

## Know the signs

Unhealthy



- Congested undergrowth
- Dense tree populations
- Dead underbrush
- Lack of disturbance (fire)

Healthy



- Scattered tree populations
- Savanna undergrowth (native grasses)
- Minimal dead litter
- Presence of disturbance (fire)

## How can we manage for a healthy forest structure?<sup>[1,2,3]</sup>

- Reduce floor litter via prescribed burns
- Eradicate dead vegetation and invasive species
- Remove felled trees
- Plant native grasses
- Plant tree species that are compatible to the forest environment
- Reduce dense populations of tree via extraction and removal

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### References

1Prescribed fire in oak savanna: fire frequency effects on stand structure and dynamics

2The importance of forest structure to biodiversity-productivity relationships

3Fire in Upper Midwestern Oak Forest Ecosystems: an Oak Forest Restoration and Management Handbook

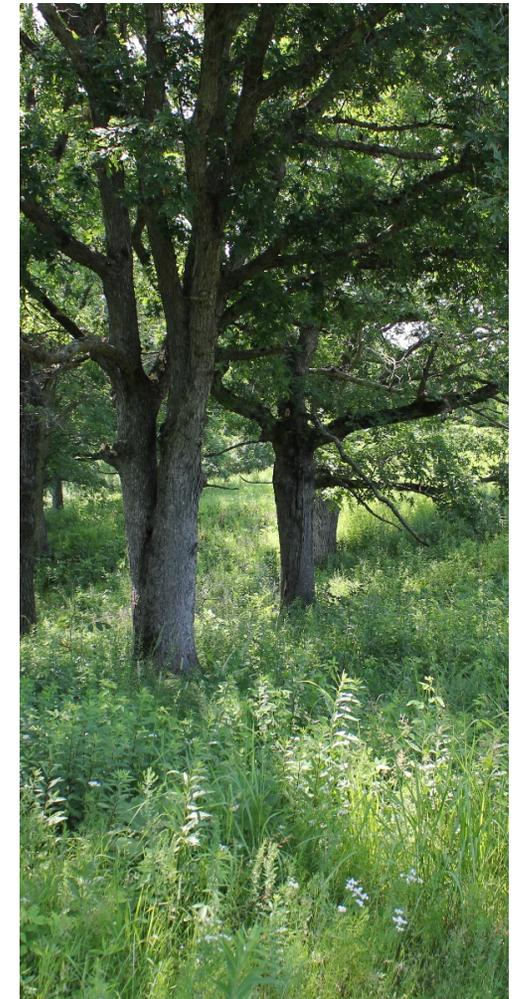
4Forest structure and woody plant species composition along a fire chronosequence in mixed pine-oak forest in the Sierra Madre Oriental, Northeast Mexico

### Acknowledgments

Thank you to the Fontenelle Forest management for allowing the sampling to take place as well as for supplying all of the pictures found within this pamphlet.

# Forest Health

## What to look for in an oak forest



## What is the most important signal for a healthy oak forest?<sup>[1,3,4]</sup>

Answer: **Baby Oak Saplings**

Recruitment is required to establish future generations of oak trees to maintain a healthy forest.

