Fire History in Southeastern Ecosystems

By Charles Lafon, Associate Professor
Department of Geography, Texas A&M University

Fire history research in the Southeast reveals that fires and fire-associated vegetation were common long before the fire prevention and suppression efforts of the past century. Fire plays a key role in many ecosystems of the southeastern U.S., from longleaf pine stands to oak forests. In a paper published in the journal Geography Compass, Charles Lafon reviews the range of fire effects and vegetation responses to fire among different ecosystems in the American South and discusses what researchers have learned about the region’s fire history from multiple sources of evidence. These include early travelers’ accounts, witness tree records obtained from original land surveys, tree-ring evidence from fire-scarred trees, and charcoal buried in soils and bogs. Both lightning and anthropogenic ignitions (caused by American Indians or European settlers) contributed to burning, but their relative importance is debated. The humid climate constrains burning, especially by lightning-ignited fires, which often occur during moist conditions. The paper reviews fire climatology studies, which indicate the importance of dry conditions (e.g., drought years and relatively dry areas) for widespread burning in this humid region. Landscape fragmentation also influences burning. In the past, some fires likely grew much larger than today because they were unimpeded by roads, farms, and other barriers.


Online Resource: Air Quality Education Tools

The National Wildfire Coordinating Group’s Smoke Committee (SmoC) and the University of Idaho have partnered to create a set of educational resources to advance land and fire managers’ understanding of air quality regulations and smoke management approaches. These excellent resources are available at the Emissions and Smoke Portal on the FRAMES website:

- An online tutorial, Smoke Management and Air Quality for Land Managers, to provide an overview of air quality regulations and smoke management approaches. This tutorial is openly available, takes from 60 to 90 minutes to complete, and can be completed at your own pace and convenience. Using a combination of conventional readings, interactive figures, and supporting case studies, the tutorial intends to help users understand impacts of smoke, air quality regulations, smoke management, and effective collaboration and communication.
- Two case studies to share examples of recent smoke management situations, how they were addressed, and the lessons learned from these events.
- An air quality library featuring PDF links to air quality guides and helpful website links.
- An interactive glossary, Smokepedia, where you can search for air quality terms.
- Archived presentations on multiple smoke and air quality topics, recorded during a series of workshops conducted in 2008-2009 titled, Effective Communication for Smoke Management in a Changing Air Quality Environment.
Partner Spotlight: Prescribed Fire Councils

Across the country, most states have established or are in the process of establishing a Prescribed Fire Council—an organization to connect individuals from public agencies and institutions, non-governmental organizations, and the private sector who use prescribed fire as a land management tool. The Coalition of Prescribed Fire Councils, developed in 2009, partners with Councils nationwide to “create one voice to assist fire practitioners, policymakers, regulators, and citizens with issues surrounding prescribed fire use.” The Coalition is also active in facilitating the development of Councils in those states that do not yet have one.

While each state’s Council is organized and functions differently, they share common characteristics of diverse membership, frequent member communication, and professional development opportunities. Most Councils meet one to two times a year, and typically these meetings consist of presentations, reports, and updates on a variety of fire science, safety, legal, and educational issues. Continuing education credits are often available for attendees. You can quickly link to the Council websites for states in the Southeast through the new Prescribed Fire Councils webpage on the SFE Resource Center.

Councils in the Southeast collaborate with the Southern Fire Exchange by transmitting SFE updates and news to their membership, and providing a venue at annual or biennial meetings to reach hundreds of practitioners. In addition, several state Council leaders and a representative from the Coalition serve on the SFE Advisory Board.

New SFE Fact Sheets

GROUND NESTING BIRDS

Burning during the growing season expands the window for completing annual burn plans and mimics natural fire regimes in much of the South. However, there is concern for affecting birds that nest on or close to the ground. A new SFE fact sheet, Nests under Fire: Does it Matter? Growing-season Burns and Ground-nesting Birds, summarizes recent publications on the effects of growing-season burns on ground-nesting birds.

VSMOKE

VSMOKE is a frequently used computer-based model for predicting concentrations of fine particulate matter and cross-plume visibility from prescribed fires. Smoke Prediction with VSMOKE provides a brief overview of this model, its applicability and limitations, and describes model inputs and outputs. In addition, if you missed the smoke model webinar on Oct 19, you can still watch the archived version to learn about VSMOKE and other smoke models from presenter Daniel Stratton, US Forest Service.

Resources from Recent Workshops Available!

In September, SFE along with several partners hosted a workshop at Osceola National Forest to share research results regarding the effectiveness and impacts of mechanically shredding and burning understory shrubs and small trees in pine flatwoods. Click here to access workshop handouts and photos, from this workshop. You can also find a workshop summary and presentations from the recent Fire in the Pocosins workshop, hosted by The Nature Conservancy in Maple Hill, North Carolina.

UPCOMING EVENTS

Visit the SFE Calendar to learn more about upcoming workshops, trainings, field trips, demonstrations, and other opportunities. To add an event to our calendar, please send the event information to sfe@ifas.ufl.edu.

SFE Fall Webinar Series

Hosted by the Forestry and Natural Resource Webinar Portal

Prescribed Fire and the Public
November 16, 12pm to 1pm (EDT)
Sarah McCaffrey, US Forest Service, will summarize findings about the social acceptability of prescribed fire and variables influencing approval.

Interagency Fuel Treatment Decision Support System
December 14, 12pm to 1pm (EDT)
Stacy Drury, Sonoma Technology, Inc., will introduce the IFTDSS and demonstrate ways to use the system to support fuels treatment decisions.

Conferences

Exploring the Mega-fire Reality Conference
November 14-17, 2011
Tallahassee, Florida

8th Southern Forestry and Natural Resources GIS Conference
December 11-13, 2011
Athens, Georgia

Southwest Fire Ecology Conference
February 27-March 1, 2012
Santa Fe, New Mexico

3rd Human Dimensions of Wildland Fire Conference
April 17-19, 2012
Seattle, Washington
Abstract deadline December 15, 2011

REMINDERS

SFE MINI-GRANTS
Applications for the Southern Fire Exchange mini-grant program are now being accepted! Click here to learn program details and download the application.

JFSP PROPOSALS DUE – NOV 18
The Joint Fire Science Program recently announced five Requests for Applications (RFAs) for funding fire science research and delivery. Click here for more information on the JFSP website.