Research Conference. Blacksburg, VA
- Gallagher, D., Montes, C., Bullock, B., & Kane, M. (2017). Quantifying uncertainty of yield predictions. In 19th Biennial Southern Silvicultural Research Conference. Blacksburg, VA
- Kane, M., Zhao, D., Wang, M., Montes, C., & Bullock, B. (2017). Productivity of Loblolly Pine Thinned Plantations with Different Cultural Regimes and Planting Densities. In 19th Biennial Southern Silvicultural Research Conference. Blacksburg, VA
- Restrepo, H., Bullock, B., & Montes, C. (2017). Contribution of Silviculture to Loblolly Pine Growth and Yield in the Southern U.S.: A Meta-Analysis. In 19th Biennial Southern Silvicultural Research Conference. Blacksburg, VA
- Montes, C., Kane, M., & Bullock, B. (2016). Modeling dominant height for loblolly pine using a discrete state-space approach. In 2016 Joint Annual Meeting of the Northeastern Mensurationists Organization (NEMO) and the Southern Mensurationists (SOMENS)
- Gallagher, D., Bullock, B., Montes, C. R., & Kane, M. (2016). Growth and yield models for loblolly pine in the Western Gulf region. In 2016 Joint Annual Meeting of the Northeastern Mensurationists Organization (NEMO) and the Southern Mensurationists (SOMENS)
- Shockey, M., Bullock, B., Montes, C. R., & Kane, M. (2016). Benchmarking gains from planting improved loblolly pine genotypes. In 2016 Joint Annual Meeting of the Northeastern Mensurationists Organization (NEMO) and the Southern Mensurationists (SOMENS)
- Shockey, M., Bullock, B., Zhao, D., Kane, M., Burkhart, H., & Weiskittel, A. (2016). Assessing stand characteristics of enhanced genetics in loblolly pine plantations in the Southeast. In NSF Center for Advanced Forestry Systems Annual Meeting
- Burkhart, H., Fox, T., Wynne, R., Amateis, R., Kane, M., & Bullock, B. (2016). Developing a region-wide modeling system for estimating future productivity of loblolly pine plantations. In NSF Center for Advanced Forestry Systems Annual Meeting

- Bullock*, B.P. and M. Shockey*. Assessing stand characteristics of enhanced genetics in loblolly pine plantations in the Southeast. Annual meeting of the NSF Center for Advanced Forestry Systems. Pensacola, FL. April 25-28, 2016. (National)
- Bullock*, B.P. Forest Biometrics Research in the Southeast US. SNS Growth and Yield Network Conference. Tönnersjöheden, Sweden. June 16-18, 2015. (Invited, International)
- Bullock*, B.P. Genotype characteristics and impacts on stand management in the SE US. 2015 Southeast Regional Managers Conference. Valdosta, GA. October 27-28, 2015. (Invited, Regional)
- Montes*, C.R., B.P. Bullock, and H.L. Allen. Modeling height-diameter relations with censored regression models. Fourth International Conference on Forest Measurements and Quantitative Methods and Management and the 2015 Southern Mensurationists Conference. Blacksburg, VA, USA. October 11-14, 2015. (International)
- Hall*, K., J.L. Stape, B.P. Bullock, J. Wright, D. Frederick, and S. Kelley. Modeling the productivity of Eucalyptus benthamii in the Southeastern United States. Fourth International Conference on Forest Measurements and Quantitative Methods and Management and the 2015 Southern Mensurationists Conference. Blacksburg, VA, USA. October 11-14, 2015. (International)
- Restrepo*, H., S. Orrego, and B.P. Bullock. A spatially explicit forest yield model of teak plantations in Colombia and financial risk modeling. Fourth International Conference on Forest Measurements and Quantitative Methods and Management and the 2015 Southern Mensurationists Conference. Blacksburg, VA, USA. October 11-14, 2015. (International)
- Kim*, T., B.P. Bullock, and A. Wijaya. Spatial Distribution of Above-Ground Biomass in Labanan Concession Forest in East Kalimantan, Indonesia. Fourth International Conference on Forest Measurements and Quantitative Methods and Management and the 2015 Southern Mensurationists Conference. Blacksburg, VA, USA. October 11-14, 2015. (International)
- Gallagher*, D., B.P. Bullock, and M. Kane. Growth and yield of juvenile loblolly pine in the Western Gulf. Fourth International Conference on Forest Measurements and Quantitative Methods and Management and the 2015 Southern Mensurationists Conference. Blacksburg, VA, USA. October 11-14, 2015. (International)
- Walker*, T.D., S.E. McKeand, F. Isik, and B.P. Bullock. Seed Source Influences on Height-Diameter Relationships in Loblolly Pine Plantations. 33rd Southern Forest Tree Improvement Conference (SFTIC). June 8-11, 2015. Hot Springs, Arkansas (Regional)
- Bullock*, B.P. Assessing stand characteristics of enhanced genetics in loblolly pine plantations in the Southeast. Annual meeting of the NSF Center for Advanced Forestry Systems. Asheville, NC. May 19-21 2015. (National)
- Gallagher*, D., B.P. Bullock, and M. Kane. Western Gulf Loblolly Pine Growth and Yield. Annual PMRC Advisory Committee Meeting. Athens, GA. July 15-16, 2015. (Regional)
- Green*, C., B.P. Bullock, and M. Kane. Culture and stand density effects on tree quality in age 15 and 16 non-thinned and thinned loblolly pine plantations. Annual PMRC Advisory Committee Meeting. Athens, GA. July 15-16, 2015. (Regional)
- Green*, P.C., M. Kane, and B.P. Bullock. Culture intensity and planting density effects on tree quality, and proportion and position of solid wood stoppers, in non-thinned and thinned loblolly pine plantations in the upper coastal plain and piedmont of the Southeast. Presented at the Joint Northeastern Mensurationists Organization (NEMO) and Southern Mensurationists (SOMENS) Conference. November 2-4, 2014. Raleigh, NC, USA. National Conference.

