

# Fire, Forests and Fungi: Exploring the Condition of Our Ecosystems



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# THANK YOU

yes I am yelling

# What I do-at least at work

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Founder and co-lead of the Conservation Data Lab

<https://landfire.gov/>

<https://conservationdatalab.org/>



# Our next hour+ together

Fungi

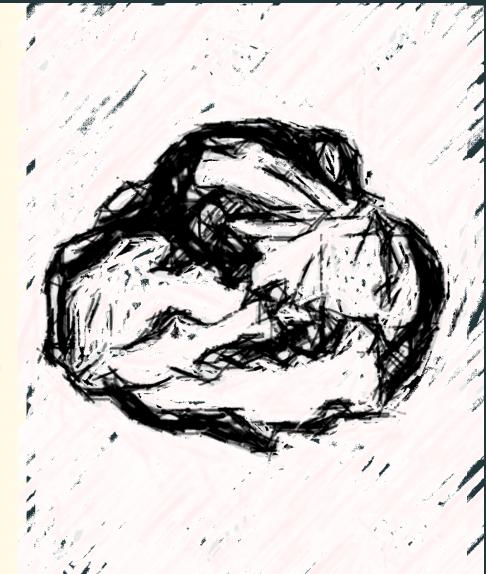
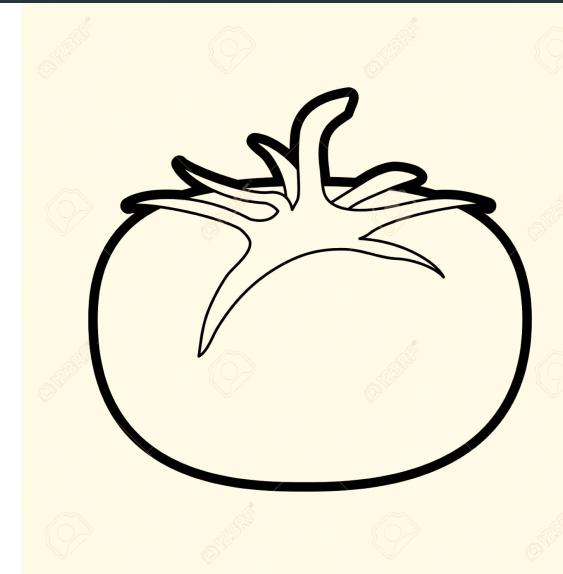
Tomato Condition Class (TCC)

Vegetation Departure

Fire

Testing your knowledge with trivia!

# Tomato Departure



What is the condition of my tomato inventory?

# Canned Tomatoes

Paste (few)

Sauce (quite a few)

Diced (quite a few)

Whole (a lot)

Organic, free-range, cruelty-free fire-roasted (even more)

# Fresh tomatoes

Romas (few)

Beefsteak (quite a few)

Cherry (quite a few)

Heirloom Brandywine (a lot)

# Dried tomatoes

Home dehydrated (few)

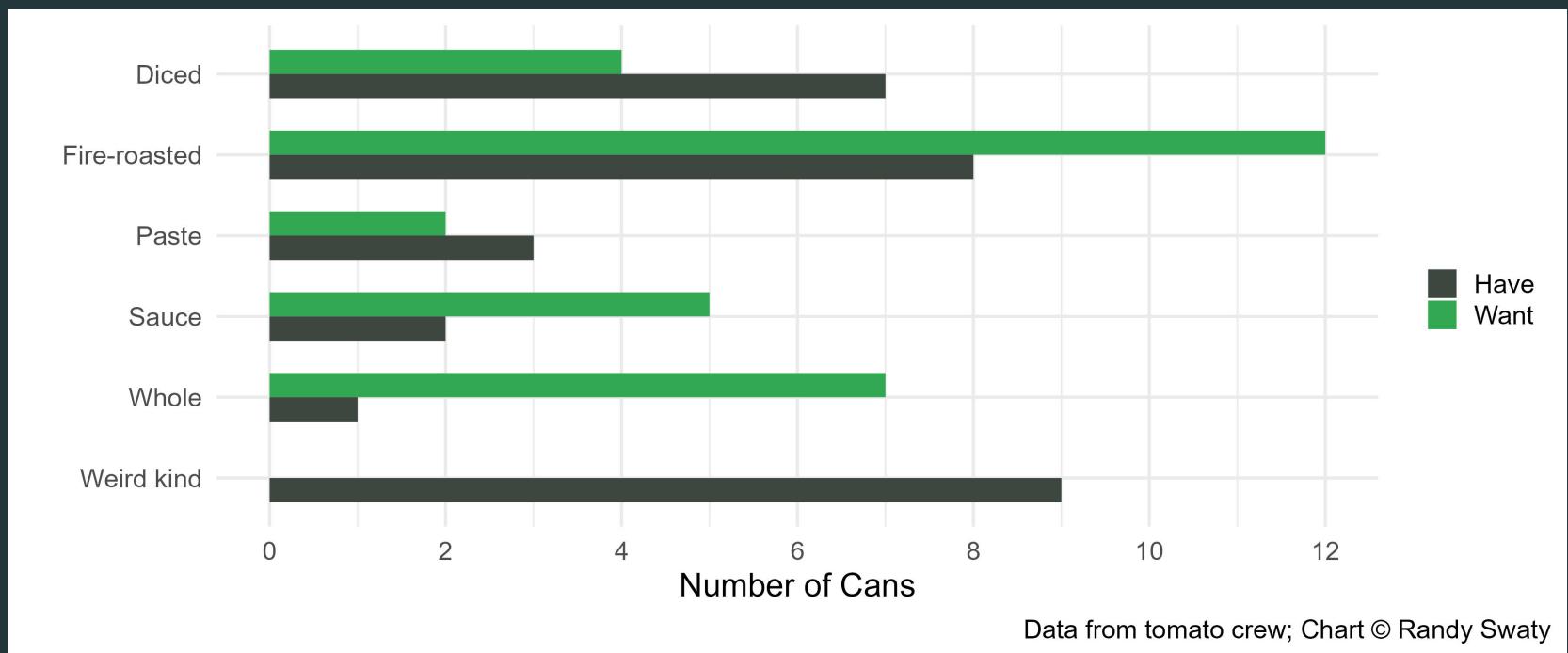
Sun dried (quite a few)

