# FOREST SCIENCE An international journal of research and technical progress

3 n JUIN 2015

Volume 61 Number 3 June 2015

www.forest-science.org

# SPECIAL SECTION Complex Forest Ecosystems

# INTRODUCTION

Complex Forest Ecosystems: From Tree to Landscape B.M. Strimbu and H.E. Burkhart

# FUNDAMENTAL RESEARCH

- On the Use of Upper Stem Diameters to Localize a Segmented Taper Equation to New Trees 411 C.O. Sabatia and H.E. Burkhart
- Height-Diameter Relationships for Different Genetic Planting Stock of Loblolly Pine at Age 6 424 S. Egbäck, B.P. Bullock, F. Isik, and S.E. McKeand
- Interpreting Stand Structure through Diameter Distributions 429 N.C. Pond and R.E. Froese
- Spatial Autocorrelation among Different Levels of Genetic Homogeneity and Spacings in Loblolly Pine T.J. Kim, B.P. Bullock, and S.E. McKeand

# silviculture

Impact of Ozone on Sequestration of Carbon by Swedish Forests under a Changing Climate: A Modeling Study 445 N. Subramanian, P.E. Karlsson, J. Bergh, and U. Nilsson

# FUNDAMENTAL RESEARCH

# economics

458 Optimal Forest Rotation with Multiple Product Classes

R.J. Brazee and P. Dwivedi

466 Projecting Potential Adoption of Genetically Engineered Freeze-Tolerant Eucalyptus in the United States D.N. Wear, E. Dixon IV, R.C. Abt, and N. Singh

## forest ecology

Structure of Fisher (Pekania pennanti) Habitat in a Managed Forest in an Interior Northern California Coast Range 481 M.R. Niblett, S.H. Sweeney, R.L. Church, and K.H. Barber

#### forest management

- 494 Generating Stochastic Ellipsoidal Forest and Wildland Fire Scar Scenarios for Strategic Forest Management Planning under Uncertainty
  - C.A. Kuhlmann, D.L. Martell, R.J.-B. Wets, and D.L. Woodruff

soils &	hydrology
509	Potential Implications for Expansion of Freeze-Tolerant Eucalyptus Plantations on Water Resources in the Southern United States J.M. Vose, C.F. Miniat, G. Sun, and P.V. Caldwell
522	Nitrogen and Carbon of Switchgrass, Loblolly Pine, and Cottonwood Biofuel Production Systems in the Southeast United States M.A. Blazier, T.R. Clason, H.O. Liechty, Z.H. Leggett, E.B. Sucre, S.D. Roberts, K. Krapft, and E.D. Vance
	APPLIED RESEARCH
biomet	rics
535	Using Forest Inventory and Analysis Plots to Estimate Sample Sizes for Alternative Inventory Methods  C.L. VanderSchaaf
forest e	ecology
540	Comparison of Loblolly, Shortleaf, and Pitch X Loblolly Pine Plantations Growing in Oklahoma K.C. Dipesh, R.E. Will, T.B. Lynch, R. Heinemann, and R. Holeman
forest r	management
548	Oak Advance Regeneration in Common Habitat Types of Central and Northern Wisconsin  K.M. Schwartz and M.C. Demchik
554	Removal of Organic Matter from the Forest Floor in Loblolly Pine Plantations Increased Ground-Layer Richness and Diversity 16 Years after Treatment
	L.D. Dimov, K.J. Howard, Z.H. Leggett, E.B. Sucre, and L.L. Weninegar
559	Relationships between Radiation and Canopy Closure Estimates in Streamside Buffers in Western Oregon  L. Cole and M. Newton
silvicult	ture .
<i>57</i> 0	Decrease in Sapling Nutrient Concentrations for Six Northern Rocky Mountain Coniferous Species  T.B. Jain and R.T. Graham
genetic	s & tree improvement
579	Effects of Inbreeding on Growth and Quality Traits in Loblolly Pine

Comparing Stem Volume Predictions of Coastal Douglas-Fir Stands in British Columbia Using a Simple Physiological Model and 586 LiDAR Remote Sensing

Y. Lu, N.C. Coops, D.K. Bolton, T. Wang, and G. Wang

social sciences

597

Family Forest Owner Preferences for Forest Conservation Programs: A New York Case Study

M.C. Kelly, R.H. Germain, and S.V. Stehman

G.A. Ford, S.E. McKeand, J.B. Jett, and F. Isik

soils & hydrology

Herbicide Concentrations in First-Order Streams after Routine Application for Competition Control in Establishing Pine Plantations 604 S.L. Scarbrough, C.R. Jackson, S. Marchman, G. Allen, J. Louch, and M. Miwa