- Gallagher*, D.A., and B.P. Bullock. Using Relative Value to Allocate Plots in Stratified Sampling. Presented at the Joint Northeastern Mensurationists Organization (NEMO) and Southern Mensurationists (SOMENS) Conference. November 2-4, 2014. Raleigh, NC, USA. National Conference.
- Denham*, S.O., and B.P. Bullock. Quantifying resin flow differences in loblolly pine under varying stand conditions during an induced bark beetle attack. Presented at the Joint Northeastern Mensurationists Organization (NEMO) and Southern Mensurationists (SOMENS) Conference. November 2-4, 2014. Raleigh, NC, USA. National Conference.
- Norman*, T.R., and B.P. Bullock. Impacts on Growth and Quality of Loblolly Pine (Pinus taeda L.) Seedlings with Clonal Material in the Lower Coastal Plain of North Carolina. Presented at the Joint Northeastern Mensurationists Organization (NEMO) and Southern Mensurationists (SOMENS) Conference. November 2-4, 2014. Raleigh, NC, USA. National Conference.
- Kim*, T.J., and B.P. Bullock. Effects of silvicultural treatments on temporal variations of spatial autocorrelation in Eucalyptus plantation in Brazil. Presented at the Joint Northeastern Mensurationists Organization (NEMO) and Southern Mensurationists (SOMENS) Conference. November 2-4, 2014. Raleigh, NC, USA. National Conference.
- E.J. Green* and B.P. Bullock. 2013. Assessing Sampling and Model Error in Standing Green Weight Estimation for a Loblolly Pine Plantation. October 7, 2013. Southern Mensurationists Conference and 2nd IUFRO Conference on Complex Forest Ecosystems: from Tree to Landscape, New Orleans, LA.
- S. Egbäck*, B.P. Bullock, and S.E. McKeand. 2013. Height-diameter relationships of genetically improved loblolly pine. October 7, 2013. Southern Mensurationists Conference and 2nd IUFRO Conference on Complex Forest Ecosystems: from Tree to Landscape, New Orleans, LA.
- T.J. Kim* and B.P. Bullock. 2013. Spatial Autocorrelation among Different Levels of Genetic Control in Loblolly Pine. October 7, 2013. Southern Mensurationists Conference and 2nd IUFRO Conference on Complex Forest Ecosystems: from Tree to Landscape, New Orleans, LA.
- T. Norman* and B.P. Bullock. 2013. Interplanting Loblolly Pine Impacts on Growth Characteristics. October 7, 2013. Southern Mensurationists Conference and 2nd IUFRO Conference on Complex Forest Ecosystems: from Tree to Landscape, New Orleans, LA.
- B.P. Bullock* and J. Steiger. 2013. Impacts of Genetics on Juvenile Stem Characteristics and Potential Stand-level Value in Loblolly Pine. October 7, 2013. Southern Mensurationists Conference and 2nd IUFRO Conference on Complex Forest Ecosystems: from Tree to Landscape, New Orleans, LA.
- K. Hall*, J. Stape, J. Wright, T. Fox, and B.P. Bullock. 2013. Developing Eucalyptus benthamii growth and yield models for the SEUS. October 23-27, 2013. Society of American Foresters (SAF) National Convention, Charleston, SC.
- B.P. Bullock* and E.R. Wood. 2012. Taper differences in loblolly pine clones. October 8, 2012. Southern Mensurationists Conference, Jacksonville, FL.
- Naumann*, N. and B.P. Bullock. 2012. An economic assessment of stand-level treatments for southern pine beetle prevention. October 8, 2012. Southern Mensurationists Conference, Jacksonville, FL.

