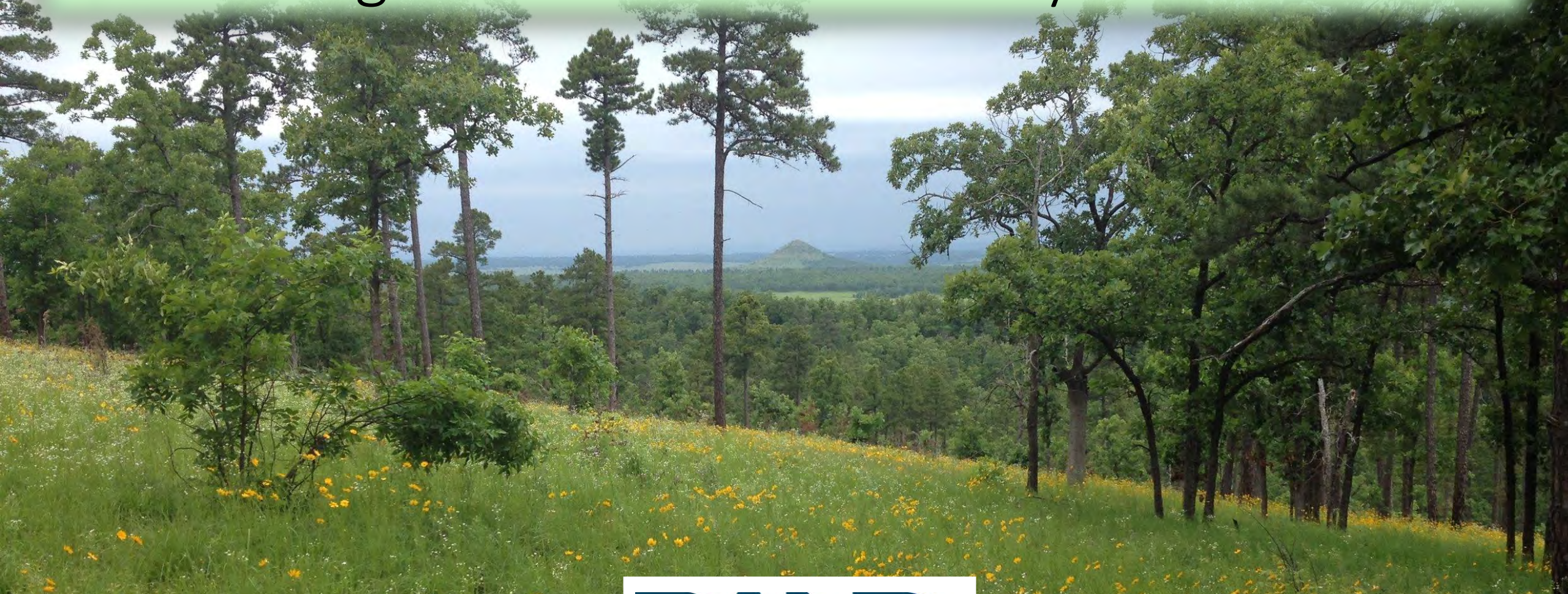


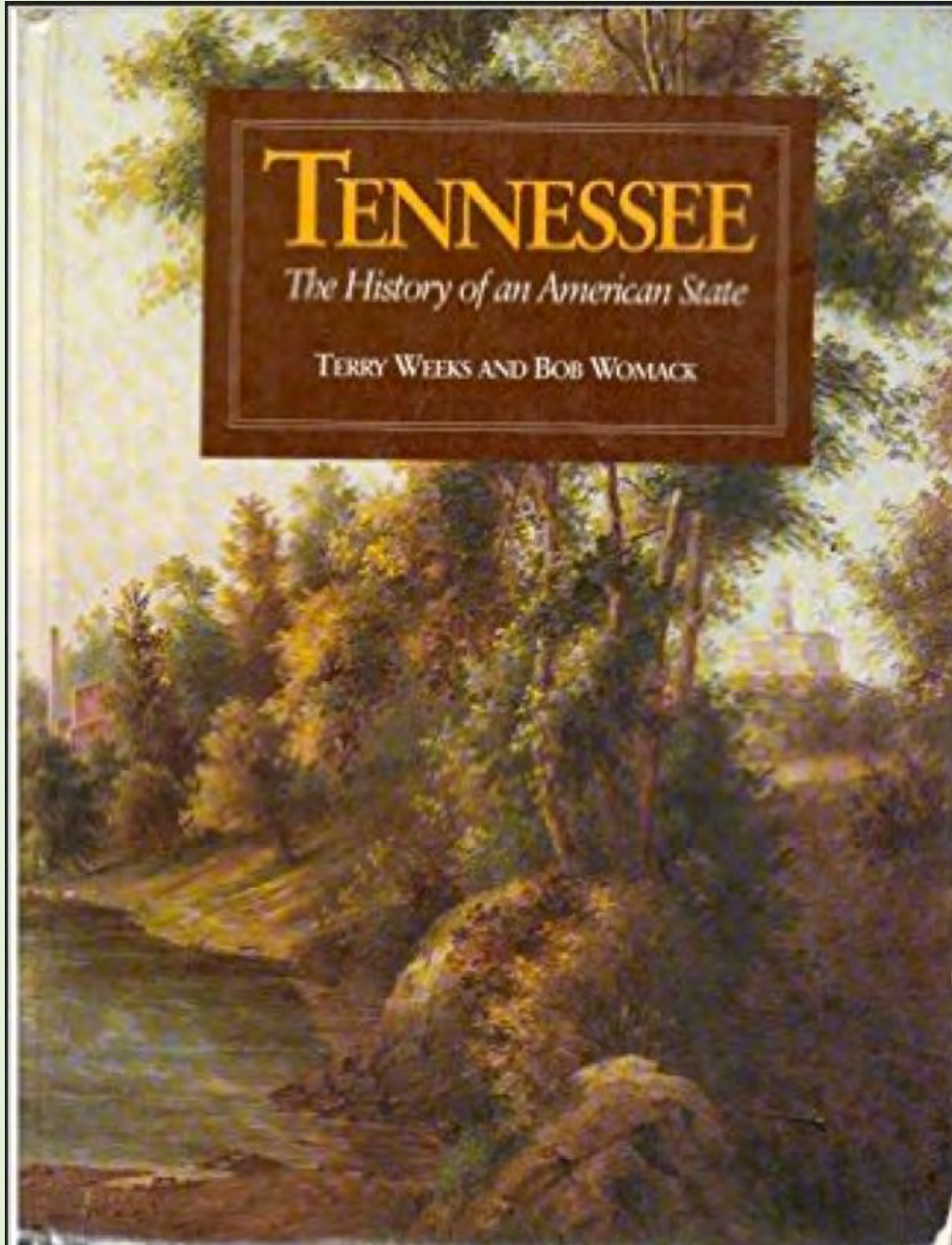
The Grassland Floor of the Shortleaf Pine Ecosystem and its Significance to Biodiversity Conservation



The Southeastern Grasslands Initiative: Charting A New Course for Conservation in the 21st Century



