

# Like Moths to a Flame

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## Introduction

Fires burned every 2 years on average from the 1800s to early 1900s in the Ozark region. Fire suppression in 1900s allowed woodlands and prairies to mature into dense, closed forests.

## Objective

Investigate how areas prescribed burn areas in the Ozarks differ from those areas not recently burned. Specifically, we wanted to see the impact of prescribed burns on moth abundances.

## Methods

Samples moths in 20 burned and 20 unburned sites from April-Nov of 2017 in Newton County, AR. Universal Black Light Trap were used to capture insects. Methyl acetate was used as a killing agent. Moth abundance for each site was estimated. The numbers of 5 representative moth species were counted. T-tests and generalized linear regression models were used to analyze the data.

## Conclusion

Moth abundance was higher in prescribed burned sites, likely because prescribed fire acts as an intermediate disturbance, supporting higher moth numbers. No differences among the 5 representative species between burned and unburned sites. The intermediate disturbance from prescribed burns may reduce competition among moths allowing for greater abundance of moths. Moths may also be drawn to the post-burn regeneration of vegetation in prescribed burned sites. As a management tool, the benefits of prescribed burns in the Ozarks may carry over to moths as well.



# Prescribed fire acts as an intermediate disturbance in forested ecosystems