- Steiger*, J. and B.P. Bullock. 2011. The effects of genetic homogeneity on sawtimber potential and productivity in loblolly pine. October 24, 2011. Southern Mensurationists Conference, Memphis, TN.
- Naumann*, N. and B.P. Bullock. 2011. Economic assessment of stand-level treatments for southern pine beetle prevention. October 24, 2011. Southern Mensurationists Conference, Memphis, TN.
- Marion*, K. and B.P. Bullock. 2011. Spatial characterization of within-stand variation in southeast forests. October 25, 2011. Southern Mensurationists Conference, Memphis, TN.
- Kim*, T. and B.P. Bullock. 2011. Spatial autocorrelation of above-ground forest biomass in Labanan Concession Forest, East Kalimantan, Indonesia. October 25, 2011. Southern Mensurationists Conference, Memphis, TN.
- Bullock*, B.P. and S.E. McKeand. Twin Plots and Growth and Yield in Tree Improvement. May 25, 2011. 55th Cooperative Tree Improvement Program Advisory Committee Meeting, NC State University, Raleigh, NC.
- Bullock*, B.P. Age five results for the Hofmann Forest Genetics x Spacing x Thinning (GST) trial. April 21, 2011. Presentation to Hofmann Forest Foundation, NCSU, Raleigh, NC.
- Bullock*, B.P. and K. Nyström*. Influence of forest stand spatial characteristics on the distributional parameters. March 3, 2011. Dept. of Forest Resource Management, Swedish University of Agricultural Sciences (SLU), Umeå, Sweden.
- Bullock*, B.P. Staying engaged with teaching and research at NCSU while on a sabbatical. February 2, 2011. NCSU, Raleigh, NC.
- Bullock*, B.P. The results of a one-year research and teaching sabbatical in Sweden. February 25, 2010, Department of Forestry Resource Management, SLU, Umeå, Sweden.
- Bullock*, B.P. Results of a teaching and research sabbatical in Umeå, Sweden at the Swedish University of Agricultural Sciences (SLU). August 23, 2010, Department of Forestry and Environmental Resources, NCSU, Raleigh, NC.
- Bullock*, B.P. and E. Agestam*. Addressing forest sustainability through a transatlantic Master's degree program in Forest Resources. October 14, 2010, Annual Project Directors Conference, Berlin, Germany.
- Bullock*, B.P. Age four results for the Hofmann Forest Genetics x Spacing x Thinning (GST) trial. October 26, 2010, Hofmann Forest, NCSU, Jacksonville, NC.
- Bullock*, B.P. A Fulbright in Sweden research, teaching, and ongoing collaborations. November 15, 2010, Friday Institute, NCSU, Raleigh, NC.
- Cuneo*, M.J. and B.P. Bullock. Compatible Taper and Volume Models for Atlantic White Cedar (*Chamaecyparis thyoides* L.) in Eastern North Carolina. 2009 Atlantic White-Cedar Symposium, The Ecology and Management of Atlantic White-Cedar (*Chamaecyparis thyoides*) Ecosystems. A Symposium held on June 9, 10, and 11, 2009, Greenville, North Carolina, USA.
- Bullock*, B.P. Collaborative Forest Biometrics Research. May 20, 2009, Metla, Finnish Forest Research Organization, Helsinki, Finland.
- Bullock*, B.P. New Challenges, Plans, and Expectations for my Forthcoming Sabbatical. March 11, 2009, Department of Forest Resource Management, SLU, Umeå, Sweden.
- Rockhill*, A.P. and B.P. Bullock. A comparison of imputation techniques for missing observations in forest inventories. 12th Annual Northeastern Mensurationists Organization (NEMO) Meeting. October, 2008. Bar Harbor, Maine.

- Cuneo*, M.J. and B.P. Bullock. Taper and Volume Models for Atlantic White Cedar (*Chamaecyparis thyoides*) in coastal North Carolina. 2008 Southern Mensurationists Conference. October, 2008. St. Augustine Beach, Florida.
- Smith*, B.C., B.P. Bullock, and S.E. McKeand. Effects of tree breeding on rotation-age yield in loblolly pine. 2008 Southern Mensurationists Conference. October, 2008. St. Augustine Beach, Florida.
- Bullock*, B.P. Forest Biometrics Research more interesting and exciting than it sounds! Dept. of Forestry and Environmental Resources' Faculty Research Symposium. August 19, 2008. Raleigh, North Carolina.
- Jackson*, B.C., T.R. Wentworth, H.L. Allen, and B.P. Bullock. Evaluating the merits of aggregate univariate methods, multiple comparison procedures (MCPs), and multivariate methods for comparing plant communities. 93rd ESA Annual Meeting, "Enhancing Ecological Thought by Linking Research and Education." August 3-8, 2008. Milwaukee, Wisconsin.
- There were <u>27</u> more research abstracts and presentations and <u>7</u> proceedings prior to 2008. Not shown available upon request.

Research Poster Presentations

International Posters:

- 1. Porter, S., Montes, C., & Bullock, B. (2018). *Estimating Height from Multiple Diameters*. Poster session presented at the meeting of 2018 SOMENS/NEMO IUFRO 4.01 Conference
- Conner, C.A., B.P. Bullock, and J. Frampton*. (2007). USDA Grade, and Economic Value for Fraser Fir (*Abies fraseri*) Christmas Trees in North Carolina. Poster Presentation at the 8th International Christmas Tree Research and Extension Conference. Bogense, Denmark.

