

A BURNING ISSUE — NATIVE USE OF FIRE IN THE MOUNT RAINIER FOREST RESERVE

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ABSTRACT — *A review of early Forest Service documents stored in the National Archives and Records Administration revealed detailed reports of forest fires for the years 1904 and 1905, for the area that is now within the Gifford Pinchot National Forest, in southwest Washington State. Fully half of these fires were attributed to purposeful burning by Indians, and analysis of the pattern of fire occurrence provides insight into native people's attempts to manage forest resources, particularly huckleberries, through the use of fire. These documents chronicle the time period when Forest Service policy and management began to interfere with traditional burning practices.*



The issue of if and how native people burned has long been a topic of discussion. Where I work on the Gifford Pinchot National Forest in southwestern Washington State, it has been suggested, based on various sources, that Indians used fire as a tool to manage huckleberry patches. Huckleberries are an early seral species that grow best in areas that have been recently burned. Indian people today claim their ancestors purposefully set fires under very specific conditions in order to manage the huckleberry resource over time and space. But since these practices were generally curtailed by the

Forest Service in the early 1900's, most of this information dates back several generations, and what those specific conditions were has in most cases been lost.

Here's an example from the ethnohistoric record. Mary Kiona, a Taidnapam woman born in 1868 in the northern part of the Forest, provided this description of huckleberry management:

...they used to burn, and then after a while the Indians would grow berries, blackberries, and in higher places, huckleberries... every now and then they would burn such a small area in there so that the huckleberries would grow...

Outside of oral tradition, finding evidence for intentional burning is difficult. In many instances, particularly in Forest Service fire reports from the teens, fires were often attributed to carelessness by Indians, assuming they inadvertently left the log burning that was used to dry their berries (Stabler 1910; Wilcox 1911). Fire is and always has been a strategic part of forest ecosystems, and Indians would undoubtedly have also taken advantage of the resources made available through natural forest fire events when they occurred.

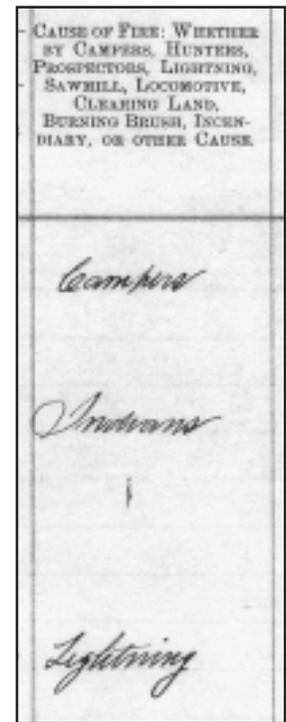
Research on huckleberry productivity was conducted on the Gifford Pinchot National Forest in the early 1970's (Minore 1972; Minore et al. 1979), and the researchers concluded that maintaining huckleberry patches through burning was not feasible, since there is insufficient fuel present to carry a fire. This study has influenced both managers' and researchers' perceptions regarding the use of fire for maintaining huckleberry patches.



But you never know what you're going to find when you're not looking for it. While doing research a year ago at the National Archives and Records Administration in Washington D.C. we came across a set of monthly and annual reports entitled "Report of Fires in the Mt. Rainier Forest Reserve." The Mt. Rainier Forest Reserve was the precursor of the Gifford Pinchot National Forest, at a time when it was administered by the Department of the Interior. These reports describe 32 fires, most relatively small, which occurred on the Reserve in the years 1904 and 1905.

First, I'd like to provide a little background. The two million acre Mt. Rainier Forest Reserve, although established in 1897, did not even employ a single ranger in the southern half of the reserve until 1902, and 1904 may have been the first year a ranger was assigned to

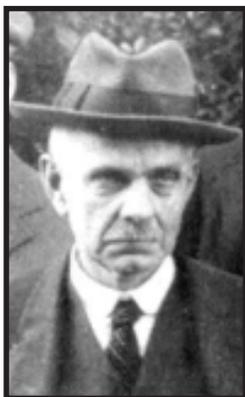
the White Salmon River drainage, which occupies the southeastern portion of the reserve. So these two years, 1904 and 1905, represent the very beginnings of custodial management by the Forest Service.



The Fire Reports contain a number of categories, including location, size, date, reported by whom, as well as a category called "cause of fire". Here is a typical entry in 1904:

2. Trail north of Little Huckleberry Mountain, 3 miles south of Trout Creek, on Deadhorse Meadow - no acres burned. Cause of fire - Indians. Discovered September 15 by Charles Randle, Forest Ranger.

Of the 32 fires reported on the entire Reserve in 1904 and 1905, sixteen were reported as caused by Indians. These 16 Indian-caused fires were all in the southeastern portion of the Reserve, an area that we know from ethnohistoric sources was one of the primary areas on the Forest traditionally used for huckleberry collection. These fires occurred between August 4 and September 22 (the majority in mid-September), and ranged in size from less than ¼ acre to 5760 acres. Of the 16 fires attributed to Indians, eight were less than an acre in size, four were between one and ten acres, and the remaining three were 80, 600 and 5760 acres in size. Five of the fires were extinguished by rain, and ten were actively extinguished by forest rangers, often on the same day they were started. Remember what I said about Ranger presence on the reserve prior to 1904. This may have been the first year there was a notable Ranger presence on the southern half of the reserve.



