

Upland snakes use frequently burned sites

Prescribed fire is an essential tool for the restoration and maintenance of longleaf pine forests and has been shown to benefit many of the unique wildlife species (e.g. gopher tortoise, red cockaded woodpecker) associated with open canopy pine forests. However, few studies have examined the relationship between snakes and prescribed fire management. We used radio-telemetry of snakes and spatial data with fire history to investigate this relationship for the following two groups of snakes:

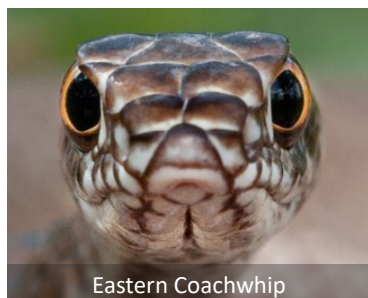
1 Habitat Specialists



Eastern Diamondback Rattlesnake

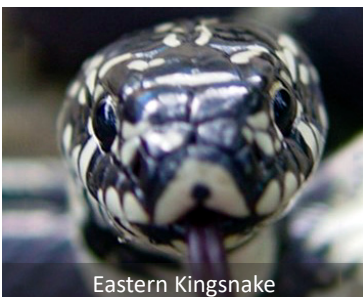


Florida Pine Snake



Eastern Coachwhip

2 Habitat Generalists



Eastern Kingsnake



Gray Ratsnake

We found that habitat specialists used sites that were burned frequently over a 10 year period (<3 year fire return interval) whereas habitat generalists selected a broader range of fire frequencies. Interestingly, both groups overlapped in selecting locations that were burned every 2 or 2.5 years and avoided locations that were not burned within 10 years.

We also found that habitat specialists tended to use sites within roughly one year of a fire as compared to 1.5 years for the eastern kingsnake and nearly 3 years for the gray ratsnake, both generalist species.

Our data suggest that forest management programs that include prescribed fire with frequent return intervals (< 3 years) over long periods would benefit a suite of snake species that use longleaf pine forests.

MORE INFORMATION

Howze, J.M., and L.L. Smith. 2021. The influence of prescribed fire on site selection in snakes in the longleaf pine ecosystem. *Forest Ecology and Management* 48:1-10. DOI: [10.1016/j.foreco.2020.118703](https://doi.org/10.1016/j.foreco.2020.118703)

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KEY POINTS

Frequent fire over long periods benefits many snake species found within longleaf pine forests.

Most snakes occupy sites within 1-3 years after an individual prescribed burn.