National Posters:

- 3. Bullock, B., Montes, C., Zhao, D., Clabo, D., & Dickens, D. (2023). *Longleaf Pine Growth and Yield - Summary of New Efforts and Permanent Sample Plots in the southeastern US.* Poster session presented at the meeting of 2023 PMRC Annual Meeting
- 4. Munro, H., Bullock, B., Vogt, J., Johnson, D., & Gandhi, K. (2023). *Sampling in tornado impacted forests and related damage assessments*. Poster session presented at the meeting of 2023 PMRC Annual Meeting
- 5. Bullock, B., Montes, C., Dickens, E., Clabo, D., Zhao, D., & Logan, S. (2023). *Development* of Longleaf Pine Growth and Yield Models for the Southeastern United States. Poster session presented at the meeting of 2023 PMRC Annual Meeting
- 6. Bolding, M., Bullock, B., Munro, H., Kinz, S., Paulus, L., & Luyk, J. (2023). *Effect of Machine Traffic Intensity from Forest Harvesting Operations on Soil Compaction and Forest Productivity.* Poster session presented at the meeting of 2023 PMRC Annual Meeting

- 7. Young, J., & Bullock, B. (2023). Assessing competing vegetation responses to mid-rotation silvicultural treatments in southern yellow pine plantations. Poster session presented at the meeting of 2023 PMRC Annual Meeting
- 8. Fulford, C., & Bullock, B. (2023). *The effects of dominant height definition on loblolly pine growth & yield model outputs in the southeast U.S.*. Poster session presented at the meeting of 2023 PMRC Annual Meeting
- 9. Young, J., Bullock, B., & Montes, C. (2021). Assessing Competing Vegetation Responses to Mid-Rotation Silvicultural Treatments in Southern Yellow Pine Plantations. Poster session presented at the meeting of Society of American Foresters National Convention
- 10. Porter, S. M., Montes, C., Bullock, B., & Dahlen, J. (2019). *Estimating height from multiple diameters*. Poster session presented at the meeting of 2019 PMRC Advisory Board Meeting
- 11. Queiroz, T., Montes, C., Campoe, O., Zapata, M., & Bullock, B. (2019). *Optimal growth temperature for contrasting ecualyptus clones across a climatic gradient in Brazil*. Poster session presented at the meeting of 2019 Plantation Management Research Cooperative
- 12. Shockey, M., Bullock, B., Montes, C., Kane, M., & DeLaTorre, R. (2019). *Assessing stand characteristics of enhanced genetics in loblolly pine plantations in the southeast*. Poster session presented at the meeting of 2019 PMRC Advisory Board Meeting
- 13. Harris, T., Bullock, B., & Montes, C. (2019). *Efforts for developing new individual tree equations for green weight, volume, and taper in planted longleaf pine*. Poster session presented at the meeting of 2019 Advisory Board Meeting
- 14. Zapata, M., Bullock, B., & Montes, C. (2019). "*PSTapeR*": an R package for tree taper modeling. Poster session presented at the meeting of 2019 PMRC Advisory Board Meeting
- 15. Peay, S., Bullock, B., Montes, C., & Kane, M. (2019). *A maximum entropy approach to defining geographic bounds on growth and yield model usage*. Poster session presented at the meeting of 2019 PMRC Advisory Board Meeting
- 16. Walker, T. D., McKeand, S. E., Bullock, B., Smith, B. C., & Isik, F. (2016). Genetic variation in carrying capacity/tolerance of loblolly pine. Poster session presented at the meeting of National Plant Breeders Association Meeting
- Denham*, S.O., K.A. Novick, D.R. Coyle, K. Heilövaara, and B.P. Bullock. (2015). Impact of silviculture and bark beetle attacks on loblolly pine resin flow. Entomological Society of America (ESA) Annual Conference. Minneapolis, MN. November 15-18, 2015.
- T.J. Kim* and B.P. Bullock. (2013). Implications of Spatial Autocorrelation in Managing Young Loblolly Pine Plantations in the Southeastern United States. October 23-27, 2013. Society of American Foresters (SAF) National Convention, Charleston, SC.

 Williams*, N.S. and B.P. Bullock. (2008). Detecting Allometric Trends in Differing Levels of Genetic Control in Juvenile Loblolly Pine. 2008 Society of American Foresters (SAF) National Convention. November, 2008. Reno, Nevada.

