

John Leiberg on forest fires, Indian burning, old-growth forests, logging history, and reforestation of southwest Oregon, ca. 1400 to 1899.

**Edited, with commentary, by Bob Zybach.
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**Part 4. Early Historical Forest Fires:
1855 to 1899**

(p. 276) Fires have widely ravaged the region examined. There is not a single forested township either on the west side or on the east side of the range in which the timber is not more or less fire marked.

(p. 276) Of the forested area examined, comprising in round numbers 3,000,000 acres, a total of 2,975,000 acres, or 99.992 per cent, are fire marked.

(p. 277) The fires were more numerous and devastated much larger areas in the early days of the settlements than they have done in later years. Much of the larger percentage of what may be classed as modern burns date back twenty-five to forty years [1859 – 1874; likely including significant area during the 1868 fire year]. As time has passed, the frequency of forest fire in the region has much diminished. This is owing to a variety of causes, chief of which are [1] the numerous fire breaks caused by the earlier burns; [2] the gradual extinction of the game and consequent diminished number of hunting parties and lessened risk from unextinguished camp fires; [3] the acquisition of valuable timber claims by private parties throughout the heavily forested sections and the measure of protection, prompted by self-interest, bestowed on their property and incidentally on adjoining areas, and, lastly, [4] the destruction of the humus layer, the chief factor in the spread of forest fires in this region, by the earlier conflagrations and the insufficient accumulations of this material since then to support hot, large, and destructive fires.

(p. 279) The white man's reasons for firing the forest in this region are much clearer [*to Leiberg than were the Indian's reasons*]. The earliest settlers found that burned-over tracts in the timber attracted game; hence the forest was fired. Many of the conflagrations spread from camp fires, which the settlers rarely took the trouble to extinguish when breaking camp. They also set many fires for the purpose of destroying the underbrush to facilitate traveling through the forest. Where roads or trails were constructed fires were set to help clear the way. The builders of a road up the North Fork of the Rogue River and across the Cascades to the Deschutes River, known as the John Day road, are responsible for large tracts burned on either side of the road.

(p. 278) Fires are often set to attract game. The larger varieties of game are now becoming scarce south of the Umpqua watershed. During the fall and late summer fires are started to attract game to the smoke and save the trouble of hunting it very far from home. Deer, for example, are readily attracted to the proximity of fire and smoke. They stand in the smoke to escape the attack of flies and gnats, which are very troublesome at certain seasons of the year [*Charles K.?*]. Several fires started for the purpose of luring deer were observed during the summer. One in **T. 33 S., R. 3 E.**, burned for a month in a very heavy stand of mixed red fir and sugar pine, destroying 15 or 20 million feet B. M. [*Scribner scale*] of merchantable mill timber [*11-inch minimum butt diameter*] before the fall rains put it out. It is not probable that more than a half dozen deer were obtained in return for this waste in timber. For similar reasons – to drive away flies and gnats – fires are often started where fire is used for purposes of cattle and horse range. These fires are rarely tended, and they frequently spread over considerable tracts. Cases of this sort were observed in **Ts. 36 and 37 S., Rs. 6 and 7 E.** In the former township, at one place near Pelican bay, a half dozen huge fires had been built in a row in the midst of a pile of inflammable forest litter.

(p. 278) As a rule grass growths after forest fires comes only along the highest slopes and plateaus of the Cascades. Fires in the middle and lower elevations usually stimulate brush growths. Some of these brush growths, consisting of hazel, mountain mahogany, scrub oak, june or service berry, and various species of ceanothi are relished by cattle, and for the purpose of providing the stock with this sort of browse the timber is frequently burned. In certain of the forested districts a new industry is springing up, that of raising Angora goats. These animals are essentially browsers and eat almost any sort of brush. A number of places were noticed along the Rogue River where the timber had been burned apparently with the sole object of providing goat browse.

(p. 248) But the open character of the yellow-pine type of forest anywhere in the region examined is due to frequently repeated forest fires more than to any other cause.

(p. 249) The forest floor in the type is covered with a thin layer of humus consisting entirely of decaying pine needles, or it is entirely bare. The latter condition is very prevalent east of the Cascades, where large areas are annually overrun by fire. But even on the western side of the range, where the humus covering is most conspicuous, it is never more than a fraction of an inch in thickness, just enough to supply the requisite material for the spread of forest fires.

(p. 249) In the middle elevations of its range yellow pine is often found to have supplanted tracts of nearly pure red-fir stands. This shifting about is due entirely to forest fires.

(p. 268) In other places fires have destroyed a certain percentage of the forest. The damage may vary from 10 to 60 per cent or higher. The destruction has not been all in one place or body. The fire has run through the forest for miles, burning a tree or group of trees here and there.