Tommy Johns & The Fabled Squirrel

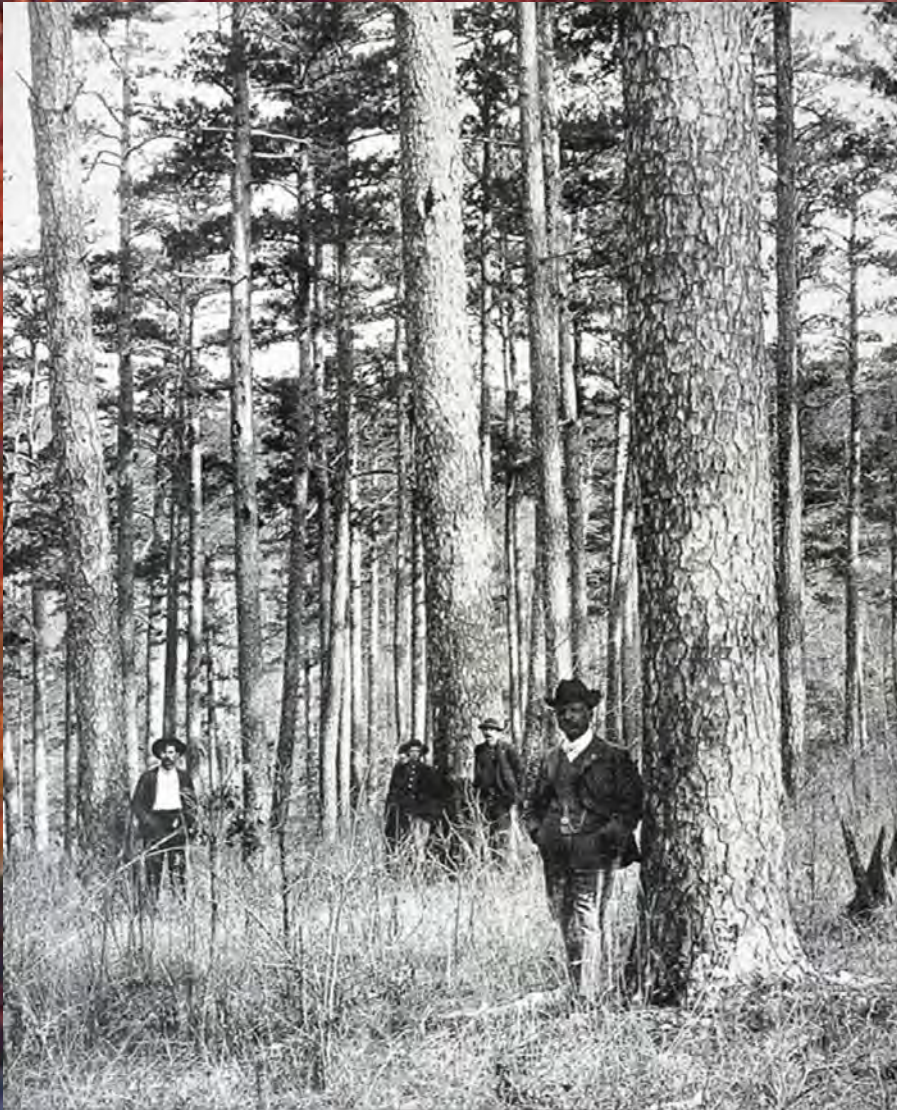


America's Concept of Grasslands



**Pennyroyal Plain Tallgrass Prairie,
Fort Campbell Army Base, Clarksville, Montgomery Co., TN**





1910—Shady, Polk County, AR
*described by resident Mitchell
Cogburn*

“Those woods were not like they are now.
There wasn’t all this undergrowth.”

“The trees were large. And there was a
regular pasture under them.”

