

Monitoring Herpetofauna and *Ophidiomyces ophidiicola* Prevalence in Longleaf Pine Forest Restoration Stands in Bankhead National Forest

The US Forest Service is working to restore longleaf pine (*Pinus palustris*) forest across the southern range of the William B. Bankhead National Forest through strategic thinning, replanting, and prescribed burning. To monitor how herpetofauna are responding to these efforts, we deployed 16 drift fence arrays with funnel traps and pit fall traps across the four following forest restoration stand types: Control (no restoration), Early, Late, and Mature. Control stands are loblolly plantations that have not been burned or thinned, resulting in dense canopies and hardwood encroachment. Early replanting stands consist of young longleaf pine trees <20 years old leading to high sunlight penetration. Late replanting stands have longleaf pine trees ranging from 20–30 years old that have not been thinned resulting in moderate sunlight penetration. Mature stands have open canopies, diverse herbaceous vegetation, and mixed-age pine trees and represent the Desired Future Condition. Early, Late, and Mature stands are currently burned on a 2–5 year rotation. From 2021-2023 we found that rare reptiles such as *Pituophis melanoleucus*, *Plestiodon inexpectatus*, and *Ophisaurus attenuatus* were more often detected in Mature and Early stands. Conversely, amphibians such as *Pseudotriton ruber*, *Aneides aeneus*, and *Pseudacris brachyphona* were more common in Control and Late stands. In 2023 skin swabs were collected from each snake captured to monitor for *Ophidiomyces ophidiicola*, a pathogenic fungus known to cause Ophidiomycosis (Snake Fungal Disease). The greatest amount of snake captures occurred in Late stands (39), followed by Mature (34), Early (27), and Control (15) stands. The prevalence rate across all stand types was approximately 17%, with Mature stands having the greatest prevalence (15%) among all restoration treatments.