

THIRTY-FIVE YEAR RESULTS FROM THE STODDARD FIRE PLOTS: A STUDY OF FIRE FREQUENCY IN THE RED HILLS OF NORTH FLORIDA AND SOUTH GEORGIA

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ABSTRACT

Prescribed fire is one of the most important land management tools applied to upland pine forests of the Southeast. Surprisingly, there are relatively few projects devoted to understanding the long-term effects of prescribed burns on forest resources. The Stoddard fire plots represent one of the longest-running fire ecology studies in the United States. In 1959, H.L. Stoddard, Sr. initiated a study on Tall Timbers Research Station to demonstrate the effects of fire frequency on mature, old-field forest of the Red Hills region of north Florida and south Georgia. Although the plots have limitations (primarily related to size), recently collected data provide insight into the relationship between forest structure and burn frequency.

Results from the Stoddard fire plots indicate that old-field stands on nutrient-rich Red Hills soil must be burned very frequently to sustain vegetation structure that mimics the open landscape of the original longleaf pine (*Pinus palustris*)-wiregrass (*Aristida stricta*) forest. Even moderate periods of fire suppression (≥ 3 years) will result in dramatic shifts in forest structure. Aggressive use of prescribed fire is required to maintain this forest type.

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