Cheaha Mountain

Mosaic Landscapes



Grassland – Woodland – Forest Mosaic



Photo: Warren Montague

3:11:30 AM

Foreword by Edward O. Wilson

Forgotten Grasslands of the South

NATURAL HISTORY AND CONSERVATION



REED F. NOSS

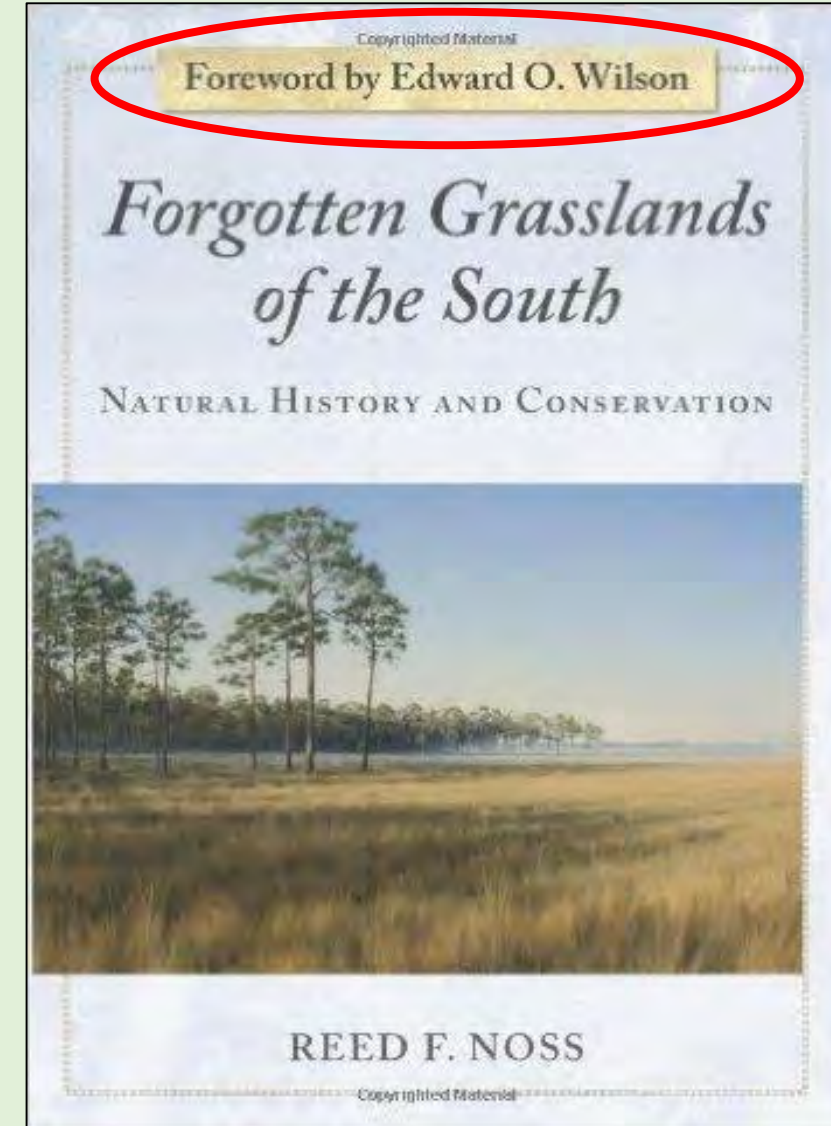
“A grassland is any community in which the grass layer, with its associated forbs is the dominant layer in terms of either total cover or biomass or both”.