What do we do now that we know what we want?

# Canned Tomatoes: what we want vs. what we have

Canned.tomato.type	What.I.want	What.I.have
Paste	2	3
Sauce	5	2
Diced	4	7
Whole	7	1
Fire-roasted	12	8
Weird kind	0	9

# Canned Tomatoes: what we want vs. what we have



# Calculate Tomato Departure

Canned.tomato.type	What.I.want	What.I.have	Least
Paste	2	3	2
Sauce	5	2	2
Diced	4	7	4
Whole	7	1	1
Fire-roasted	12	8	8
Weird kind	0	9	0
<b>SUMS</b>	<b>30</b>		<b>17</b>

Tomato Departure = 30 - 17 = 13

# My Tomato Departure

Compares what we have to what we want

Uses math to do this (i.e., calculate Tomato Departure)

I have 'moderate' Tomato Departure

We need fewer weird tomatoes, more fire-roasted and whole

# Time to translate

"Pantry"

Categories of tomato ( e.g., 'canned')

Types within a category (e.g., "sauce")

"What we want"

"What we have"

"Weird type"

*What are the ecosystem/landscape analogues?*

# Moving on to Ecosystem Condition



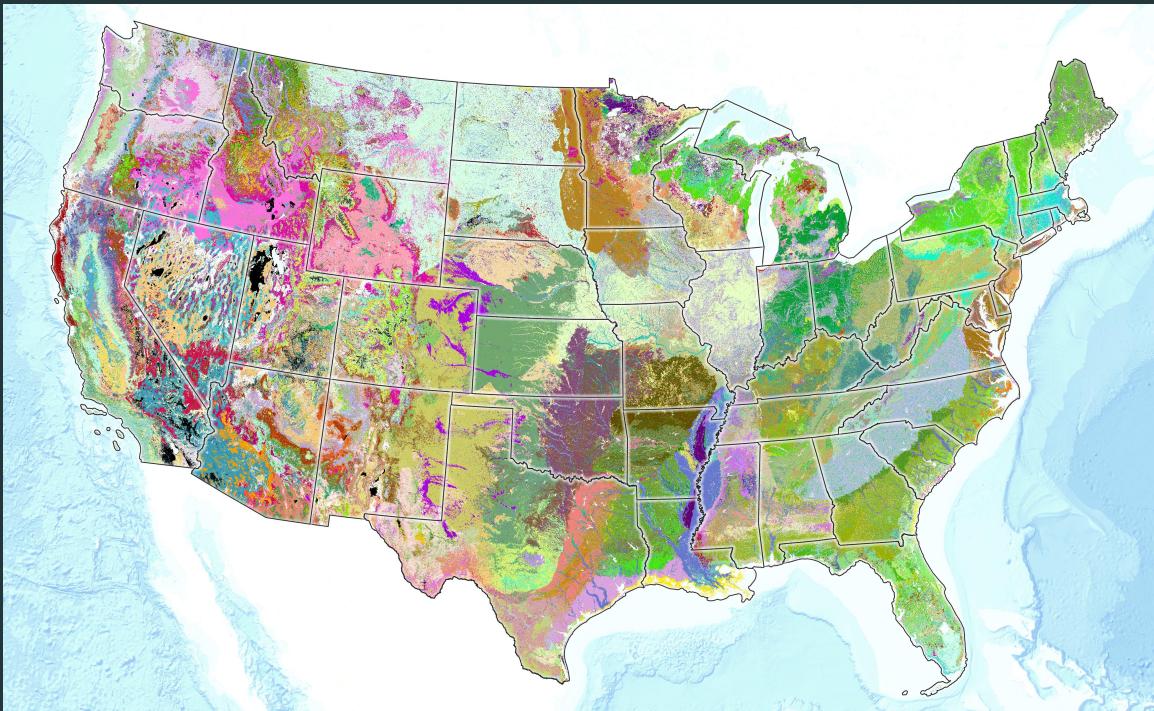
*We need ecosystem footprint and description,  
reference and current conditions*

