

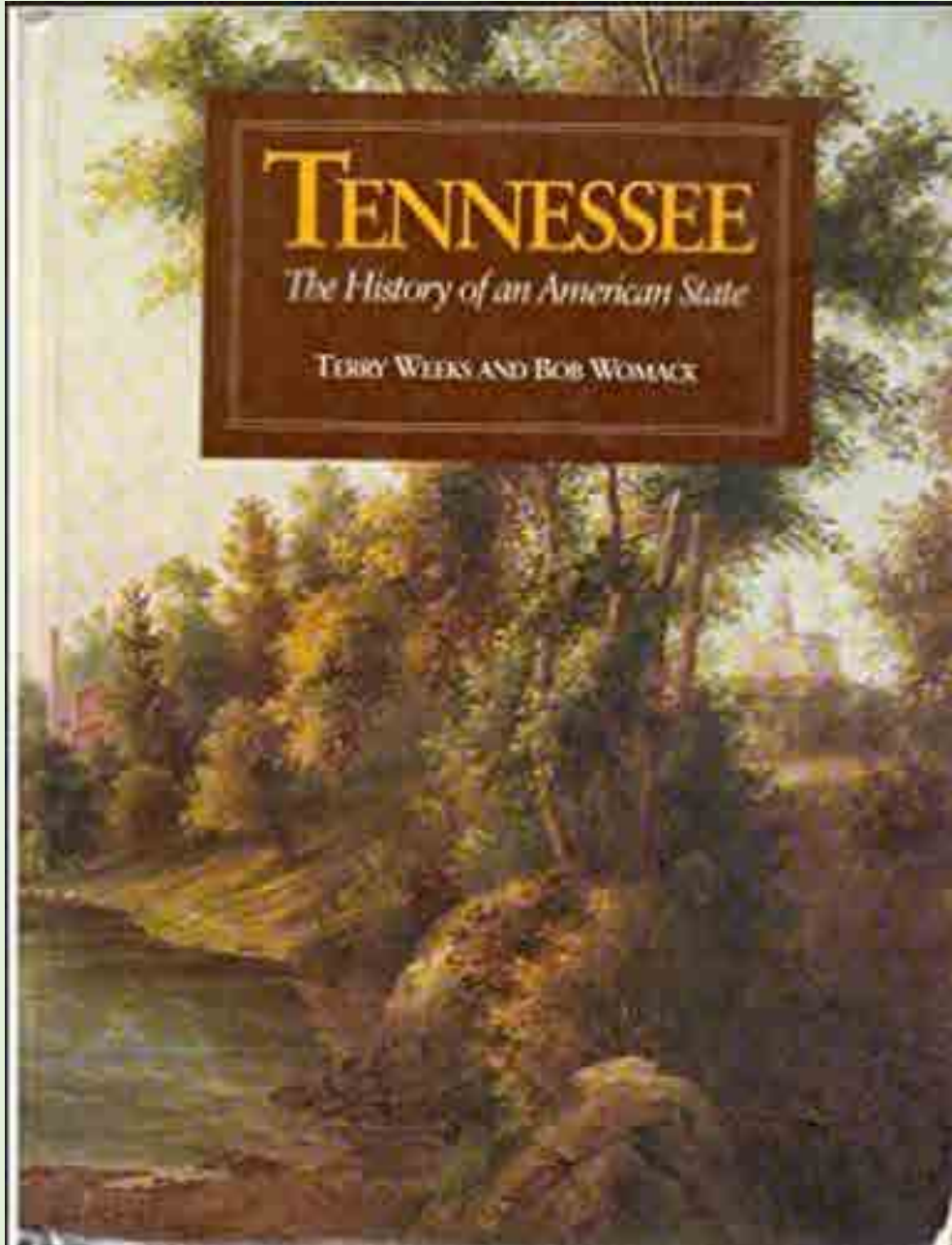
# The Southeastern Grasslands Initiative: Charting A New Course for Conservation in the 21<sup>st</sup> Century

Dwayne Estes, Theo Witsell, Reed Noss, Alan Weakley





# Tommy Johns & The Fabled Squirrel





# Tommy Never Talked About Grasslands



Pennyroyal Plain Tallgrass Prairie,  
Fort Campbell Army Base, Clarksville, TN

# The Forgotten Grasslands of the South



**52 species in 1 m<sup>2</sup>**

Florida Dry  
Park, FL  
Credit: Reed



Longleaf Pine Savanna  
Eastern NC  
Photo by: Reed Noss





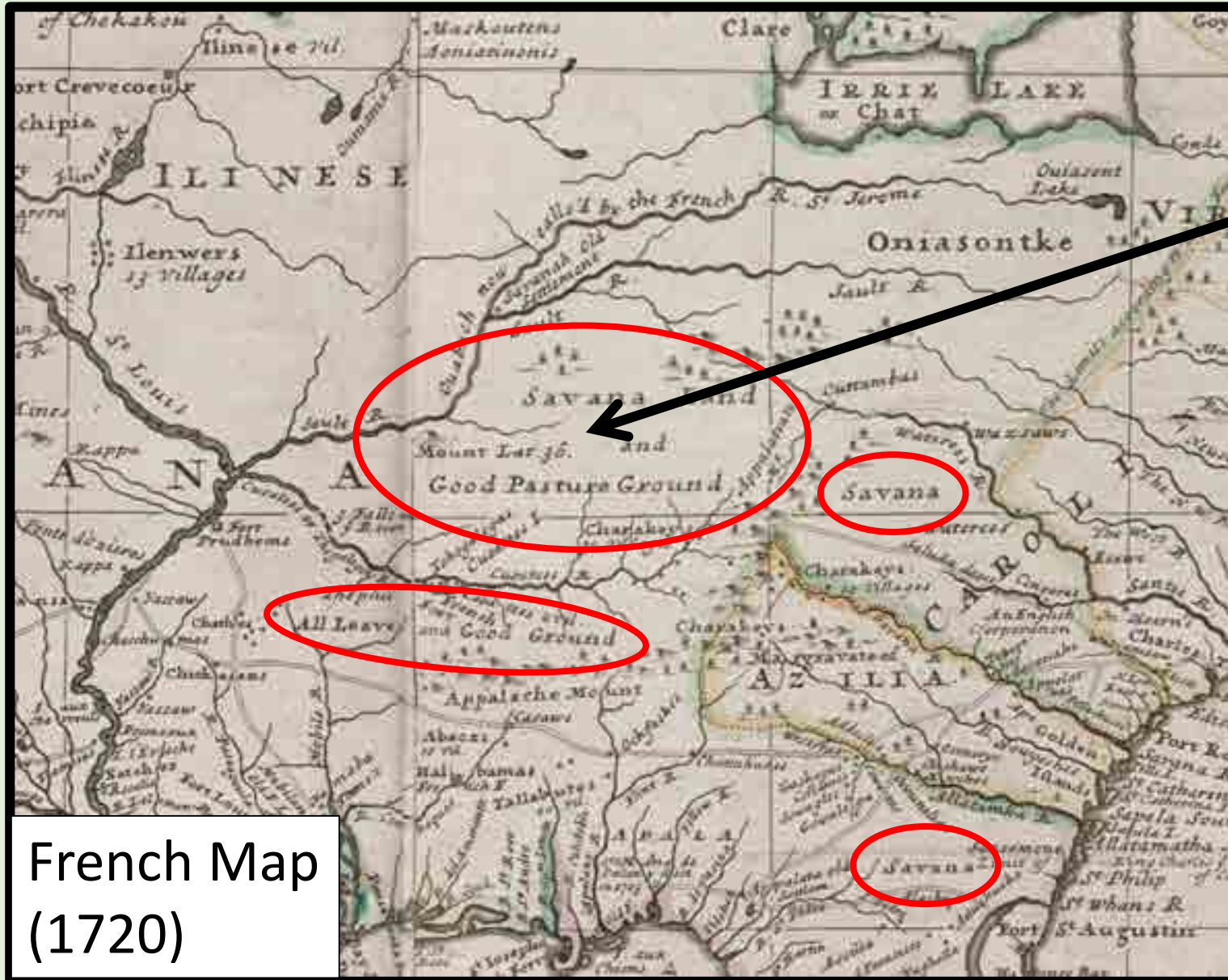
DeSelm & Murdock (1993)



Estes et al. (in prep.)  
– >100 million acres, 90% lost

How do we know Southeastern grasslands  
were so extensive?

