

Dry Oak Forest Fire Monitoring

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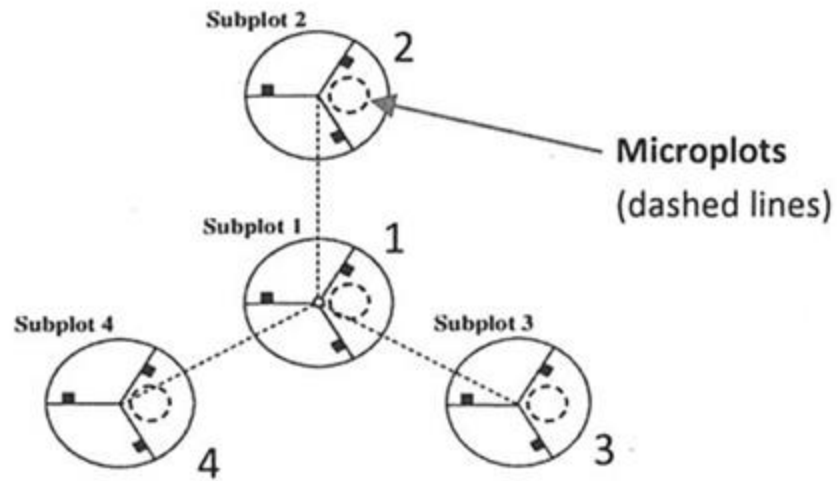


Vermont Center for Ecostudies advances conservation of wildlife across the Americas through research, monitoring, and citizen engagement. We deliver the science people need to make good decisions for wildlife.



Dry Oak Forests-S3





- 1- Monitor complementary variables
- 2- Identify which best track change
- 3- Compare tech to traditional field methods

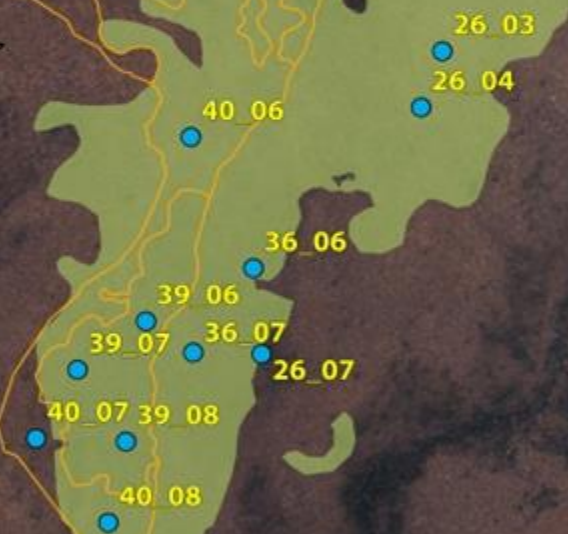


Geat Ledge Natural Area The Nature Conservancy

The Dome Green Mountain National Forest

Legend

- Dry Oak Forest (S3)
- Great Ledge Natural Area
- Dome Landscape Burn Stands
- Great Ledge FIA Plots
- Dome FIA Plots



1 inch = 0.14 miles



Managing to maintain an Oak dominated system under mesophication

Decrease in interfering and mesophytic vegetation:

Increase competitiveness of oak species and associated fire-adapted vegetation

May Fire

Decrease Fuel Loading 30-50%

Remove 1-3" of duff

Top-kill 70-80% saplings







FIA Phase 3+

Slope

Canopy Openness

Litter/Duff Layer

Forest Floor Cover Class

Coarse/Fine Woody Debris

Tree Species, Density, DBH

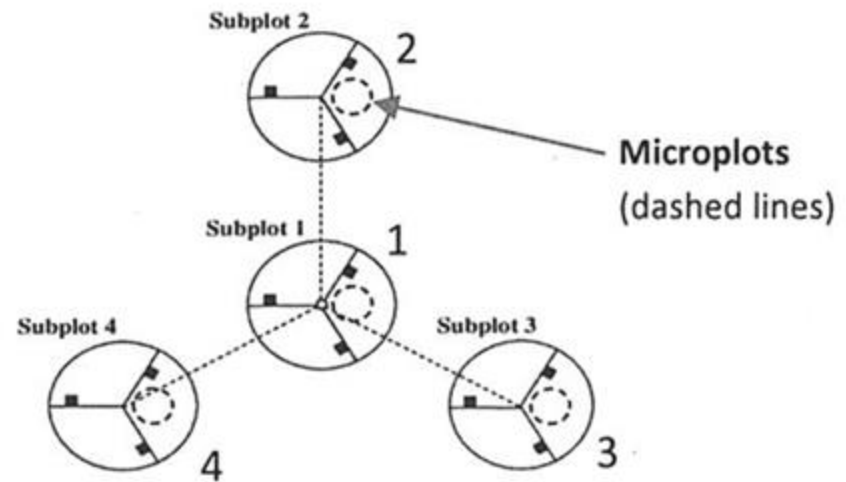
Seeding/Sapling Richness and Density by Size Class

