**Headline:** Facing a Surge in Wildfires, the U.S. Government Turned to Native Wisdom and Advanced Archaeology

**Teaser:** Collaborative efforts between forest agencies and Indigenous communities are improving wildfire management by combining oral histories with long-term archaeological datasets, demonstrating the value of integrating an understanding of the past into solutions for a better future.

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**[Article Body:]**

After a sharp increase in uncontrollable wildfires [across the northern U.S. and Canada](https://www.noaa.gov/noaa-wildfire/wildfire-climate-connection) [in recent](https://www.foxweather.com/weather-news/canadian-wildfire-smoke-returns-midwest-us) decades, the Bureau of Indian Affairs and the U.S. Forest Service have been open to new approaches and ways to address the inherent weaknesses of their bureaucracies. Due to their lack of historical understanding of past fire management methods, they turned to archaeologists, who have collected information on more than 10,000 years of human activity. For their approach, these government agencies studied the perspectives and wisdom of Indigenous peoples offered through shared oral histories.

Outreach and deliberations by federal officials led to the creation of the [People, Fire, and Pines working group](https://www.archsynth.org/project/2018-people-fire-and-pines/) in 2018. The working group was formed with support from the [Coalition of Archaeological Synthesis](https://www.archsynth.org/) (CfAS).

Thanks to the advances in technology and the accumulation of an increasingly detailed global data set of human history, modern archaeology has more usable information for government and society than in decades past. CfAS, one of the leading early drivers of this approach, helped the working group conduct two workshops in 2018 and 2019. These workshops attempted to bridge a gap between Western and Indigenous perspectives to create a more holistic understanding of human fire use in North America since the most recent ice age. The participants of the workshops studied the Indigenous knowledge of the Border Lakes region, developed across the millennia of living on and with the land, along with archaeological and tree-ring data gathered by researchers from red pine forests in the Boundary Waters Canoe Area Wilderness (BWCAW) and the Great Lakes region.

The first workshop reached out to members of the [Fond du Lac Band of Lake Superior Chippewa](https://www.fdlband.org/) and the [Bois Forte Band of Lake Chippewa](https://boisforte.com/), focusing on “[Indigenous fire stewardship](https://ostrnrcan-dostrncan.canada.ca/entities/publication/11097b5c-b509-4b37-ba26-5e22a651530e)” and the “Western concepts of wilderness.” The second workshop was held at the Lac La Croix First Nation Reserve and delved further into the discussion on ways to propel collaborative efforts. The workshops, along with [other outputs from the group](https://www.archsynth.org/wp-content/uploads/2023/08/CfAS-PFP-Working-Group-Final-Report.pdf), including museum exhibits, documentaries, and peer-reviewed papers, have helped reshape the perspectives surrounding Indigenous fire stewardship and the damaging effects of settler groups, who actively disrupted the long-standing relationships between people and their environment.

In a [2020 paper](https://www.tandfonline.com/eprint/NVIWVVWPX4DJPPNRBBBJ/full?target=10.1080/24694452.2020.1768042), People, Fire, and Pines project organizer Evan Larson, a dendrochronologist and professor at the University of Wisconsin-Platteville, along with two University of Minnesota researchers, analyzed tree-ring data from 500 years of red pine forest growth in the BWCAW of northern Minnesota. This research began with a focus on the scars left behind by forest fires and co-occurring cultural modification of bark removal for medicinal and utilitarian purposes, and it later broadened to include the historical relationship between people and fire. Though the Indigenous peoples fundamentally changed and shaped these landscapes with fire for centuries, the Western population, who later moved into these lands, designated culturally relevant landscapes as “wilderness” and inaccurately defined these areas as “untrammeled by man,” under the [Wilderness Act of 1964](https://www.govtrack.us/congress/bills/88/s4/text). In fact, humans have shaped the region of northern Minnesota for thousands of years through fire and forest management practices.

The research conducted in the BWCAW and facilitated through CfAS support continues to expand the understanding of Indigenous fire stewardship through the [Wisconsin Sea Grant](https://www.seagrant.wisc.edu/)-funded project [Nimaawanji’idimin giiwitaashkodeng](https://www.seagrant.wisc.edu/news/the-stories-trees-tell/). The “[Fire, blueberries and treaty rights](https://www.seagrant.wisc.edu/audio/the-water-we-swim-in/fire-blueberries-and-treaty-rights/)” episode of the podcast, “[The Water We Swim In](https://www.seagrant.wisc.edu/audio/the-water-we-swim-in/),” offers a glimpse into the story that emerged from this work. In the episode, members of Nimaawanji’idimin giiwitaashkodeng, which translates to, “We are gathering around the fire,” share their experiences with cultural fire use and gathering blueberries among the pine trees. In the context of paleoecological and archaeological data, the ecological evidence of past surface fire activity obtained from the study confirms that the BWCAW was periodically burned to achieve forest conditions that were more desirable to the Border Lakes Anishinaabeg community and are linked to the resilience and ecological health of pine forests throughout the region.