# Enter TNC and LANDFIRE



*Mule Story, and what is this thing called 'LANDFIRE'*

# One of many LANDFIRE datasets



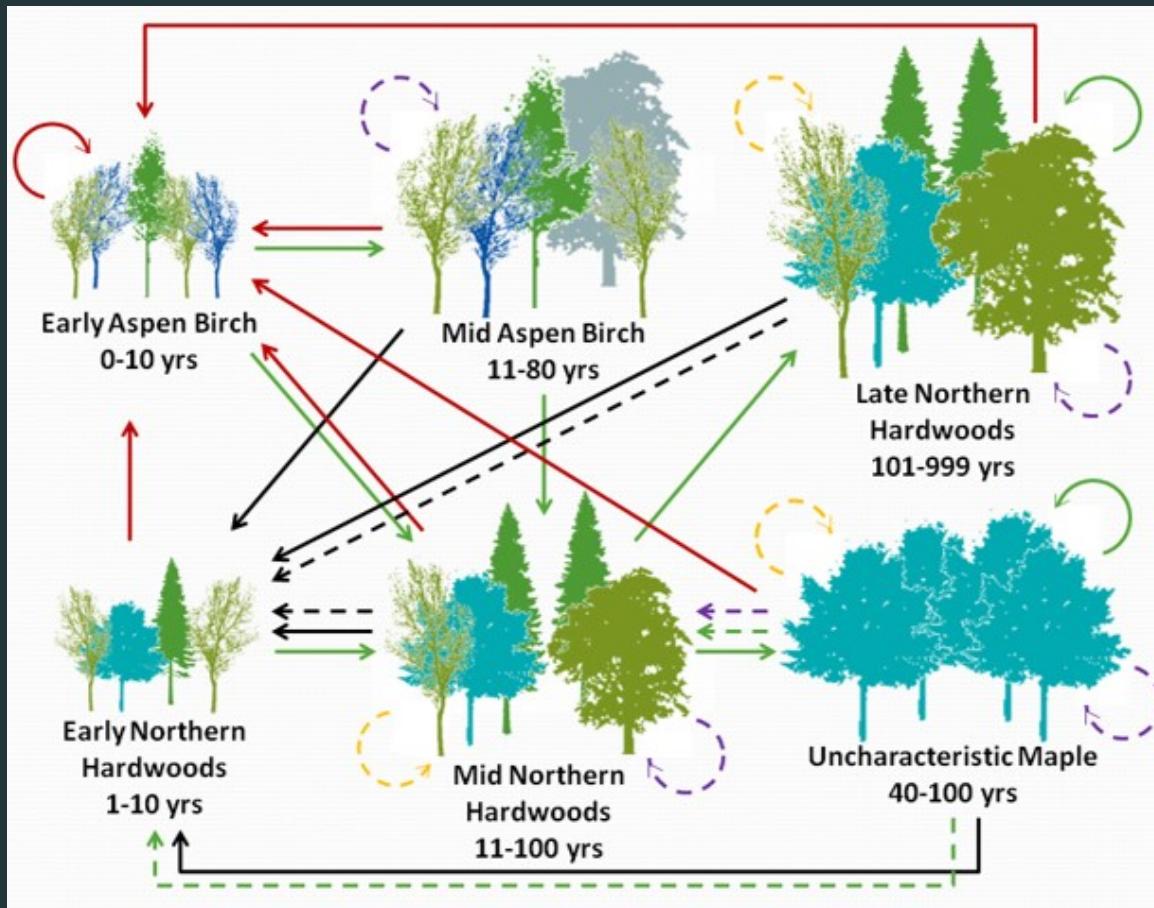
*Map of ~1,000 ecosystem footprints prior to European Colonization*

