

# RED SPRUCE AS WITNESS TREE ON THE MONONGAHELA NATIONAL FOREST

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A digital database of witness tree locations has been created from the earliest deeds of the area now within the Monongahela National Forest. These locations were used to describe the distribution, environmental gradients, and associated tree species of red spruce (*Picea rubens*) in eastern West Virginia from between 1771 and 1889. Contingency table analysis and analysis of standardized residuals were used to assess environmental gradients underlying observed tree species distributions. Indicator kriging was used to create continuous tree species probability coverage of the study area. The distribution of red spruce from witness trees was compared to the current distribution.

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