The Nature Conservancy

The Nature Conservancy in Oregon
647 Washington Street
Ashland, OR 97520

tel 541 573-8900
fax 541 573-3042
nature.org/oregon

NEWS RELEASE – FOR IMMEDIATE DISTRIBUTION

Contact: Darren Borgias, 541.821.3723, dborgias@tnc.org

Learning About Burning: Wisdom of Old Trees

A new scientific paper authored by The Nature Conservancy and partners was just published in the journal *Forest Ecology and Management*, *https://authors.elsevier.com/a/1XWlP1L~GwGd5E.*

Using 100 trees scarred by more than 200 fires going back to 1650 AD, the researchers found that diverse dry forest stands from across the Rogue River Basin survived repeated fires. Fire returned on average every 8-years with 90% of fires returning within 3 to 30 years.

While the forests surrounding the Rogue Valley are known to support large wildfires at the height of summer wildfire season, the research found that half of all historical fires burned in the spring or fall. Frequent fire and cool season burning ended in the research stands 110-165 years ago.

Loss of frequent fire in the 1850's corresponded with Euro-American settlements and the forced displacement of Native Americans which ended their well-document cultural burning. Fire regimes were disrupted by 1906 in more remote settings.

Frank Lake, Ph.D., US Forest Service Research Ecologist reviewed the new publication, and explains further,

"The findings of this study are important for considering the historical role that tribal burning had in contributing to past fire regimes, and for increasing the public's and resource managers' awareness of how working with tribes on forest restoration and restoring fire as an eco-cultural process can benefit society and the environment today."

Lead author Kerry Metlen Ph.D., Forest Ecologist for The Nature Conservancy, explains that a wealth of science provides details about historic fire patterns in other regions. However, in the Rogue Basin a fuzzy picture of fire has been painted from historic accounts and old photographs, old forest inventories, and research on charcoal in lake sediments.

"These local fire-scar data from ponderosa pine, mixed conifer, and mixed evergreen forests sharpen resolution of burn patterns and reveal similarities in fire regimes in diverse dry forests across the Siskiyou, southern Cascades, and northern Sierra Nevada Mountains," says Metlen.

Paul Hessburg, Ph.D., Research Ecologist with the USFS Pacific Northwest Research Station and author of the Era of Megafire (*https://www.ted.com/speakers/paul_hessburg*), thinks this study could inform land management,

"The findings of this paper match well with other studies in dry forest ecosystems. Frequent fires created fuel-limited systems, with open forest canopies and clumped tree distributions. These conditions are readily restored and an excellent bet-hedging strategy for the coming wildfires and a steadily warming climate."

This view is shared by Bill Kuhn, Ph.D., the Area Ecologist for the Rogue River-Siskiyou and Umpqua National Forests,

"This research shows how fire exclusion has narrowed the role of fire to one dominated by large fires during the hottest times of the year when fires are more likely to be higher severity, and suppression is the most difficult, dangerous, and costly. This makes a case for using fire in cooler spring and fall months, along with significant fuels reduction work, to prepare our forests for a changing climate."

Looking to the trees for wisdom, the authors suggest that these results reinforce the need to work in partnership to increase the pace and scale of forest restoration, including forest thinning and fuels reduction to set the stage for controlled burns in the spring and fall.

See attached information for photos, contacts, and tour details.

If you are interested in more information, a field trip to one of the Ashland field sites will be hosted September 15th; contact Sara Jones (sara.jones@ashland.or.us) for details and to RSVP.

External perspectives and contacts:

Andrew Larson, University of Montana (andrew.larson@cfc.umt.edu)
Bill Kuhn, USFS Rogue River-Siskiyou National Forest (wkuhn@fs.fed.us)
Frank Lake, USFS Pacific Southwest Research Station (franklake@fs.fed.us)
John Bailey, Oregon State University (John.Bailey@oregonstate.edu)
Paul Hessburg USFS Pacific Northwest Research Station (phessburg@fs.fed.us)

Photos below are also available in their original form here https://tnc.box.com/s/3j6onmq7buptp7d4ltbh7fgmws1i1lf0.

Fire scars and continued growth in a Jeffrey pine, photo credit The Nature Conservancy (Kerry Metlen).

Fire scars sample collected by Keith Perchemlides, photo The Nature Conservancy (Kerry Metlen).

Cross-dated fire-scars on a ponderosa pine, photo USFS Pacific Southwest Research Station (Carl Skinner)


Clem Stockard and Kerry Metlen preparing a fire-scar sample for collection from an old stump, photo The Nature Conservancy (Keith Perchemlides)