(p. 255) On ground where fires have not run for one hundred to two hundred years humus covers the forest floor to a depth which varies from 3 to 5 inches. The litter consists of broken trees and branches. It is enormously increased in quantity when a fire, even of low intensity, sweeps through the forest.

(p. 278) The eastern slope of the Cascades, the summit and middle elevations of the range, the western slope, the slopes and summits of the Siskiyou with the country intervening between this range and the Cascades, all suffer more or less from this needless infliction. And there is little prospect that it will be otherwise for many years to come.

T. 28 S., R. 5 E. (see: Indian Burning)

(p. 298) The southern and central portions are covered with stands of lodgepole pine, all reforestations after fires and representative of all ages of burns from one hundred fifty years ago [*ca. 1750*] up to the present time [*1899*]. There is no portion of these or the heavier stands of alpine hemlock and noble fir in the northern sections of the township that have not been visited by fire within the past forty-five years [*since 1855*].

T. 28 S., R. 6 E. (see: Indian Burning)

(p. 299) The forest consists of stands of alpine-hemlock type. Ninety per cent of it is composed of lodgepole-pine reforestations. Some of these stands date back to Indian occupancy, others are the result of fires set by the white man. All of the forest is fire marked.

T. 28 S., R. 6 1/2 E. (see: Indian Burning)

(p. 300) The forest is fire marked everywhere in this township. Seventy-five per cent of the yellow pine is fire seared in the lower 3 or 4 feet of the trunk.

T. 29 S., R. 5 E. (see: Indian Burning)

(p. 305) During the past forty or forty-five years [1855-1899] the timber has been burned in many locations and the subsequent reforestations have again been burned.

T. 30 S., R. 2 E. (see: Old-Growth)

(p. 310) The forest is fire marked throughout the township and 15 per cent of the standing mill timber has been consumed or killed. It is worthy of note that although the forest on the northern slopes of the Umpqua-Rogue River divide in this and the preceding township [T. 30 S., R. 1 E.: pp. 308-309] has been over-run by fire almost everywhere, the actual quantity of timber consumed is not nearly as large as might be expected considering the extent of the fires.

(p. 310) The fires have been more severe and widespread along the summit of the divide, where the sheep pastures are found, than elsewhere. As fires in these localities decidedly encourage grass growth at the expense of the forest, there probably is some connection between the sheep camps and the fires that have ravaged the timber in their neighborhood.

T. 30 S., R. 4 E. (see: Reforestation)

(p. 314) Practically all of the forest is fire marked. One-sixth of the entire area has been burned clean of timber, save for the occasional tree, and the remainder has lost 40 per cent of its mill timber through the same cause. The southern areas have suffered the most, but no tract has been entirely exempt.

T. 30 S., R. 6 1/2 E. (see: Indian Burning)

T. 30 S., R. 7 E. (see: Indian Burning)

T. 30 S., R. 8 E. (see: Indian Burning)

T. 30 S., R. 9 E. (see: Reforestation)

T. 31 S., R. 1 E. (pp. 326-328)

(p. 326) The central portions contain a few hundred acres of grazing lands. They consist of open, park like ridges, covered with yellow pine, where the scattered timber permits a thin growth of grass to exist. Cattle range on these tracts, but no sheep.

(p. 326-327) The yellow-pine type is not abundant or well developed. Its stands are thin and scattering, and the component trees, yellow and sugar pine, are only of medium dimensions – 20 to 30 inches in basal diameters, 15 to 20 feet clear trunks. Occasionally, however, there occurs veteran sugar pines, remnants of a very old growth, whose diameters vary from 6 to 10 feet. These giants are not very common, and almost every one of them is in a state of decay, due to sears and basal burns of modern times. The red-fir type is abundant and well developed. It occurs of three ages – veterans, standards, and young growth. The veterans are mixed with sugar pine, yellow pine, and white fir, and have dimensions varying from 5 to 9 feet in diameter at the base, with clear trunks 40 to 80 feet in height. The standards occur in extensive bodies throughout the canyon bottoms. The trees average 2 to 3 feet in basal diameters, with clear trunks 40 to 60 feet in length. The young growth represents reforestations after fires which burned the forest one hundred years ago [c. 1800].

(p. 327) The alpine-hemlock type is composed mostly of noble fir and alpine hemlock in almost equal proportions. Previous to fires, originating since the white man's occupancy of the region, the stands of this type were of magnificent proportions. To judge from the remains there were large areas which

carried more than 100,000 feet B. M. per acre. The best stands were composed of large veteran trees 2 1/2 to 3 1/2 feet in diameter at the base, with long columnar trunks 50 to 60 feet in the clear. Little remains now but the fire-killed trunks.