# Reference conditions collaboratively developed



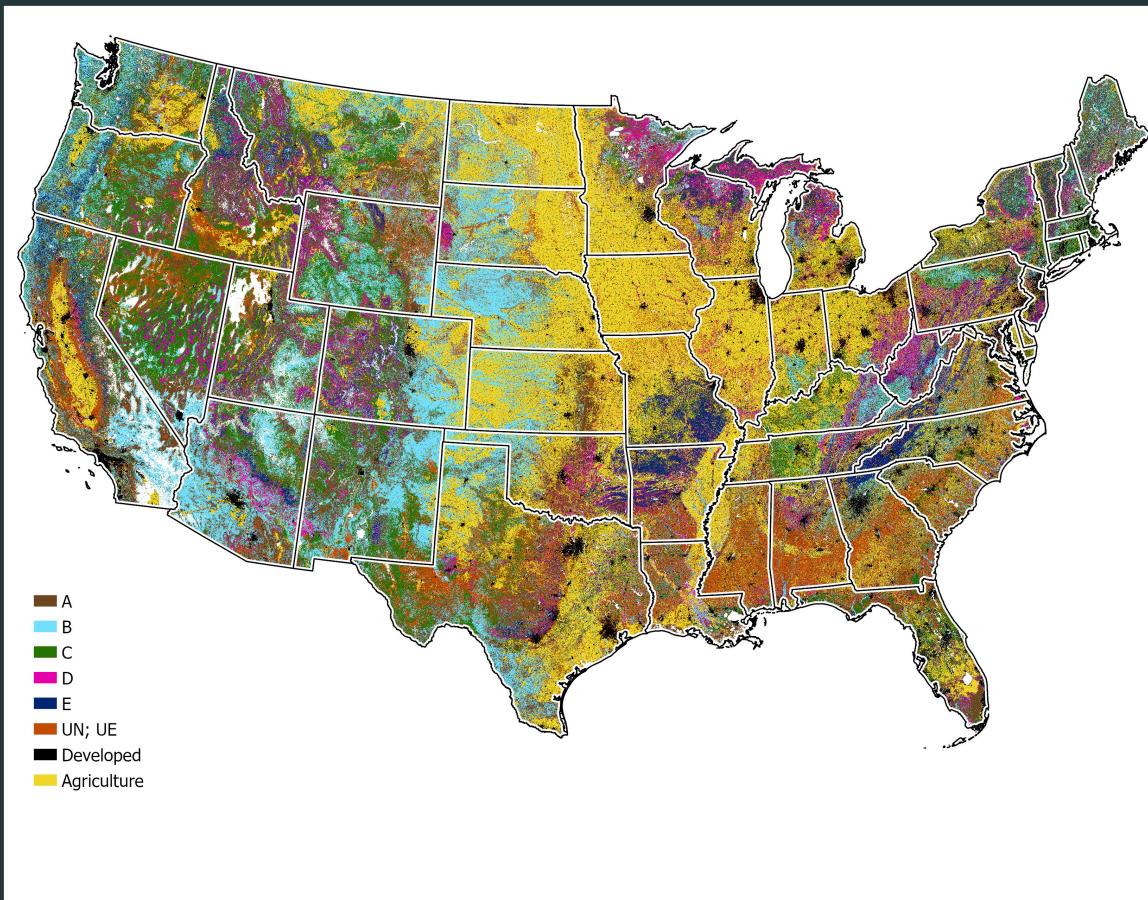
*Hundreds of experts, dozens of workshops and a big group hug*

