Consortium of Appalachian Fire Managers and Scientists
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Mountain Laurel (*Kalmia latifolia*)

Two Studies Looking at its Origin and Techniques for Control

In the Appalachian Mountains, Mountain Laurel (*Kalmia latifolia*) may interfere with the regeneration of mixed-oak species and can lead to hazardous fuel situations. Two recently published papers by Dr. Patrick Brose (USDA Forest Service, Northern Research Station) investigated the origin of mountain laurel thickets and compared several treatment methods to reduce mountain laurel dominance. The oldest mountain laurel in his 2016 study dated to the 1930's when the stands emerged from a period of recurring disturbance. However, most of the mountain laurel originated starting in the 1950's to today which is over a period of time when stands have been generally undisturbed. More recent insect outbreaks have accelerated the development of mountain laurel thickets by increasing sunlight to the forest floor. A 20-30% cover is sufficient to inhibit hardwood seedling establishment and survival. Perpetuating mixed-oak forests that contain mountain laurel thickets will require reducing the cover to less than 20-30% at the beginning of the regeneration process to help ensure adequate densities of hardwood seedlings.

Mountain laurel continued:

In the 2017 paper listed below Brose compared the effectiveness of seven understory management techniques. These techniques included chemical, prescribed fire, mechanical and untreated controls. All of the treatments except the control reduced the mountain laurel for at least 2 years and facilitated the establishment of oaks and other hardwoods species. The mountain laurel thickets had nearly redeveloped completely by year 5 and the reproduction of several hardwood species were outcompeting the oak seedlings. All of the methods had operational challenges and more research is needed into broadcast herbicides that would kill the mountain laurel long-term to prevent fast redevelopment of thickets. None of the techniques in the study provided effective control beyond just a few years.

Brose, P.H., 2016. Origin, development, and impact of mountain laurel thickets on the mixed-oak forests of the central Appalachian Mountains, USA. *Forest Ecology and Management*, 374, pp.33-41 *https://www.fs.usda.gov/treesearch/pubs/50849*

Brose, P.H., 2017. An evaluation of seven methods for controlling mountain laurel thickets in the mixed-oak forests of the central Appalachian Mountains, USA. *Forest Ecology and Management*, *401*, pp.286-294. *https://www.fs.usda.gov/treesearch/pubs/54535*

Thanks and Best Wishes in Retirement

Steve Croy, Forest Ecologist and Fire Planner for the George Washington and Jefferson National Forests and friend to many, retired this fall. Steve has served on the CAFMS board since 2015 and made a large impact on CAFMS with his fire knowledge and expertise. He values fire research in the Appalachians and has put that research to work on the ground over the span of his career. Steve started his Forest Service career in the early 1990s. He quickly became involved in the fire organization of the Forest Service, first in wildland fire and then prescribed fire management.

Croy continued:

Ecologically, he began to see a pattern in rare species management, namely that fire suppression was identified as a threat to the future health of a number of rare populations and ecosystems in the Appalachians. Starting in the mid-1990s, he promoted the active restoration of fire as a disturbance regime in the Appalachian Mountains. He was a founding member of the Appalachian Fire Learning Network in the early 2000's and collaborated extensively on a number of fire history studies in the Appalachians from 2002 to the present with researchers such as Drs. Charles Lafon and Henri Grissino-Mayer. In retirement, Steve will continue to stay active in the fire world as part of Incident Management teams such as the Northern Rockies Fire Use Team, and as part of the Appalachian Fire Learning Network. He also looks forward to spending more time snow skiing, fly fishing, and practicing his photography skills. Steve, thank you doesn't seem enough for the impact you have had on CAFMS and fire in the Appalachian region. Enjoy retirement!

**Special thanks to Steve's wife Carol for the information and photo above!*

WE ARE KEEPING THOSE IMPACTED BY THE CALIFORNIA FIRES THIS HOLIDAY SEASON IN OUR THOUGHTS. WISHING YOU ALL A MERRY CHRISTMAS AND A HAPPY NEW YEAR!

WE WILL SEE YOU IN 2018!

Communicate With Us!

Find us on twitter @APfirescience or find us on Facebook by searching Consortium of Appalachian Fire Managers and Scientists.

Join CAFMS:

The consortium is for all land managers and researchers in the region who deal with any aspect of fire. To join, simply provide us with some contact information at the web site listed below.

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