



SOUTHERN Fire Exchange

A JFSP Knowledge Exchange Consortium



FIRE LINES

A Joint Newsletter of the Southern Fire Exchange and the
Southeastern Section of the Association for Fire Ecology

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IN THIS ISSUE

Fire and Birds in the Southeast	1
Research Highlight: Reproductive Success of Wild Turkeys in Frequently Burned Longleaf Pine Forests	1
Partner Spotlight: Florida Scrub Working Groups	2
Resources on Fire and Birds	2
Upcoming Events	2
SFE and LANDFIRE Webinar Series	3
Provide Input: Cohesive Strategy in the South	3
Highlights from Fall 2014 SFE Field Tours	4
News and Reminders	4

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Fire and Birds in the Southeast

The effects of fire on a variety of southeastern bird species, including wild turkey, northern bobwhite, red-cockaded woodpecker, Florida scrub jay, and Bachman's sparrow to name a few, is a topic that has been studied in our region for decades. It is also a topic about which fire, wildlife, and natural resource managers have voiced a need for additional information and resources so they can better meet their management objectives. This newsletter points to several resources that may be helpful to you, including fact sheets, webinars, and other publications. We also summarize new findings from a recent research article on how management in longleaf pine ecosystems influences wild turkey reproductive ecology.

Research Highlight: Reproductive Success of Wild Turkeys in Frequently Burned Longleaf Pine Forests

In a recent *Forest Ecology and Management* article, Andrew Little, University of Georgia, and his co-authors reported results from a study that investigated how management of longleaf pine forests influences eastern wild turkey reproductive ecology. The study was conducted in two longleaf pine forests in southwestern Georgia that have been managed with prescribed fires every 1 to 3 years. Fires were applied in a mosaic pattern across the landscape in both dormant and growing seasons. In addition, large hardwood trees were mechanically removed. After fitting a sample of female turkeys with radio transmitters, the turkeys and their nests were surveyed to estimate nest and brood survival. Researchers also measured habitat features at each nest site: they used GIS to map characteristics such as land cover types and nearby roads, and calculated number of days from the last prescribed fire to the first day of incubation.

Of the 78 nests included in the sample, 42 percent of the nests were successful (one or more eggs hatched). Females tended to select nest sites in areas that were nearing the end of their burn rotation, suggesting that higher vegetative cover attracted nesting birds. Most nest loss was due to predation, with little loss occurring due to growing-season prescribed fire. Results showed that "...growing-season prescribed fire had minimal impact on wild turkey reproductive success when using small-scale (12-22 ha), frequent fire return intervals of 2 years or less." These results are consistent with that of other studies. However, while some past studies have resulted in recommendations of burning every 3 to 7 years for wild turkeys, the authors of this article suggest a more frequent burn interval of 2 years or less to better balance management objectives for turkeys with those of threatened and endangered species dependent on shorter fire return intervals in longleaf pine ecosystems. The authors conclude by recommending that managers use small-scale prescribed fires (12–22 ha) with frequent fire return intervals of 2 years or less to promote wildlife diversity and suitable nesting conditions for wild turkeys in longleaf pine savannas.



Photo by Larry Korhnak, University of Florida

Little, A.R., Streich, M.M., Chamberlain, M.J., Conner, L.M., Warren, R.J. (2014). Eastern wild turkey reproductive ecology in frequently-burned longleaf pine savannas. *Forest Ecology and Management* 331, 180-187.

Partner Spotlight: Florida Scrub Working Groups

Florida has **five scrub ecosystem working groups** with members representing a variety of local, state, and federal agencies, non-profit organizations, consultants, and private land-owners. The first working group was established in 1991 to bring stakeholders together to *share information and experiences, establish partnerships and collaborations, and address conservation issues at landscape and regional scales* (for more information, see <https://fsjconservation.wordpress.com/working-groups>). Florida scrub habitat contains many endemic species, several of which are threatened or endangered such as the Florida scrub jay. The working groups meet between one and three times a year and have started management, education, and communication initiatives, including field tours and volunteer programs in scrub ecosystems around the state. The Southern Fire Exchange looks forward to partnering with the working groups as they continue efforts to improve management in scrub ecosystems.