Forest Supervisor G. F. Allen was the author of these Fire Reports, and in the cover letter accompanying the report in 1904 he expands on his discussion of two of the larger fires of that year, a 600 acre fire north of Mt. Adams, and a 5760 acre fire in the Indian Heaven area:

"This fire and the large fire, south and west of the Mummy and Steamboat Mountain were set out by Indians from the Columbia river. They were probably actuated by a variety of motives. It is their practice to drive the game to the meadows and lakes by fire. The burning of the brush makes the country more open and accessible to horses. . . It is the custom of the Indians to go into the mountains every summer, in great numbers. The women pick berries and the men hunt, gamble, run horses..."

Now Allen doesn't specifically attribute these fires to maintenance of huckleberry patches. But this is probably due to his lack of familiarity with or even consideration of huckleberry ecology. Huckleberries were simply not a major concern of Forest Rangers at that time.

What we are seeing here is the point at which the Forest Service began to interfere in traditional Indian land management practices. So is there anything we can glean about these practices by looking at these 16

fires? For the small fires there isn't much to say about them except their location. But this is intriguing, particularly if you look at where they occurred with respect to an 1899 map which classifies the reserve by categories of timber volume. The majority of these fires occurred in areas that were either very lightly timbered or were, in 1899, already classified as "burns". They cluster in the same general area, and occur in the same area in consecutive years.

For the larger fires, the report provides additional information on the type and amount of timber burned. They use categories for which we're not quite sure of the modern analog, such as "real timber", "dry timber" and "green timber", but this probably equates to mature, dead and immature. An 8 acre fire in 1905 burned 48,000 feet of "dry timber" (6MBF/acre), and was located within an area classified as a burn. An 80 acre fire in 1905 burned 900,000 feet of "green" timber on 60 acres (15MBF/acre), with the unstated assumption that 20 acres had no trees. On the 60 acres where a volume was reported, 15MBF/acre is a very light volume, and implies that the trees were immature. Average timber volume in mature forests in this area ranges between 35,000 and 50,000 board feet/acre.

A 600 acre fire in 1904 north of Mt. Adams was reported as burning 350,000 ft of "green" timber, equating to less than 600 BF/acre. The Ranger who reported on this fire stated that "the amount of timber burned is comparatively light." This entire area is shown as a burn on the 1899 map, and is an area known ethnohistorically to have been used for huckleberry collection. Mr. Allen also had to report in 1904 that the Ranger who was attempting to size up the extent of this fire had to turn back, because deep snows in October prevented him from accessing the area.

The largest fire reported in 1904 burned over 5760 acres, but Allen stated that no acres of "real" timber were burned. He does, however, report that 100,000 feet of "green" timber was burned. This equates to less than 20 BF/acre, and was located entirely within what were considered berry fields at that time. I would guess that from the Indian's point of view, this fire represented a successful re-burn within an older, larger burn that had occurred in the 1890's, removing mostly conifer seedlings.

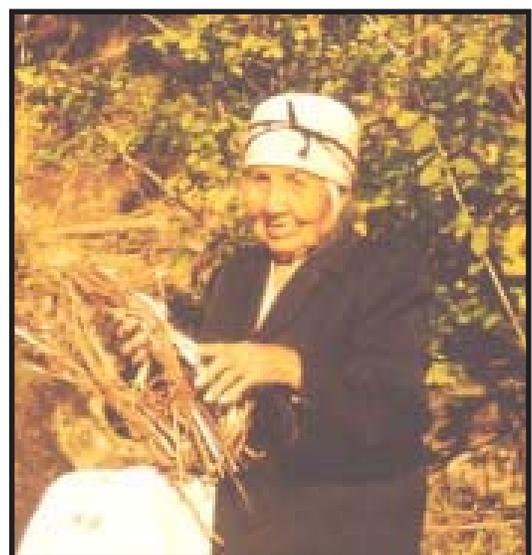
Fred Plummer, the geographer who prepared the 1899 map of the Reserve, commented specifically on this burn in his accompanying report. He noted that "The recent burns near Steamboat Mountain and over scattered patches to the southward have occurred periodically during the past twenty years, the last and most extensive fire being in 1897". This would indicate that this pattern of repeated burning was an established one.

What we see here is a pattern of repeated fires set in areas where the tree cover is very light, either within or adjacent to existing larger burns. They are set at a time of year when either rain or snow can be counted on to extinguish them within a month's time. They could certainly be described as maintenance fires.

By 1907 only 1 fire out of 22 is reported by Allen as incendiary. By this date, the Ranger presence on the Forest is much more pronounced. A 1911 Report contains the statement "During the last two summers and particularly is true of last summer, the Indians have been rather overawed by the number of Forest Officers and other Service employees that have appeared among them at any and all times."

I'd like to close with the rest of the quote from Mary Kiona :

"And until some time ago when the white man came, why, they couldn't make any more of them berry patches by starting fires on account of. . . forest fire hazard and stuff like that. So since then the huckleberry patches have disappeared almost completely from the Cowlitz land today."



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