(p. 327) Ninety per cent of the forest in the township is fire marked. Forty per cent of the standing timber has been consumed by fire within the past forty-five years, but no area has been completely burned off; there is always some little timber left. Most of the burned-over areas are reforesting, principally with red fir. A few of the southern slopes are becoming brush covered, dense thickets of rhododendron and of vellum-leaved ceanothus occupying the ground.

T. 31 S., R. 3 E. (see: Old-Growth)

(p. 285-286) Where the yellow-pine reforestations have reached an age of 200 years and upward, the yellow pine is giving way to the encroaching red-fir growth. Where fires of modern date [1855-1899] have burned away the reforestations in these places, lodgepole pine or brush growths have taken possession.

(p. 330) With the exception of red-fir stands on bottom lands the forest has been marked by fire throughout the township. The slopes of **Huckleberry Mountain** have especially suffered severely.

(p. 330) Reforestation is scanty everywhere; it is practically lacking up **Huckleberry Mountain**, where heavy brush growths flourish on all the fire-swept areas.

T. 31 S., R. 4 E. (see: Indian Burning)

T. 31 S., R. 5 E. (see: Reforestation)

T. 31 S., R. 6 E. (see: Indian Burning)

T. 31 S., R. 7 E. (see: Indian Burning)

T. 31 S., R. 8 E. (see: Reforestation)

T. 32 S., R. 1 W. (see: Indian Burning)

T. 32 S., R. 3 E. (see: Old-Growth)

T. 32 S., R. 4 E. (pp. 233, 286, 346-347)

T. 32 S., R. 5 E. (see: Indian Burning)

T. 32 S., R. 6 E. (see: Reforestation)

T. 33 S., R. 3 E. (see: Old-Growth)

T. 33 S., R. 4 E. (pp. 233, 286, 361-362)

T. 34 S., R. 2 E. (see: Logging)

T. 34 S., R. 3 E. (see: Reforestation)

T. 34 S., R. 4 E. (p. 233, 286, 376-378)

T. 34 S., R. 5 E. (see: Old-Growth)

T. 34 S., R. 6 E. (see: Old-Growth)

T. 35 S., R. 2 E. (see: Logging)

T. 35 S., R. 3 E. (see: Logging)

T. 35 S., R. 4 E. (pp. 233, 286, 392-394)

T. 35 S., R. 5 E. (see: Indian Burning)

T. 36 S., R. 2 E. (see: Logging)

T. 36 S., R. 3 E. (see Old-Growth)

T. 36 S., R. 4 E. (pp. 269, 286, 407-409)

T. 36 S., R. 5 E. (pp. 278, 409-411)

T. 36 S., R. 6 E. (see: Logging)

T. 36 S., R. 7 E. (pp. 279, 413-414)

T. 37 S., R. 2 E. (see: Logging)

T. 37 S., R. 3 E. (see: Logging)

T. 37 S., R. 4 E. (pp. 254, 422-423)
T. 37 S., R. 5 E. (see: Reforestation)
T. 37 S., R. 6 E. (p. 279, 425-426)
T. 37 S., R. 7 E. (p. 426-427)
T. 38 S., R. 3 E. (see: Reforestation)
T. 38 S., R. 4 E. (see: Old-Growth)
T. 38 S., R. 5 E. (p. 233, 435-436)
T. 39 S., R. 2 W. (see: Logging)
T. 39 S., R. 1 W. (see: Logging)
T. 39 S., R. 4 E. (p. 233, 284, 445-446)
T. 39 S., R. 5 E. (see: Old-Growth)
T. 39 S., R. 6 E. (see: Reforestation)
T. 40 S., R. 2 W. (see: Reforestation)
T. 40 S., R. 1 W. (see: Old-Growth)
T. 40 S., R. 1 E. (pp. 453-454)
T. 40 S., R. 2 E. (pp. 454-455)
T. 40 S., R. 3 E. (see: Reforestation)
T. 40 S., R. 4 E. (see: Reforestation)
T. 40 S., R. 5 E. (see: Logging)
T. 40 S., R. 6 E. (see: Reforestation)
T. 41 S., R. 2 W. (see: Old-Growth)
T. 41 S., R. 1 W. (see: Indian Burning)
T. 41 S., R. 1 E. (see: Old-Growth)
T. 41 S., R. 3 E. (pp. 269, 466)
T. 41 S., R. 4 E. (see: Indian Burning)
T. 41 S., R. 5 E. (see: Logging)
T. 41 S., R. 6 E. (pp. 284, 468-469)