Save the Date! The Florida Scrub-Jay Festival, which is a working group spin off, will be held on February 28, 2015 at Merritt Island National Wildlife Refuge in Florida.



Participants at a recent scrub workshop at Camp Blanding, Florida. Photo by David Godwin, SFE

Resources on Fire and Birds

Lightning-Season Burning: Friend or Foe of Breeding Birds? is a Tall Timbers Research Station and Land Conservancy booklet written by Jim Cox and Brent Widener. The document reviews research of the effects of lightning-season burning on important breeding birds associated with southern pine forests, including the northern bobwhite, wild turkey, red-cockaded woodpecker, brown-headed nuthatch, loggerhead shrike, Bachman's sparrow, and Henslow's sparrow. For a quick look at some of the information reported in this booklet, you can check out a 2-page SFE fact sheet, **Nests under Fire: Does It Matter? Growing-season Burns and Ground-nesting Birds**, which summarizes several publications on the effects of growing-season burns on ground-nesting birds.

The **USFWS Southeast Region** has developed a collection of **five highly detailed fact sheets** that provide land managers with species specific ideal habitat and fire regime conditions for the **Bachman's sparrow**, **brownheaded nuthatch**, **Henslow's sparrow**, and **painted bunting**. Each fact sheet provides information such as desired understory, mid-story, and overstory conditions, burn season, and burn severity that can be used to directly support the development of management and prescribed fire plans. The fact sheets also include detailed citation lists where readers can dig deeper into relevant research.

You can also watch the archived webinar, **Fire and Fauna in the Southeast: Lessons Learned from Recent Research**, presented by Dr. Chris Moorman of North Carolina State University. This webinar highlights research investigating the response of wildlife to prescribed fire, including a section on effects of fire on turkey nest survival.

And lastly, the National Bobwhite Conservation Initiative has a Bobwhite Library which contains many resources, including **eight videos on prescribed fire**.



Left to Right: Bobwhite quail, loggerhead shrike, and red-cockaded woodpecker nest. Photos by Larry Korhnak, University of Florida.

UPCOMING EVENTS

Visit the [SFE Calendar](#) and the [JFSP Calendar](#) to learn more about upcoming events. To add an event to our calendar, send the event information to sfe@ifas.ufl.edu.

Webinars

Training Exchanges from the Ground Up
January 21, 2pm Eastern

The Ability of Wildfire to Act as a Fuel Treatment
January 21, 2pm Eastern

Effect of Complex Terrain on Extreme Fire Behavior
January 27, 3pm Eastern

Critical Fire Weather Patterns—Eastern United States, Canada and Australia
February 10, 3pm Eastern

Workshops and Trainings

Fire Curriculum and Workshop for Educators
February 7, 2015; 9:00am-3:30pm, Eastern
Tallahassee, FL

North Carolina Prescribed Fire Training Exchange
Feb 15-28, 2015 (*application deadline is past*)
Ellerbe, NC

Niobrara River Valley Prescribed Fire Training Exchange
March 14-29, 2015 (*applications due 2/2/15*)
Ainsworth, NE

Lower Loup Valley Prescribed Fire Training Exchange
March 16-27, 2015 (*applications due 2/2/15*)
Broken Bow, NE

Conservation Site Assessment & Planning
Online: March 16-April 10, 2015
In-person: April 14-15 2015 (Melrose, FL)

Ignition Planning and Prescribed Fire Techniques for Wildlife
April 6-9, 2015
Archbold Biological Station; Venus, FL

Conferences

Wildland-Urban Interface Conference
March 24-26, 2015
Reno, NV

Greater Everglades Ecosystem Restoration
April 21-23, 2015 (*abstracts due 1/2/2015*)
Coral Springs, FL

13th International Wildland Fire Safety Summit & 4th Human Dimensions of Wildland Fire Conference
April 20-24, 2015
Boise, ID