# The models



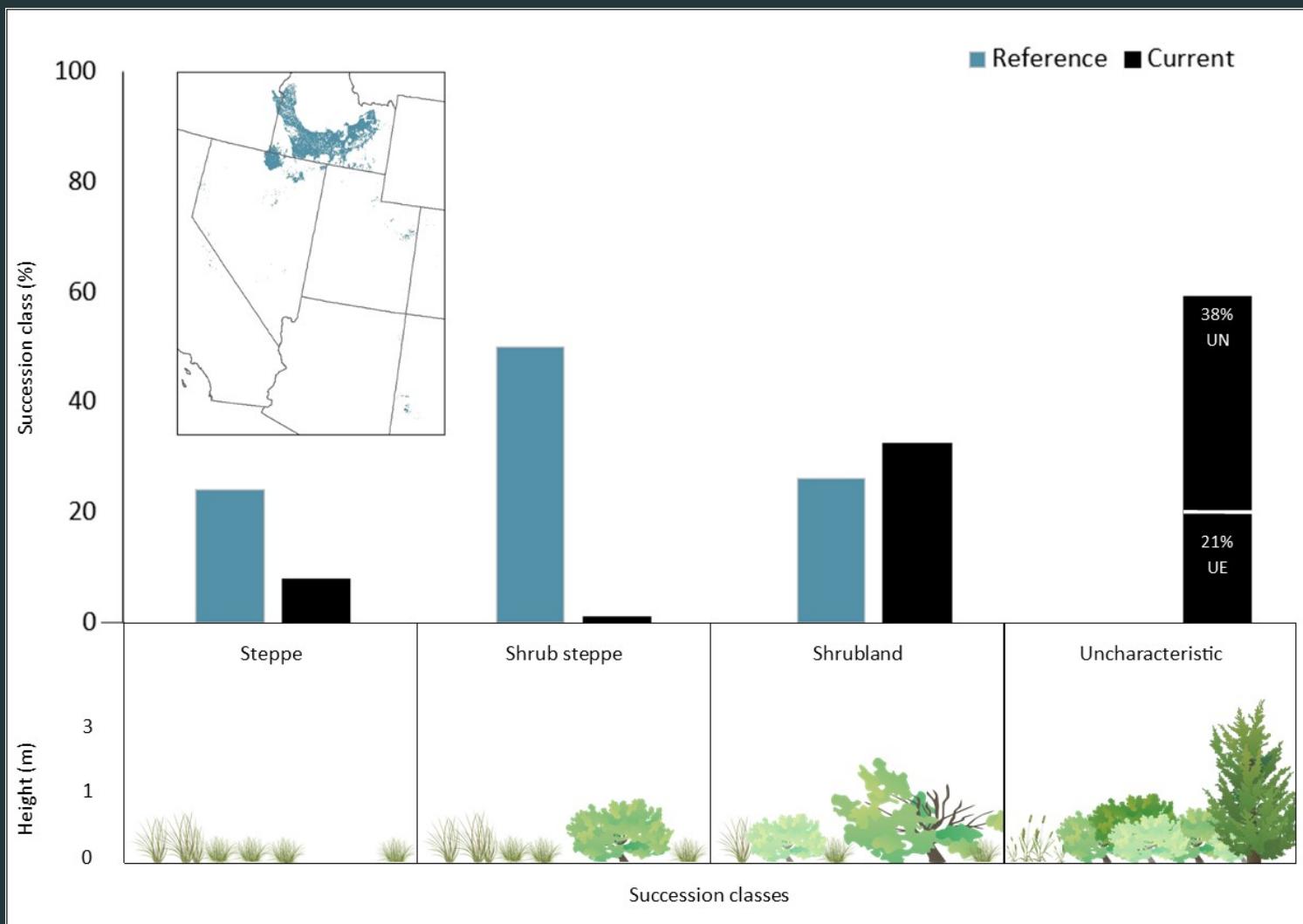
*How did our ecosystems look and work?*

# Mapping what is there today

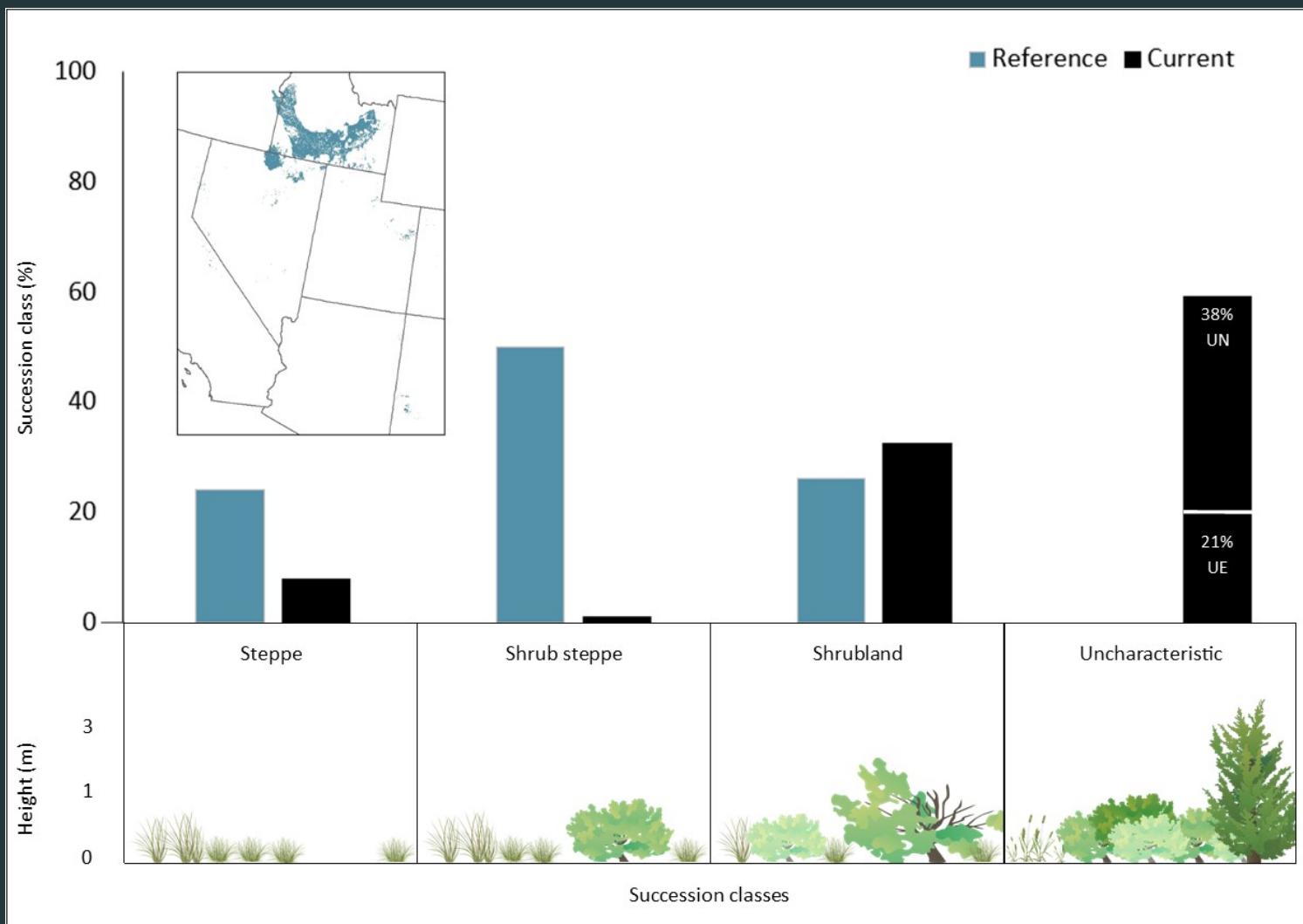


*Stack footprints and this map to get current percent  
of each succession class*