# Historical Maps & Quotes

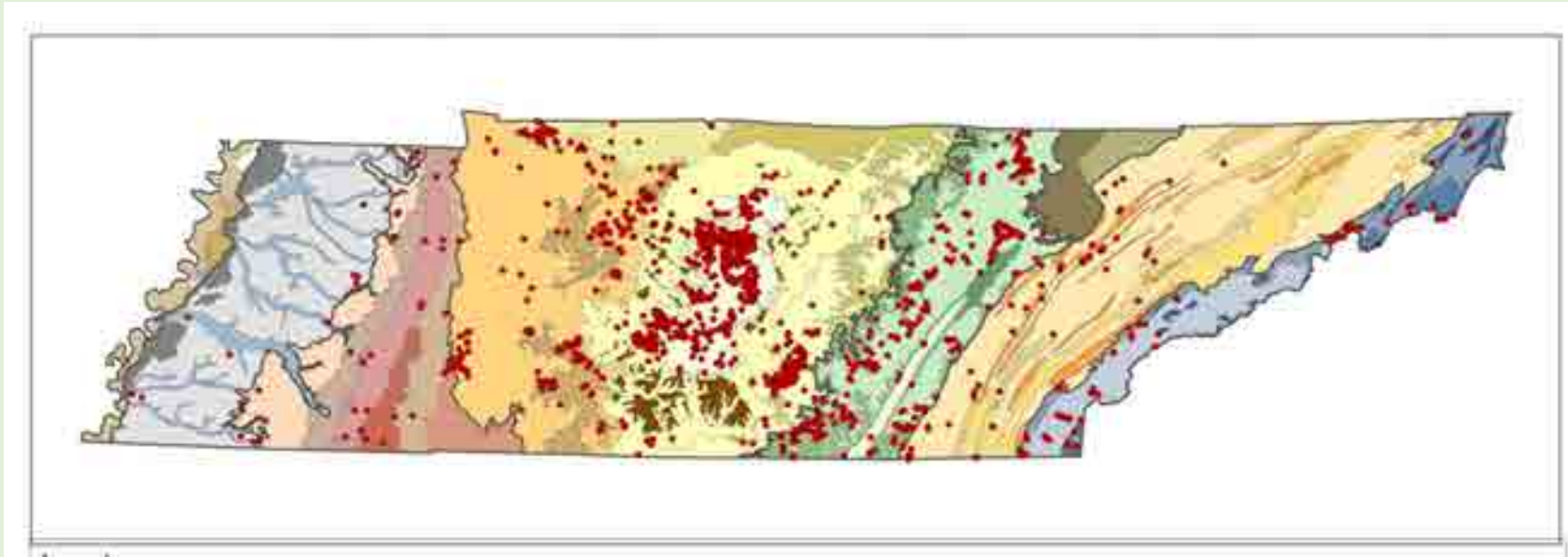


**Louis-Phillippe (1797),  
In south-central Kentucky**

“a high and dry plateau,  
where trees are sparse and  
grass and shrubs plentiful.  
One sees only small,  
stunted trees, most of  
them oaks and hickories,  
and everywhere lush grass  
dotted with charming  
flowers.”