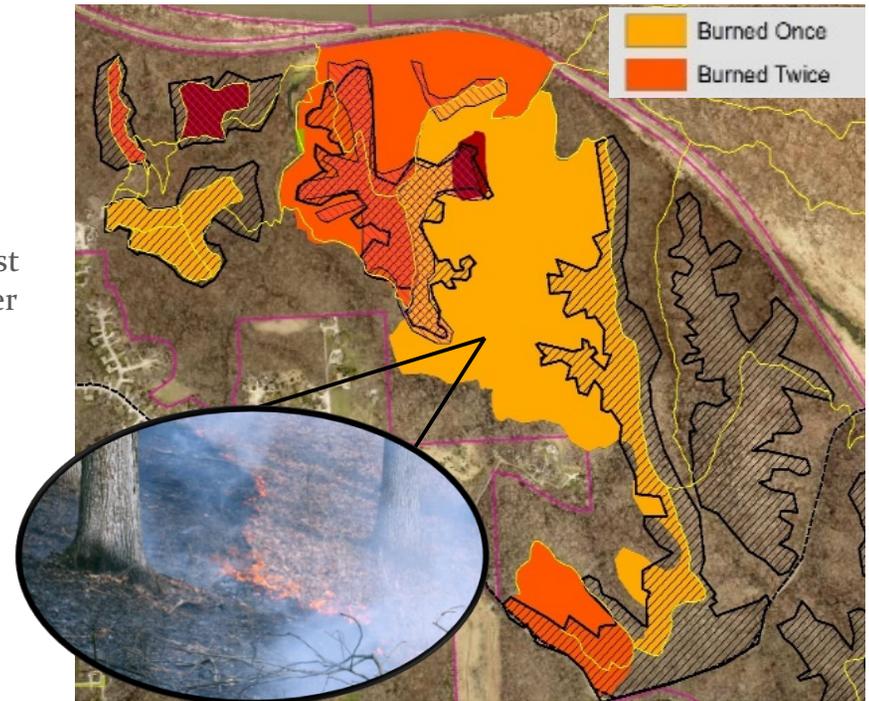


## What are the benefits of a healthy forest structure for oak tree regeneration?<sup>[1,3,4]</sup>

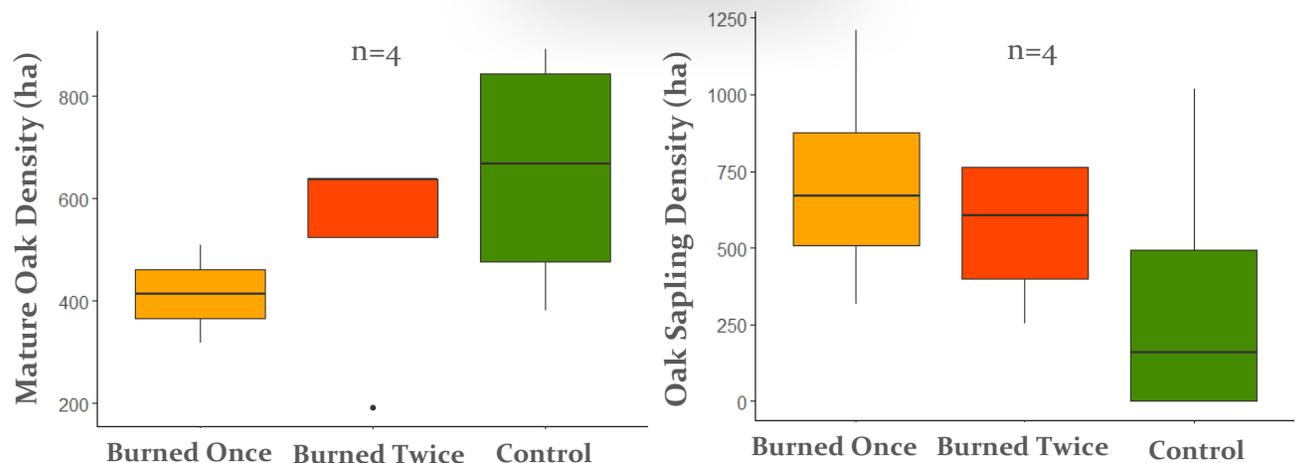
- Limits competition for resources
- Gives trees and ground-level vegetation adequate supply of sunlight for photosynthesis
- Reduces the dominance of invasive species
- Supports mammal populations by creating dwellings, providing access to resources, and allowing freedom of movement

## How important are prescribed burns in helping oak regeneration?<sup>[1,3,4]</sup>

- Eliminate litter on the forest floor, allowing acorns better access to the soil.
- Remove fire-intolerant woody species that can outcompete baby oaks in the absence of fire.
- Open up the forest canopy allowing sunlight to reach baby oak seedlings



## Where do we see oak tree regeneration in Fontenelle Forest?



Fontenelle Forest incorporates a vast array of management practices outside of prescribed fires. Each section sampled may have also been subject to practices such as litter removal, tree felling, removal of invasive species etc.