-Frost, 2006

“In some instances shrubs or trees emerge above the canopy as scattered individuals to form savannas... An ecosystem may be designated a grassland when the canopy of grasses is continuous or nearly so”.

-Coupland, 1991

The Forgotten Grasslands of the South



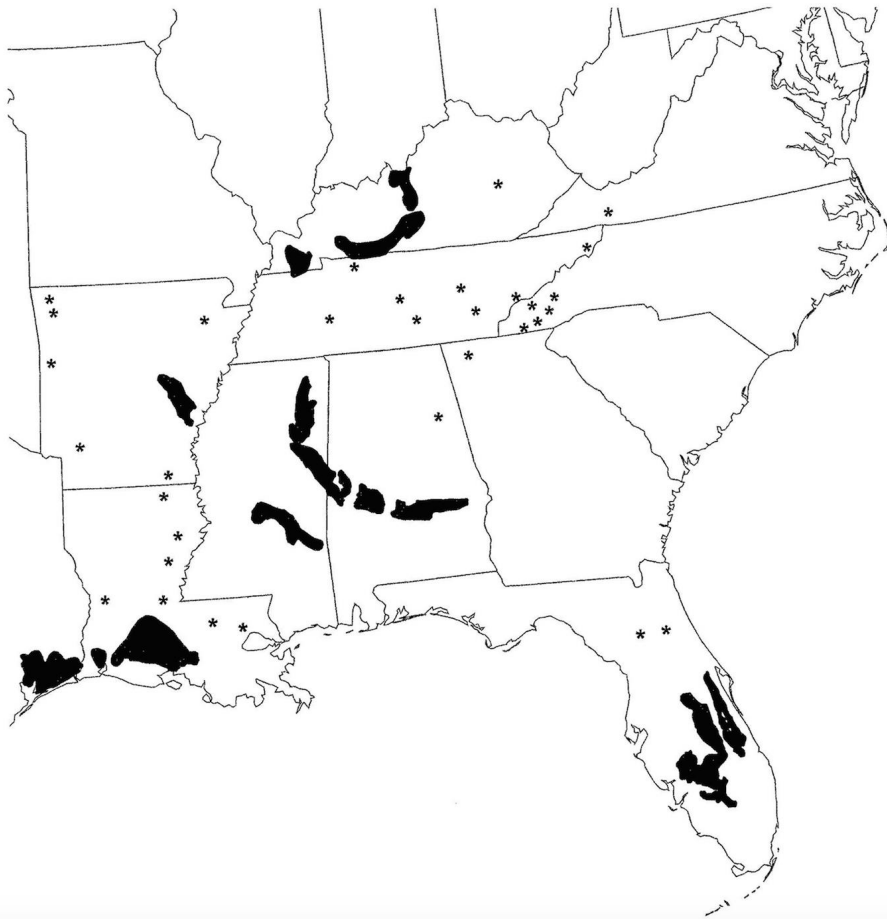


E.O. Wilson (Harvard University), 2012

The Southern Grassland Biome

"The Southern Grassland Biome, when it is properly defined to include the longleaf pine savanna and its intermittent hardwood bottomlands, is probably the richest terrestrial biome in all of North America.

