

FIRES ON THE FLATHEAD FOREST IN MONTANA

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The fact that many of the fires in the west this summer were set by lightning is often questioned by those unfamiliar with western conditions. But there are very few rangers who have not had practical demonstration of fires from this source.

The writer was employed in the Swan Valley east of Flathead Lake during July and August, and can testify to the truth of this fact. On July 3, at 4 p. m., after several weeks of dry weather, we had a thunder storm of half an hour's duration, with a heavy down-pour of rain. A few minutes after the storm passed, the ranger called our attention to a smoke about a mile off. This was located in the heavy timber, and was found to be a dead larch tree which had been struck and was blazing from top to bottom. It could not be cut down, so was allowed to burn off and was then ditched around for its whole length. No water was available to put it out, and dirt thrown on it did not quench it. The tree burned for over two weeks, during which time it was a constant menace. The fire followed the roots for distances of 8 or 10 feet and would reach the surface outside of the trench. The place where this occurred was 75 miles from the nearest town and only its prompt discovery and constant watch by the ranger prevented it from developing into a fire that would have swept the whole valley. It had two months in which to spread before any rain came.

And the fourth day after this storm a heavy smoke was seen on a mountain spur twelve miles distant. There was no trail and we started the

following morning with pack horses through the timber and reached the fire late that afternoon. Fortunately there had been no wind that day and the fire was smouldering. It covered nearly two acres in a long strip where the wind of the day before had blown it up the shoulder of the ridge. At the lower end of the burn was a dead larch tree with a fresh lightning scar.

The location of the fire made it impossible that any person could have been there for any purpose whatever, and the position of the lightning-scarred tree coincided exactly with the probable center from which the fire had traveled to spread up and down hill. So that while no one saw this fire start from lightning as in the case of the first fire, the evidence is just as convincing. The bolt had not set this tree on fire, but had ignited the dry duff at its base. This had smouldered for three days, and had been finally fanned into life on the fourth day after the storm.

Owing to the inexperience of a fire guard employed to watch this fire, it broke out three times after it had been completely subdued and surrounded by trenches and was still burning when rains came in September. It had been confined to less than two hundred acres in area. If allowed to run it could have burned over from 20 to 100 square miles. No other fires occurred in the valley all summer except those set by lightning.

Fires of this character usually start in some remote spot that cannot be reached promptly by the ranger because there is no trail and it is absolutely nec-

essary to take horses in to carry food, bedding, and tools for fire fighting. A trail must either be cut out to a point near enough to reach the fire from camp or the horses taken slowly and painfully through country covered with tangles of down timber and dense thickets, with the risk that in case the fire got well started there might be some difficulty in getting out again. Meanwhile the fire is gaining headway, and the ranger finds on reaching it that he can make no impression on it and needs 20 to 50 men to control it. He proceeds to the nearest telephone station and the men are sent in from some town, or in rare circumstances they may be recruited from settlers nearby. Their beds, provisions and cooking outfit are packed in 20 to 75 miles on animals hired for the purpose, and after a delay of from 3 to 7 days they reach the fire.

By this time it is so large that they cannot entirely subdue it, but can only check its progress, head it off, gradually surround it, and, if rains come or the wind does not blow too hard, hold it within narrow limits. Then, sooner or later, a high wind is sure to occur, and these smouldering fires leap up and across the trenches and sweep over wide areas in a single day.

In the South Fork valley, east of Swan Valley, an area of 110 miles long had to be protected by a force of guards so small that it was impossible for them to at once reach and put out fires starting from such causes. One fire which resulted from the carelessness of a half-witted youth who was hunting in the mountains, got such a start that a crew was necessary.

This crew was sent in accompanied by fifty pack horses, but had to stop on the way to control three other fires, and the first fire before they could get to it, had burned over a township. The ranger in the Swan Valley had instructions to look up this youth and es-

cort him out of the forest, and would have done so had it not been for the fires set by lightning in the Swan Valley, which prevented him.

On the west side of the range a similar situation developed. A fire got away from the ranger through the impossibility of his reaching it in time. This fire was burning during the week preceeding the great fire in Idaho. The same wind that caused such destruction there, blew this fire across the timbered summit of the range and swept it down into the valley with a fury that made all attempts to stem it hopeless for the time. Burning brands and bark were blown across the Swan River and fires started for three miles along the further bank. By great good fortune this wind was followed by rain which enabled us to attack the fire, and by ten days' work with 20 men who were already on the ground its further progress was prevented.

This in a small way illustrates the conditions which caused the larger conflagrations in Idaho. Wherever fires were set in low ground, along railroads and trails, in inhabited districts, they were controlled promptly. But, largely through lightning, many fires were started that could not be reached. These fires, on the day of the great wind, swept down on the protected areas in solid fronts miles in extent and destroyed the work of weeks of fighting.

When the national forests are provided with complete systems of trails, when enough men are employed to reach and control fires as soon as they start, and when, by the operation of the Forest Homestead Act and the development of transportation, vast stretches of wilderness become populated as far as their resources will permit, the conditions that preceeded the great fires of 1910 will have been brought fully under control, and a repetition made impossible.