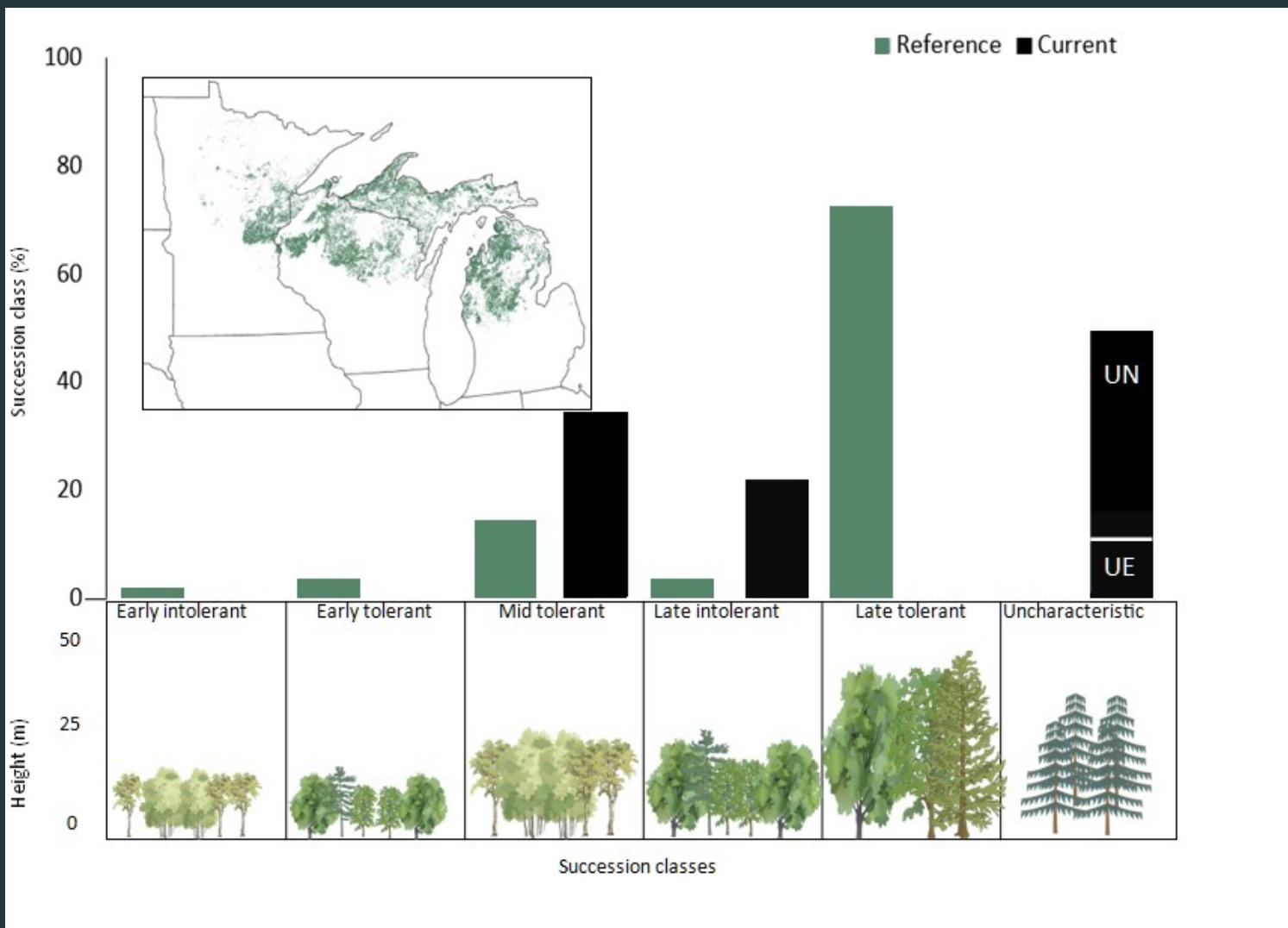
# Sage-steppe example



# Sage-steppe example



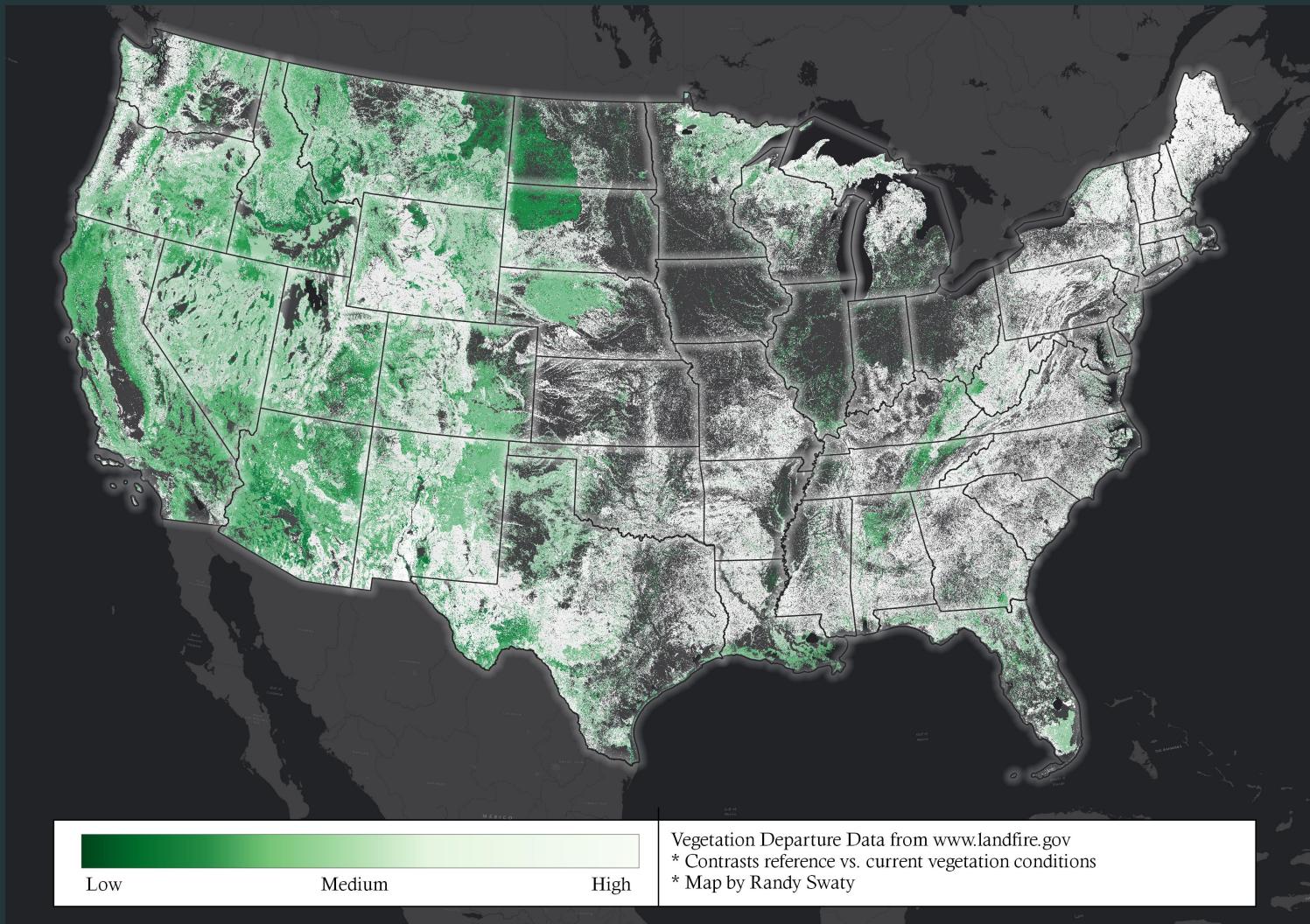
# Northern Hardwoods example



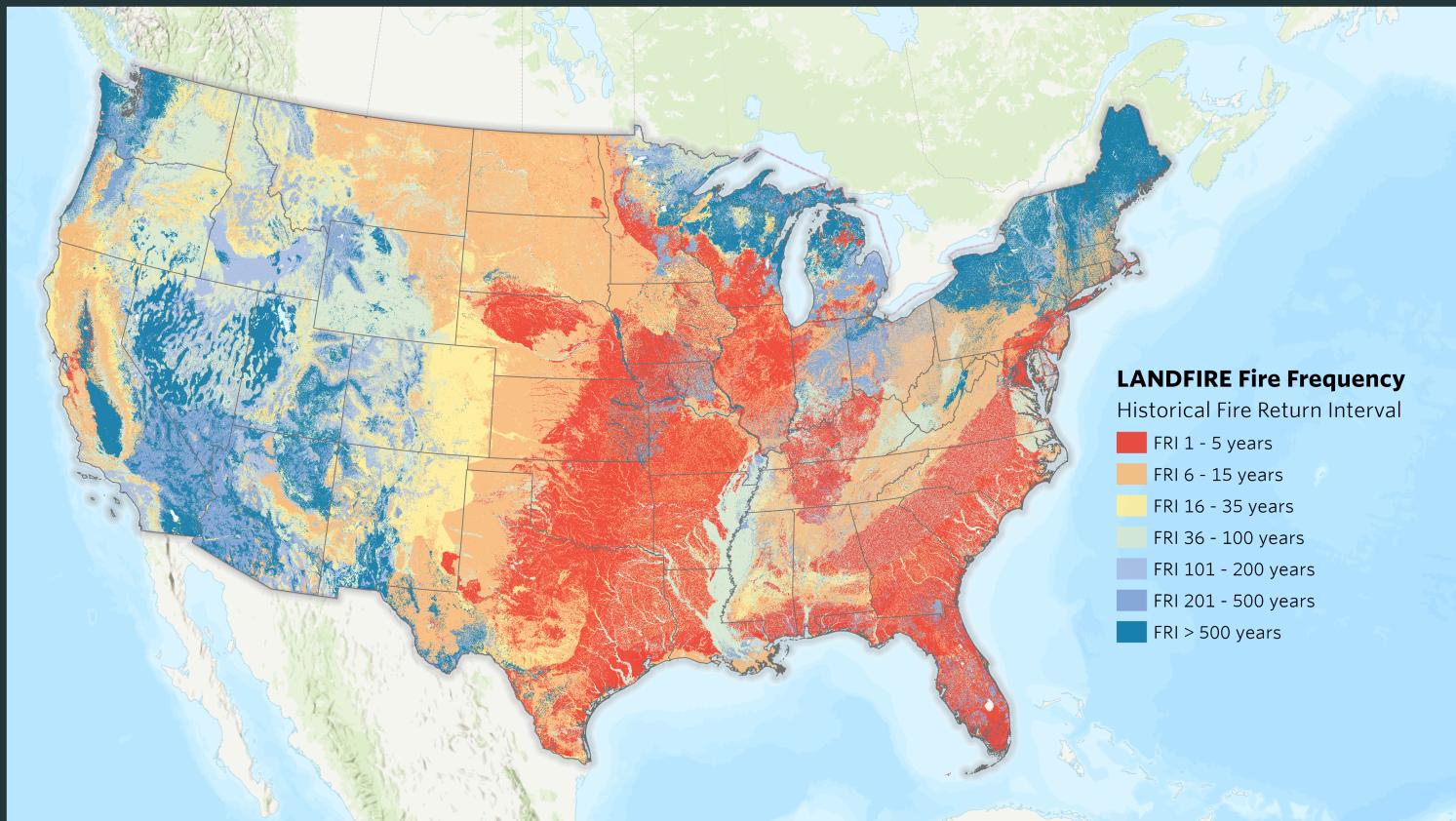
