

**Fire Ecology and Conservation Practices of the
Yurok Tribe: Revitalizing Native Plants &
Natural Resources**

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The Conservation Practices of the Yurok Tribe: Maintaining Native Plants & Natural Resources

Introduction

The widespread environmental degradation that faces our global community due to climate change requires swift and immediate action. Leading the way in their efforts to combat these environmental challenges are the Native Nations across the globe whose traditional ecological knowledge, Native science, and conservation practices have allowed them to preserve their traditional environments since time immemorial. The Yurok Tribe and their natural resource and Native plant conservation efforts are no exception. By utilizing fire ecology and implementing conservation education and outreach, the Yurok Tribe sustain their local ecology and resources while revitalizing their culture and language for future generations.

Background

The Yurok people, who call themselves Oohl, meaning "Indian people" in their language, have inhabited their ancestral homelands in what is now northern California long before any contact from non-Native settlers (The Yurok Tribe, History & Culture). Figure 1 depicts the Yurok Tribe's traditional homelands, as well as their current reservation land, allotted lands, and acquisition lands. The Yurok people have deep connections to their homelands and the natural systems that make up the region.



Figure 1: Map of Yurok Ancestral Territory from: Hostler, Joe; *Yurok Tribe Climate Change Adaptation Plan for Water & Aquatic Resources*. The Yurok Tribe, 2019.

Residing along much of the Klamath River allowed the Yurok people to sustain themselves as master fishermen (The Yurok Tribe, History & Culture). As a result the Tribe continues to value this natural resource for the gifts of salmon, sturgeon, and seaweed that the Klamath River provides (The Yurok Tribe, History & Culture). Furthermore, the dense redwood

forests that populate the region also have great significance to the Yurok Tribe. These redwood forests are home to the deer and elk that the Tribe traditionally hunt, as well as the Native plants like nuts, berries, and herbs that the Yurok gather for food and medicine (The Yurok Tribe, History & Culture). Fallen redwood trees are also used to build traditional homes, sweat houses, and canoes (The Yurok Tribe, History & Culture). Therefore, the natural resources and Native plants that are indigenous to their homeland region are vital to the Yurok Tribe's survival because they provide sustenance, medicine, and construction materials that have continually been sacred to the Tribe's culture and way of life. In addition to being a critical part of the Tribe's culture, the Native plants and natural resources that the Tribe cherishes so deeply are also necessary for the survival of the Yurok language.

The connection between language and these natural resources comes from the fact that much of the traditional ecological knowledge that the Tribe utilizes and passes down to future generations is transmitted in the Yurok language (LaPier, 2018). The Yurok language has words that are extremely place-based and specific to the Yurok Tribe's environmental practices (LaPier, 2018). Therefore, the maintenance of the Tribe's Native plants and natural resources helps retain the traditional knowledge that goes hand in hand with the preservation of the Yurok language.

The Yurok Tribe utilize fire ecology to maintain the health of their redwood forests and their Native plants. The fire ecology practiced by the Yurok Tribe consists of prescribed burns which are human-controlled fires on the floor of the forest. The prescribed burns have countless ecological benefits including removal of invasive species, the recycling of nutrients back into the soil, a reduction in insect borne diseases, and increased room for new growth (Boyd, 1999;

Cagle, 2019). Yurok tribal member and Cultural Fire Management Council secretary, Elizabeth Azzuz, helps run the yearly Yurok Training Exchange Prescribed Burn program. According to Azzuz:

Cultural Fire burns for cultural resources and food securities...we're burning for [the maintenance of] hazel sticks and bear grass for our weavers [as well as] for various medicinal plants and herbal remedies, things that we have used since time immemorial (Azzuz, 2017).

These yearly prescribed burns are a traditional cultural practice that supports the health and prosperity of the Yurok Tribe's Native plants and natural resources.

The Yurok Tribe also puts significant time and resources into ensuring that their tribal members are well-informed about the environmental concerns facing the Tribe's Native plant populations and natural resources. The Tribe has created several informational booklets and pamphlets intended to aid tribal members in the preservation of their sacred natural resources.

