

20th Biennial Southern Silvicultural Research Conference

Tuesday Concurrent Session 1 in Salon 1 – March 12, 2019

7:00 – 8:30 am **Continental Breakfast** – Pre-function area

8:00 – 10:00 am Welcome and Plenary Session in Ballroom D

Keynote I: History of the Biennial Southern Silvicultural Research Conference - Jim Barnett, Emeritus Scientist, Southern Research Station, USDA Forest Service

Keynote II: Representative Panel Discussion: The Future of Southern Silviculture and Research
 Universities: Andy Ezell, Professor and Head (retired), Mississippi State University
 Forest Service: Don Bragg, Project Leader, USFS-Sothern Research Station
 Indusdtry: Conner Fristoe, Silviculture Manager, MSLA Region, Weyerhaeuser

10:00 – 10:30 am **Break**

Forest Measurements and Modeling: David Wilkinson Moderator

10:30 - 11:00 am Using the integrated system approach to model tree and stand survival. QV Cao

11:00 - 11:30 am Calibrating a Growth and Yield Model for Loblolly Pine Plantations Growing in the Misiones Region of South America. RL Amateis, HE Burkhart

11:30 – 1:00 pm **Lunch** in Ballroom C

1:00 - 1:30 pm Can a mixed-effects basal area equation fit using one species produce accurate estimates following calibration using data of another species. CL VanderSchaaf, G Trincado, S Huang, TE McConnell, Y Yang

1:30 - 2:00 pm Estimated Impacts to Louisiana Hardwood Timber Product Receipts Following Emerald Ash Borer Invasion: A 25-year Scenario. TE McConnell, CL VanderSchaaf, SM Tanger

2:00 - 2:30 pm* A Model To Estimate Leaf Area Index In Loblolly Pine Plantations In The Southeast United States Using Ground Based Measurements And Satellite Data. SM Kinane, CR Montes

2:30 - 3:00 pm* Growth and Yield Model Comparison for Planted Longleaf Pine to Inform Long-term Management Decisions. TB Harris, BP Bullock, CR Montes, D Dickens

3:00 – 3:30 pm **Break**

3:30 - 4:00 pm* Prediction of timber product class proportions for loblolly pine in the southeastern U.S. HI Restrepo, BP Bullock, N Lazar, CR Montes

4:00 - 4:30 pm* Risk as a Function of Temperature for Modeling Southern Pine Beetle Outbreak Prediction Models. HL Munro, KJ Gandhi, C Montes

4:30 - 5:00 pm* A price premium for growing higher quality pine sawtimber by extending rotation age. A Regmi, DL Grebner, JL Willis

6:00 – 8:00 **Poster Session and Reception:** complementary hors d'oeuvres and drinks

* Denotes student presentation

Tuesday Concurrent Session 2 in Salon 3 – March 12, 2019

7:00 – 8:30 am **Continental Breakfast** – Pre-function area

8:00 – 10:00 am Welcome and Plenary Session in Ballroom D

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10:00 – 10:30 am **Break**

Fire: Rebecca Kidd Moderator

10:30 - 11:00 am The Development of an Appalachian Mountain Fuels Photo Series. TA Coates, TA Waldrop, HH Mohr, TF Hutchinson

11:00 - 11:30 am* Six years following a wildfire in southwest Virginia: has it accomplished first-entry prescribed burn objectives? GE Hahn, TA Coates, WM Aust, CA Copenheaver, MA Thomas-Van Gundy

11:30 – 1:00 pm **Lunch** in Ballroom C

1:00 - 1:30 pm* Soils of the Southern Appalachian Mountains Following 17 Years of Fire and Fire Surrogate Treatments. CJ Dukes, TA Coates, DL Hagan, WM Aust, MA Callahan, DM Simon

1:30 - 2:00 pm The consequences of herbaceous and litter fuels for restoring fire behavior in north Mississippi oak-hickory woodlands. JM Varner, T Shearman, JK Kreye, JS Brewer, GW Hamby

2:00 - 2:30 pm* Spatial and Seasonal Flammability Comparisons of Endemic and Exotic Plants in the Post Oak Savannah, Blackland Prairie, and Piney Woods Ecoregions of Texas. MB Tiller, B Oswald, A Frantzen, I Hung, S Jerez, Y Weng