11th Symposium on Fire and Forest Meteorology
May 5-7, 2015
Minneapolis, MN

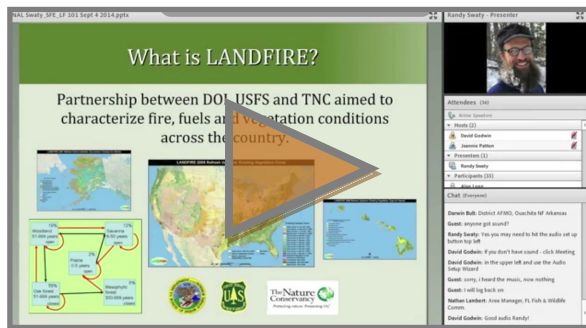
2015 Conference on Laurel Wilt Disease and Natural Ecosystems
June 16-18, 2015
Coral Springs, FL

Backyards & Beyond: Wildland Fire Education Conference
October 22-24, 2015 (*abstracts due 12/15/14*)
Myrtle Beach, SC

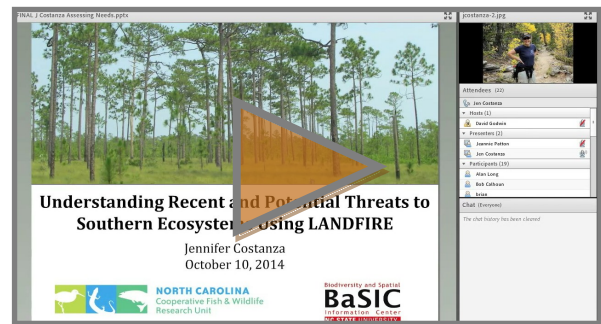
6th International Association for Fire Ecology Congress
November 16-20, 2015
San Antonio, TX

SFE and LANDFIRE Webinar Series

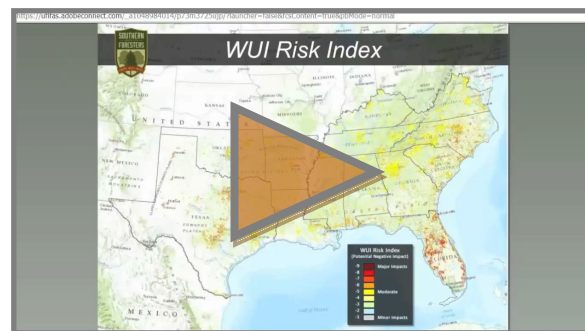
If you missed any of the webinars in fall SFE and LANDFIRE series, you can view the archived versions on the [SFE YouTube Channel](#). In addition, copies of the presentations including notes are available on the [TNC LANDFIRE Conservation Gateway](#).



LANDFIRE 101 with Randy Swaty



LANDFIRE Assessing Needs with Jennifer Costanza



LANDFIRE Customizing Data with Curt Stripling and David Buckley

****An archived version of the last webinar in the series, *State and Transition Modeling for Ecosystem Assessment, Restoration Planning and Collaborative Learning* with Randy Swaty, is coming soon to the SFE YouTube page! ****

PROVIDE INPUT: COHESIVE STRATEGY IN THE SOUTH

The Southern Regional Cohesive Strategy Outreach Team invites you to complete a short survey, which will only take a few minutes of your time. As you may know, over the past several years, a collaborative effort has been working to develop and implement a cohesive wildland fire strategy in the Southeast to further restore and maintain landscapes, enhance fire adapted human communities and build even more efficient and effective wildland fire response systems. As you are an integral part of the wildland fire community, the team would like to hear from you. This brief survey is intended to gauge your familiarity with the Southeast strategy, to collect ideas about successful activities that can be used across the region, and to learn about needs you may have to more fully integrate the strategy into your agencies' mission and activities.

Click here to take the survey: https://www.surveymonkey.com/s/cohesive_fire

For more information on the national strategy and regional action plan, please visit:

- ⇒ National Strategy: www.forestsandrangelands.gov/strategy/
- ⇒ Regional Action Plan: www.forestsandrangelands.gov/strategy/Regional_Strategy_Committees/Southeast/reports.shtml

For information on Southeast specific activities or to become further engaged, please contact:

Mike Zupko, Chair, Southern Regional Strategy Committee, Cohesive Wildland Fire Strategy,
Southern Governors' Association Representative, 770-267-9630, mike@zup-co-inc.com