# Records of Grassland-Dependent Species



Blackjack Oak



Schweinitz's  
Sunflower



Meadow Jumping  
Mouse



Henslow's  
Sparrow



Prairie Moth



Piedmont  
Prairie  
Burrowing  
Crayfish



# Grassland Remnants



**Powerline Prairie  
Van Buren Co., TN**



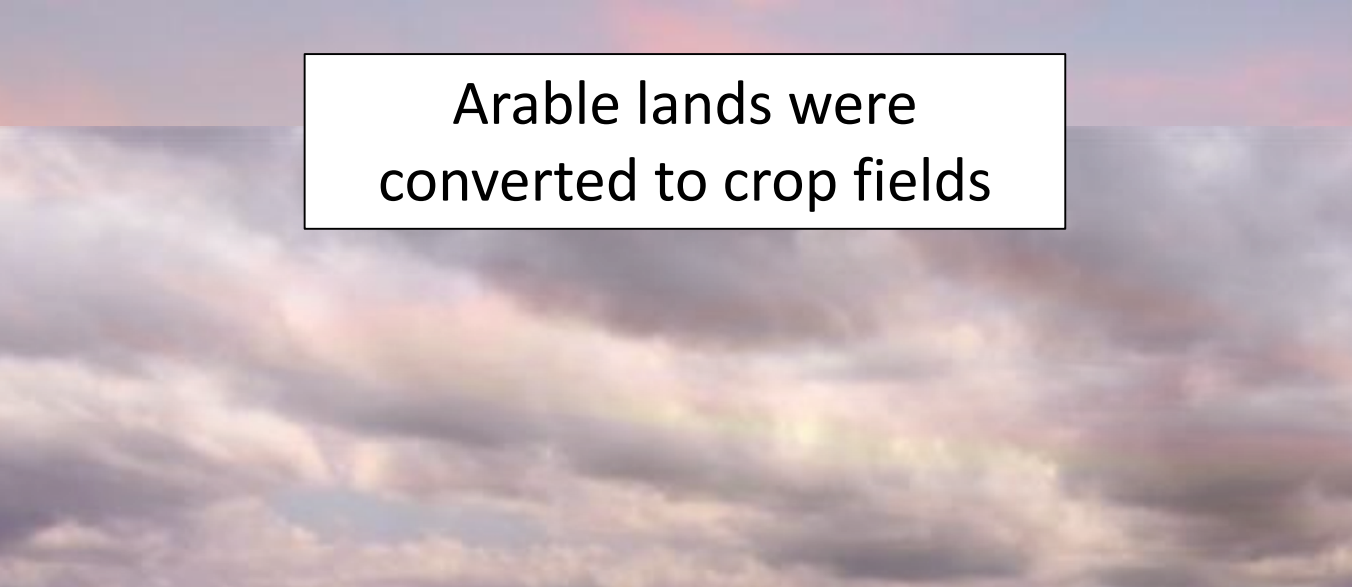
**Harrell Prairie  
Near Jackson, MS**




# Mosaic Landscapes








Arable lands were  
converted to crop fields



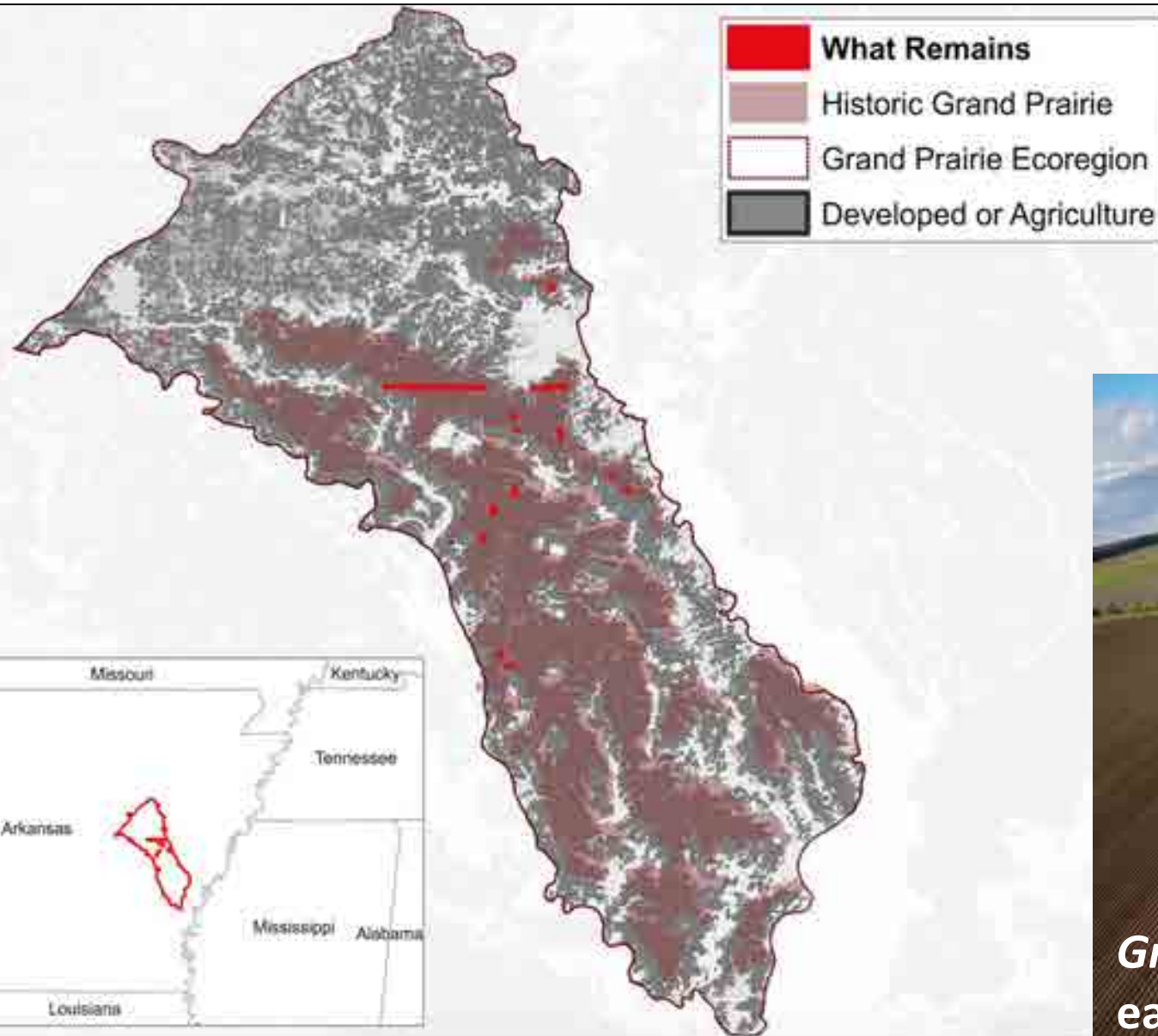
Savannas succeeded  
to forests



**THIS IS THE REASON WHY  
TOMMY NEVER TAUGHT US  
ABOUT SOUTHEASTERN GRASSLANDS**



# I. Functionally Extinct



*Grand Prairie*  
eastern Arkansas

Credit: Pam Pasco



## II. Restorable Grasslands



Seedbanks & Rootstocks  
have persisted for decades





**“IT’LL BE GONE IN 30 DAYS...”**

**5,000 year old  
“Pimple Mounds”**

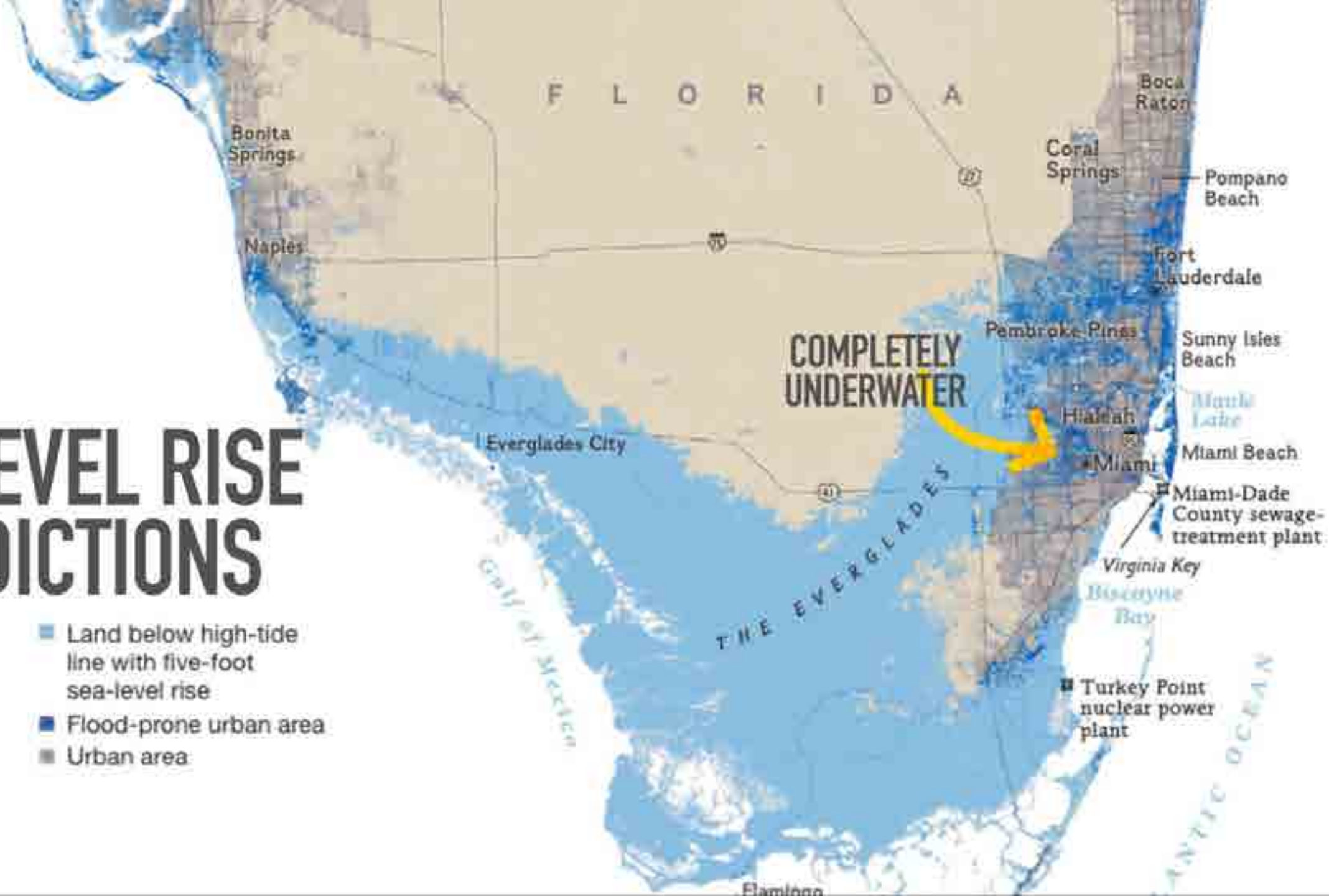


***Destruction of Virgin Prairie  
Massard Prairie, Fort Smith,  
western Arkansas***



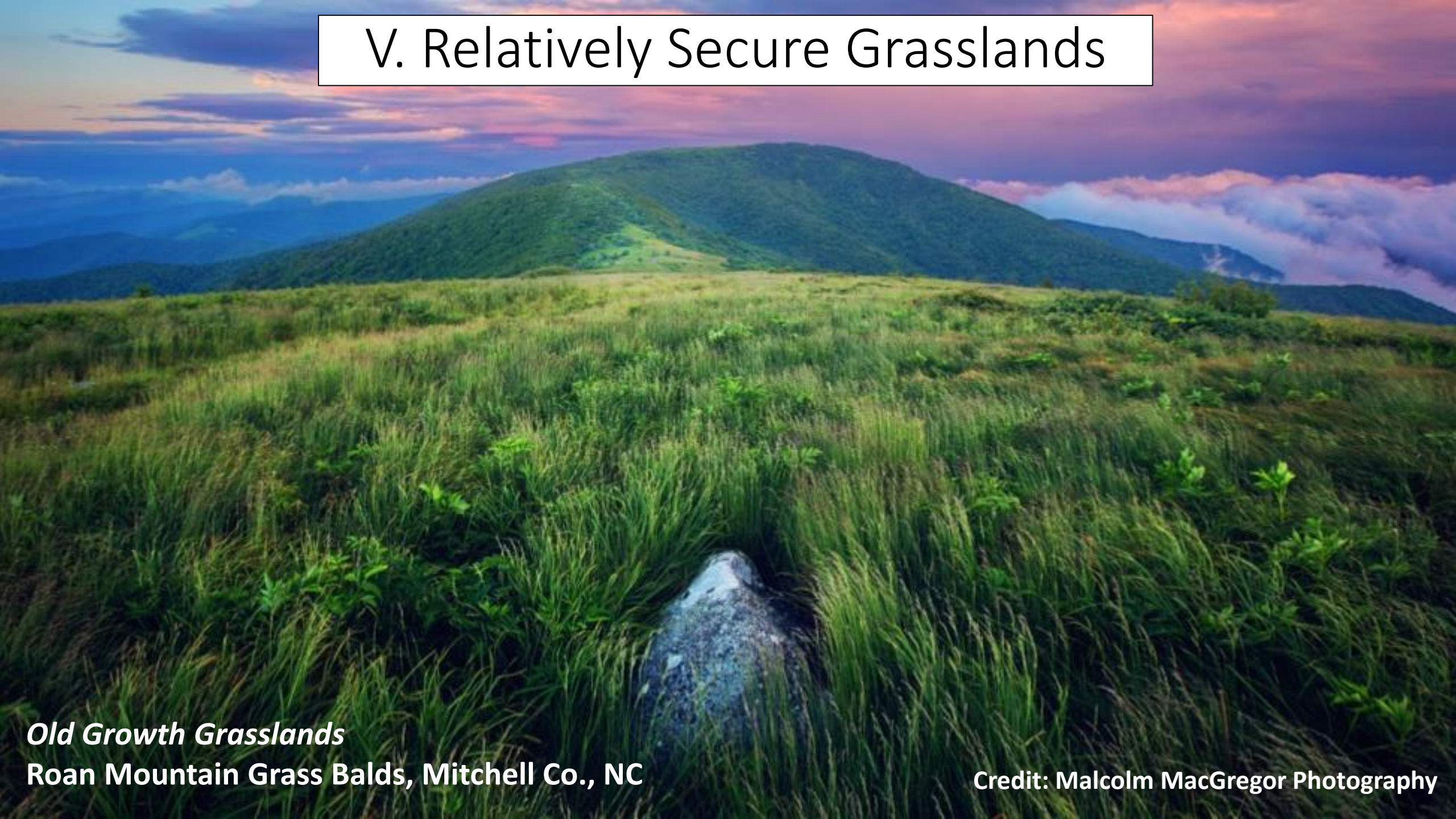
# 5 FT SEA LEVEL RISE PREDICTIONS

- Land below high-tide line with five-foot sea-level rise
- Flood-prone urban area
- Urban area