2:30 - 3:00 pm Fire exclusion in the Cross Timbers forest of north-central Oklahoma is leading to densification and the increase in mesic hardwoods and Juniperus virginiana which increases risk of wildfire. R Will, D Hoff, C Zou, N Lillie

3:00 – 3:30 pm **Break**

3:30 - 4:00 pm* Stand dynamics 12 years following implementation of prescribed fire to restore degraded upland oak-hickory forest in the Ozark-St. Francis National Forest, AR. MC Danheim, KR Kidd, BP Oswald, HO Liechty

4:00 - 4:30 pm Restoring forest floor fuels in fire-excluded oak-hickory woodlands: impacts on litter moisture. JK Kreye, M Varner, G Hamby

4:30 - 5:00 pm Wildfire Effects on Tree and Stand Characteristics on the Cumberland Forest, Tennessee. MR Schubert, B Fitzgerald, J Zobel

6:00 – 8:00 **Poster Session and Reception:** complementary hors d'oeuvres and drinks

* Denotes student presentation

Tuesday Concurrent Session 3 the Arkansas Room – March 12, 2019

7:00 – 8:30 am **Continental Breakfast** – Pre-function area

8:00 – 10:00 am Welcome and Plenary Session in Ballroom D

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10:00 – 10:30 am **Break**

Longleaf Pine: Brian Oswald Moderator

10:30 - 11:00 am Early Impacts of Midstory Hardwoods and Overstory Density on Longleaf Seedling Establishment on Xeric Sites. J Henry, J Willis, D Schnake

11:00 - 11:30 am USFS Commitment to Restoration in the Southern Region - Increasing the Pace and Scale of Restoration - An Overview and a Case Study of Efforts With Longleaf Pine Restoration. JM Matthews, J Hinchee

11:30 – 1:00 pm **Lunch** in Ballroom C

1:00 - 1:30 pm Is planting stock critical to long-term performance of longleaf pine seedlings? SS Sung, JD Haywood, MA Sayer, DJ Leduc

1:30 - 2:00 pm Hybridization of longleaf pine: Is there a growing problem? JP Barnett, P Jackson, R Olatinwo

2:00 - 2:30 pm* Site Preparation for Longleaf Pine Restoration on Hydric Sites: Tree-Level and Stand-Level Responses 15 Years Following Planting. CD Crouch, BO Knapp, MC Stambaugh, SA Cohen, JL Walker, GG Wang

2:30 - 3:00 pm Field Observations of Longleaf Pine Seedlings to Determine the Extent of Hybridization. P Jackson, J Barnett, R Olatinwo, B Strom, S Sung

3:00 – 3:30 pm **Break**

3:30 - 4:00 pm Role of prescribed fire season in maximizing the growth of longleaf pine seedlings and saplings. MA Sayer, MC Tyree, B Rudd

4:00 - 4:30 pm* Media Depth in Container Cells Affects Longleaf Pine Germination Rates. NG Bolner, P Jackson

6:00 – 8:00 **Poster Session and Reception:** complementary hors d'oeuvres and drinks

* Denotes student presentation

Tuesday Concurrent Session 4 in the Louisiana Room – March 12, 2019

7:00 – 8:30 am **Continental Breakfast** – Pre-function area

8:00 – 10:00 am Welcome and Plenary Session in Ballroom D

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Indusdtry: Conner Fristoe, Silviculture Manager, MSLA Region, Weyerhaeuser

10:00 – 10:30 am **Break**

Hardwood - Natural Regeneration: Michael Blazier Moderator

10:30 - 11:00 am* Cherrybark Oak (*Quercus pagoda* Raf.) Seven Year Growth Response in Intermixed Species Competitive Neighborhoods. MR Schubert, W Clatterbuck, J Zobel

11:00 - 11:30 am Establishing Improved Cherrybark Oak Seedlings In A Recent Clearcut On A Bottomland Terrace In The Lower Mississippi Alluvial Valley. KK Cunningham

11:30 – 1:00 pm **Lunch** in Ballroom C

1:00 - 1:30 pm Status of planted oak monocultures on a Coastal Plain minor bottom in the fourth decade after establishment. M Olson, M Bataineh, K Cunningham, C Fristoe, W Headlee, S Hossain

1:30 - 2:00 pm The Potential for Extending the Natural Range of Cherrybark Oak (*Quercus pagoda* Raf.) on Appropriate Sites. WK Clatterbuck