Regional Posters:

- 20. Koirala, A., Montes, C., & Bullock, B. (2019). *A compatible prediction-projection basal area equation for loblolly pine in Western Gulf*. Poster session presented at the meeting of 2019 Southern Mensurationists Conference
- 21. Shockey, M., Bullock, B., Montes, C., Kane, M., & DeLaTorre, R. (2019). *Assessing stand characteristics of enhanced loblolly pine plantations in the Southeast*. Poster session presented at the meeting of 2019 Southern Mensurationists Conference
- 22. Zapata Cuartas, M., Bullock, B., & Montes, C. (2019). *PSTapeR: an R package for tree taper modeling*. Poster session presented at the meeting of 2019 Southern Mensurationists Conference
- 23. Koirala, A., Montes, C., & Bullock, B. (2019). *Simultaneous prediction and projection equation for basal area growth of unthinned loblolly pine stands*. Poster session presented at the meeting of 2019 Southern Mensurationists Conference
- 24. Restrepo, H., Montes, C., & Bullock, B. (2019). *Biophysical drivers of the loblolly pine timber production and its uncertainty in the Southeastern U.S.: a stochastic spatial 3-PG model.* Poster session presented at the meeting of 2019 Southern Mensurationists Conference
- 25. Restrepo, H., Orrego, S. A., & Bullock, B. (2016). *A spatially explicit framework for forest growth and yield modeling*. Poster session presented at the meeting of Plantation Management Research Cooperative Annual Meeting
- 26. Kim, T.J., B.P. Bullock*, and A. Wijaya. (2015). Estimation of the spatial distribution of biomass based on transect samples in East Kalimantan, Indonesia. 10th Southern Forestry and Natural Resource Management GIS conference. Athens, GA. December 7-8, 2015.
- 27. Fardmo*, N.A. and B.P. Bullock. (2012). Productivity impacts on Eucalyptus with interplanting of Acacia – Initial results. October 8, 2012. Southern Mensurationists Conference, Jacksonville, FL.

Research Reports

- Wang, M., Montes, C., Zhao, D., & Bullock, B. (2023). Coastal plain culture / density study: Age 24 analysis on non-thinned loblolly plots and slash plots. PMRC Technical Report 2023-1.
- Dahlen, J., Bullock, B., Montes, C., & Dickens, E. (2022). Harris T, Raut S, Bullock B, Montes C, Dahlen J, Dickens D. 2022. Cutover and old-field planted longleaf pine total and merchantable stemwood with bark green weight equations for unthinned stands. Warnell WSFNR-22-10A. Athens, GA.

- Zhao, D., Montes, C., Bullock, B., & Wang, M. (2020). Culture / density studies: Results through age 21 on non-thinned loblolly pine plots. PMRC Technical Report 2020-1.
- Montes, C., Wang, M., & Bullock, B. (2018). Evaluation of different methods to project site index uncertainty for the Lower Coastal Plain. PMRC Technical Report 2018-2.
- Zhao, D., Bullock, B., & Montes, C. (2018). Taper, merchantable volume, and biomass equations for slash pine trees. PMRC Technical Report 2018-1.
- Bullock, B.P., K. Nyström, and O. Rosvall. (2010) Mixed stand establishment with genetically improved and unimproved plant material for Norway spruce - Simulations of future yields and impacts on forest management. Bilaga 14-Skötselstrategier för högförädlat plantmaterial. Skogforsk – The Forestry Research Institute of Sweden. 9 p.
- Bullock, B.P. and H.E. Burkhart. 2002. Regional equations for predicting green weight of loblolly pine trees. Dept. of For., Va. Polytech. Inst. & State Univ., Loblolly Pine Growth & Yield Research Cooperative Report No. 124. 24 p.
- Bullock, B.P. and H.E. Burkhart. 2002. Juvenile diameter distributions of loblolly pine characterized by the two-parameter Weibull function. Dept. of For., Va. Polytech. Inst. & State Univ., Loblolly Pine Growth & Yield Research Cooperative Report No. 126. 39 p.
- Bullock, B.P. 1999. Modeling forest stand characteristics of loblolly pine using photogrammetrically derived stand heights. Dept. of For., Va. Polytech. Inst. & State Univ., Loblolly Pine Growth & Yield Research Cooperative Report No. 109. 23 p.

Teaching Presentations

- Bullock*, B.P. Fulbright Program Opportunities. Panel discussion on crafting successful Fulbright applications. April 21, 2014. North Carolina State University, Raleigh, NC.
- Bullock*, B.P. The Atlantis Program Transatlantic Master's Degree in Forest Resources, What does the future hold? April 1, 2013. North Carolina State University, Raleigh, NC.
- Bullock*, B.P. The Atlantis Program Transatlantic Master's Degree in Forest Resources. June 6, 2012. North Carolina State University, Raleigh, NC.
- Bullock*, B.P. and E. Agestam*. Flagship Projects EU-US TMDPFR: EU-US Transatlantic Master's Degree Program in Forest Resources. March 22, 2012. Project Directors' Conference, Brussels, Belgium.
- Bullock*, B.P. The Atlantis Program Transatlantic Master's Degree in Forest Resources. August 2, 2011. University of Helsinki, Helsinki, Finland.
- Ash*, S., B.P. Bullock*, G. Hess*, and A. Moore*. Incorporating Community Engagement in your Courses. March 18, 2011. NCSU Faculty Development Series, Raleigh, NC.
- Bullock*, B.P. Student Information Session on the Atlantis Program Transatlantic Master's Degree in Forest Resources. January, 2010, University of Helsinki, Finland.
- Bullock*, B.P. Opportunities for Faculty Exchange in the US as part of the Atlantis Program. January, 2010, University of Helsinki, Finland.
- Bullock*, B.P. Transatlantic Master's Degree in Forest Resources. Poster. February, 2010, Jokkmokk Winter Conference, Jokkmokk, Sweden.
- Bullock*, B.P. and P.H. Clayton*. International MS Education and Dual Degrees in Forestry: The Atlantis Program. March 26, 2010, The 8th Biennial Conference on University Education in Natural Resources, Virginia Tech, Blacksburg, Virginia.