Many other North American ecosystems burned periodically as well—sometimes through forest fires started by lightning strikes, but more often through intentional fires set by Native American communities. More than a mere tool for survival and achieving agricultural goals, fire became integral to and deeply rooted within the culture of Indigenous groups. For example, the Ojibwe of the Great Lakes region regarded fire as a sacred force, identifying more than 700 uses for it. The Ojibwe spirit of fire, [*Oshkigin*](https://www.yesmagazine.org/environment/2022/09/20/fire-indigenous-traditional-ecological-knowledge), was a symbol of renewal and transformation.

Fire is one of our most ancient and important tools for human modification of local environments. Prescribed burning or controlled burning, when used responsibly, is particularly [valuable in forest management](https://link.springer.com/chapter/10.1007/978-3-642-69805-7_16). For instance, one of the ways in which managed fire benefits the ecology and ecosystem health of forests is that burning unwanted vegetation from the forest floor allows for new seeds to germinate, which increases variability in the type and height of plants growing.

Red pine forests, like those found in the Border Lakes area, especially benefit from this use of fire as their seeds require exposed soil to grow. Moreover, a greater balance between woody and grassy/herbaceous plants improves food availability for livestock, wildlife, and pollinators. Clearing dead or dry vegetation in this manner also allows for fire-dependent species and important food sources to grow, such as the blueberry in the Great Lakes region. Blueberries used to proliferate in the region due to fire-based interventions from the Ojibwe community, who cleared patches of the forest floor and made them conducive to berry bush growth. In addition, reducing the amount of dry vegetation on forest floors also limits the potential severity of future wildfires by minimizing the available fuels.

The arrival of European settlers to the North American continent, however, brought about a turning point in the relationship between people and fire. While North American Indigenous groups viewed fire as a great assistance to landscape management, the Europeans only saw it as a destructive force that needed to be avoided at all costs, and this led them to implement policies that suppressed all fire. The shift in attitude within the continent and suppression of Indigenous culture caused a significant loss in traditional fire knowledge and practices, leading to ecological consequences and large wildfires. As a member of the [Red Cliff Band of Lake Superior Chippewa](https://wisconsinfirstnations.org/red-cliff-band-of-lake-superior-chippewa/), Melonee Montano, [mentioned](https://www.seagrant.wisc.edu/audio/the-water-we-swim-in/fire-blueberries-and-treaty-rights/) in the podcast episode “[Fire, blueberries and treaty rights](https://www.seagrant.wisc.edu/audio/the-water-we-swim-in/fire-blueberries-and-treaty-rights/),” the land has “literally been waiting” for fire and fire-based intervention.

By studying material cultural resources, such as evidence of bark collection and forest fires left behind in the form of [scars](https://storymaps.arcgis.com/stories/86cd1d2700b8489a84bc4722f458fc3c) on trees, archaeological researchers gain insight into past societies and the environments people lived in during those times. In the case of wildfires, a better understanding of past human involvement in shaping local landscapes can help prevent catastrophic fires in the future.

Collaboration between researchers, forest management agencies, such as the U.S. Forest Service and National Park Service, and descendant communities creates an opportunity to reassess current practices and policies surrounding wilderness management. Since the formation of the People, Fire, and Pines group, fire management plans have been revised in partnership with the Lac La Croix First Nation to include prescribed fire in the Quetico Provincial Park of Ontario, Canada, where “[t]hese fires are important in allowing the regeneration of red and white pine and maintaining their presence on the landscape.” Burn plans for the [Cloquet Forestry Center](https://cfc.cfans.umn.edu/) in Minnesota were also changed to include cultural fire use through a collaboration between the University of Minnesota and the Fond du Lac Band of Lake Superior Chippewa. This initiative was funded by the Bureau of Indian Affairs. Since the change in burn plans, multiple successful prescribed fires have been [conducted by Ojibwe firefighters](https://cfans.umn.edu/news/restoring-fire) in the Cloquet Forestry Center.

The resurgence of cultural fire practices, stemming from the initiatives started by the People, Fire, and Pines project, underlines the value of combining Indigenous and archaeological knowledge. By reclaiming controlled burns and implementing centuries-old fire practices to support effective forest management today, the relationship between people and their surrounding environments can be reestablished. This restoration will not only benefit all parties in the Border Lakes region and beyond but will also increase forest ecosystem diversity and resilience to fires, offering a hopeful future for forest management in a changing climate.

The success of these initiatives sets a precedent for other institutions, which may benefit from a similar collaborative approach by the sharing of temporal data among researchers, archaeologists, and descendent communities. Organizations, such as [CfAS](https://www.archsynth.org/), have begun to change the context of archaeological research by fostering collaboration across multiple institutions and disciplines.

Analyzing prehistoric data to better understand the root causes of modern issues that originated in the greater global past, like human contributions to climate change, conflict, and disease, can be used to facilitate solutions to current issues and avoid greater ones in the future.