Line Intercept Shrub Richness, Density, Height and Herbivory

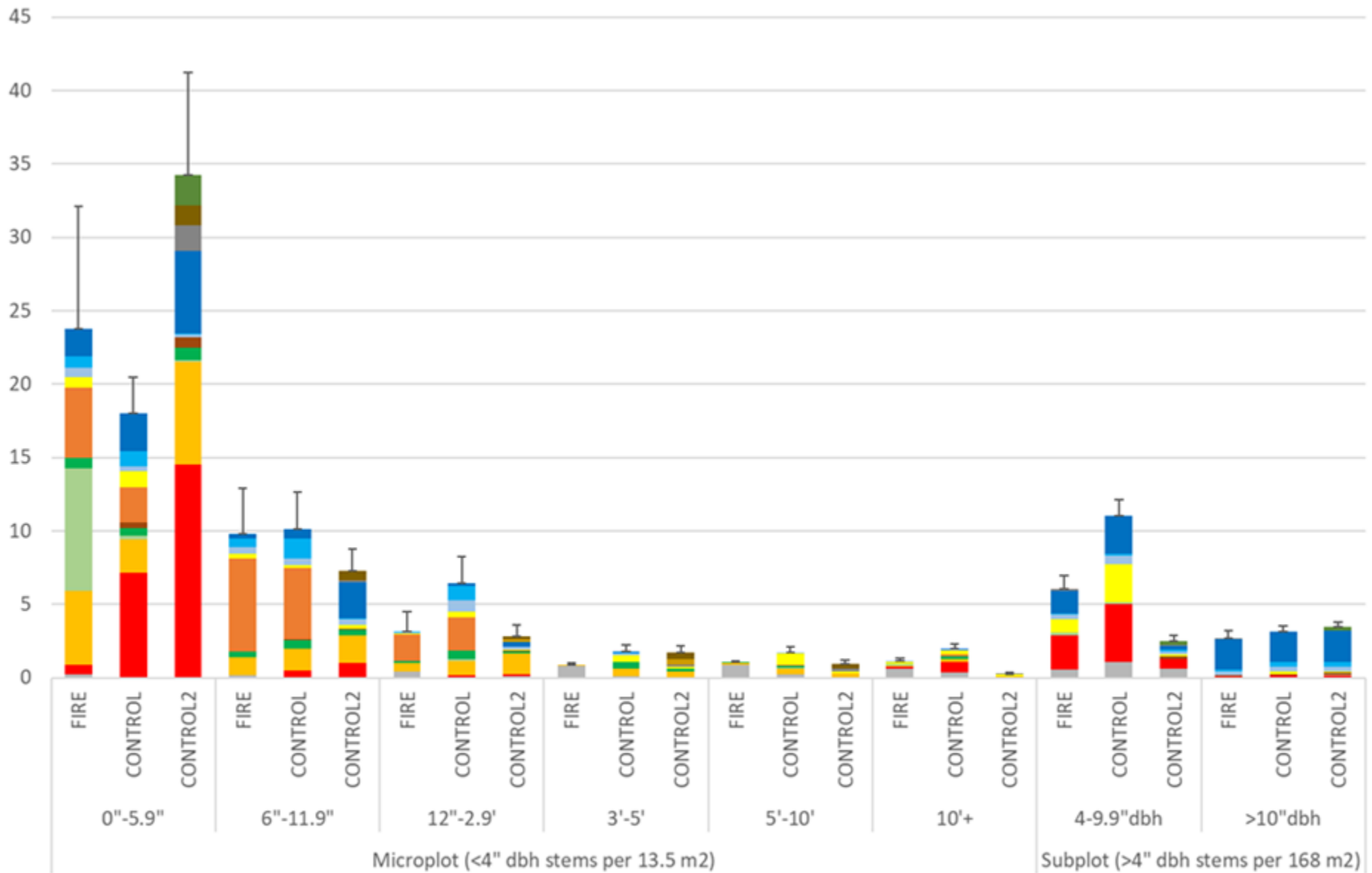
Vegetation Height

Non-Native Plants

Herbaceous Richness, Density, Cover

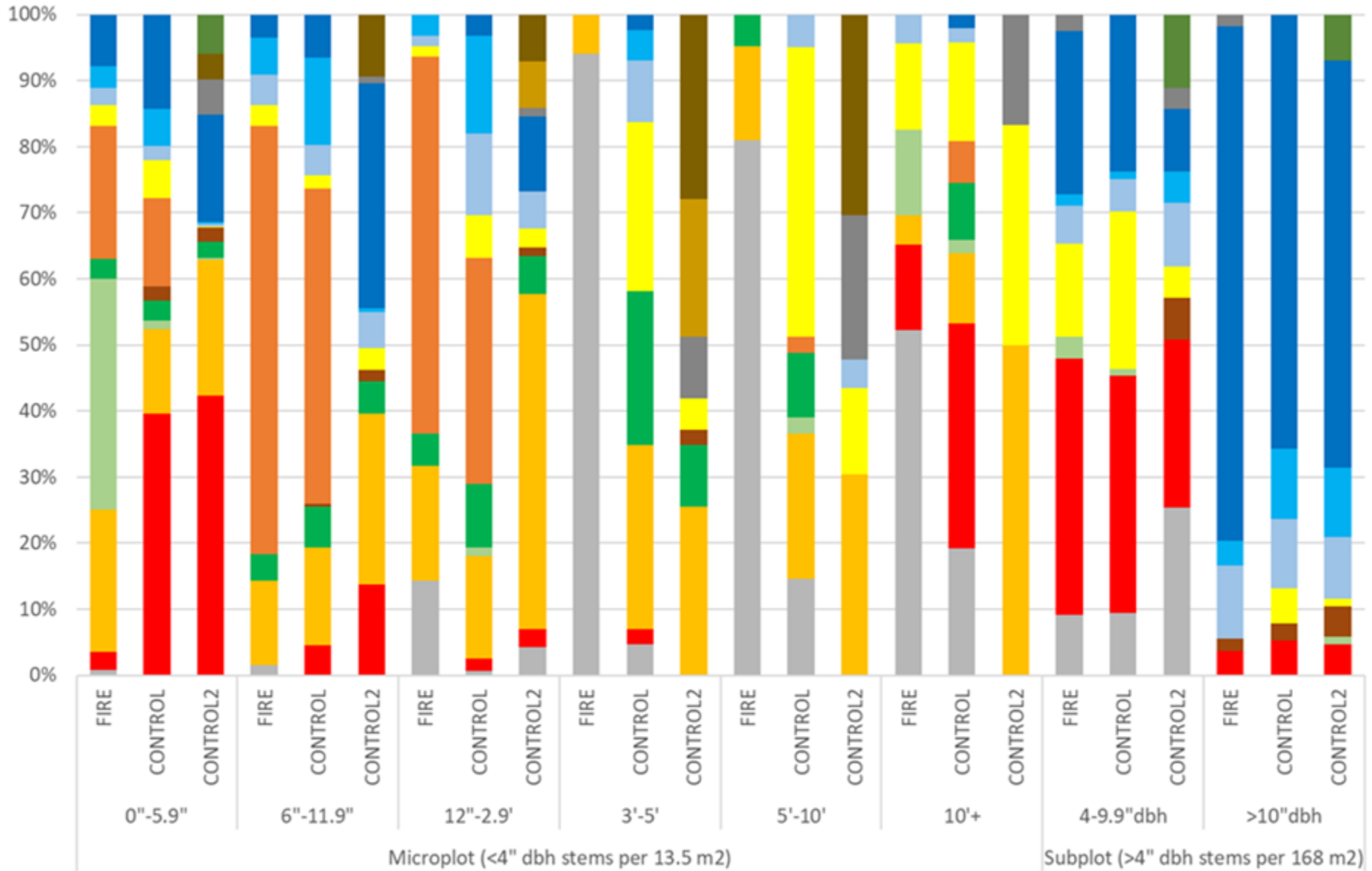


Stem Density and Species Composition of Tree Species by Size Class



- Dead
- Acer rubrum
- Amelanchier sp.
- Betula lenta
- Hamamelis virginiana
- Pinus strobus
- Sassafras albidum
- Fagus grandifolia
- Quercus alba
- Quercus prinus
- Quercus rubra
- Ostrya virginiana
- Populus grandidentata
- Acer pensylvanicum
- Tsuga canadensis

