

dreds of forest plots, some of which we burned at various times and seasons in order to note the effects of fire. We did not wish to announce anything to the public in relation to our findings or observations until we were absolutely sure of our position, and even now I hesitate to discuss fire as an aid to forestry. Fire uncontrolled, is the most destructive thing with which we are yet acquainted. Yet, controlled, it is our best friend. "Fire the worst of masters, the best of servants," said the poet Schiller. We have had to combat fires in all seasons from January to December, and our one effort was to put out the fires as quickly as we could, confining the burn to as few acres as possible and we were so fortunately situated that we could throw a hundred men on the fire line at any time. Of course, we noticed the effects of these fires at the different seasons and gradually formed conclusions. It was very discouraging to say the least to see a fire reduce a promising stand of twenty year old trees to the former state—a desolate waste. One cannot sit idly by and see a young forest in its making converted into a veritable fire trap with inflammable material piled up in heaps on the ground and lodged on limbs up to the tree tops without trying to find some plan to combat this menace. We have now 100,000 acres of forest lands on which there is almost complete reforestation—the trees ranging from two year old seedlings to twenty-five year old saplings—and this reproduction cost, figuring taxes, interest and other expenses, will range around twenty dollars per acre. In fact, the forest could not be reproduced now for twenty-five dollars per acre. My share in these values is small compared to that of the people of the state—the Nation. Shall I continue to look on and fiddle while this forest goes up in smoke, or shall I find a remedy to save the work of a life time? I cannot wait for the state

or the U. S. Forest Service to provide a working plan to save this promising and potentially valuable tract of forest lands, and yet, I am not so sure of my position that I would spurn the advice and assistance of others. I do not want it said that any plan or act of mine would endanger the cause of reforestation in the least.

What are we going to do about these infernos—these tinder boxes that are in the making,—waiting for some one to touch them off in the dry, hot months of July, August or September? We have no sprinkler system or chemical engines, besides a fire can run a mile in a very few minutes at a favored time.

There are spots in every forest called thickets or pine thickets where the accumulation of litter is very heavy. These spots should be burned at nightfall on a cold, quiet, damp day from December first to March first, when the fire would burn slowly and lightly without creating much heat but would completely burn all the accumulated litter of years. Thus the worst spots would be cleaned out. Other areas of less danger could be gradually burned until our whole forest was clean and the fire hazard removed. I am confident that this can be done without the least bit of loss to the stand of trees. Our young forests are usually overstocked with trees and the loss of a few would prove beneficial to the stand. "*A Master of the Fires*" might again become an honorable occupation as it was at the "big houses befo de wah." These fires may be necessary at intervals of five years but when nature reduces the stand to 300 trees per acre—or better still when man reduces the stand by thinning, the fire hazard will have entirely disappeared. Three hundred trees will not produce as much litter as 2,000 or 3,000 and there will be no danger spots, but in my opinion this pine straw, leaves or litter will always have to be removed in some way. The celebrated