

Restoring the Land with Fire

Fire as Spirit, Fire as Tool

MORE THAN 40 YEARS AGO, Silas C. Whitman, 66, was working with the U.S. Forest Service (USFS) in Northern Idaho battling a range fire in a canyon with his uncles and “some of the old-timers” from the Nez Perce tribe.

“We thought the fire had been contained,” Whitman recalled. “Then just before bedding down for the night, the fire came ripping out of the canyon, roaring like a freight train. A tornado of fire headed right toward us. Then it jumped over our heads into the air and disappeared as if taken by the sky. We thought it went down the hill and burned everything in its path, but it was completely extinguished. It was the fire’s last breath.

“Fire has a spirit. You don’t tease it. You respect it.”

These are the cultural truths taught to Whitman when he was growing up on the Nez Perce Reservation in north central Idaho. But at 20 years old believing is seeing, and on that starless night fire revealed itself to Whitman as a life giver and taker.

A speaker at the Colorado Mitigation & Wildfire Conference in September 2002, Whitman talked about fire as a living spirit, an intrinsic element that sustains the life cycle of the planet’s ecosystem. Whitman, president of a land rehabilitation company, told the audience that the ecosystem depends on people to keep nature balanced through the use of fire.

But for more than 100 years fire was consistently excluded from the American landscape by policy and practice, he said, resulting



in overgrown forests, drastically changed fire behavior and, according to foresters and fire ecologists, an increased number of catastrophic fires.

Only recently has a consensus begun to emerge about how to manage fire. Today, the USFS and other land managers are implementing a new national policy that calls for the reintroduction of fire, not only to reduce fuels in the wildland/urban interface but also to return forests to a healthier condition.

As a result, traditional cultures are becoming intertwined with modern fire science.

Fire as tool

For thousands of years, American Indian tribes across the continent shaped the land-

scape with fire. Today, scholars, researchers and anthropologists credit American Indians for creating the vast prairies in their quest for buffalo and other game.

Though not all tribes used fire to manage the land, Gerald W. Williams, in *References on the American Indian Use of Fire in Ecosystems*, said that researchers have concluded that American Indians utilized fire for several reasons.

According to Williams, “[T]here were some indications that fire was used to protect certain medicine plants by clearing an area around plants, as well as to fireproof areas, especially around settlements, from destructive wildfires.”

Other reasons included crop management, improving growth and yields, insect col-

Near Winter Park,
Colorado





“Firefightin’ 4 Life” — a member of the Ute Mountain Ute Firefighters

lection, pest control, clearing areas for travel, felling trees and clearing riparian areas.

Germaine White is a Salish Indian who lives at the base of the Mission Mountains on the Flathead Indian Reservation in Montana. White works at the tribal preservation office and serves as vice chair of the Lower Flathead Valley Community Foundation board of directors, as well as participating on many other committees and councils.

In an interview in the Fall 2001 issue of *Northern Lights* magazine, White discussed her tribe’s historical uses of fire:

[B]urning was to maintain campsites and keep the camp clean. They kept the trails groomed with fire. There are also many of our foods and medicines that have an important relationship with fire. They rely on fire for fertile seedbeds. That nice ash layer nourishes them. The canopy is opened, too, and all of their competitors are cleaned out. The horses benefited. Game also relied on the abundant grasses that came in after fire.... [F]ire was used in our daily life and that included our spiritual well being. Biologists talk about fire-dependent species. Well, that’s us. We’re a fire-dependent species.

Whitman said that in the California high chaparral of the Sierra Mountains, tribes performed prescribed burns on several hundred thousand acres as late as 1923.

“We’ve known for years that in order to prevent catastrophic fires, you have to reduce fuel loads,” said Whitman, who served as the Nez Perce fishery program manager for 13 years. “We understood about fire management to protect our watershed and fish population.”

After a burning they would find berries, herbs and medicines. “Nutrients flowed from fire,” Whitman said. Tribes developed a cultural science, even though it was not written down. Their traditional knowledge of fire ecology was passed from generation

to generation like the knowledge of crafting beadwork.

