



Restoring Fire to Eastern Oak Forests: A Conference on the State of Our Knowledge

05-S-05

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Problem

Land managers are in need of current knowledge of fire in oak forests to inform prescription writing, forest plan revisions, implementing burn plans, and related tasks

Approach

A conference, entitled "Fire in the Eastern Oak Forest: Delivering Science to Land Managers," was held November 15-17, 2005 at the Fawcett Center, Ohio State University in Columbus, OH. The goals of the conference were to expose practitioners to research results and application techniques that might help them restore fire to eastern oak forests, to highlight what current research is underway, and to identify knowledge and application gaps that need further research. Proceedings were published in September 2006 and submitted to all participants. The proceedings contains 20 articles and 36 poster abstracts. Over 400 students, professionals, and land managers attended.

Project Findings

The conference addressed four focal areas of fire in the eastern oak forests as outlined below. Also listed below are the titles of the presentations and the author/presenters' names. The abstracts of the posters presented are included in the conference proceedings and can be found at the link listed under the Deliverables section of this document.

1) Historical Perspectives on Eastern Oak Forest

- a. [The Paleocology of Fire and Oaks in Eastern Forests](#) -William A. Patterson
- b. [Fire Scars Reveal Variability and Dynamics of Eastern Fire Regimes](#) -Richard P. Guyette, Daniel C. Dey, Michael C. Stambaugh, and Rose-Marie Muzika
- c. [Understanding the Evidence for Historical fire Across Eastern Forest](#) - Charles M. Ruffner
- d. [Oak Composition and Structure in the Eastern United States](#) - W. Keith Moser, Mark Hansen, Will McWilliams, and Ray Sheffield
- e. [Why Sustain Oak Forests?](#) - David Wm. Smith

2) Vegetative and Forest Floor Responses to Fire

- a. [Ecological and Ecophysiological Attributes and Responses to Fire in Eastern Oak Forests](#) - Mark D. Abrams
- b. [Research Efforts on Fuels, Fuel Models, and Fire Behavior in Eastern Hardwood Forests](#) - Thomas A. Waltrop, Lucy Brudnak, Ross J. Phillips, and Patrick H. Brose
- c. [Soil, Water, and Wind: How the Elements conspire in the Forest Context](#) -Ralph E.J. Boerner
- d. [Responses of Oak and Other Hardwood Regeneration to Prescribed Fire: What We Know as of 2005](#) - Patrick H. Brose, Thomas M. Schuler, and Jeffery S. Ward
- e. [Fire and the Herbaceous layer of Eastern Oak Forest](#) - Todd Hutchinson

3) Fire – Fauna Interactions

- a. [Do Fire and Insects Interact in Eastern Forest?](#) - Lynne K. Rieske-Kinney
- b. [Does Fire Affect Amphibians and Reptiles in Eastern U.S. Oak Forest?](#) – Rochelle B. Renken
- c. [Conservation Implications for Neotropical Migratory and Game Birds in Oak-hardwood Stands Managed with Shelterwood harvest and Prescribed Fire](#) - J. Drew Lanham, Patrick H. Brose, and Patrick D. Keyser
- d. [Influence of Fire on Mammals in Eastern Oak Forests](#) – Patrick D. Keyser and W. Mark Ford

4) Obstacles and Solutions to Using Prescribed Fire in Oak Forests

- a) [Prescribed Fire: What Influences Public Approval?](#) – Sarah M. McCaffrey
- b) [Top Ten Smoke Management Questions for Fire in Eastern Oak Forest](#) – Joseph J. Charney, Ann L. Acheson, and Andrea Stacy
- c) [Resistance of Eastern Hardwood Stems to Fire Injury and Damage](#) – Kevin T. Smith and Elaine Kennedy Sutherland
- d) [Fire and Invasive Exotic Plant Species in Eastern Oak Communities: an Assessment of Current Knowledge](#) – Cynthia D. Huebner
- e) [Rx Fire Laws: Tools to Protect Fire: the “Ecological Imperative”](#) – Dale Wade, Steven Miller, Johnny Stowe, and James Brenner
- f) [Growing a Burning Program: Challenges and Opportunities](#) – Rex Mann

Application by Land Managers

The information available to land managers as a result of this conference is notable. The availability of the information through the various links and websites makes this collection of data easily accessible to land managers. The subject matter is important and useful to managers for prescription writing, forest plan revisions, implementing burn plans, and related tasks. It opens the networking door to federal and state agencies, universities, and private sector industries that have the same goal of improving the eastern oak forests and ecology. As an individual who attended the conference I found it to be very informative and well organized. I was able to bring home valuable information for current and future projects. Moreover, given the success and interest the 2005 conference generated, the Northeast Research Station has plans to organize another conference in 2008. This conference will be held in Carbondale, Illinois on the Southern Illinois University campus and will be entitled “Fire in Eastern Oak Forest: Learning from Experience”.

Deliverables and Technology Transfer

Several deliverables were produced as a result of this conference and are readily available through the internet.

Proceedings

- Dickinson, Matthew B., ed. 2006. [Fire in eastern oak forests: delivering science to land managers, proceedings of a conference; 2005 November 15-17; Columbus, OH. Gen Tech. Rep. NRS-P-1.](#) Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 303p.

Websites

- Individual papers can be downloaded from the USDA Forest Service’s Northern Research Station website at <http://nrs.fs.fed.us/pubs/8405> - The entire proceedings publication (pdf file-6,164 KBs) can also be access through this site or a printed and bound copy of the entire proceedings can be requested.
- Presentations from the conference can be found at <http://www.fs.fed.us/ne/delaware/4153/FireConfPdfs.html>.

The above deliverables can also be located through the following online databases:

- [FRAMES](#) Fire Research and Management Exchange System
- [TREESEARCH](#) Research and Development database for USDA scientific publications