2:00 - 2:30 pm Eastern Cottonwood Coppice Production: Impacts of Three Different Clones and Two Planting Densities. HO Liechty, W Headlee

2:30 - 3:00 pm Is the “optimum” pH for growing hardwood seedlings wrong? D South

3:30 - 4:00 pm Nuttall and cherrybark oak performance in mixed species plantings. J Schuler, J Trauger, C Stuhlinger

4:00 - 4:30 pm Effects of canopy structure on water and nutrient cycling: implications for changing forest composition in the Central Hardwoods, USA. CM Siegert, KE Limpert, NA Drotar, ML Siegle-Gaither, HD Alexander

4:30 - 5:00 pm Developing a Bacterial Leaf Scorch Resistant Population of American Sycamore. RJ Rousseau, TD Leininger, JP Adams

6:00 – 8:00 **Poster Session and Reception:** complementary hors d'oeuvres and drinks

* Denotes student presentation

Wednesday Concurrent Session 5 in Salon 1 – March 13, 2019

7:00 – 8:30 am **Continental Breakfast** – Pre-function area

Fire (Coninued): Rebecca Kidd Moderator

8:00 - 8:30 am Evaluating the Efficacy of Prescribed Fire in Meeting Management Objectives and Impacts on White-Tailed Deer in East Texas. TP Wall, B Oswald, KR Kidd, R Darville, B Burt

8:30 - 9:00 am* Deriving Meaningful Metrics of Fire Behavior. MC Vaughan, D Hagan

9:00 - 9:30 am* Modeling fire-induced tree mortality for eastern hardwood forests: Evaluating and refining the First Order Fire Effects Model. BL Blood, M Wachuta, BO Knapp, DC Dey, GG Wang

9:30 - 10:00 am* Using Standardized Fuel Loading and Infrared Technology to Create Distinguishable Fire Intensity Treatments. EC Yost, T Gifford, MR Schubert, W Clatterbuck

10:00 – 10:30 am **Break**

Hardwood – Natural Regeneration: Brian Lockhart Moderator

10:30 - 11:00 am* Effect of harvest gap size and neighborhood composition on oak competitive status in a pine-hardwood forest. C Mohler, MG Olson, M Bataineh, D Bragg

11:00 - 11:30 am * Growth Of Chinese Tallow (Triadica Sebifera) And Native Hardwood Species Under Varying Light And Water Regimes. O Ajala, J Stovall, B Oswald, H Williams

1:30 – 1:00 pm **Lunch** in Ballroom C

1:00 - 1:30 pm Sixth-Year Oak Regeneration in Bottomland Hardwood Shelterwood Cuts in Mississippi. AB Self, JC Rainer, A Ezell, J Willis

1:30 - 2:00 pm Oak Regeneration Success in Operational Shelterwood Cuts: Second-Year Results. AB Self

2:00 - 2:30 pm Hardwood retention tree mortality in burned and unburned areas managed using the irregular shelterwood method. DC Clabo, W Clatterbuck

2:30 – 3:00 pm Even- and uneven-aged silviculture affects the oak regeneration process in the Ridge and Valley ecoregion of Tennessee. SL Clark, SE Schlarbaum, CJ Schweitzer, TL Keyser, AM Saxton, KP Hoyt

3:00 – 3:30 pm Uneven-aged Silviculture Does Not Successfully Perpetuate Red Oak-Dominated Bottomland Hardwood Forests - The Stoneville Experience. BR Lockhart, ES Gardiner, JS Meadows, TD Leininger

