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MSU Museum hosts experts on forest management techniques

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Sean Dunham speaks on the trees that have been surrounded by fire at some point at the forest and fire management event held at the Stem Building on Oct. 14, 2023.

— Photo by Zari Dixson | The State News

An MSU Museum event, called "Forest and Fire Management with Western and Indigenous Practice," brought in three experts with unique perspectives to discuss a method of forest management and

its cultural significance for Indigenous communities.

That method is “prescribed fires,” wherein a section of a forest is intentionally burned in order to improve its ecosystem.

The program, held on Saturday afternoon, was the national premier of the traveling Smithsonian exhibit *Knowing Nature: Stories of the Boreal Forest*, which “focuses on the biodiversity and global importance of our northern-most forests through first-person stories,” according to the Smithsonian’s website.

The event featured a presentation on the history of the Chippewa National Forest in northern Minnesota, the U.S. Forest Service, and the displacement of Ojibwe people through the Dawes Act and subsequent acts that violated previous treaties between Native American tribes and the U.S. government. The presentation also discussed current research efforts occurring in the Chippewa National Forest that blend Indigenous and western practices.

One of the event's experts was Amy Burnette, a Tribal Historic Preservation Officer for the Leech Lake Band of Ojibwe. The Chippewa National Forest rests in the Leech Lake Band of Ojibwe's reservation in northern Minnesota.

Burnette remembers growing up in the 70s when prescribed fires were used to control the large tick population in her community.

“We had people that would clean our community, and part of that was the use of fire,” Burnette said.

However, the practice was used far less frequently compared to the era prior to colonization.

Burnette said part of the reason for that is because of the “cultural trauma” that resulted from Native American youth being put in boarding schools by the U.S. government and effectively dispossessed from their cultural practices and heritage during the 19th and 20th centuries.

“(We were) separated from our traditions of using fire,” Burnette said.

Burnette — alongside students at the Leech Lake Tribal College, researchers with the U.S. Forest Service and University of Minnesota Associate Professor of Geography, Environment, and Society Kurt Kipfmueller — has been working to change this.

Kipfmueller, who was also at the event, has been working to document the tradition of fire use by Ojibwe people through one of his main research interests, called dendrochronology.

Dendrochronology is the scientific method of observing the rings of a tree's trunk in order to trace when those rings were formed, and how.

Through observing rings formed on trees as a result of "fire scarring" in the Chippewa National Forest, Kipfmueller is uncovering a document of history.

Zari Dixson

Part of trees, called cross sections, on display at the forest and fire management event held at the Stem Building on Oct. 14, 2023.

In explaining his research findings, Kipfmueller focused on the period from 1790 to 1817 where rings found in trees in the Chippewa National Forest indicate that there was a series of fires that occurred one-after-another. Participants were able to view samples of fire-scarred wood following the presentation in an interactive workshop.

"If I didn't know anything about the culture or history of the area, I probably would've interpreted that as being a very dry period," Kipfmueller said. "But, the problem with that interpretation is that if you get that many fires in a dry period you (will likely) burn the vegetation, but it's not going to grow back."

Zari Dixson

Part of the trees that have been surrounded by fire at some point are on display at the forest and fire management event held at the Stem Building on Oct. 14, 2023.

Kipfmueller explained that because the vegetation did indeed grow back, it became clear that a drought was not the cause of the frequent fires. His knowledge of the tradition of controlled fire use by Ojibwe people confirms this finding.

Kipfmueller expanded on this synthesis between scientific research and cultural knowledge.

“Trees can tell the story of when fires burned, (but) they can't solve it all,” Kipfmueller said. "They can’t tell the entire story because part of the story is the 'why?'"

According to a presentation shown during the program, the answer to that question is to "restore fire dependent communities, restore diverse, pine-oak woodlands, create openings, and create habitats for fruiting shrubs."

Many Americans have a negative association with wildfires, Kipfmueller said, but it’s important to recognize the distinction between "fires of chance" and "fires of choice."