The Yurok Tribe Environmental Program *Environmental Pollution Risk Reduction Booklet*, which informs members about pesticides and insect diseases; and the Yurok Tribe *Initial Prioritization Climate Change Plan*, which describes the impacts of climate change both globally and specifically to the Tribe, are both examples of resources created to aid in their community's conservation efforts (The Yurok Tribe, Environmental Program).

Policies Affecting the Conservation Efforts of the Yurok Tribe

The Federal Land Policy and Management Act of 1976 (FLPMA) is a policy that plays a significant role in the Yurok Tribe's ability to practice conservation efforts like their annual

prescribed burns. FLPMA requires that land use plans and management programs of Native American tribes must be approved by both state and tribal land resource management programs (Bureau of Land Management, 1976). Therefore, this policy can somewhat delay or restrict the conservation efforts of the Yurok people because the Tribe must first obtain approval before carrying out their management plans.

A second federal policy that involves the Yurok Tribe and their conservation practices is the National Environmental Policy Act of 1970 (NEPA). NEPA is a broad federal framework with the purpose of creating national environmental protection policies (Environmental Protection Agency, 1970). Whenever the Yurok Tribe works on conservation projects that have a broader impact on the surrounding community or when their projects involve federal partnerships, then the policies of NEPA apply to the Tribe's efforts and consequently impact the Tribe's ability to carry out said projects because there are more restrictions involved (Environmental Protection Agency, 1970).

Analysis of Environmental and Social Implications

As the original stewards of their land, the Yurok people are very in touch with its health and wellbeing. According to Azzuz, the positive results of their prescribed burns are seen in “the wildflowers coming back and the hazel sticks [growing]” and also in the Tribe’s renewed ability to be “able to gather again and walk through an area without getting hung up or lost...and we've been seeing more animals, bears, deer, and bobcats as well” (Azzuz, 2017). Since the Yurok Tribe are so deeply involved with their land through their cultural and environmental practices

they see first hand the signs of environmental revitalization, like renewed Native plant growth and the return of various animal species.

Furthermore, the Tribe partnered with Stanford University graduate students in a study that examined the impacts of the Yurok's understory fire management treatments on California Hazelnut. While the Stanford study is more of a Western science approach to evaluating the efficacy of the Tribe's fire ecology practices, the results coincide with the Tribe's evaluation in that the impact of prescribed burns is a positive one due to increased yields of California Hazelnut (Marks-Block et al., 2019). Therefore, both Native and Western methods of environmental evaluation find the conservation efforts of the Yurok Tribe to be successful.

Lessons Learned and Applications

There are many lessons to be learned from the conservation efforts of the Yurok Tribe. To start, the traditional ecological knowledge of the Tribe's prescribed burns is a practice that could be widely appreciated and adopted where appropriate for its many environmental benefits. Additionally, the Yurok Tribe's use of educational outreach in the form of environmental informational booklets and pamphlets is a conservation technique that other communities could look to embrace. One such community is the Forest County Potawatomi (Bodéwadmi) who have also created several informational guides for their members to aid in environmental conservation efforts on their reservation lands. The Forest County Potawatomi is also in the process of creating a Native Plant Conservation and Gardening Guide. This guide seeks to inform tribal members of the growing requirements and recommendations of their sacred Native plants, as well as incorporate the Bodéwadmi language as a means of revitalizing this knowledge.

Conclusion

The Yurok Tribe deeply value their homelands around the Klamath River in Northern California. The Yurok utilize their Native plants and natural resources for food, medicine, craft, and construction. Therefore, in order to protect these resources that are vital to the revitalization of their culture and language, the Tribe practices fire ecology to promote the health of their forests and Native plants. The Yurok Tribe also creates and distributes informational resources to educate their tribal members about the environmental hazards facing their Native plant populations and natural resources. The practices of the Yurok Tribe exemplify how traditional ecological knowledge and Native science are extremely valuable in environmental conservation and can serve as inspiration for Native and non-Native conservation practices worldwide.

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