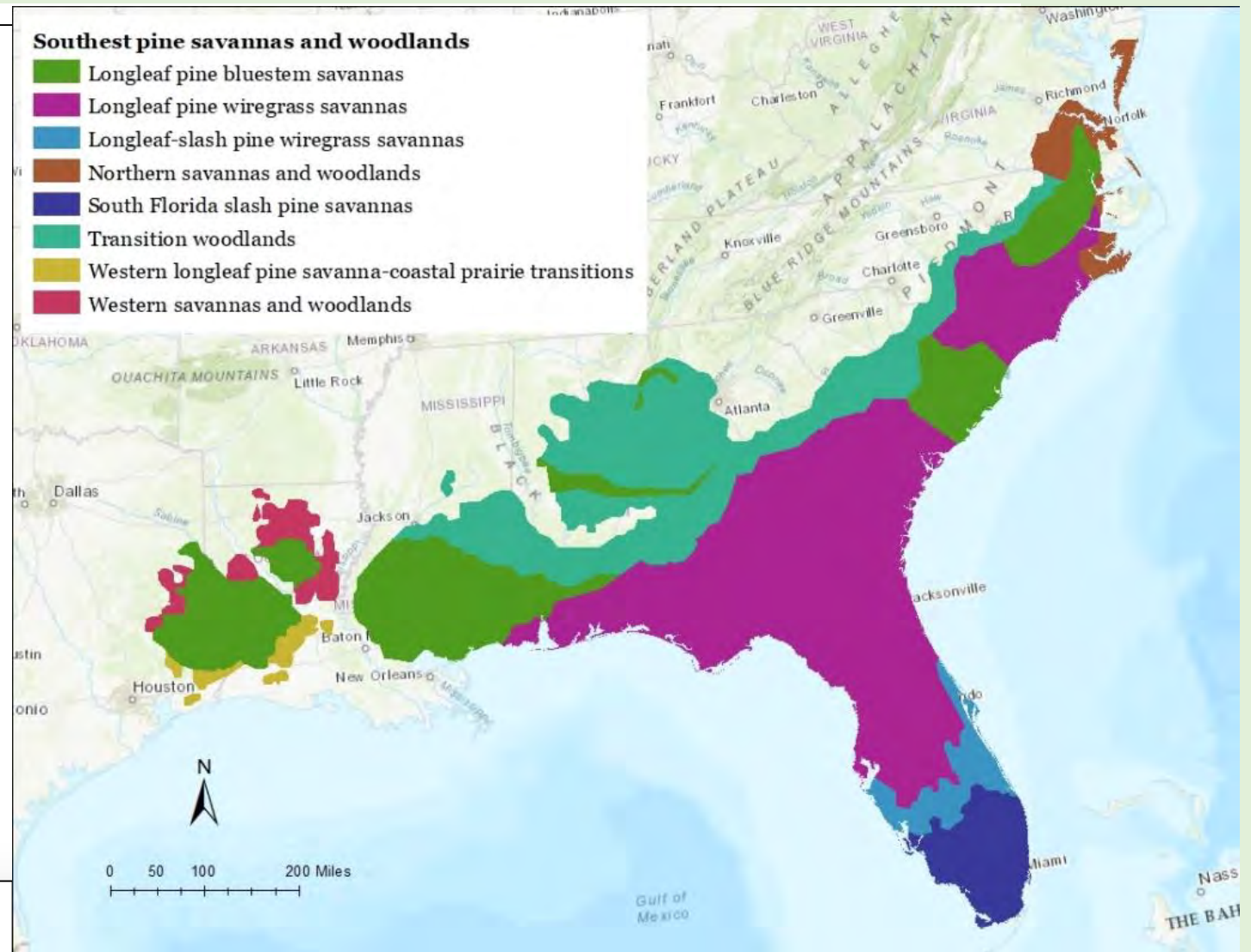
To understand, cherish, and preserve the great natural heritage of the Southern Grassland Biome should be a priority goal in America's environmental movement."