Added White, “Perhaps our people did not possess an encyclopedia knowledge of the land, but they had an intimate knowledge based on a collective, multi-generational understanding of how natural systems work, on millennia of observation, habitation and experience.”

According to both White and Whitman, not just anyone was allowed to burn. Igniting at the wrong time of the year or under unfavorable conditions could have been disastrous for those living close to the forest. In White’s tribe, only those who had expert knowledge were allowed to ignite vegetation.

“Sx paám is the [Salish Indian] name of the one whose task it is to set fires. It means he is setting the forest fires here or there and he is setting forest fires over and over and over again,” explained White. “This is a person who had an intimate relationship with and knowledge about fire and had authority to light fires.”

Northwest tribesmen would “pitch fire” to control a prescribed burn, which was referred to as a “climax fire” that would put itself out.

“They would light a torch at opposite ends of a field so the fire would meet and then burn out,” said Whitman. “If the fire did get out of control, they would light backfires to regain control of it.”

Whitman also said that tribes would hold meetings about fire land management at which they discussed the pros and cons of igniting the forests and when to do it.

Even though American Indians used fire extensively, European settlers did not, according to Whitman. While many American Indians were nomadic, most new settlers remained in fixed locations. To the European pioneers, igniting the forest threatened agricultural crops, commercial timber and communities made of wooden structures.

Cultures collide

There were various reasons why fire was limited on the North American landscape

once European settlement began, but most scholars, authors and American Indians agree that it came down to differing core values about how the forests should be managed.

“Early settlers and explorers came here and found the land to be very beautiful,” said Dana Salway, a firefighter and Salish Indian from the Flathead Reservation. “But they feared fire, which was the very thing that we used to maintain the landscape.”

Arizona State University professor Stephen J. Pyne, one of the foremost experts on the history of fire, wrote in *Fire in America* that the country’s need for commercial timber was also a fundamental motivation for the settlers to suppress fire from the landscape.

In 1878, John Wesley Powell, director of both the U.S. Geological Survey and the Bureau of Ethnology, said in his famous *Arid Lands* report that he wanted to save the forests from the wildland fires he saw ignited by American Indians in Colorado and Utah, which “destroyed more timber than that taken by the people of the territory since its occupation.”

Another major factor in the exclusion of fire was the Great Idaho Fire of August 1910, which destroyed several million acres in Idaho and Montana and killed 85 people.

According to Pyne, the burn was a turning point in American fire history because it drastically altered the way the country perceived wildfires. A year later, the USFS firefighting program was established, and with its formation a nationwide approach to wildland preservation focused on extinguishing all wildland fires.

As other government land agencies were established, they followed the USFS lead on fire suppression. With an aggressive suppression policy, the annual acreage destroyed by wildfires in the United States dropped from more than 40 million acres a year in the 1930s to 5 million acres by 1970.

But by completely suppressing wildfires without otherwise reducing fuels, the ecosystem was interrupted, altering the structure

and composition of forests and creating a tinderbox of diseased and overgrown forests.

Many trees that would have been naturally expunged from woodlands by regular, low-intensity fires instead became infected with disease and produced an unhealthy landscape.

