

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?^[1,2,3]

- 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

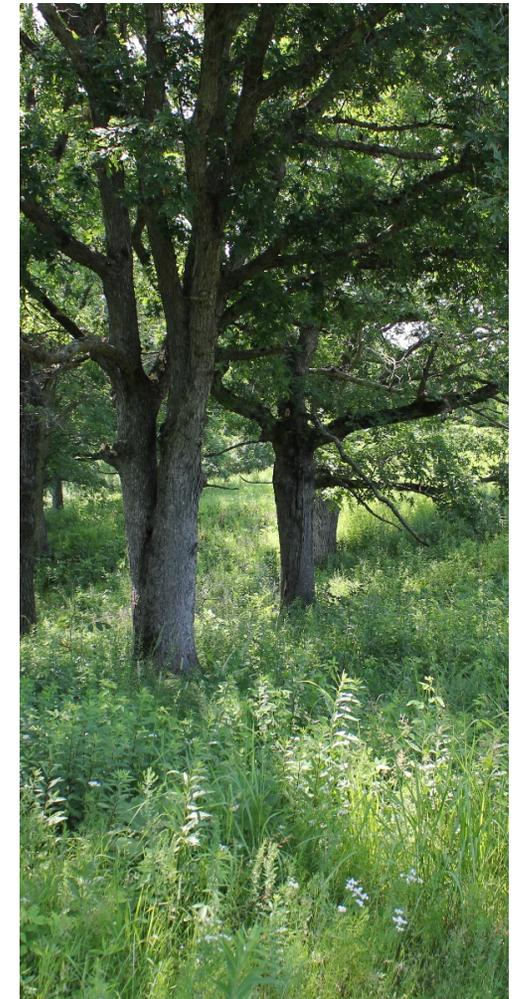
4Forest structure and woody plant species composition along a fire chronosequence in mixed pine-oak forest in the Sierra Madre Oriental, Northeast Mexico

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?^[1,3,4]

Answer: **Baby Oak Saplings**

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

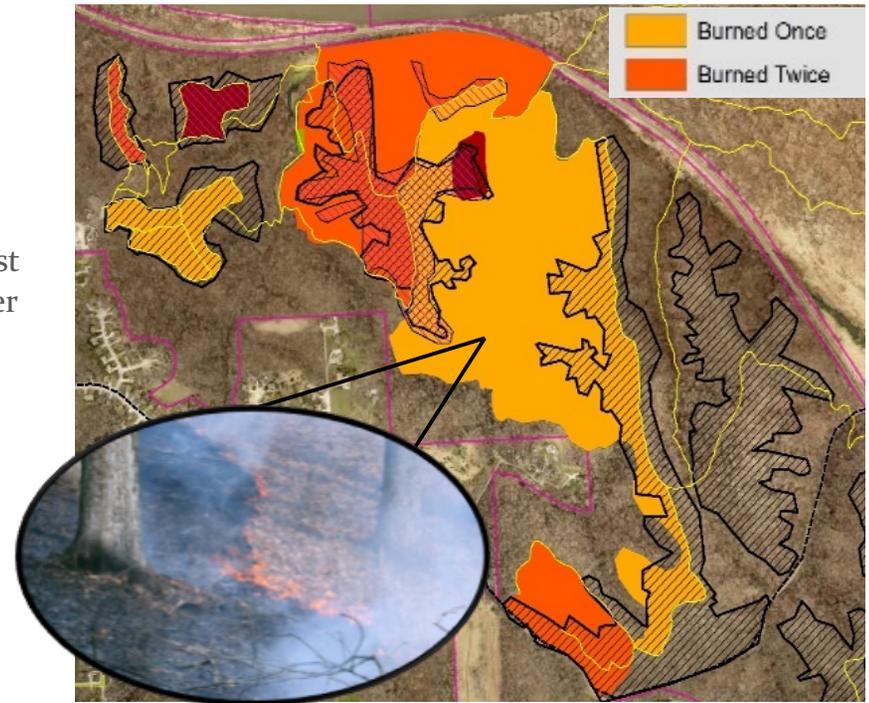


What are the benefits of a healthy forest structure for oak tree regeneration?^[1,3,4]

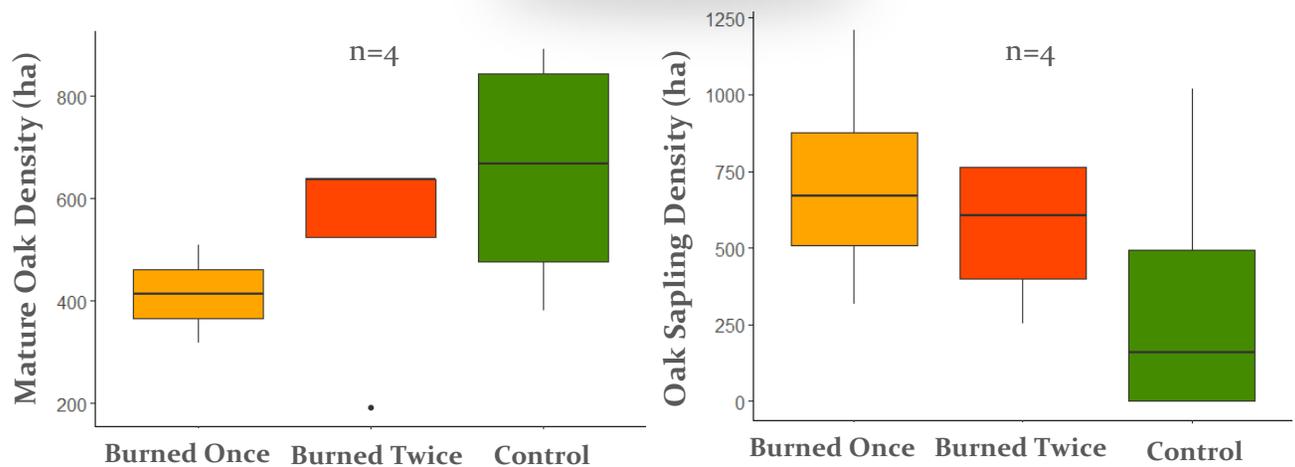
- Limits competition for resources
- Gives trees and ground-level vegetation adequate supply of sunlight for photosynthesis
- Reduces the dominance of invasive species
- Supports mammal populations by creating dwellings, providing access to resources, and allowing freedom of movement

How important are prescribed burns in helping oak regeneration?^[1,3,4]

- 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.