# V. Relatively Secure Grasslands



*Old Growth Grasslands*

**Roan Mountain Grass Balds, Mitchell Co., NC**

**Credit: Malcolm MacGregor Photography**



# History

# Economics

# Services

# Biodiversity



Vital for a multi-billion-dollar outdoor recreation economy

horticultural trade, landscape architecture, & seed sources

Grassfed-beef & Biofuels

ecological restoration



Prevent loss of topsoil

Water Quality & Flooding

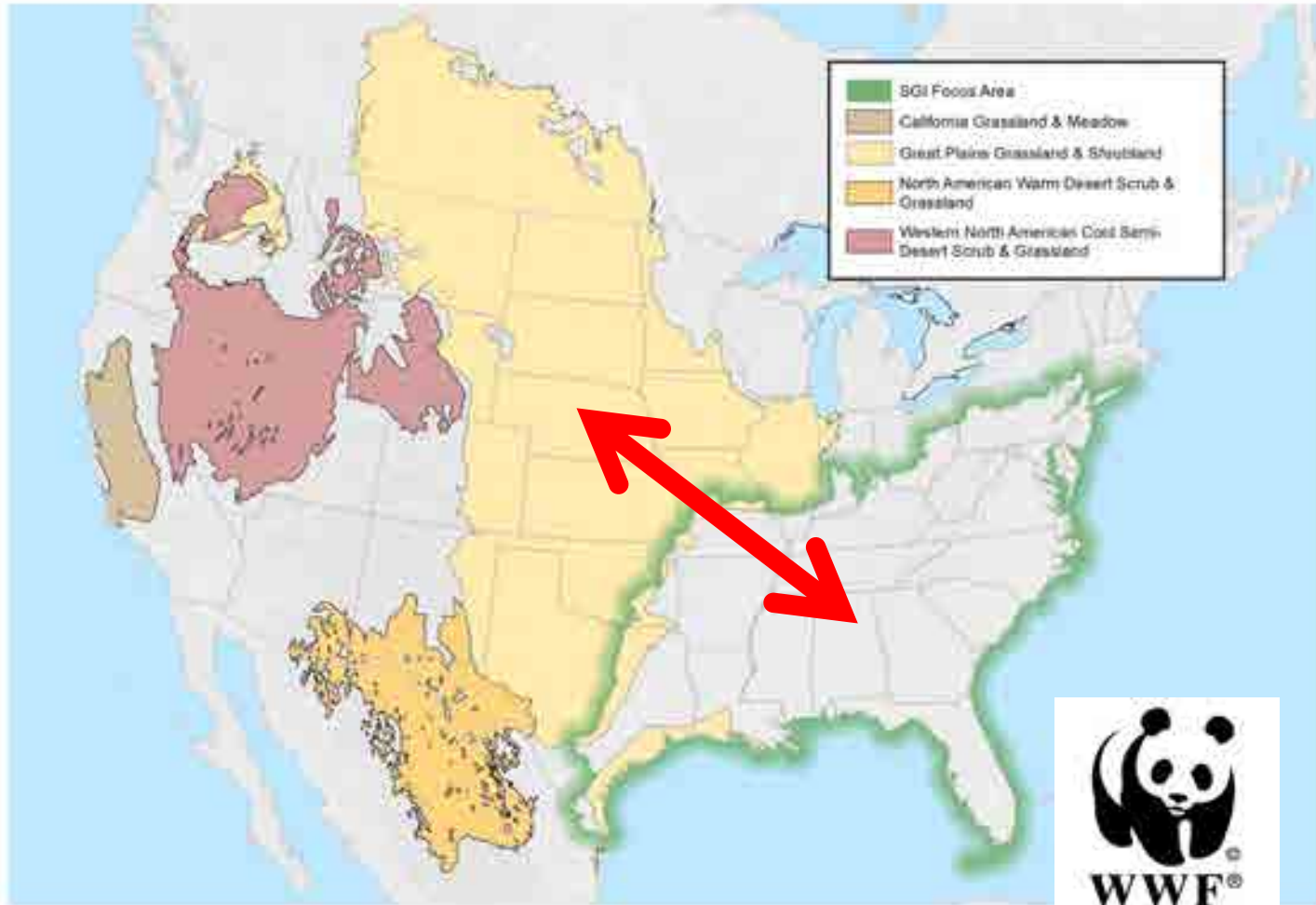
Carbon Sequestration

Pollination



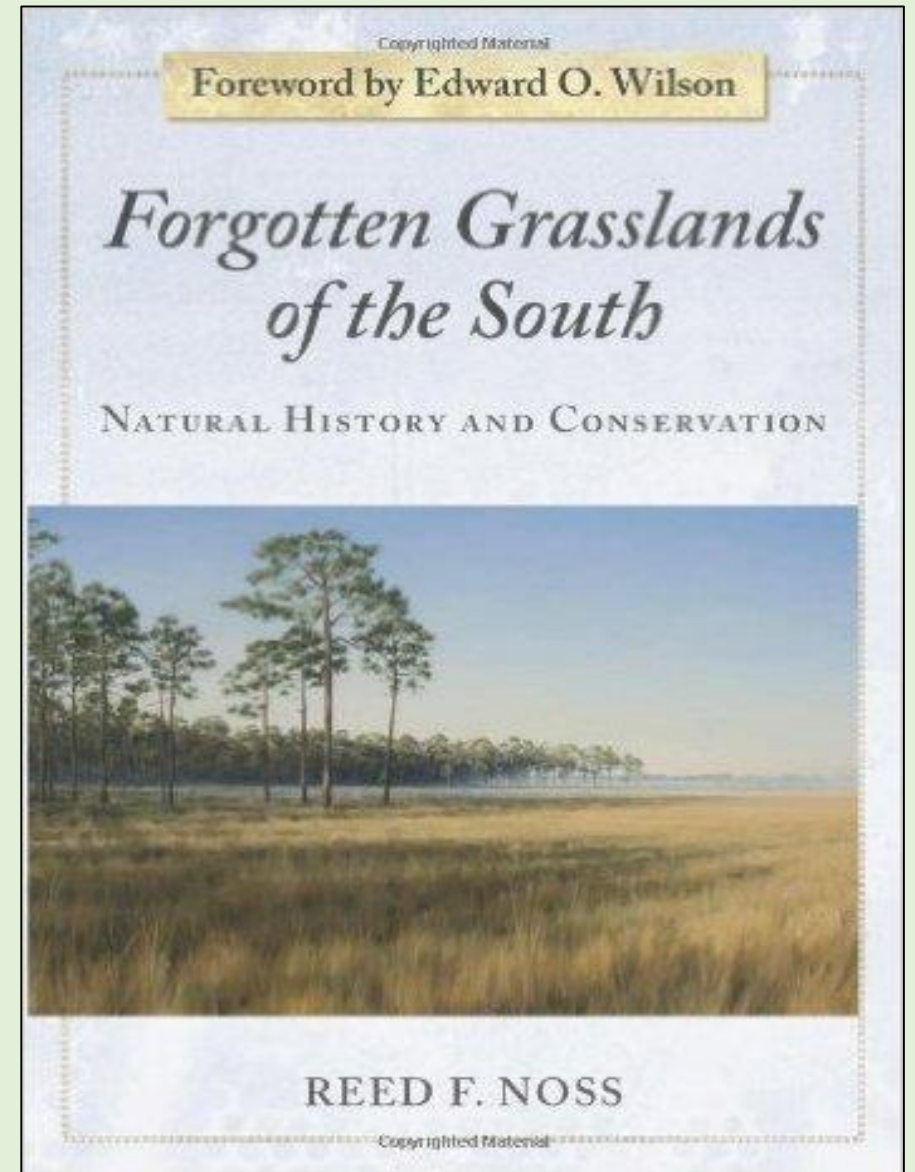


# They Are America's Most Biodiverse Grasslands



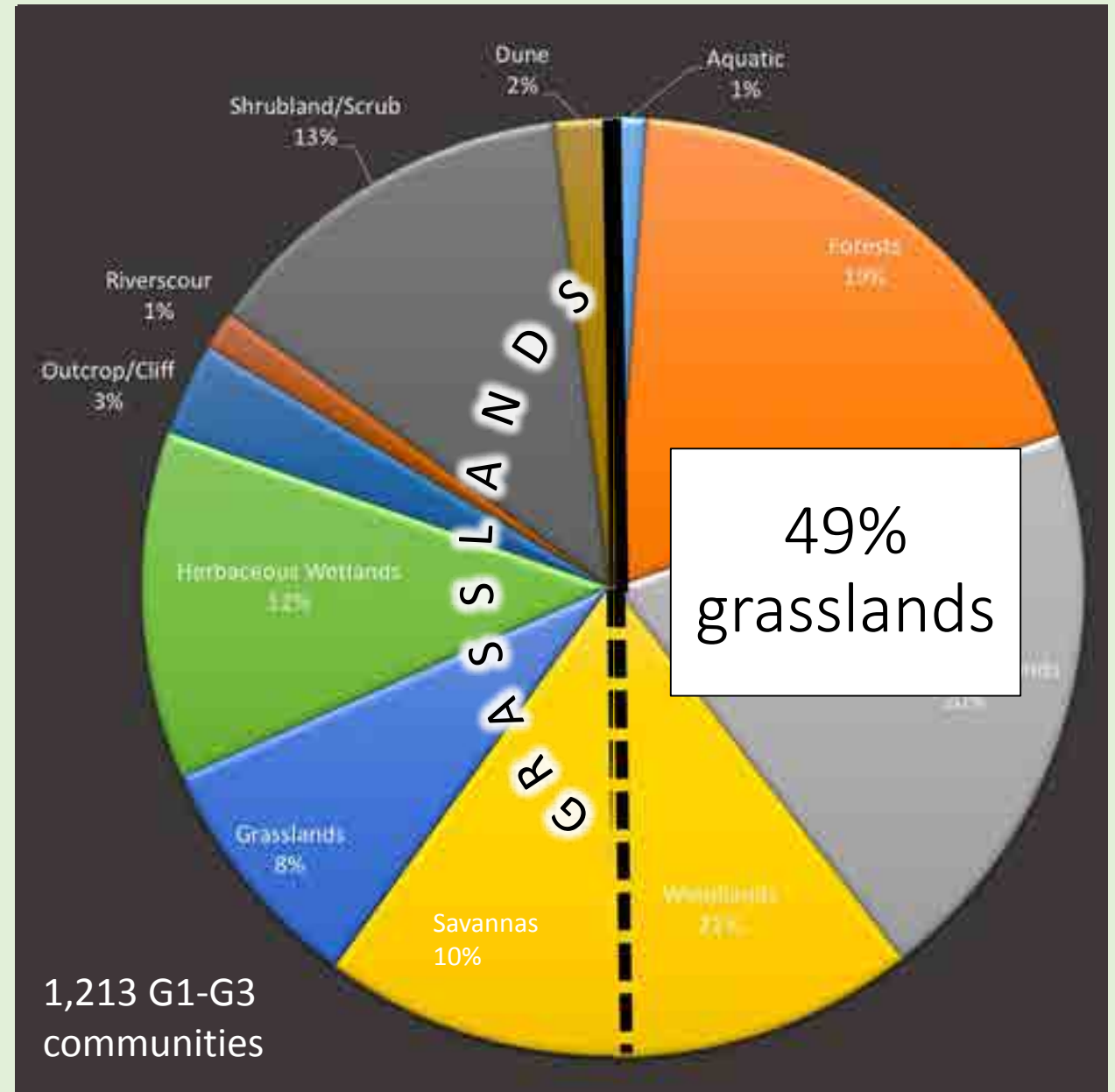
## GRASSLANDS OF NORTH AMERICA

Source: Dixon A.P., et al. (2013) Distribution mapping of world grassland types.



