

Sustainable Forests Education Cooperative

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2016 Workshop: Fire in Minnesota’s Forests



Event description: Many of Minnesota’s most productive forest systems are fire-dependent. At this day-long workshop, we’ll discuss the ecology and management of these systems, with a focus on the role of fire, including potential for increased use of prescribed burning. We’ll hear from a variety of speakers including applied researchers, forest managers, and fire managers from Minnesota and across the Lake States. The event will include hour-long panel discussions about the role of fire in managing jack pine, red pine, and oak-dominated systems.

Event summary: A diverse group of about 140 forest and wildlife managers, wildfire specialists, researchers, and others gathered in Grand Rapids to explore the state of fire in Minnesota’s forests. The event was designed to bring new energy to a discussion of Minnesota’s fire-dependent forests and the complex role of fire in maintaining healthy, productive forests.

To open the event, John Almendinger, an ecologist and leader in development of Minnesota’s Ecological Classification System, discussed the extent to which the fire regime shapes the distribution of Minnesota’s native plant communities. Interactions between fire rotation, typical fire severity, and fire extent drive the distributions of upland prairie, fire-dependent forest, and mesic hardwood forest systems in Minnesota. Finer-scale differences in these factors largely determine the distribution of plant communities within these systems.

Lee Frelich discussed ways that other disturbances mimic and differ from the effects of fire. Earthworm invasion, as an example, does “half the work of fires by removing the duff, but unlike fire does not kill red maple.” This is one factor leading to the “mesophication” of oak-dominated systems in Minnesota and across the region. Frelich also discussed how the relationship between fire and wind, and the changes in summer temperature, affect the trajectory of stand succession and compositional change.

After the two opening talks, three approximately hour-long panels focused on fire in jack pine-, red pine-, and oak-dominated systems in Minnesota, and a fourth shared case studies of successful prescribed fire. These presentations included a mix of ecological and practical information related to historic fire, tree genetics, prescribed burn implementation and monitoring, lessons learned from decades of prescribed burning, and conventional wisdom about ecosystem function and silvicultural opportunities in these communities. The event ended with a panel composed of Brian Palik, Jack McGowan-Stinski, and Paul Dubuque synthesizing key themes throughout the day and looking to the future.

There was a great deal of energy around this discussion and we look forward to working with the Lake States Fire Consortium and other partners to continue the discussion about how and when to most effectively incorporate fire in to Minnesota’s forests.

This page includes links to the day’s agenda, all of the slideshow presentations from the event, and recordings of most presentations [coming soon]. Watch [SFEC’s website](#) for links to future fire-related events.

Date: December 1, 2016

Location: [Timberlake Lodge](#), Grand Rapids MN

Speakers: John Almendinger, MN DNR; Lee Frelich, UMN-FR, Greg Nowacki, USFS; Jack McGowan-Stinski, Lake States Joint Fire Sciences Consortium, Matt Graeve, TNC; Kyle Gill, Cloquet Forestry Center; Carrie Pike, USFS; Brian Stearns, Huron-Manistee National Forest; Mike Lichter, MN DNR; Mark Spoden, MN DNR – Wildlife; and Brian Palik, USFS-Northern Research Station.

[Agenda](#) (.pdf)

Content from the workshop

[Presenters’ slides](#)

[Recorded presentations](#)

Links to documents mentioned at the workshop

Frelich, Lee E.; Reich, Peter B.; Peterson, David W. 2015. **Fire in upper Midwestern oak forest ecosystems: an oak forest restoration and management handbook**. Gen. Tech. Rep. PNW-GTR-914. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 64 p.

<http://www.treesearch.fs.fed.us/pubs/49420>

Nowacki, G.J. and Abrams, M.D. 2008. **The demise of fire and “mesophication” of forests in the eastern United States**. *BioScience* 58:123-138.

<http://bioscience.oxfordjournals.org/content/58/2/123.full>

Thomas-Van Gundy, Melissa A.; Nowacki, Gregory J. 2016. **Landscape-fire relationships inferred from bearing trees in Minnesota**. Gen. Tech. Rep. NRS-GTR-160. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 32 p.

<http://www.treesearch.fs.fed.us/pubs/52030>

Abrams, M.D. and Nowacki, G.J. 2008. **Native Americans as active and passive promoters of mast and fruit trees in the eastern USA**. *The Holocene* 18:1123-1137.

<http://www.personal.psu.edu/users/a/g/agl/AbramsNowacki%20Holocene.pdf>

Photos



Contact Us

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Tweets from @MNForestEd Follow

UMN SF... @MNFores... · Sep 21
Brian Palik gave a great talk yesterday called Adaptive Silviculture for Climate Change: Lessons for timber-oriented managers.

If you missed it, here's the recording:
sfec.cfans.umn.edu/2022-webinar-s...



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UMN SF... @MNFores... · Sep 20
Starting in 15 minutes: Adaptive Silviculture for Climate Change

Fire in Minnesota's Forests

December 1, 2016 from 8:30am – 4:00pm, Timberlake Lodge, Grand Rapids MN



8:00am	Check-in opens	
8:30am	Welcome and agenda review	Eli Sagor, UMN-SFEC
8:35am	Setting the Stage Minnesota's Fire-dependent Forests Historic and Future Role of Fire as a Disturbance Agent in Minnesota Forests	John Almendinger, MN DNR-Forestry Lee Frelich, UMN-FR
9:45am	Break	
10:00am	Panel 1: Jack pine Jack Pine Stand Recruitment and Development in Central Minnesota Does Serotiny in Jack Pine Reflect Other Genetic Attributes or 'What's Under the Bark'? Slash Burning for Site Preparation Q&A and open discussion	Kyle Gill, UMN-CFC Carrie Pike, USFS-S&PF Mike Lichter, MN DNR-Forestry
11:00am	Short break	
11:10am	Panel 2: Oak Past fire and present-day mesophication: Implications for oak ecosystem restoration Seasonality of Fire: Growing Season Burns in Oak-Pine Barrens and Jack Pine Barrens Q&A and open discussion	Greg Nowacki, USFS-R9 Jack McGowan-Stinski, Lake States Fire Consortium
12:20pm	Lunch	
1:15pm	Panel 3: Red pine Myths and truths about natural disturbance in red pine ecosystems: lessons for management Fire and Fuels Monitoring in Red Pine and Jack Pine Landscape Level Prescribed Burning Q&A and open discussion	Brian Palik, USFS-NRS Brian Stearns, USFS-Huron-Manistee NF
2:05pm	Break	
2:35pm	Panel 4: Case studies Prescribed burning in TNC's Lake Alexander Preserve Interagency Prescribed Burn Partnership Q&A and open discussion	Matt Graeve, TNC Mark Spoden, MN DNR-Wildlife
3:25pm	Panel synthesis: Major themes and a vision to move forward	Brian Palik, Jack McGowan-Stinski, and Paul Dubuque
4:00pm	Adjourn	

Speakers:

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