Highlights from Fall 2014 SFE Field Tours



Apalachicola National Forest field tour participants learn about intensive habitat restoration efforts used to benefit the rare and regionally endemic striped newt. Photo by David Godwin, Southern Fire Exchange

RESTORATION PROJECTS IN THE APALACHICOLA NATIONAL FOREST

In November, the Southern Fire Exchange co-hosted a fire ecology workshop and field tour in the Apalachicola National Forest for land managers, natural resource professionals, and private landowners. With blue skies and mild temperatures, it was a wonderful day in the field for the twenty-four workshop participants and speakers. The field tour took participants to seven locations in the forest to discuss topics including prescribed fire management recommendations for improving quail habitat, hardwood management options, and wetland restoration techniques. Field tour participants learned about the benefits of converting to a variable season 18-24 month prescribed fire regime for improving quail habitat and populations. Partners included the USDA Forest Service, Tall Timbers Research Station, Upland Ecosystem Restoration Project (UERP), The Nature Conservancy, and The Coastal Plains Institute. Check out [photos from the day!](#)

COASTAL FIRE ECOLOGY

The Southern Fire Exchange recently partnered with the Cooperative Extension Service in South Carolina and the Belle W. Baruch Institute of Coastal Ecology and Forest Science near Georgetown, SC for a two-day workshop with both classroom talks and field demonstrations. Talks included an enlightening review of the natural and cultural history of fire in southern forests by Johnny Stowe, a summary of current research on prescribed fire and other management activity effects on drinking water quality in coastal lands by Dr. Alex Chow, and an overview of management and research at Hobcaw Barony, the Institute's 17,000 acres of forest and marsh. Field stops demonstrated a variety of management regimes, with and without fire, focused on restoring longleaf pine under or after loblolly pine. One of their recent publications* summarized results this way: *Retaining low to moderate levels of canopy density (approx. 20–40 ft²/ac basal area) in loblolly pine stands may provide an effective balance for reaching multiple restoration objectives that include maintaining desirable vegetation structure and creating fuel conditions for a frequent fire regime.* Additional publications related to that research can be checked out at <http://www.srs.fs.usda.gov/staff/623>. The field stops provided an excellent opportunity for scientists and managers to share relevant research and experience in longleaf pine restoration.

* Knapp, B.O.; J.L. Walker; G. Wang; H. Hu; and R.N. Addington. 2014. Effects of overstory retention, herbicides, and fertilization on sub-canopy vegetation structure and functional group composition in loblolly pine forests restored to longleaf pine. *Forest Ecology and Management* 320:149-160.

SFE looks forward to assisting with many similar science applications across the region. Let us know if you have ideas for how this can happen in your neck of the woods!

NEWS AND REMINDERS

PRESCRIBED FIRE AWARENESS EVENTS

Many southern states celebrate Prescribed Fire Awareness days/weeks during the winter season. Let us know if you have any activities scheduled for this important recognition—we can help publicize and ensure you reach your stakeholders. Contact: Annie Oxart, oxart@ufl.edu

SAFETY ZONES WEBINAR

Watch the archived version of the webinar, *The How, What, and Where of Safety Zones: Recent Findings*, recently presented by Bret Butler.

CONTINUING EDUCATION OPPORTUNITIES IN THE SOUTHEAST

This [2-page document](#) provides an overview of several training and continuing education opportunities available for natural resource and fire managers in the Southeast.

FIRE AND WILDLIFE WORKSHOP IN FLORIDA

The Florida Chapter of the Wildlife Society is hosting a workshop April 6-9 at the Archbold Biological Station in Venus, Florida. The [multi-day workshop](#) will cover a wide variety of topics related to prescribed fire planning and implementation.

SAVE THE DATE

May 2, 2015 is International Wildfire Community Preparedness Day. [Click here](#) for project ideas and resources.

FIRE ECOLOGIST POSITION

Tall Timbers Research Station and Land Conservancy is seeking a [fire ecologist](#) to assist with research in the areas of plant ecology and fire science in southeastern U.S. Applications are due by January 1.

FIRE LINES CONTRIBUTIONS

Send your fire-related news, field stories, or photos to Annie Oxart (oxart@ufl.edu) to be included in future issues of Fire Lines.



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