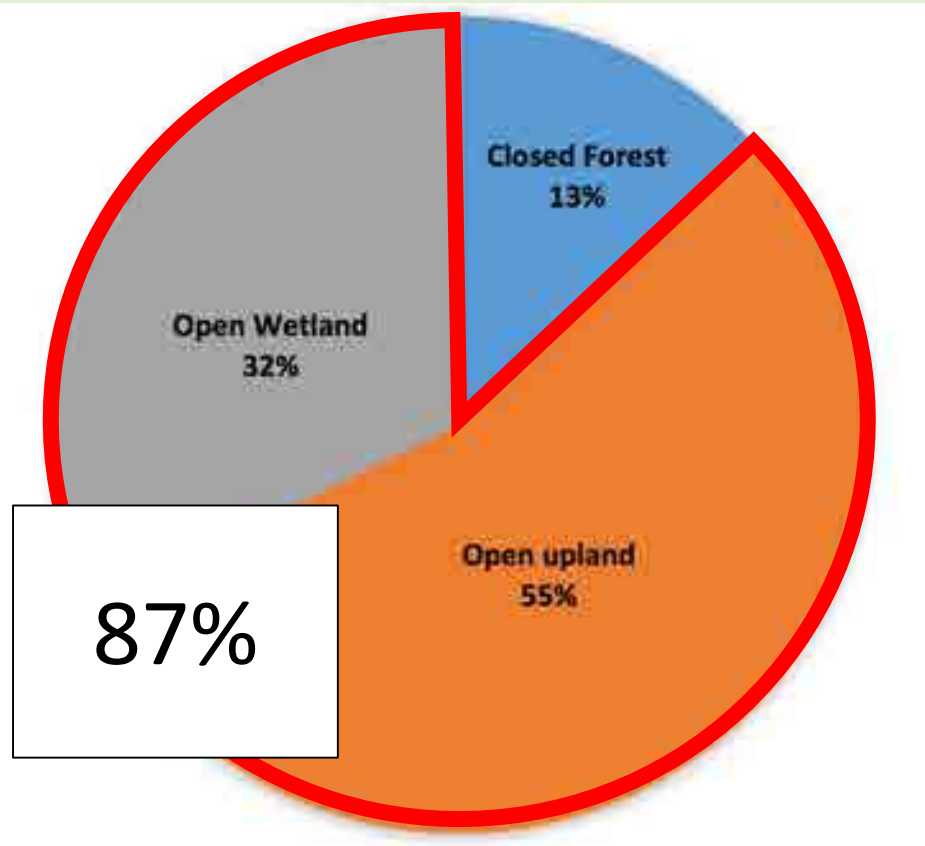


# Can we afford to let our last remnants slip into oblivion?





# Plant Biodiversity



62 federal-listed species

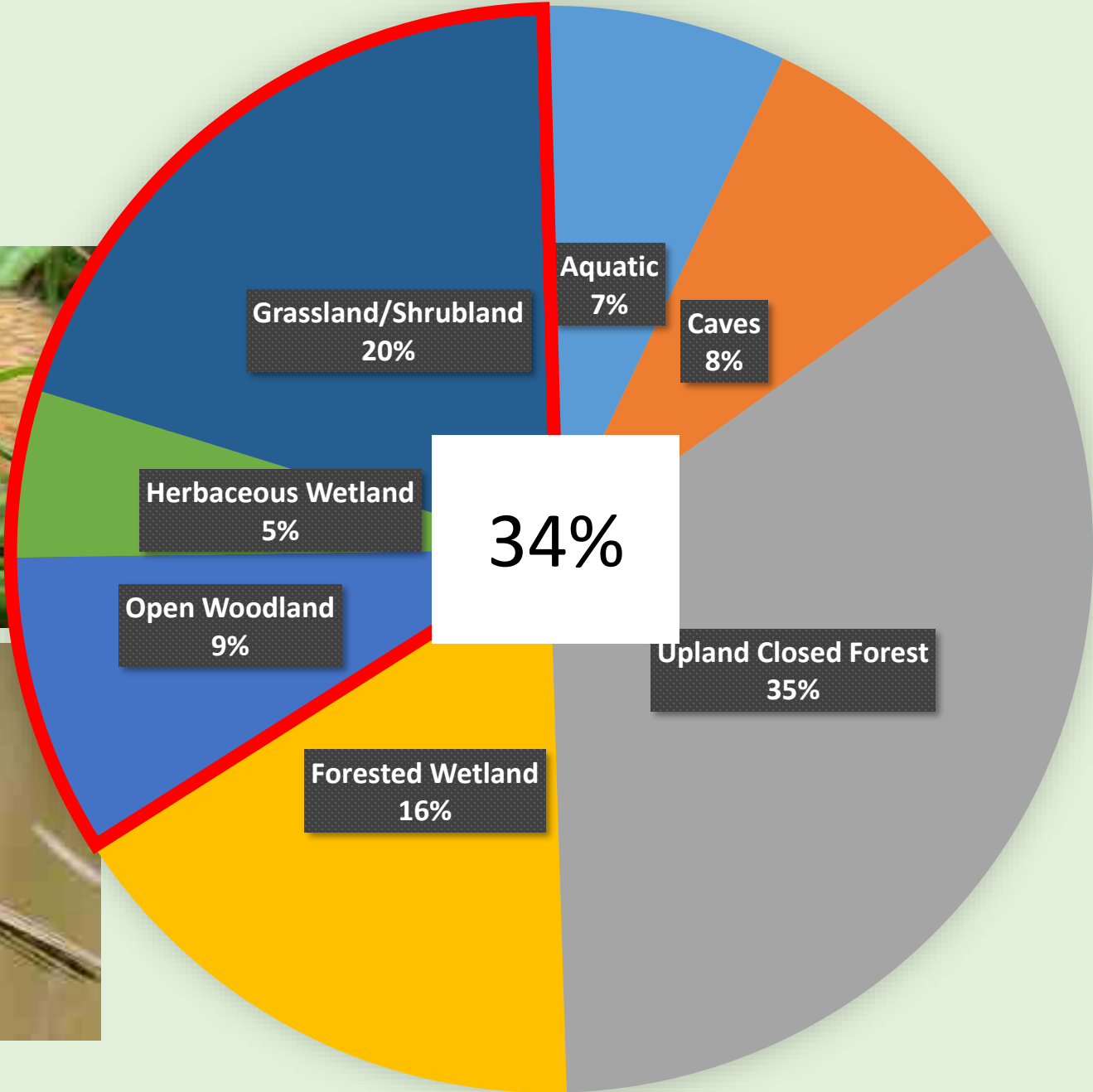


*Sabatia arkansana*  
Pelton's Rose Gentian

Known from 2 sites worldwide



# Animal Biodiversity







Kral's Paintbrush  
Alan Cressler

Alabama Rose Gentian  
Alan Cressler

Ketona Marbleseed  
Alan Cressler

Cahaba Torch  
Jim Allison



Cahaba Daisy Fleabane  
Alan Cressler

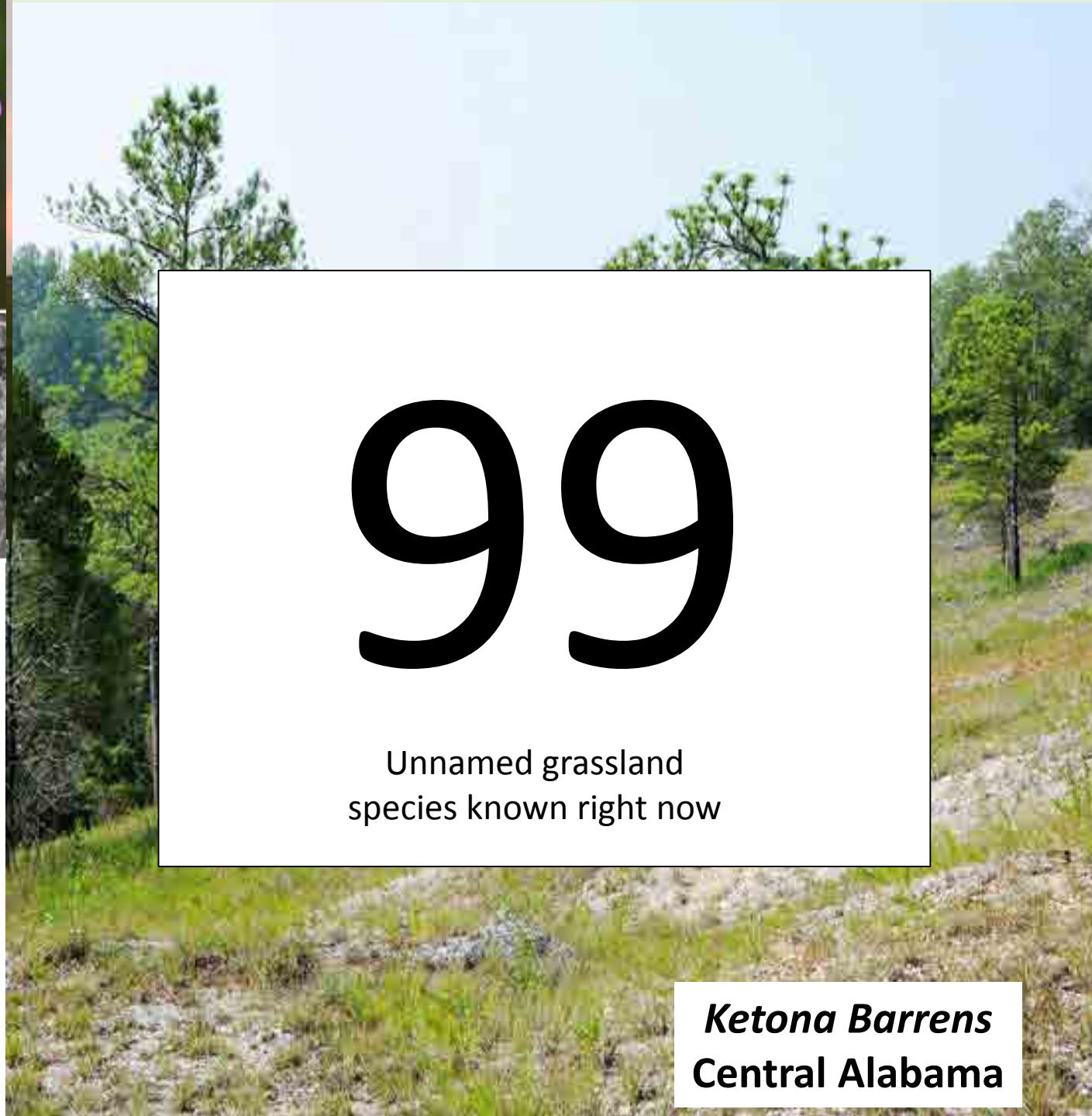
Sticky Rosinweed  
Jim Allison

Ketona Tickseed  
Alan Cressler

Cahaba Prairie Clover  
Alan Cressler