- Bullock*, B.P. Graduate education at North Carolina State University. August, 2010, Michigan Tech University, Houghton, MI.
- Bullock*, B.P. Transatlantic Master's Degree in Forest Resources. August, 2010, Michigan Tech University, Houghton, MI.
- Bullock*, B.P. The Atlantis Program Transatlantic Master's Degree in Forest Resources. June 9, 2009, SLU, Southern Swedish Forest Research Center, Alnarp, Sweden.
- Bullock*, B.P. Service-Learning Workshop First Day Activities. Engaged College Faculty Development Program. December 3, 2008. Raleigh, North Carolina.
- Bullock*, B.P. Incorporating writing assignments and peer reviewing into a quantitative class, FOR 374, Forest Measurements, Modeling, and Inventory. Campus Writing and Speaking Program Faculty Seminar Showcase. April 9, 2008. Raleigh, North Carolina.
- Blank*, G., B.P. Bullock*, P. Clayton, G.R. Hess*, J.J. Scott*, E. Treasure*. Making Service-Learning work for you. 7th Biennial Conference on University Education in Natural Resources. March 13-15, 2008. Corvallis, Oregon.
- Clayton*, P.H., B.P. Bullock*, G.R. Hess*, B. Honeycutt*, A. Moore*, M. Moses*, S. Stallings*, R. Thompson*, and B. Usry*. Approaches to Designing and Enhancing Service-Learning Opportunities. North Carolina Campus Compact, 10th Annual Service-Learning Conference. February 13, 2008. Elon, North Carolina.
- Bullock*, B.P., G.R. Hess, and A. Moore. Community-Driven Project Development: An Example. Center for Excellence in Curricular Engagement Launch Event. February, 2008. Raleigh, North Carolina.
- Bullock, B.P. 2007. Development of Research Ideas into a Research Program. Presentation to participants in the Graduate Research Certificate (GRC) program in the College of Natural Resources. Raleigh, NC.
- Bullock*, B.P., J. Fortune*, G.R. Hess*, B. Honeycutt*, S.P. Stallings*, R. Thomson*, and R. Usry*. 2007. Expanding and Deepening Faculty Participation in Service-Learning. Presentation at the North Carolina Campus Compact, 9th Annual Service-Learning Conference. Elon University, NC.
- Stallings*, S.P., B.P. Bullock*, S.L. Ash*. 2005. Service-Learning as a One-Time Module. Panel Presentation at the North Carolina Campus Compact, 7th Annual Service-Learning Conference. Elon, NC.
- Bullock, B.P. 2004. Integrating Service-Learning into a Core Forestry Course: Forest Measurements, Modeling, and Inventory. 5th Biennial Conference on University Education in Natural Resources, Natural Resource Education for a Culturally Diverse Audience, Flagstaff, AZ. (Abstr).

4. PUBLIC SERVICE, OUTREACH, AND EXTENSION

New Outreach Programs Developed and Delivered

Issues in Forest Valuation for Extension Professionals

This course was for those extension professionals that come from a non-forestry background, yet have to have an understanding of forestry terms and measurements in their jobs. There was also a field portion where we were able to get them to use common tools in forestry. Delivered 2012.

Mensuration Review for the Registered Forester Exam

A course reviewing the measurements, inventory, and sampling techniques for practitioners who are preparing to take the NC Registered Foresters Exam. This ½ day workshop refreshed the mensurational background needed to pass the RF exam. Delivered 2012 (January + July), 2011, 2010, 2009, 2008 (January + August).

Timberland Investment: Southern Pine Management for Long-Term Revenue

Joint with other NCSU Department of Forestry and Environmental Resources Faculty (Dr. Fred Cubbage, Dr. Bob Abt, and Dr. Joe Roise), we developed a new continuing education workshop focused on an educational need in the forestry community. The focus of this workshop was on learning how to estimate the return on investment from capital invested in southern pine management, the effects of higher land prices on potential rates of return on timberland, the application of growth and yield models, and how to calculate timberland returns based on various management scenarios. Delivered 2007.

Introduction to Forest Inventory and Sampling

I developed a new continuing education workshop focusing on the applied skills that are needed to accurately assess our forestland resources. Participants in this workshop learned to develop statistically reliable forest inventories and how to make informed conclusions based on timber cruise results. Emphasis was placed on practical field considerations with numerous applications and examples. Delivered 2013, 2010, 2009, 2007, 2006, 2005.

Advanced Forest Inventory and Sampling

The second part of the previous continuing education workshop was developed to focus on the more advanced sampling and inventory methods that are needed to make proper land management decisions. Delivered 2013, 2010, 2009, 2007, 2006, 2005.