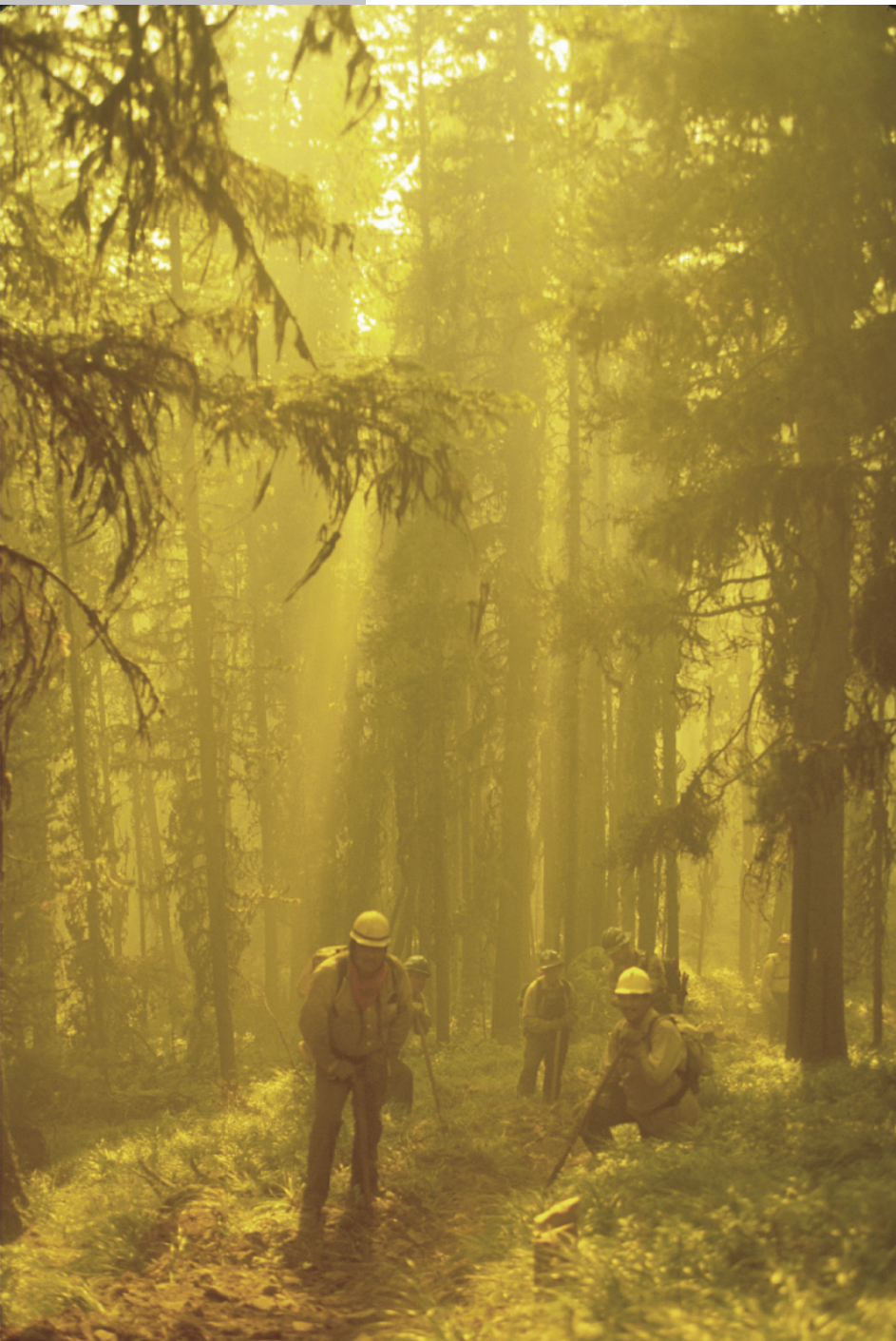
According to *Managing the Impact of Wildfires on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000 (September 2000)*:

Over time, these trees became susceptible to insects and disease. Standing dead and dying trees in conjunction with other brush and downed material began to fill the forest floor. The resulting accumulation of these materials, when dried by extended periods of drought created the fuels that promote the type of wildfires we have seen this year.

In short, decades of aggressive fire suppression have drastically changed the look and fire behavior of Western forests and rangelands. Forests a century ago were less dense and had larger, more fire-resistant trees.... As a result, studies show that today’s wildfires typically burn hotter, faster, and higher than those of the past.

Members of the Ute Mountain Ute Firefighters during the Snaking Fire in Colorado, April 2002





out. The real issue is that in the past we have not looked totally at how to deal with fuels and vegetation from a management standpoint. It's a tough situation to deal with and still is.