**Did you know...**  
 Strange flora, previously unknown to science, were discovered in the hidden Ketona Dolomite Slades, an area often referred to as a "botanical lost world". Why do these mysterious rare plants grow only over this unique Cambrian rock?  
 Learn more about secret species spawn from special soil at...  
[www.uhaul.com](http://www.uhaul.com)

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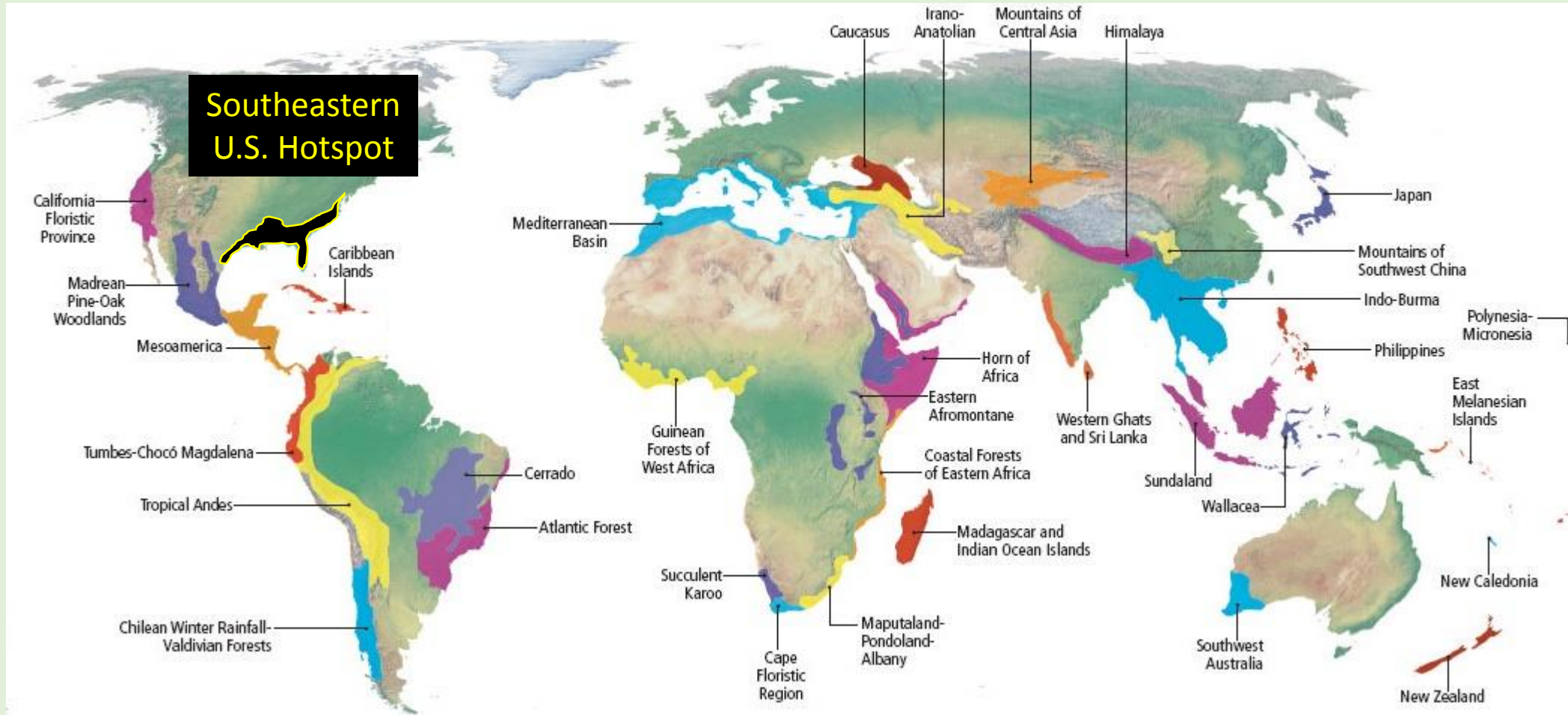
99

Unnamed grassland species known right now

***Ketona Barrens***  
**Central Alabama**



# The World's Newest (36<sup>th</sup>) Global Biodiversity Hotspot

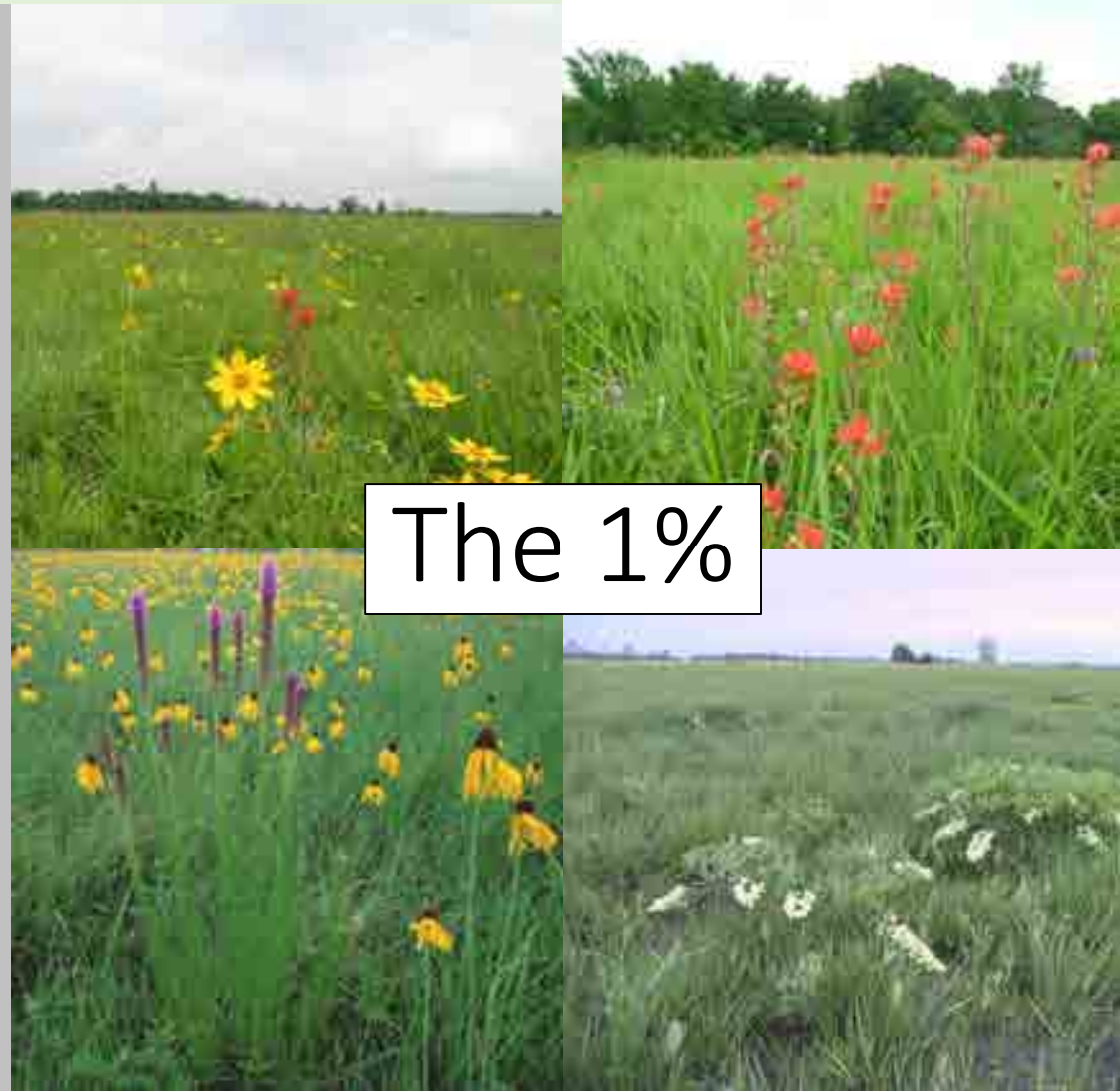




# No Safety Net



The Virgin Prairie in Prairie Co., Ark. 10,000 Acres for Sale by A. Boysen.



