Periodic forest fires were characteristic of the virgin forests of northern Minnesota. The present-day stands of Itasca State Park can be dated back to a series of fires recorded by fire scars in the older trees. The 18-inch red pine in Fig. 1 owed its origin to fire and bears the scars of six later fires which can be dated accurately from a study of the tree rings. Corroborative evidence has been obtained from increment borings throughout the area.

Scattered within the Park are old red (or Norway) pines (Pinus resinosa) ranging from 215 to 235 years old at breast height. These trees -- of which Preachers Grove, the stand along the Park Entrance Drive, and the stand at Nicollet Cabin (Fig. 2) are well-known examples -- originated after an extremely severe fire or series of fires that swept through the Park about 1714. Of the stands that followed this fire, only the long-lived red and white (Pinus strobus) pines still persist.
The 1772 fire was less severe, but resulted in a series of red and white pine stands, now 146-168 years old at breast height. These occur chiefly in the north-east corner of the Park but are also found to the west of Elk Lake. Almost any fire in the pre-colonial period could be expected to burn a sizeable area since only swamps and previous burns formed natural firebreaks.

The early nineteenth century saw three major fires, about 1803, 1811 and 1820. These gave rise to the major present-day stands of red pine. The stands around Bohall Lake and west of Hernando de Soto Lake followed the 1803 burn. Timber following the 1820 burn is mixed with the 220-year age class and also forms pure stands in the area between the park entrance and Mary and Deming Lakes, and west of Elk Lake. In this age class, too, are the oldest remnants of black spruce (Picea mariana), white spruce (Picea glauca), and jack pine (Pinus banksiana).

Three decades after Schoolcraft and Nicollet described the timber around Lake Itasca, a severe fire occurred in 1865. The scene was described by Garrison in 1881:

"For many miles in all directions but the north (from Elk Lake) the surface was gently rolling, none of the hills appearing to be more than twenty or twenty-five feet high; they were chiefly covered with a young growth of birch, aspen and a few oak. Towering above them were seen the black pines (i.e., jack pine), not killed by fires, and an occasional single tree or small groves of Norway pine, towering still above these. These fires which so devastate and utterly ruin so many thousand acres of large pine forests are said to be set by the Indians, purposely, and assisted to spread, to kill the timber, and so give better feeding ground for the moose and deer which abound in this vicinity."

This fire gave rise to an extensive 75-year-old age class (age taken at breast height) which can be found throughout the forest today. The jack pine and aspen (Populus tremuloides) stands which came in after this fire are now largely decadent.

The last of the great fires occurred in 1886. This fire was most severe in the northeast section of the Park, where it has given rise to thousands of acres of 55-year-old jack pine and aspen. It is recorded, however, throughout the Park. In addition to these major fires, others have burned through portions of the Park. Official reports indicate, however, that no fire occurred in 1894, contrary to popular belief.

The Itasca Park forest is the product of, and has been maintained by fires which have periodically burned through the area. In a very real sense, fires were part of the normal scene in the virgin forest. Complete protection of the timber from fire will eventually greatly reduce the pine stands which owe their existence to fire, and will replace them with a climax forest composed of spruce, fir, maple, basswood, and other hardwoods. The pine forests of Itasca may be maintained through plantings. If, however, these forests are to be maintained without planting there are only two alternatives; either develop the use of fire as a prescribed and controlled silvicultural tool to regenerate cut-over areas to pine (a highly questionable procedure in recreational areas), or develop substitutes such as chemical and mechanical treatment of the soil and brush which will accomplish the task done by fire in the virgin forest.

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