"Fires are part of the normal ecosystem of the land. Today there's a different attitude about how to manage fire. We've done such a good job at suppressing in the past, we've built up the fuels. Now we have those fuels alongside housing developments. Now we're trying to save lives and property and sometimes we're stretched so thin, we don't have the resources to combat the wildland fires."

Firewise Communities/USA, for which Bailey is a workshop coordinator, is a national program designed to help communities survive wildland fire. The goal of Firewise is not to suppress fires, but to educate people living in the wildland/urban interface about how to create defensible space around homes, plan fire-safe subdivisions and build with fire-resistant materials.

Bailey cited other factors related to the increased incidence of catastrophic wildland fires.

"We've been in drought conditions for several years, with the expansion of homes and subdivisions being built in wildland areas not conducive to firefighting," Bailey said. "More and more people are moving to wildland areas, from New York to Wyoming."

Statistics support Bailey's assertion. Eight out of the 10 fastest-growing states in the country are in the interior West. The average annual population growth nationally is about one percent, while the West is growing at a rate of 2.5 percent to 13 percent. As a result, communities are expanding into fire-prone areas, often adjacent to federal land.

"If fire enters the picture, it's back to dealing with saving lives and property. Whether people see that as suppression or not, it's what's got to be done," Bailey said. "What's different today is that a lot of communities are learning about vegetation management and thinning around their homes and communities."

Montana firefighters

In short, the exclusion of fire from the ecosystem contributed to an increase in the frequency and magnitude of wildfires.

Fire ecology

There was a short pause when Dan Bailey, USFS Wildland/Urban Interface Program Coordinator and National Fire Protection Association board member, was asked if he thought the aggressive suppression policy played a role in the recent rash of catastrophic wildfires since the late 1980s.

"That's part of it," replied the former firefighter. "There are fires that have to be put

As early as the 1930s there were land managers who tried to return the United States to a more natural fire regime. Prescribed burning is not a new technique with federal land management agencies, and there have been foresters conducting low-level prescribed burnings whenever possible during the last 40 years.

Those efforts, however, were often met with public resistance. Reasons varied throughout the country, but they included worries about prescribed burns getting out of control, destruction of buried cultural artifacts, air pollution, disturbing animal habitats and killing endangered plant and animal species.

But with the emergence of fire ecology in the 1970s, it became more apparent to land managers that fire was indeed an integral part of an interdependent system of plants, animals and the land.

Previous methods of managing the land would not suffice as more and more people moved into the wildland/urban interface and encountered fire firsthand.

The National Fire Plan

As the 20th century came to a close, wildland fire rivaled record-setting hurricanes and earthquakes for disaster headlines. The unprecedented Yellowstone fires of 1988 began a public debate about fire management after 800,000 acres of the national park burned.

More than 10,000 homes were destroyed by wildfire between 1985 and 2000. In 1994 alone, 34 firefighters were killed, including 14 on Storm King Mountain in Glenwood Springs, Colorado. A need for a new fire plan was clear.

At the request of President Clinton, the secretaries of Agriculture and Interior developed a response to the severe wildland fires making headlines in 2000. The result was the National Fire Plan, which included creation of a 10-year comprehensive strategy.

This strategy was developed by federal, state, tribal and local governments and non-

governmental representatives. Their objectives were to improve the management of wildland fire and hazardous fuels, and to restore and rehabilitate the ecosystem on federal and adjacent state, tribal and private forest and rangelands.

Nationwide, federal and state agencies are now reintroducing fire into the landscape in an attempt to return forests to a pre-fire-suppression condition. In 2002, land managers removed brush, small trees and downed material from 2.5 million acres on federal land, using small, intentionally set “prescribed” fires and mechanical thinning techniques.

After more than a century of suppression, fire had been returned to the ecosystem as part of a national, coordinated land management strategy.