The 1%

Landscape-Scale Conservation

Small-Scale Conservation



# Ecological Collapse



# Renewed Interest in Grassland Conservation





Have we resigned ourselves to accept the loss of these once majestic landscapes that are so critically important to biodiversity, history, culture?





Can our grasslands survive into the 22<sup>nd</sup> century?



**Until there is a coordinated effort to conserve, research, and rebuild them they will continue to slip into oblivion**

# *The challenges facing Southeastern grasslands are complex*

**Major Knowledge Gaps**

---

**Extreme Rarity**

---

**Scarcity of Funding**

---

**Diminished Resources**

---

**Declining Expertise**

---



- unparalleled long-term financial commitment from philanthropy, corporate sponsors, and grants

- support at local, regional, state, and national levels

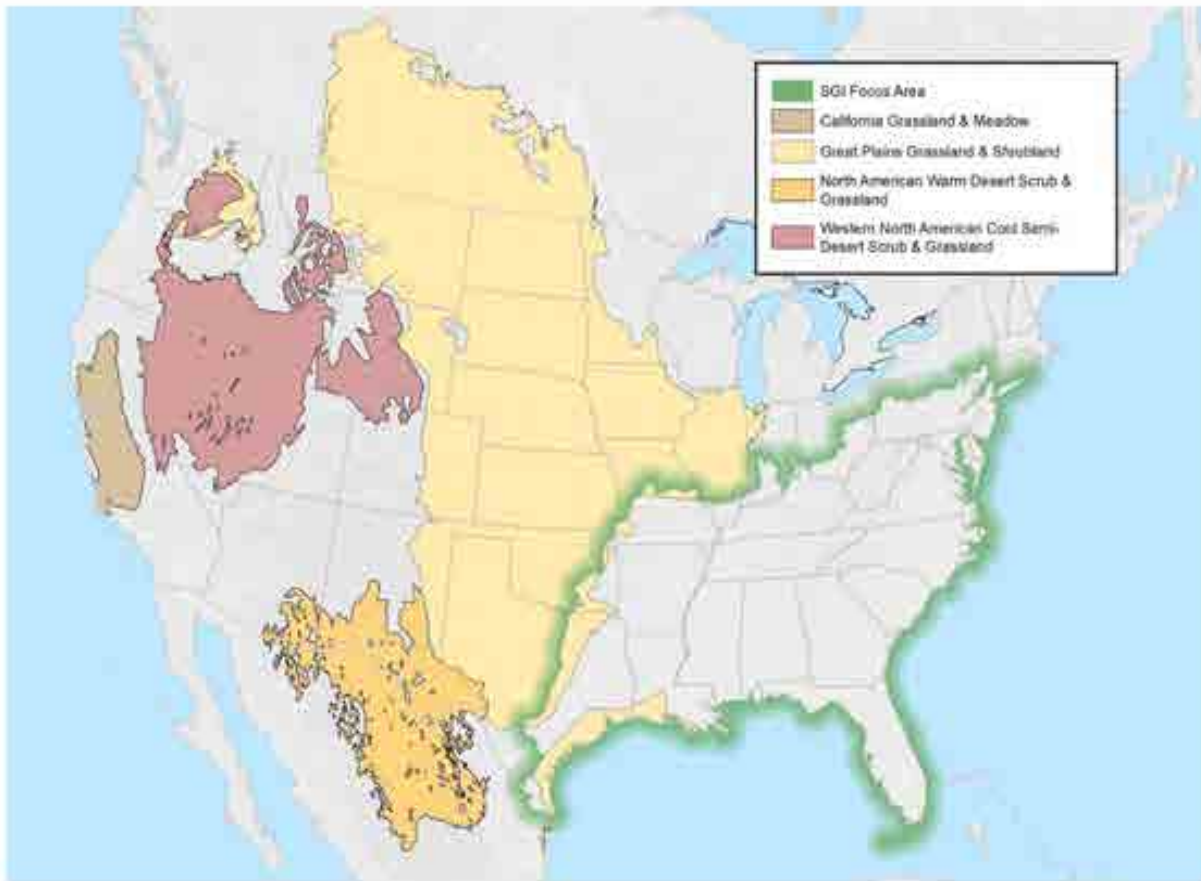
- leadership and coordination

- investments in infrastructure and organization

- Multifaceted response



# *The Southeastern Grasslands Initiative - a new national conservation program -*



## GRASSLANDS OF NORTH AMERICA

Source: Dixon A.P., et al. (2013) Distribution mapping of world grassland types.





SOUTHEASTERN  
GRASSLANDS  
INITIATIVE

## Our Programmatic Priorities

- Leadership
- Resource Center
- Education/Outreach
- Advocacy/Policy
- Granting Program





# SOUTHEASTERN GRASSLANDS INITIATIVE

- **Leadership**
- Resource Center
- Education/Outreach
- Advocacy/Policy
- Granting Program



