

two ways: (1) By the age of the stands of poplar, and (2) by the number and age of the fire scars on the old trees. For example, it would be found that the great majority of the young trees on a certain area fell into three age classes, of 8, 16, and 25 years. In addition, the poplars 25 years old would show that they had been burned at the base 8 and 16 years ago, while the poplars 16 years old would have fire scars eight years old. By counting the annual rings of the wood covering the fire scars on the few mature trees still standing, it would be found that they had been severely injured by fire approximately 8, 16 and 25 years ago. Therefore, the area would be classed as having been burned three times. Severe fires usually burn off the brush and duff down to the mineral soil. These areas form ideal germinating beds for poplar, which requires plenty of light, and whose seeds are easily and widely distributed and germinate quickly. The poplar grows rapidly for the first few years, and the young seedlings soon cover the ground. The seedlings from the seed crops of the few succeeding years are too much shaded to compete successfully with those already on the ground. The result is a pure or a nearly pure stand of even-aged trees. Fire is practically the only agent that can make the proper conditions for the development of such stands. Clean cutting without the usual subsequent fire might bring about pure stands in restricted patches, but, taking the area as a whole, it would be found that the poplar would not come among the brush piles until they decayed. The result would be "patchy" stands of different ages. In any case, the presence or absence of fire scars on the escaped mature trees would furnish the necessary corroborative evidence that we are dealing with burned areas.

One is, then, not dependent upon hearsay or tradition in determining the number of times an area has been severely burned. Every severe fire leaves its record burned into the trees not actually killed, and stamps its impress upon the succeeding generation of trees.

Many
Smaller
Fires

The designation *number of times burned*, in these discussions and on the accompanying map, means that the greater portion of the area so designated has been *severely* burned the number of times indicated; that is, burned sufficiently to scar the standing trees and to kill off portions of the young growth periodically, so that stands of different age classes have resulted where more than once burned. It will be seen that this method of designation takes no account of the ground fires, which did not develop