% Composition of Tree Species by Size Class



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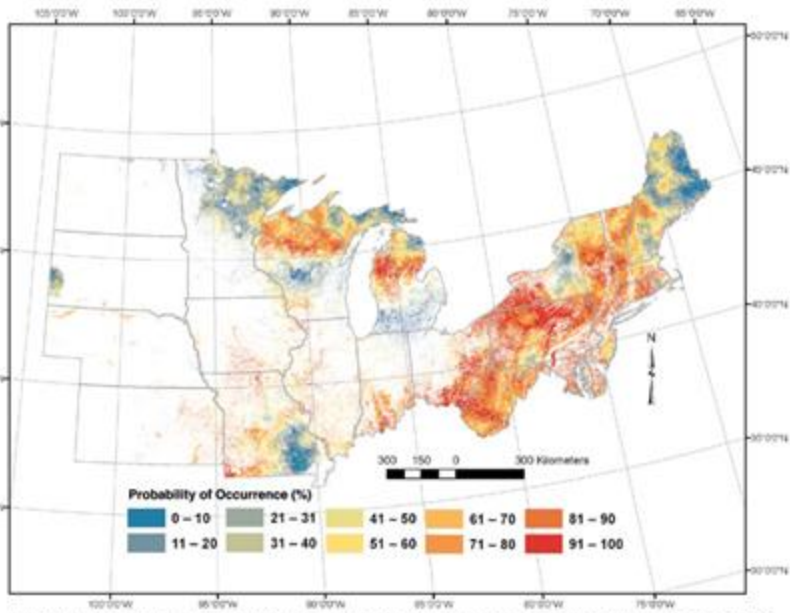
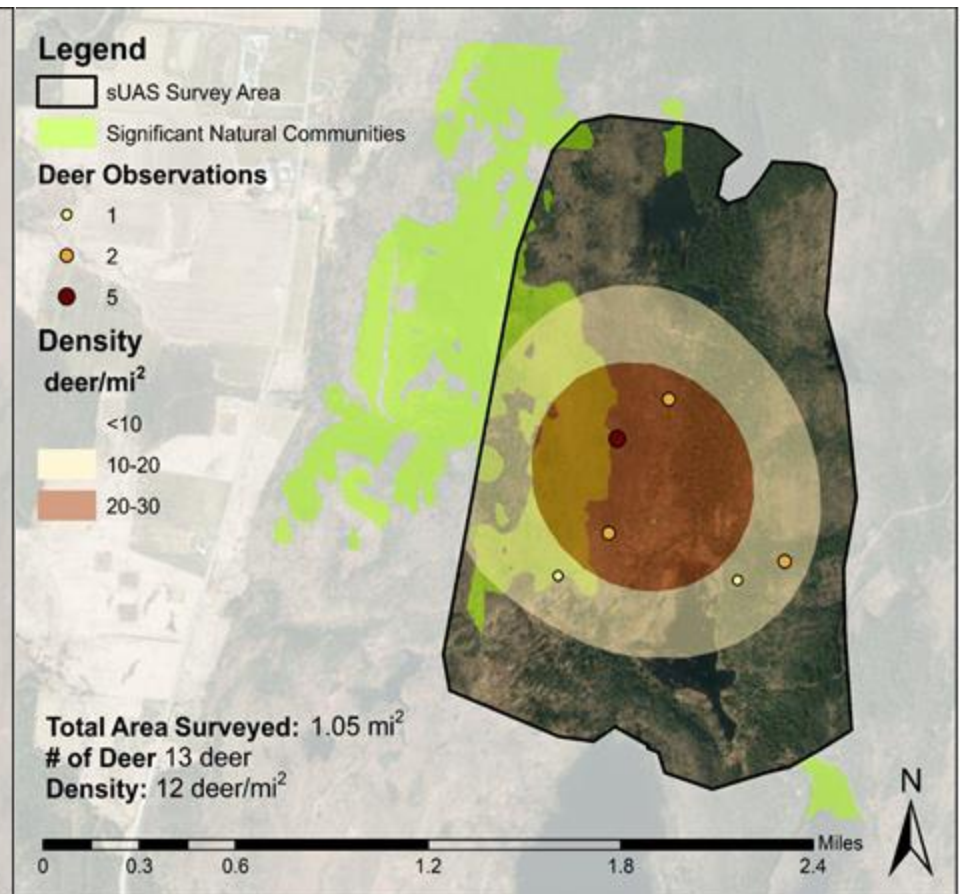
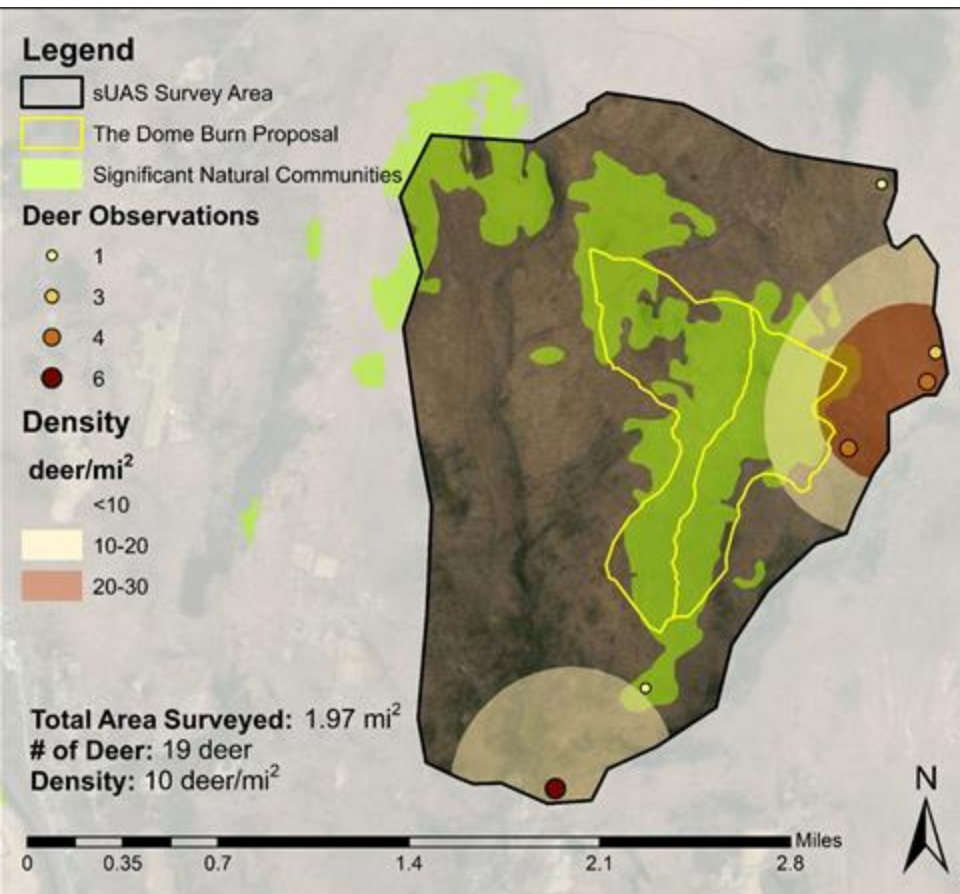


