### **Tall Timbers Fire Ecology Conference 18th Proceedings**

### The Longleaf Pine Ecosystem: Ecology, Restoration and Management

#### **Table of Contents**

Editor's Note (p. vii)

Contributors (p. ix)

Conference Dedication to Roy Komarek. (p. xiii) James A. Stevenson

Second E. V. Komarek, Sr. Fire Ecology Lecturer: Daniel Simberloff. (p. xv) Ronald L. Myers

Species-area and Fragmentation Effects on Old-Growth forests: Prospects for Longleaf Pine Communities (p. 1) Daniel Simberloff

The History of Longleaf Pine in Florida (p. 15) William A. Watts

Four Centuries of Changing Landscape Patterns in the Longleaf Pine Ecosystem (p. 17) Cecil C. Frost

Longleaf Pine Vegetation of the Southern Atlantic and Eastern Gulf Coast Regions: A Preliminary Classification (p. 45)
Robert K. Peet and Dorothy J. Allard

**Vegetation of the Longleaf Pine Region of the Western Gulf Coastal Plain** (p. 83) Paul A. Harcombe, Jeff S. Glitzenstein, R. G. Knox, Steve L. Orzell and Edwin L. Bridges

Rare Vascular Plant Taxa Associated with the Longleaf Pine Ecosystems: Patterns in Taxonomy and Ecology (p. 105) Joan Walker

Characteristic Mammals and Birds of Longleaf Pine Forests (p. 127) R. Todd Engstrom

Amphibians and Reptiles of Longleaf Pine Communities (p. 139) Craig Guyer and Mark A. Bailey

Arthropods Associated with Xeric Longleaf Pine Habitats in the Southeastern United States: A Brief Overview 159 George W. Folkerts, Mark A. Deyrup and D. Clay Sisson

Genetic Variation in Longleaf Pine (p. 193) James L. Hamrick, William J. Platt and Mark Hessing

The Effects of Fire on Nutrient Cycles in Longleaf Pine Ecosystems (p. 205) Norman L. Christensen

**The Impact of Temporal Variation in Fire Regime on Savanna Oaks and Pines** (p. 215) Alan J. Rebertus, G. B. Williamson and W. J. Platt

Evaluating Effects of Season of Burn in Longleaf Pine Forests: A Critical Literature Review and Some Results from an Ongoing Long-term Study (p. 227) Donna R. Streng, J. S. Glitzenstein and W. J. Platt

Small-scale Disturbances in Longleaf Pine Forests (p. 265) Sharon M. Hermann

Dynamics of an Old-Growth Longleaf Pine Population (p. 275) William J. Platt and S. L. Rathbun

Regenerating Longleaf Pine with Natural Seeding (p. 299) William D. Boyer

Growth and Yield in Naturally-Regenerated Longleaf Pine Stands (p. 311 Robert M. Farrar

An Ecological Approach to Longleaf Pine Forestry (p. 337) W. Leon Neel

**Longleaf Ecosystem Restoration in the Wake of Hurricane Hugo** (p. 339) George Bengtson, J. DePre, W. Twomey and R. Hooper

Restoring Longleaf Pine Community Integrity (p. 349) Ronald L. Myers

Societal Influences on Prescribed Burning (p. 351) Dale D. Wade

**Panel Discussion: Silviculture Effects on Groundcover Plant Communities in Longleaf Pine Forests** (p. 357) Jeff S. Glitzenstein, Facilitator; Dennis Hardin, D. Bruce Means, Kenneth W. Outcalt, Joan Walker and Neal Wilkins

**Panel Discussion: Managed Longleaf Pine Forests and Red-Cockaded Woodpeckers** (p. 371) Frances C. James, Facilitator; Ralph Costa, Ronald E. F. Escano and Jeffrey R. Walters

**Panel Discussion: Conservation of the Longleaf Pine Ecosystem** (p. 385) Julie Moore, Facilitator; Lindsay Boring, Roger Dennington, Steven Gatewood, James Stevenson and Michael Webb

**POSTER ABSTRACTS** (p. 401)

The Effect of Season of Burn on Reproductive Dynamics and Herbivory in a Longleaf Pine Savanna Groundcover Herb, Pityopsis graminifolia

Stephen J. Brewer and William J. Platt

Long-term Fire Ecology of a Longleaf-slash Pine/Wiregrass Forest, Alapaha, Georgia
Dale G. Brockway and Clifford E. Lewis

The Red-cockaded Woodpecker in an Old-growth Longleaf Pine Forest: A Preliminary Report R. Todd Engstrom

Sensitive Plant Species on the Apalachicola National Forest: An Introduction Robert Evans, Susan Carr and Rose Marie Boyle

**Co-occurring Populations of Parnassia caroliniana and P. grandifolia: Responses to Growing Season Fire**Robert Evans, Susan Carr and Joan Walker

#### Hypothetical Biological Rotation Ages for Longleaf pine on Sandhill Sites

Thomas C. Fristoe

#### Old-growth Longleaf Pine Stand Structure Under Conditions of Chronic Fire Exclusion

Frank S. Gilliam

#### Red-cockaded Woodpecker Cavity Trees in an Old-growth Forest

Sharon M. Hermann

#### Plant Size and Fuel Characteristics Influence Survival of Fire by Juvenile Longleaf Pines

Susan A. Langevin and William J. Platt

# Preliminary Results of Efforts to Establish a Longleaf Pine Community with Natural Characteristics at the Blackwater Ecological Preserve, Zuni, Virginia

Gerald F. Levy and Brian Courtney

#### Florida Department of Natural Resources Management of Longleaf Pine Ecosystems

Patricia A. MacLaren and James A. Stevenson

## Recovery of Shrubs in Longleaf Pine Forests and Embedded Seepage Savannas Following Early and Late Growing Season Burns Matthew S. Olson and William J. Platt

#### The Long-term Effect of Selected Site Preparations on Wiregrass

Kenneth W. Outcalt

### Restoration and Multi-aged Management of Longleaf Pine Forest on St. Marks National Wildlife Refuge

Joseph P. Reinman, Joe D. White, Robin M. Will and John G. Fort, Jr.

#### **Ecological Concerns about Pine Straw Raking**

Michael P. Schafale

# The Potential Role of Fire Suppression in Upland Longleaf Pine Forest on the Catastropic Decline on the Endangered Conifer, Torreya taxifolia

Mark Schwartz and Sharon Hermann

#### The Upland Habitat Protection Project: A Response to Xeric Declines

Leslie Hay Smith and Dale Jackson

#### Herbicide Use in Understory Restoration of a Xeric Sandhill: First-year Results

R. Neal Wilkins, Rosi Mulholland, Dan G. Neary and Wayne R. Marion

Conference Participants (p. 415)

Note: Papers in this proceedings are presented in program order.