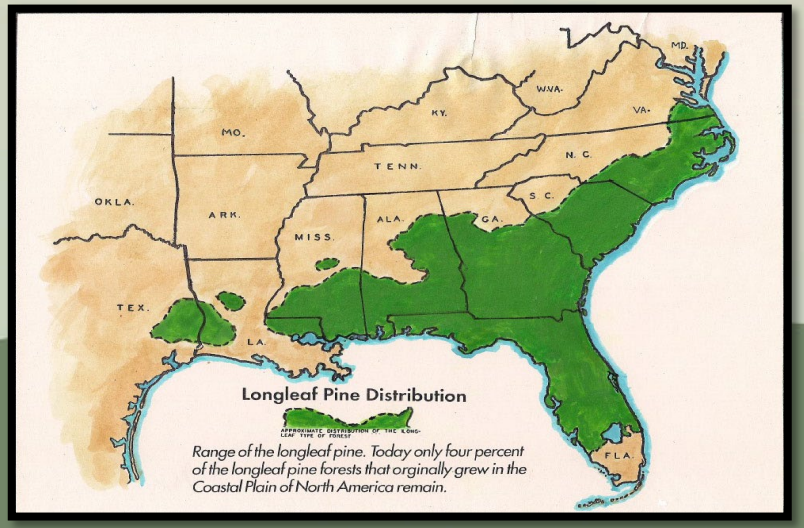
Fire and Wildlife Habitat

Joe Vaughn
Private Lands Biologist
Florida Fish and Wildlife Conservation Commission
Landowner Assistance Program (LAP)

Fire is the primary driver of the ecology of Pine Savannas, Oak-Hickory Glades, Prairies etc….

- Widely spaced trees, mostly pines
- Little to no mid-story
- Sparse shrub layer (Turkey oak, saw palmetto)
- Areas of bare sand
- An incredibly diverse groundcover of grasses and forbs composed of 1200+ species in the range of Longleaf pine





Small scale habitat benefits derived from burning

Food

- Increases nutritional quality of forage
- Improved accessibility of that forage
- Creates new sources of forage
- Increases insect populations
- **Decreases disease vectoring ticks**
- Maintains a super diverse assemblage of plant species on sites that have no history of soil disturbance

Vegetative Structure

- Seed bed preparation
- Nesting sites
- Predator avoidance



Forage Nutrition

Many studies have shown a significant increase in:

- Palatability
- Crude Protein
- Phosphorus
- Calcium
- Magnesium
- Potassium
- Sodium



This nutritional increase last for 2-3 months after a dormant season fire, 3 to 6 months after a growing season burn.

When summarized across the 40 years of the study, we observed an average increase of
14% in total gain for steers grazing burned pasture . (Cooperative Extension Service, Kansas State University, Manhattan).

Improved Accessibility





Improved Accessibility with overhead cover





Creates/maintains sources of forage





Not early successional but old-growth grassland

Veldman et. Al, Journal of Vegetation Science 25 (2014) 1438–1449

1200 +species of grasses and forbs identified within the historic range of the LLP

Susceptible to soil disturbance

25% of species can be lost with a single pass of a disk

Once gone you can never get it back!!!



Burned herbaceous understories have proven to have significantly higher insect populations than unburned areas, an invaluable source of protein for young quail and other birds, reptiles and amphibians.





Seed Production



6 Reproductive Stems



30 Reproductive Stems =
400% increase

Seed Bed Preparation





Nesting Cover





Frequent prescribed burns reduce mammalian species richness and occurrence in longleaf pine sandhills

Wesley W. Boone, Brittany A. Bankovich, Brian E. Reichert, Mandy B. Watson, Robert A. McCleery, Forest Ecology and Management, 553 (2024) 121596



As compared to an unburned site, FRI of 5yrs or less reduced the probability of nest detection from over 70% to <20%

An FRI of 2 yrs. or less decreased detection probability to less than 10%

Ticks, I Hate Ticks





Wait, there's more

- Increase water yields
- Carbon sequestration
- Reduction in Pine Beetle outbreaks when stand is at 80BA or lower
- Reduction of wildfire severity