5. OTHER SERVICE

- Research Panel Review, Full Proposal Review for the Forest Investment Account (FIA) -Forest Science Program (FSP), Ministry of Forests and Range, British Columbia (BC), Canada. February 2009.
- > Program Reviewer, University of Minnesota, Agricultural Experiment Station, April 2009.
- **Book Review**, Prospectus Quantitative Assessments for Natural Resources
- External Reviewer, USDA Forest Service, Northern Monitoring Program and Forest Inventory and Analysis Research Group, Northern Res. Station.
- > Reviewer, USDA Hatch Proposal, June 2015
- > Reviewer, Scandinavian Journal of Forest Research.
- > Reviewer, Southern Journal of Applied Forestry.
- Reviewer, Forest Science.
- > Reviewer, Forests.
- > Reviewer, Canadian Journal of Forest Research.
- Reviewer, Canadian Journal of Remote Sensing.
- Reviewer, Scientia Agricola.
- > Reviewer, PLOS ONE.
- > Reviewer, Northern Journal of Applied Forestry.

- > Reviewer, Forest Ecology and Management.
- Reviewer, Journal of Forestry.
- > Reviewer, Environmental and Ecological Statistics.
- > Reviewer, Journal of Community Engagement and Scholarship.
- > Reviewer, Annals of Forest Science.
- > Reviewer, Southern Hemisphere Forestry Journal.
- > Reviewer, Swedish University of Agricultural Sciences (SLU).
- > Reviewer, North Carolina Academy of Science Journal.
- > Reviewer, NCSU Undergraduate Research Program.
- > Reviewer, NCSU Forestry Extension Publications.

Service to the University

- UGA, Warnell School of Forestry & Nat. Res., Advisor, SAF and Forestry Club, 2015 present
- ▶ UGA, Warnell School of Forestry & Nat. Res., Sr. Project Committee Member, 2015 present
- UGA, Warnell School of Forestry & Nat. Res., Coordinator, International Student Exchange with SLU in Sweden, 2016 – present
- ▶ UGA, Warnell School of Forestry & Nat. Res., Curriculum Committee, 2017 present
- UGA, Warnell School of Forestry & Nat. Res., Teaching Effectiveness Committee, 2014 present
- UGA, Warnell School of Forestry & Nat. Res., Forestry Equipment Room Manager, 2015 present
- ▶ UGA, Professional & Applied Studies University Review Committee, 2022–Present
- ▶ UGA, Warnell School of Forestry & Nat. Res., Forest Biometrics Search Chair, 2023
- ➢ UGA, Warnell School of Forestry & Nat. Res., Forest Silviculture Search Chair, 2022
- ▶ UGA, Integrated Precision Agriculture (IPA) Search Committee Member, 2021-2022
- ▶ UGA, Presidential Fellows Review Panel Member, 2020, 2021
- UGA, Warnell School of Forestry & Nat. Res., Promotion and Tenure Committee, 3rd year review, 2020
- ▶ UGA, Warnell School of Forestry & Nat. Res., Precision Forestry Search Chair, 2019 2020
- > UGA, Warnell School of Forestry & Nat. Res., Soil Sciences Faculty Search Committee, 2019
- > UGA, Warnell School of Forestry & Nat. Res., Post-Tenure Review Committee, 2018-2019
- ▶ UGA, Warnell School of Forestry & Nat. Res., Administrative Committee, 2015 2017
- UGA, Warnell School of Forestry & Nat. Res., Promotion and Tenure Committee, 3rd year review, 2015 – 2016
- ▶ UGA, Warnell School of Forestry & Nat. Res., Lands Committee, 2014 2017
- UGA, Warnell School of Forestry & Nat. Res., Graduate Symposium Judge, 2015, 2016, 2017, 2018, 2019, 2020
- ▶ UGA, Warnell School of Forestry & Nat. Res., Biometrics Search Committee, 2014 2015
- ▶ NCSU, Community-Engaged Faculty Fellows Program, 2011–2014
- NCSU, College of Natural Resources Education and Technology Fee Committee, Department Chair of Committee, 2003 – 2014
- NCSU, College of Natural Resources, Search Committee, Department Head, Forestry & Envir. Res., 2013 – 2014
- ▶ NCSU, Operations Council, Center for Excellence in Curricular Engagement, 2008 2009
- NCSU, Engaged College Service-Learning Project, Leadership Team Member, 2006 2009
- NCSU, College of Natural Resources representative on the LITRE Advisory Board (Learning in a Technology Rich Environment), University Committee, 2 year term, 2006 – 2009

