

Andrea De Stefano

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Education:

- Masters of Applied Statistics, minor in Geography, Louisiana State University, in progress.
Anticipated graduation date: Spring Semester 2024
Advisor: Kevin McCarter
- Ph.D. in Forestry and Forest Resources, minor in Applied Statistics, Louisiana State University, 2019
Emphasis: Forest ecology
Dissertation: “Changing land-use from *Pinus elliottii* to *Eucalyptus benthamii* in southwestern Louisiana affects understory richness, diversity, and functional diversity patterns”
Advisor: Michael A. Blazier
- M.S. in Forest Resources, Pennsylvania State University, 2014
Emphasis: Agroforestry
Thesis: “Assessing carbon pools in agroforestry systems: a meta-analysis”
Advisor: Michael G. Jacobson
- Laurea Magistrale, Università Mediterranea di Reggio Calabria (Italy), 2005
Emphasis: Forest economics and policy
Advisor: Francesco Saverio Nesci

Programming:

- Proficient: R, SAS, ArcGIS
- Familiar: Python,
- Markup: LaTeX, Markdown
- Version control: Git

Academic Experience:

Aug 2014 – Dec 2018

Graduate Research Assistant, Louisiana State University

- Assessed the decline in understory vegetation richness, diversity, and functional diversity as consequence of 5,000-ha land use conversion from slash pine (*Pinus elliottii*) to Camden white gum (*Eucalyptus benthamii*) in southwestern Louisiana.
- Developed generalized linear mixed models to predict changes in understory species diversity as function of environmental variables.

- Used advanced multivariate techniques to identify gradients of ecological variables that dictated understory species patterns.

Aug 2012 – May 2014

Graduate Research Assistant, Pennsylvania State University

- Conducted a comprehensive literary review on agroforestry as a strategy to mitigate the climate change.
- Evaluated the effectiveness of agroforestry systems as carbon sink through meta-analysis.

Aug 2012 – Dec 2012

Graduate Research Assistant, Pennsylvania State University

- Helped to create an online Italian learning program for the PSU M&LD team (<http://inspiration.psu.edu/italian.php>).
- Provided expertise about Italian language and culture. Performed video and audio registrations for the Italian learning program and collaborated to develop the storyline and the multimedia games.

Employment History:

Dec 2022 – Current

Assistant Professor of Forestry, LSU AgCenter Hill Farm Research Station

- Cooperated in research projects with other scientists in the LSU AgCenter, other land grant institutions, private industries, local governments, as well as state and federal agencies.
- Developed extension programs for the Louisiana Cooperative Extension Service (LCES) forestry-based extension programs to support the Louisiana Forestry industry.
- Developed workshops and conferences that conveyed research-based forest management suggestions to forestry professionals of the Western Gulf region.

Apr 2021 – Nov 2022

Postdoctoral Research Associate, University of Wyoming

- Compiled and analyzed datasets related to invasive grasses across several western states, specifically focusing on plant abundance measures, site environmental characteristics, and treatment-response information.
- Conducted an analysis focused on understanding the baseline condition of invaded areas. Specifically, explored the relationship between introduced annual grass cover and plant functional groups.
- Applied statistical models to predict species number and diversity using functional group cover and environmental features as explanatory variables.

- Developed machine learning models to map invasive annual grasses (*Bromus arvensis*, *Bromus tectorum*, *Ventenata dubia*, and *Taeniatherum caput-medusae*) using satellite imagery in Wyoming rangelands.

Nov 2019 – Feb 2020

Environmental Scientist, California State Water Resources Control Board

- Reviewed applications for dredge or fill permits for accuracy, completeness, and consistency with statutory, regulatory, and other policy requirements.
- Analyzed proposed projects to determine impacts on aquatic resources and beneficial uses, and work with project proponents and stakeholders to avoid, minimize and mitigate for those impacts.
- Developed enforceable permits or certifications for dredge and fill activities as needed to ensure projects will not exceed water quality objectives.

Jun 2019 – Oct 2019

Botany Coordinator, BREC – Parks and Recreation in East Baton Rouge

- Assisted the Assistant Director of Natural Resources Management with the creation of Howell Community Park and Manchac Park grow zones.
- Coordinated members of Louisiana Conservation Corps and Green Force volunteers in the maintenance of hiking trails, wetland planting, and bog bridges construction at Highland Road Community Park, Manchac Park, and Bluebonnet Nature Center.
- Assisted the Assistant Director of Natural Resource Management in the water hyacinth (*Eichhornia crassipers*) removal project at Blackwater Conservation Area, and in the algae bloom and vegetation control project at City Lake Park.
- Participated in the development of Invasive Species Management Plan, Biodiversity Assessment Plan, and Rapid Ecological Assessment Protocol.

