

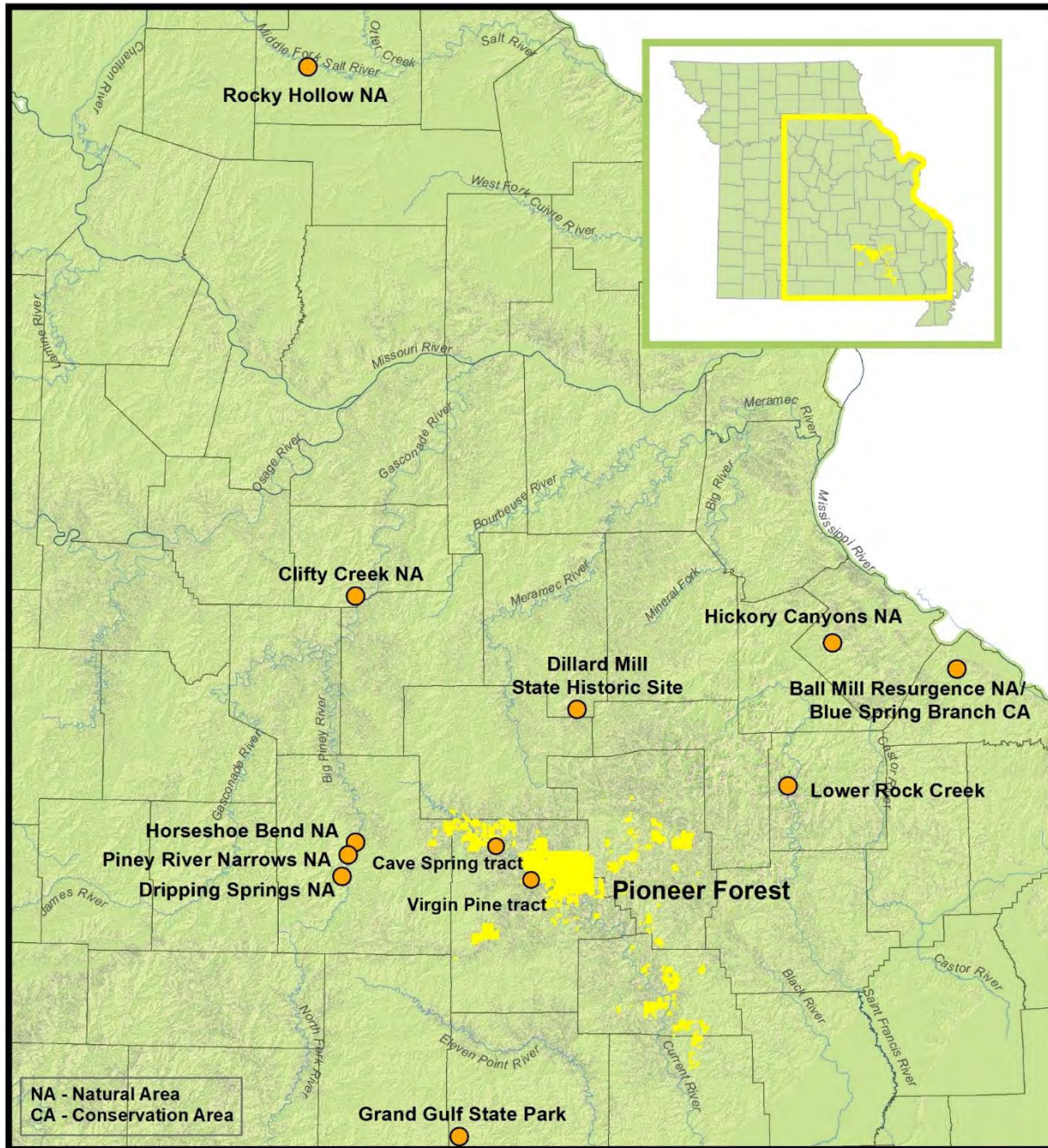
Shortleaf Pine-Oak Woodland Restoration Pioneer Forest, the First 10 Years

5th Biennial Shortleaf Pine Conference

October 1-3, 2019

Van Buren, Missouri





L-A-D Foundation Pioneer Forest

Leo Drey, Founder

140,000 acres

**Uneven Aged, Single Tree Selection
Sustainable Harvest in Hardwoods**

12 Missouri Natural Areas





Virgin Pine Area History

**Old-growth shortleaf date to the 1780s. (230 years old)
Cutting of Old-growth pine started in 1946, 1000 seed trees saved.**

Virgin Pine Area, 42 acres, protected from cutting.

Wildfire in 1953 with good pine and scarlet oak establishment, then fire suppression.

Red-cockaded woodpeckers were last seen in Missouri here in 1962.

Shortleaf Pine-Oak Woodland Ecological Management Area



**Goals:
Ecosystem Restoration.**

Protect Old-Growth trees.

**Manage existing hardwoods
to harvest.**

**Natural shortleaf pine
regeneration.**

700 acres in size currently.

Duff Accumulation under Old-Growth Shortleaf



Duff Mop-Up Guide for firefighter:

Don't Dig!!!

Uncover Only What's Burning.

Feel for Heat.

Flood Hot Spots with Water.

Every Tree Checked?

Recheck Until Out Cold!!!

First Prescribed Burns on Pioneer Forest



Cultural shift to using fire.

Cool, patchy coverage, fuel reduction burns initiated 2009.



January RX Burn

Backing fire on south facing slope.
Snow on north facing slopes.

Commercial Harvest of Fire-sensitive Trees



With six decades of fire exclusion two species dominate the canopy, scarlet oak and shortleaf pine. Fire damaged trees are salvaged and stands are thinned, increasing fuel loads on the ground.



Pine seedling establishment in 2014.

More than 400 seedling per square meter in places, following an early March burn.

Left photo, 2018.



**Pine seedlings
five years after
establishment.**

**Right: Pine resprouting
after January burn.**

Left: Unburned patch.



Unit: Randolph SW

**Four burns in eight years.
No hardwood removal.
Understory thinning
prior to fire.
80-120 square foot ba.
Conservative flora has
positive response.**



Unit: Randolph 1

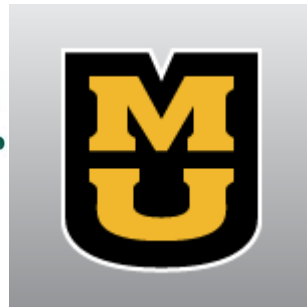
**Four burns in 11 years.
Hardwood removal.
2-7" DBH removal.
130 ba to 20-70 ba.
6 year old pines.
Nesting prairie
warblers and yellow
breasted chats.**

Biological Response



Critical habitat for 12 priority birds, 500 plant species, pine regeneration.

Partners



UNIVERSITY OF WISCONSIN
PLATTEVILLE

Colorado
State
University

Missouri
Tree-Ring
Laboratory



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