

Influence of Prescribed Fire on White-Tailed Deer Browse in East Texas Forested Ecosystems



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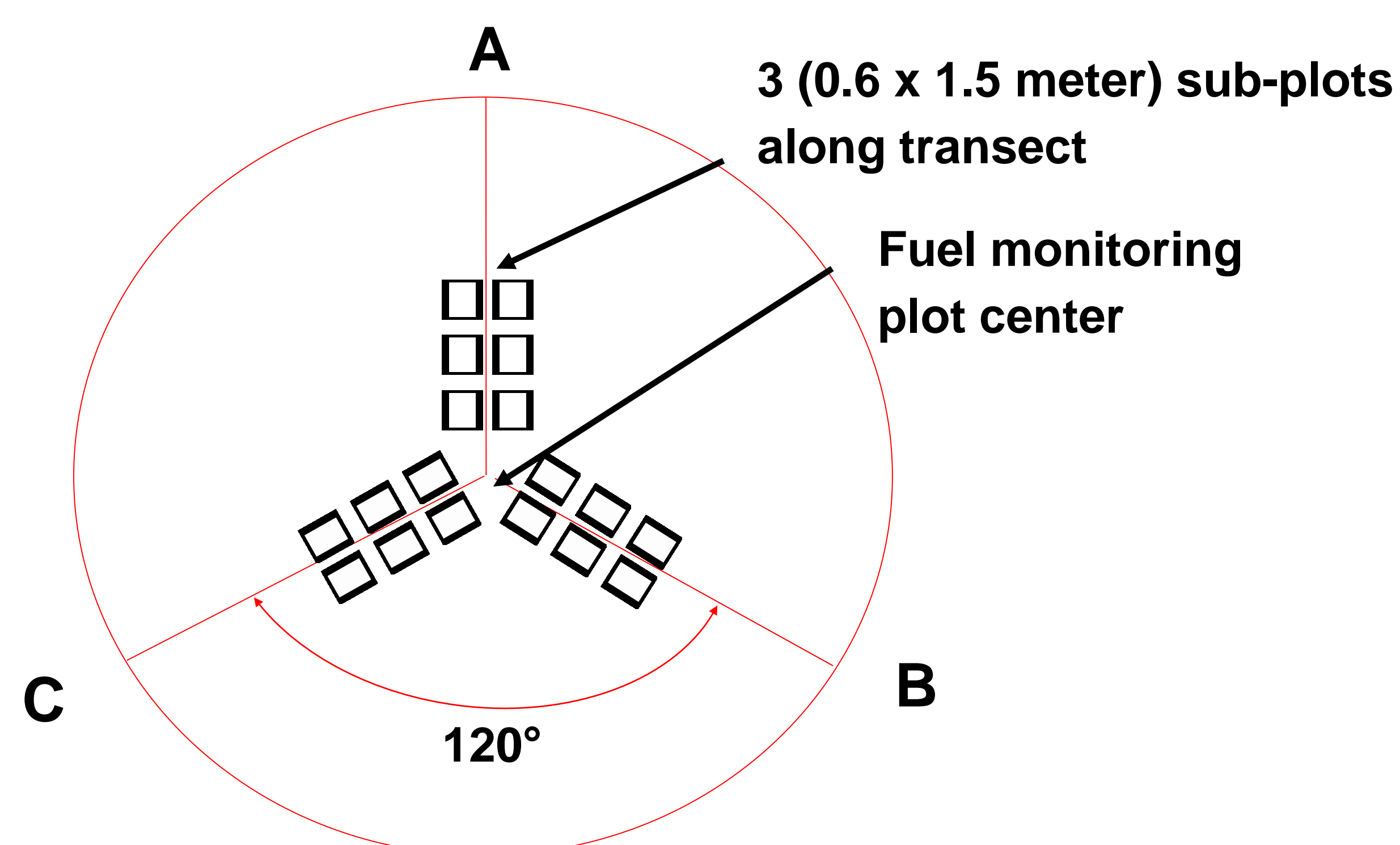
Introduction

- Fire is often used for shaping and managing habitat for White-tailed deer (*Odocoileus virginianus*).
- Prescribed fire has been utilized to improve browse availability, forage production, and nutrient availability for deer.



Plot Design

Figure 1. Circular plot .202 ha in size (25.37 meter radius) with 3 transects (A, B, and C)



Goals and Objectives

Goal

- Correlate fuel and vegetation measurements to assess the effects of different prescribed burn regimes on overall white-tailed deer browse.

Objectives

- Assess impacts of different burn regimes on preferred white-tailed deer browse species' nutritional value and caloric content in National Forests and Grasslands in Texas habitat, and the Winston 8 ranch, and the Nature Conservancy's Roy E. Larsen Sandylands Sanctuary.
- Correlate browse utilization survey data in Alabama Creek WMA, Bannister WMA, Moore Plantation WMA, Sam Houston National Forest, and the prescribed fire history to determine the most utilized areas in different burn regimes.
- Determine which prescribed burn regimes in East Texas produce the optimum forage for white-tailed deer.

Acknowledgements

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Materials and Methods

- Browse utilization will be assessed using a modified version of TPWD Stem count index method.
- Herbaceous production will be measured off of USFS fuel monitoring plots (Figure 1).
- Woody browse nutrient samples will be clipped and sent to Dairy one forage laboratory in Ithaca, New York
- Browse data will be obtained from local WMAs and correlated to the prescribed fire history in to determine when browse utilization was highest.
- This study will utilize 54 plots.

Timeline

Summer 2020

- Data collection at study sites in East Texas

Fall 2020

- Continued data collection at study sites

Summer 2021

- Continued data collection at study sites

Fall 2021

- Data Analysis

Spring 2022

- Complete and defend thesis