**Dwayne Estes Ph.D.**  
Executive Director  
& Co-Founder



**Theo Witsell**  
Director of Research  
& Co-Founder



**Reed Noss Ph.D.**  
Chief Science Advisor



**Alan Weakley Ph.D.**  
Chair, Science Advisory Board

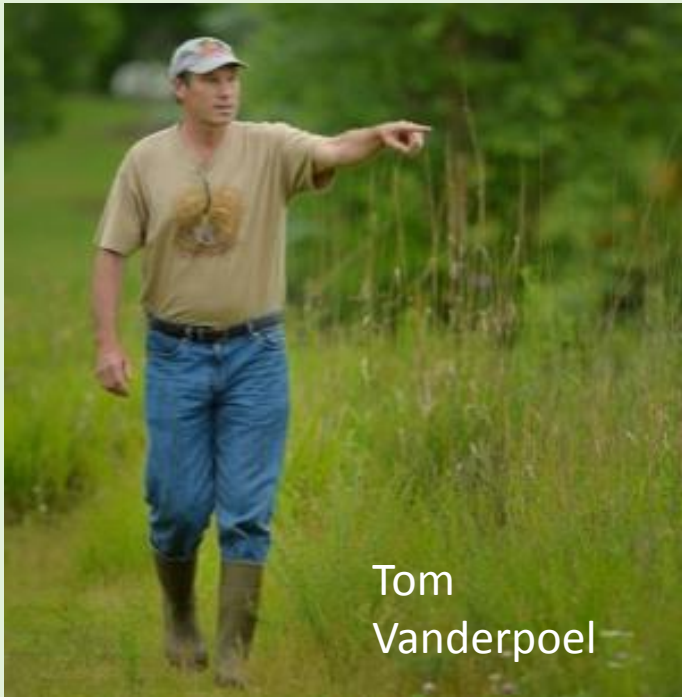


**K. Gregg Elliott**  
Dir. of Communications



**J.J. White**  
Administrative Assistant

# On-the-ground Coordination



Tom  
Vanderpoel

**Citizens for Conservation  
Chicago, Illinois**





Regional  
Coordinators

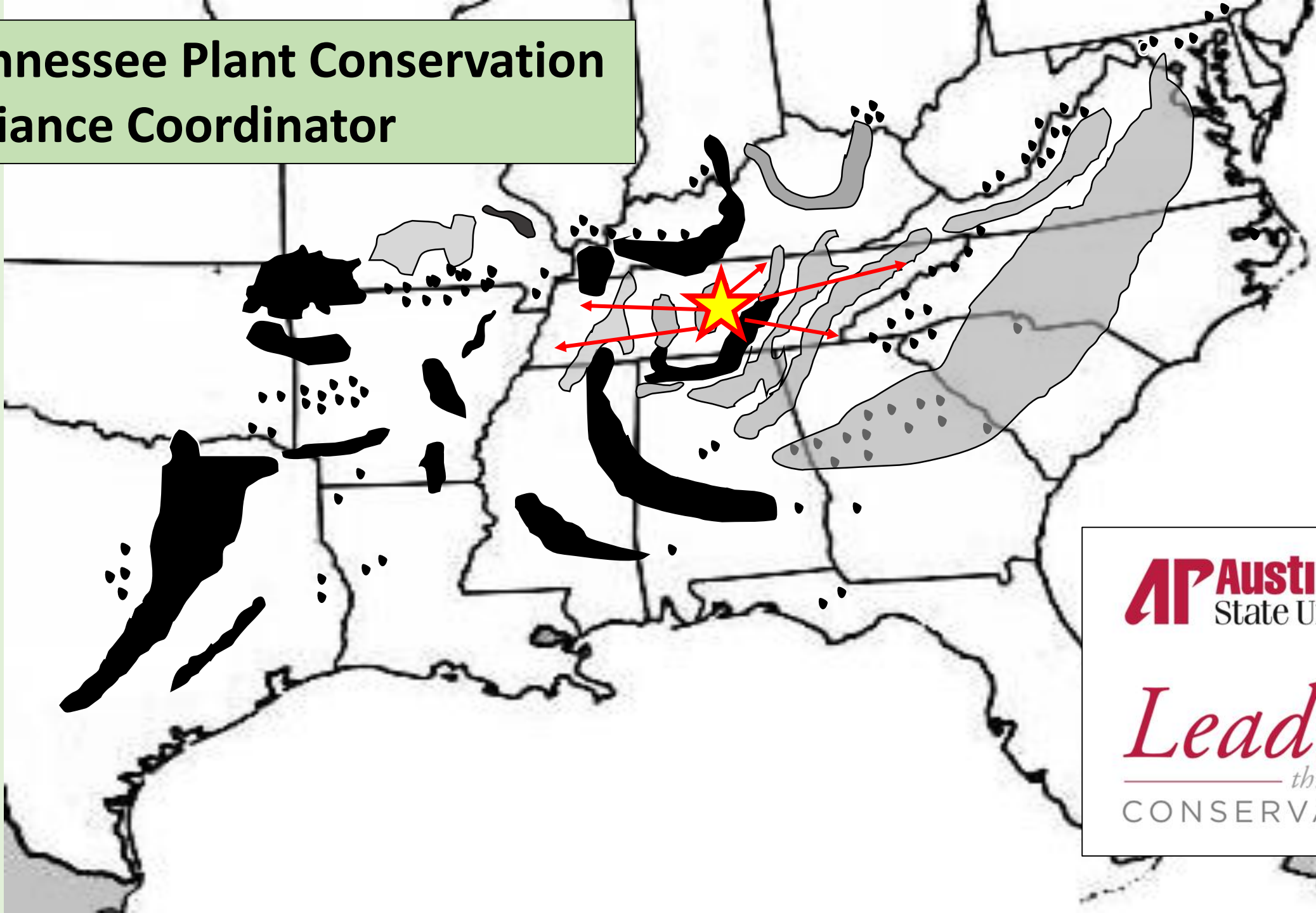
Interior  
Plateaus  
Coordinator



*We Need Partnerships to  
Support Coordinators*



# Tennessee Plant Conservation Alliance Coordinator



**AP** Austin Peay  
State University

*Leading*  
— through —  
CONSERVATION



# *SGI Objectives*



SOUTHEASTERN  
GRASSLANDS  
INITIATIVE

- Leadership
- **Resource Center**
- Education/Outreach
- Advocacy/Policy
- Granting Program







# SOUTHEASTERN GRASSLANDS INITIATIVE

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# *SGI Objectives*



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# *SGI Objectives*

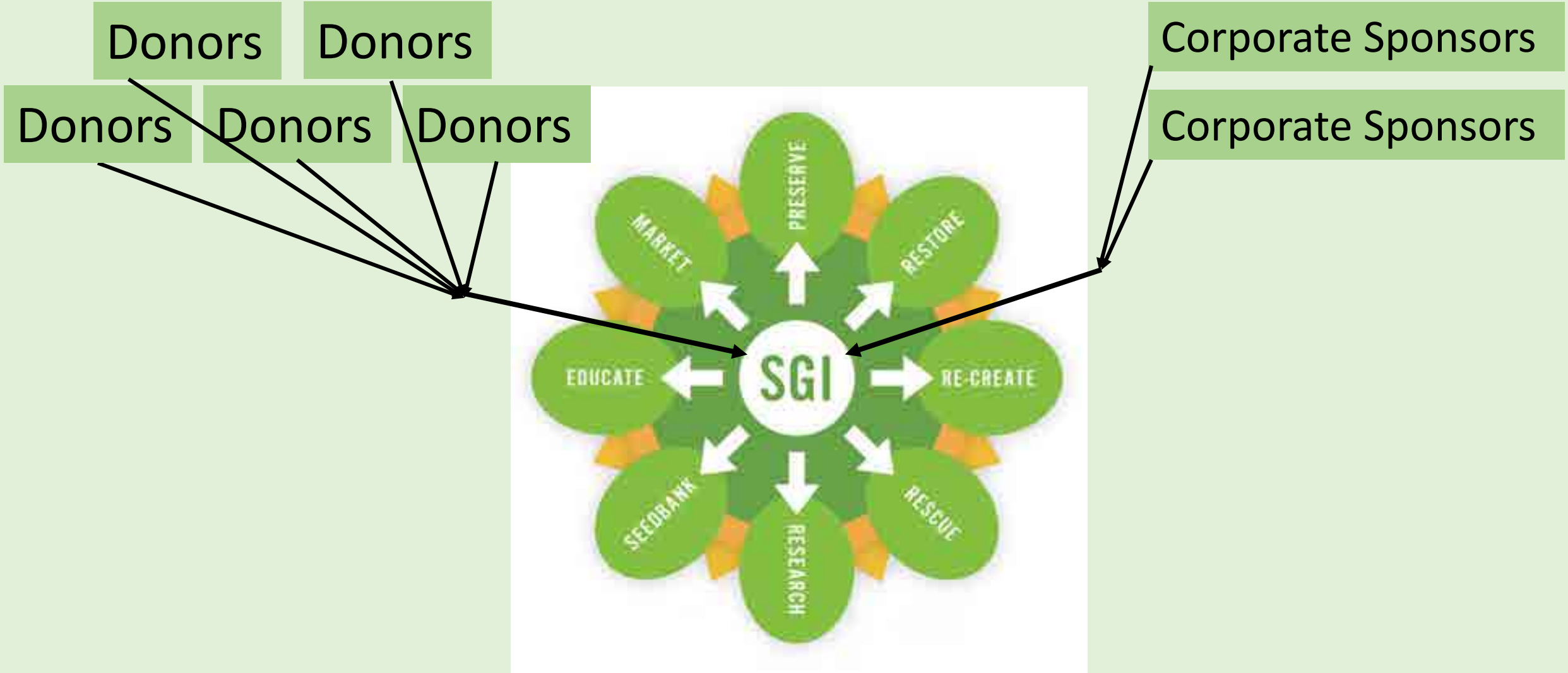


SOUTHEASTERN  
GRASSLANDS  
INITIATIVE

- Leadership
- Resource Center
- Education/Outreach
- Advocacy/Policy
- **Granting Program**



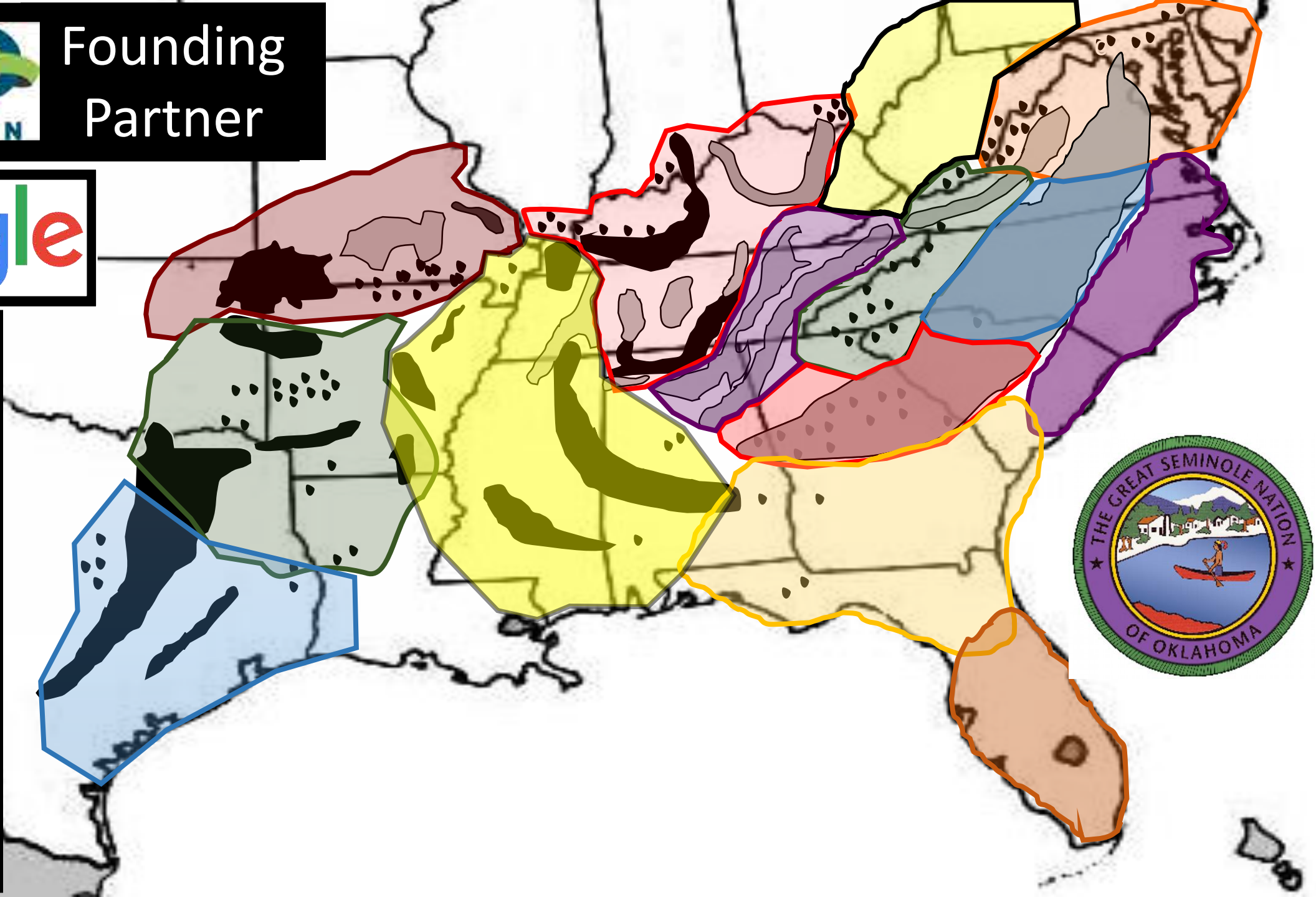
# GRANTING PROGRAM







Founding Partner





**SGI is actively seeking partners and we need  
...25 years will be too late...  
funding and collaboration**





A large, textured tree trunk stands on the left side of the frame. The background is a lush green field with many small yellow flowers. The sky is overcast and grey. The text "There is Hope" is overlaid on the tree trunk.

There  
is  
Hope





**TAKE ACTION**

[www.segrasslands.org](http://www.segrasslands.org)

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# Acknowledgments



Clark Mitchell  
BAND Foundation