- NCSU, Forestry & Envir. Res. Dept., Reappointment, Tenure & Promotion Committee, 2014
- ▶ NCSU, Forestry & Envir. Res., Dept. Advisory and Management Committee, 2013 2014
- NCSU, Forestry & Envir. Res. Dept. Undergraduate Forest Management Curriculum Coordinator, 2010 – 2014
- ▶ NCSU, Forestry & Envir. Res., International Programs & Funds Committee, 2011 2014
- NCSU, Forestry & Envir. Res. Dept. Undergraduate Programs Committee, 2002–2014
- ▶ NCSU, Forestry & Envir. Res., Search Committee, Liaison Silviculturalist, 2013 2014
- ▶ NCSU, Forestry & Envir. Res. Dept. Teaching Peer-Review Committee, 2010 2012
- ➢ NCSU, Faculty Advisor, Assoc. of Southern Forestry Clubs, NCSU Chapter, 2003 − 2009
- NCSU, Faculty Advisor, Society of American Foresters Club, NCSU Chapter, 2003 2009
- ▶ NCSU, Forestry & Envir. Res. Dept. Executive Review Committee, 2003 2004
- ▶ NCSU, Forestry & Envir. Res. Dept. SAF Accreditation Committee, 2004 2006
- ▶ NCSU, Forestry Program Review and Recruitment Committee, 2002 2003
- NCSU, Hofmann Forest Educational Faculty Committee, 2002 2003
- NCSU, Supervisor, College of Natural Resources Vehicle Pool, 2003 2014
- ▶ NCSU, Supervisor, Department of Forestry Equipment Room, 2003 2014

<u>Service Off Campus</u>

State

- > Chair, Society of American Foresters, Georgia Division, 2022
- > Chair-elect, Society of American Foresters, Georgia Division, 2021
- > Chair, Society of American Foresters, North Carolina, Triangle Chapter, 2007
- > Chair-elect, Society of American Foresters, North Carolina, Triangle Chapter, 2006

Regional

- Co-administrator, 2021 Southern Mensurationists Conference, September 2021
- Co-administrator, 2019 Southern Mensurationists Conference, September 2019
- Co-administrator, 2017 Southern Mensurationists Conference, October 2017
- Associate Editor, Southern Journal of Applied Forestry, served three 3-year terms, 2005-2014
- > Chairman of Planning Committee, 2005 Southern Mensurationists Annual Meeting
- Planning Committee, Appalachian Society of American Foresters Winter Meeting, 2003

National and International

- Solution Associate Editor in Forest Biometrics, Forest Science, 2011 present
- ➢ Associate Editor in Forest Biometrics, Forests, 2016 − present
- Co-administrator, 2023 Southern Mensurationists and Northeastern Mensurationist Conference, October 8, 2023–October 10, 2023
- ➢ Co-administrator, 2nd North American Mensurationists Conference, December 2022
- Co-administrator, NSF Center for Advanced Forestry Systems Industrial Advisory Board Meeting, June 2019
- Opponent, Doctoral Dissertation, Southern Swedish Forestry Research Center, Swedish University of Agricultural Sciences, Alnarp, Sweden. June 2016.
- Co-Chair, Planning Committee, 2014 Joint Northeastern Mensurationists Organization (NEMO) and Southern Mensurationists (SOMENS) Conference. November 2-4, 2014. Raleigh, NC, USA. National Conference.
- Evaluator, Doctoral Dissertation, Southern Swedish Forestry Research Center, Swedish University of Agricultural Sciences, Alnarp, Sweden. January 2014.

- Hosted visiting Finnish researcher at NCSU from the University of Helsinki, Dr. Mika Rekola. 2 months, January – February 2013.
- Hosted visiting Swedish researcher at NCSU (with McKeand) from SLU Alnarp, Dr. Samuel Egbäck. 4 months, January – May 2013.
- Hosted visiting Turkish researcher at NCSU, Adem Kurtipek. 6 months, December 2013 June 2014.
- Hosted 4 visiting researchers and teachers at NCSU from SLU Alnarp for meetings around the Atlantis Program and other collaborations between our institutions and researchers. Dr. Urban Nilsson, Dr. Eric Agestam, Dr. Johan Bergh, and Dr. Lars Drossler. March 31 – April 8, 2013.
- External reviewer for RPT dossier for promotion from Assistant Professor to Associate Professor with Tenure. September 2013.
- Chairman of Planning Committee and Host, Annual Atlantis Program Conference in Raleigh, NC. Had visiting faculty and graduate students from SLU in Sweden, UH in Finland, and MTU in Michigan. June 5-8, 2012.
- > Hosted visiting Swedish Forest Researchers from Skinnskatteberg, Sweden, October 2011.
- > Hosted visiting Swedish researcher from SLU Umeå, Dr. Gun Lidestav. April 2011.
- ▶ Hosted visiting researcher from SLU Alnarp, Dr. Vilis Brukas. April 2011.
- Chair, Society of American Foresters, A3 Biometrics Working Group, elected for two-year term, 2007 – 2009.
- Secretary, Society of American Foresters, A3 Biometrics Working Group, elected for two-year term 2005 – 2007.

Membership in Professional Organizations

Society of American Foresters (SAF), member since 1996 Xi Sigma Pi, Forestry Honor Society, member since 2003 Georgia Forestry Association (GFA), member since 2015 Forest Landowners Association (FLA), member since 2014 American Statistical Association (ASA), member 2001-2009 North Carolina Academy of Science (NCAS), member 2002-2011 Sigma Xi, The Scientific Research Society, member 2003-2011