# Looking across the country



# Vegetation Departure



# Why the high Vegetation Departure?



*There was at least 180,000,000 acres of fire every year historically*

# Does it matter?



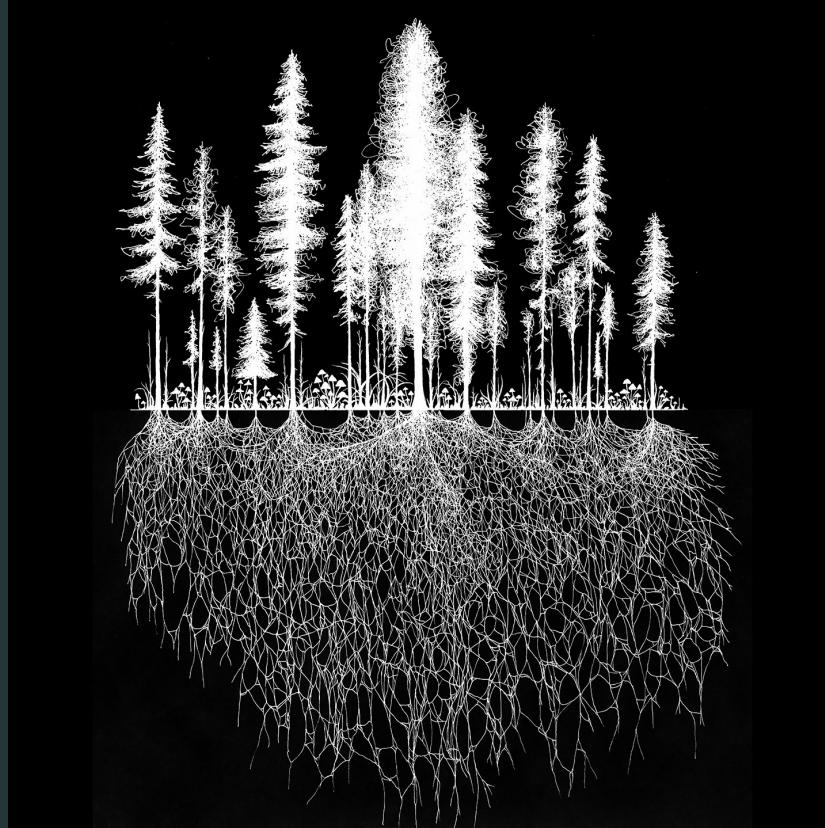
*Reference conditions may/may not = Desired Future  
Conditions, among other things*

Your very own "Departure-O-Meter". I found mine in Florida.



*More of a site-level approach!*

# Bringing it back



From <https://www.katieholten.com/emergenceforest>

# Trivia Time



THANK YOU!