Mar 2019 – Jun 2019

Research Associate, Louisiana State University AgCenter

- Improved the quality and habitats of +150 acres of loblolly (*Pinus taeda*) and longleaf (*Pinus palustris*) pine plantations through prescribed burning.
- Assisted the LSU faculty in teaching activities during the 2019 LSU Forestry Camp. Led a crew of 5 students during learning activities, such as dendrology, prescribed fire, and herbicides application training.
- Participated in the implementation of a management plan for Lee Memorial Forest.
- Assisted and implemented the design and maintenance of research projects, including data collection and analysis.

Sep 2008 – Aug 2012

Professional Forester, self-employed (Reggio Calabria – Italy)

- Developed forest management and harvesting plans, and forest inventories for private and public landowners.
- Developed funded projects under the European Agricultural Fund for Rural Development (EAFRD).
- Expert for the Court of Reggio Calabria for appraisals, acquisitive prescription, inheritance, and easement trials.

May 2006 – Jul 2008

Forestry Consultant, Studio Associato Tassone (Reggio Calabria – Italy)

- Developed funded projects under the European Agricultural Guidance and Guarantee Fund (EAGGF).
- Developed feasibility studies for Clean Development Mechanism (CDM) and Joint Implementation (JI) forestry projects under The Kyoto Protocol in Romania, Egypt, and Democratic Republic of Congo.
- Developed carbon offset projects, collected data and processed information for Carbon sequestration in forestlands.

Publications:

1. De Stefano A., Jacobson M. G. (2018). Soil carbon sequestration in agroforestry systems: a meta-analysis. *Agroforestry Systems*. 92(2):285–299. <https://doi.org/10.1007/s10457-017-0147-9>.
2. De Stefano A., Blazier M. A., Comer C. E., Dean T. J., Wigley B. T. (2019). Understory vegetation richness and diversity of *Eucalyptus benthamii* and *Pinus elliottii* plantations in the mid-south U.S. *Forest Science*. 66(1): 66-81. <https://doi.org/10.1093/forsci/fxz051>.
3. De Stefano, A, Fowers, B., Mealor, B. A. (2021). Comparison of visual estimation and line-point intercept vegetation survey methods on annual grass-invaded rangelands of Wyoming. *Invasive Plant Science and Management*. 14(4), 240-252. <https://doi:10.1017/inp.2021.36>.
4. De Stefano A., Mealor B. A., Jones L. C., Lehnhoff E. A., Mangold J. M., Prather T. S., Ransom C. V., Rew L. J. (2024). Plot-Measured Variables Indicate Landscape-Scale Patterns of Annual Grass Invasion in Northwestern US Rangelands. *Rangeland Ecology & Management*. 92: 90-99. <https://doi.org/10.1016/j.rama.2023.10.003>.
5. Lepinard O., Mattillio C. M., Arndt J. N., Mealor B. A., De Stefano A. Evaluating high-frequency, moderate-resolution satellite imagery for assessment and monitoring of invasive annual grasses. *Rangeland Ecology & Management*. Manuscript submitted on 11/06/23 (Under review).
6. Howie N. A., De Stefano A. Measuring Tree Diameters Using LiDAR Equipped iPad: Evaluation of ForestScanner and Arboreal Forest Applications. *Forest Science*. Manuscript submitted on November 2023 (Under review).
7. De Stefano A., Blazier M. A., Kaller M., Comer C. E., Wigley B. T. Overstory and soil condition shape understory vegetation community structure of *Eucalyptus benthamii* and *Pinus elliottii* plantations in the mid-south U.S. Manuscript in preparation.
8. De Stefano A., Blazier M. A., Comer C. E., Wigley B. T. The role of understory vegetation in ecosystem functionality of *Eucalyptus benthamii* and *Pinus elliottii* plantations in the mid-south U.S. Manuscript in preparation.

- Blazier M. A., De Stefano A., Comer C. E., Wigley B. T. Microbial biomass and metabolic activity of *Eucalyptus benthamii* and *Pinus elliottii* plantations in the mid-south U.S. Manuscript in preparation.