Figure 9.—Probability of occurrence for moderate or high ungulate browse impacts on forest land, Midwest and Northeast, 2017.

McWilliams et al. 2018





+

**Burn Intensity
Leaf Litter
Sapling Mortality
Invasives**



+/-

**Shrub and Seedling
Response
Rare Plant Response**

-

**Duff Layer
Deer Density**



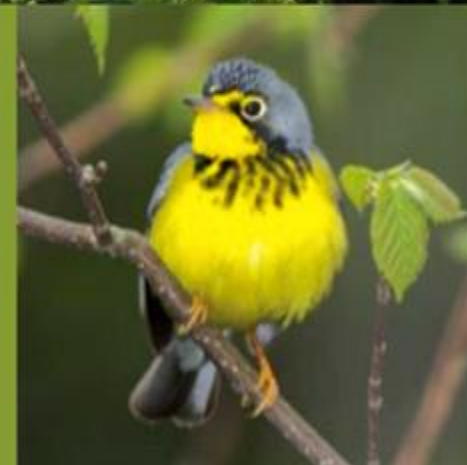


Castanea dentata (S3)
Isotria verticilata (S2)
Sassafras albidum (S3)
Uvularia perfoliata (S2)

Castanea
Lysimachia
Rhododendron
Vaccinium
Viola



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