* Denotes student presentation

Wednesday Concurrent Session 6 in Salon 3 – March 13, 2019

7:00 – 8:30 am **Continental Breakfast** in pre-function area

Intermediate Management and Stand Development: Tom Dean Moderator

- 8:00 - 8:30 am* Using sapwood-based growth efficiency modified by individual tree competition measures to assess site quality in disturbed, brownwater and blackwater forested wetlands. AL McAlhane, R Keim, T Dean, S Allen
- 8:30 - 9:00 am* Approaches to model mid-rotation treatments effects in loblolly pine plantations in the southeast US. M Zapata Cuartas, BP Bullock, CR Montes
- 9:00 - 9:30 am* Assessment of Fertilization and Release Impact in Second Thinned Loblolly Pine (*Pinus taeda*) Plantations in the Piedmont/Upper Coastal Plain Region of the Southeastern United States. ML Buchanon, MB Kane, CR Montes
- 9:30 - 10:00 am* Forestry Best Management Practices and Estimated Erosion Rates for Roads, Skid Trails, and Stream Crossings in Mountainous Terrain. CL Quistorff, B Hawks, WM Aust, MC Bolding, SM Barrett
- 10:00 – 10:30 am **Break**
- 10:30 - 11:00 am* Assessing the Establishment, Growth, and Survival of West Gulf Coast Southern Pines in East Texas. JM Hooker, BP Oswald, JP Stovall, HM Williams, Y Weng
- 11:00 - 11:30 am First Through Fourth Growing Season Response of Loblolly Pine to Thinning in the Western Gulf Region. JB Grogan, Y Weng, DW Coble
- 11:30 – 1:00 pm **Lunch** in Ballroom C
- 1:00 - 1:30 pm Why does loblolly pine outperform slash pine in the southeastern US? D Zhao
- 1:30 - 2:00 pm Fertilizer and Thinning Effects on Plantation Loblolly Pine (*Pinus taeda* L.) Taper and Wood Quality. ML Schulte, RL Cook, TJ Albaugh, TR Fox, HE Burkhart, RA Rubilar
- 2:00 - 2:30 pm Tree and stand scale responses of *Pinus taeda* after two thinning and fertilization treatments: a case study -Note there are 2 more authors: Harold E. Burkhart and Thomas R. Fox. TJ Albaugh, RL Cook, DR Carter, RA Rubilar, OC Campoe, HE Burkhart, TR Fox, RL Amateis
- 2:30 - 3:00 pm Above-ground carbon stock and distribution in managed and unmanaged mature, natural-origin, pine-hardwood forest stands. MM Bataineh
- 3:00 – 3:30 pm **Break**
- 3:30 - 4:00 pm Stand development of loblolly pine, sweetgum, and cherrybark oak mixtures in Northwest Louisiana. MA Blazier, T Clason
- 4:00 - 4:30 pm Red Maple Composition in an Old Growth Forest Fifty Years Following Disturbance. MK Crosby, RB Butler, BN Hodges
- 4:30 – 5:00 pm Silvicultural Strategies to Improve the Sustainability of Eastern Hemlock. WA Whittier, A Mayfield, R Jetton

* Denotes student presentation

Wednesday Concurrent Session 7 in the Arkansas Room– March 13, 2019

7:00 – 8:30 am **Continental Breakfast** in pre-function area

Vegetation Management: Andy Ezell Moderator

- 8:00 - 8:30 am Two-year growth of loblolly pines following herbaceous weed control with indaziflam, imazapyr, sulfometuron, and hexazinone. AW Ezell, AB Self
- 8:30 - 9:00 am Longleaf growth response following site preparation including Esplanade, Oust Extra, Escort, and Method. AW Ezell, AB Self
- 9:00 - 9:30 am Testing five treatments to control bush honeysuckles and promote natural hardwood reproduction in north Alabama. CJ Schweitzer
- 9:30 - 10:00 am Potential Detrimental Effects of Using Glyphosate for Hardwood Seedling Release. SE Peairs, WK Clatterbuck
- 10:00 – 10:30 am **Break**

Shortleaf Pine: Don Bragg Moderator

- 10:30 - 11:00 am * Increasing the survival probability and height growth of 1-0 bareroot shortleaf pine (*Pinus echinata*) seedlings through genetic selection, site preparation, and vegetation control. S Lyczak, J Kabrick, D Larsen, W Walter
- 11:00 - 11:30 am Revisiting shortleaf outplantings of the Southwide Pine Seed Source Study on the Crossett Experimental Forest. DC Bragg, SM Hossain
- 11:30 – 1:00 pm **Lunch** in Ballroom C
- 1:00 - 1:30 pm Comparison of Shortleaf Pine Seed Sources in Some Ouachita and Ozark National Forest Progeny Tests. SM Hossain, DC Bragg, VL McDaniel, B Crane
- 1:30 - 2:00 pm Shortleaf Pine Underplanted in Naturally Occurring and Artificially Induced Hardwood Canopy Gaps. MR Schubert, J Zobel
- 2:00 - 2:30 pm Planting shortleaf pine seedlings deeper increases resprouting after fire. C Meek, R Will

* Denotes student presentation