Presentations:

- De Stefano A., Meador B. A., Rew L J, Mangold J, Ransom C. V., Jones L. C., Prather T. S. Effects of Introduced Annual Graminoids on Native Vegetation of Rangelands Across Northwestern United States (2022, March). Speaker at Western Society of Weed Science Annual Meeting (WSWS), Newport Beach, CA.
- De Stefano A., Fowers B., Meador B. A. Comparison of Visual Estimation and Line Point Intercept Vegetation Survey Methods on Annual Grass-invaded Rangelands of Wyoming (2022, March). Poster presenter at Western Society of Weed Science Annual Meeting (WSWS), Newport Beach, CA.
- De Stefano A., Jacobson M. G. (2019). Agroforestry systems may play vital role in mitigating climate change. Poster presenter at Research to Action: The Science of Drawdown International Conference, University Park (PA).
- De Stefano A., Blazier M. A., Comer C. E., Wigley B. T. (2018, August). Understory vegetation richness of *Eucalyptus benthamii* and slash pine (*Pinus elliottii*) plantations in the mid-south U.S – Functional traits. Speaker at the Annual Meeting of The Ecological Society of America (ESA), New Orleans, LA.
- De Stefano A., Blazier M. A., Comer C. E., Wigley B. T. (2017, August). Understory vegetation richness of *Eucalyptus benthamii* and slash pine (*Pinus elliottii*) plantations in the mid-south U.S. Speaker at the Annual Meeting of The Ecological Society of America (ESA), Portland, OR.
- De Stefano A., Blazier M. A., Comer C. E., Wigley B. T. (2015, November). Vegetation diversity of *Eucalyptus benthamii* and slash pine plantations in southwestern Louisiana. Speaker at National Convention of The Society of American Foresters (SAF), Baton Rouge, LA.
- De Stefano A., Blazier M. A., Comer C. E., Wigley B. T. (2015, April). Understory vegetation assessment in *Eucalyptus benthamii* plantations in southwestern Louisiana. Speaker at Big Thicket Science Conference, Stephen F. Austin State University, Nacogdoches, TX.

Extension, Workshops, and Webinars:

- De Stefano A. (2023). Presentation: Invasive Species and Forest Management in Louisiana. Louisiana Vegetation Management Association 2023 Fall Meeting. September 28, 2023. Louisiana Evacuation Shelter, Alexandria, LA.
- De Stefano, A. 2023. Presentation: Louisiana Grazing Lands Conservation Initiative Summer Series Webinar 5: Silvopasture. May 28, 2023. <https://www.youtube.com/watch?v=Q05FZNBAzeM>.
- De Stefano, A. 2023. Article: Promoting understory for sustainable forest management. Timber Tales Issue 175:4-5.
- De Stefano, A. 2023. Presentation: Forestry research updates. ARK-LA-TEX Forestry Forum (02/28/2023), Florida Parishes Forestry Forum (03/17/2023), and CENLA Forestry Forum (03/28/2023).
- De Stefano A. (2021). Presentation: Enhancing Regional Decision Making for Invasive Grass Management. Northeast Wyoming Invasive Grass Working Group (NEWIGWG). May 2021, Sheridan, WY.

- De Stefano A. (2018, March). Presentation: Wildlife habitat of fast-growing hardwood plantations. Arkansas, Louisiana, Texas forestry forum. El Dorado, AK.

Teaching Experience:

- Spring 2021* Introduction to Statistical Analysis (EXST 2201), Louisiana State University
- Teaching assistant to Mr. Michael McKenna. Taught computer laboratories.
- Fall 2018* Trees and Woody Plants of the Southeast (RNR 2001), Louisiana State University
- Teaching assistant to Dr. Christopher Reid. Collaborated on exams development, taught indoor and outdoor lectures.
- Fall 2017* Trees and Woody Plants of the Southeast (RNR 2001), Louisiana State University
- Teaching assistant to Melinda Hughes. Collaborated on exams development and grading, taught indoor and outdoor lectures.
- Fall 2013* Principles of Forest Soils Management (FOR 475), Pennsylvania State University
- Teaching Assistant to Dr. Richard Stehouwer. Collaborated on exams development, taught lectures, graded labs, midterm exams, and final projects.

Affiliations:

- Ecological Society of America
- Society of American Forester
- Western Society of Weed Science
- Xi Sigma Pi Forestry Honor Society

Professional Service:

I have served as a reviewer for the following peer-reviewed scientific journals:

- Agroforestry Systems
- Agriculture, Ecosystem & Environment
- Ecological Engineering
- Ecosphere
- Forest Science

January 29, 2024