Restoring a cultural landscape

According to Whitman, the “new” fire ecology is recapturing American Indians’ historical knowledge about the role and use of fire. White, for one, sees obvious benefits in bringing together traditional tribal values and modern fire science.

Having an opportunity for the managers and elders to work cooperatively could really benefit both groups. The elders can provide guidance and direction, the forest managers, science and technology. If that can happen we can build a powerful management program, a program that is sustainable because it is informed and guided by a culture with thousands of years of successful management experience and carried out by highly skilled professionals and technicians.

— *Germaine White*,
Northern Lights Magazine

The cross-cultural dialogue White envisions has already begun to occur between some government land agencies and tribes.

“We depend on tribal leadership to guide us on our projects concerning the restoration of their land and protection of their communities.”

— Dennis Dupuis

Bureau of Indian Affairs (BIA) Regional Wildland/Urban Interface Fire Prevention Manager Val Christianson works with tribes throughout the nation to reduce fuels on reservations. Part of his job is to make sure the BIA is in compliance with the tribes’ traditional and cultural conventions.

“We have a very active fuel reduction program that is very holistic,” said Christianson. “We work with the tribes and in some cases the tribe will actually take over the entire management on its reservation.”

In accordance with the National Fire Plan, the BIA National Fire Program Office located at the National Interagency Fire Center (NIFC) in Boise, Idaho, has implemented a nationwide program to reduce hazardous fuels and reintroduce fire to restore healthier landscapes on all federal tribal lands.

The BIA has been treating fuels under the auspices of the National Fire Plan since 2001. More than 195,000 acres have been treated on Native American land in the past two years at a cost of \$50 million.

“We are in constant dialogue with the tribes and tribal members about any work conducted on the reservations throughout the country,” said Dennis Dupuis, BIA-NIFC deputy of fire use and fuels. “We depend on tribal leadership to guide us on our projects concerning the restoration of their land and protection of their communities.”

According to Dupuis, the reintroduction of fire to a fire-dependent ecosystem has a two-fold objective.

“With prescribed burnings, fire can return to its natural role in the restoration, maintenance and healing of the forests and rangelands,” he said. “Second, the reduction of hazardous fuels adjacent to the urban interface and intermix will protect communities when wildland fire does break out.”

Near Santee, Nebraska, fire was reintroduced to the Winnebago Tribal Rangelands in order to reduce fuels and restore the land to pre-suppression conditions. The BIA and the Natural Resource Branch of the Winnebago

Agency, in cooperation with the Santee Sioux Tribe of Nebraska, began the restoration project in June 2001.

One of the goals of the 2,500-acre project is the eradication of the Eastern red cedar and the return of Native prairie grasslands—which were once dominated by Big Bluestem, Little Bluestem, Indian Grass and Green Needle Grass but which had become heavily infested with cedar, dominating much of the landscape.

The Santee Sioux tribe strongly endorsed the goals of the Winnebago Agency while making its own recommendations for a healthier landscape. The tribe’s concern for the return of its cultural plants to the landscape is what Whitman hopes to see continued throughout the country.

“Many of our culturally important plants have been threatened or endangered,” Whitman said. “Native Americans would like to use fire as a way to recover those plants.”

When the drought ends, Dupuis plans to move into full production of managing 200,000 acres of tribal land every year with mechanical thinning and prescribed burnings.

Whitman and White both see the National Fire Plan as a blueprint for restoring not just tribal land to a healthier condition, but all wildlands.

White envisions a landscape rich and abundant with traditional foods and medicines. “I see lots of animals. I imagine how enriched our language and culture would be, and how important those culture bearers would be who had the tribal knowledge of fire,” she said.

For Whitman, he hopes to see the next generation of American Indians combine fire ecology with traditional knowledge, in what he referred to as “cultural science.”

Whitman concluded, “We need to encourage land managers to use fire as a tool to shape the landscape and we need to educate the public to not be afraid of fire. You’re always going to have fire. You just have to contain it, as opposed to fighting it.” ■