DeSelm & Murdock (1993)

Southeast pine savannas and woodlands

- Longleaf pine bluestem savannas
- Longleaf pine wiregrass savannas
- Longleaf-slash pine wiregrass savannas
- Northern savannas and woodlands
- South Florida slash pine savannas
- Transition woodlands
- Western longleaf pine savanna-coastal prairie transitions
- Western savannas and woodlands

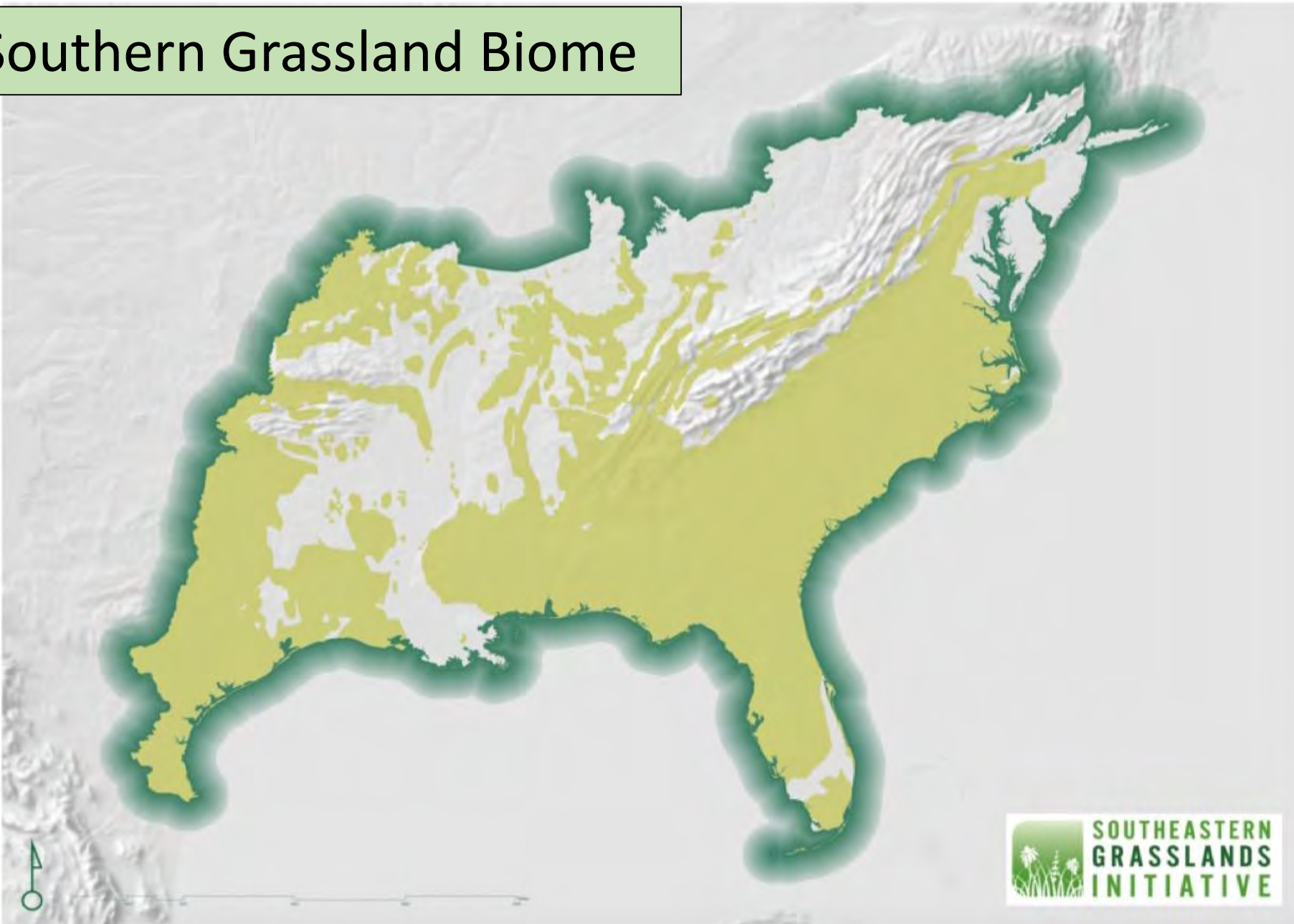


GRASSLANDS OF NORTH AMERICA

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



The Southern Grassland Biome



Why call them “forgotten”?

***William Foote 1846, describing
vicinity of Charlotte NC prior to 1750***

“Previous to the year 1750...the solitary cabins were found upon the borders of prairies, and in the vicinity of canebrakes, the the immense ranges abounding with wild game, and affording sustenance the whole year for herds of tame cattle. Extensive tracts of country between the Yadkin and the Catawba, now waving with thrifty forests, then were covered with tall grass, with scarce a bush or shrub...the abundant grass luxuriating in its native wildness and beauty...”

Montgomery, Alabama, c. 1775 (Oil on canvas by Philip Juras)

Prairies became
crop fields



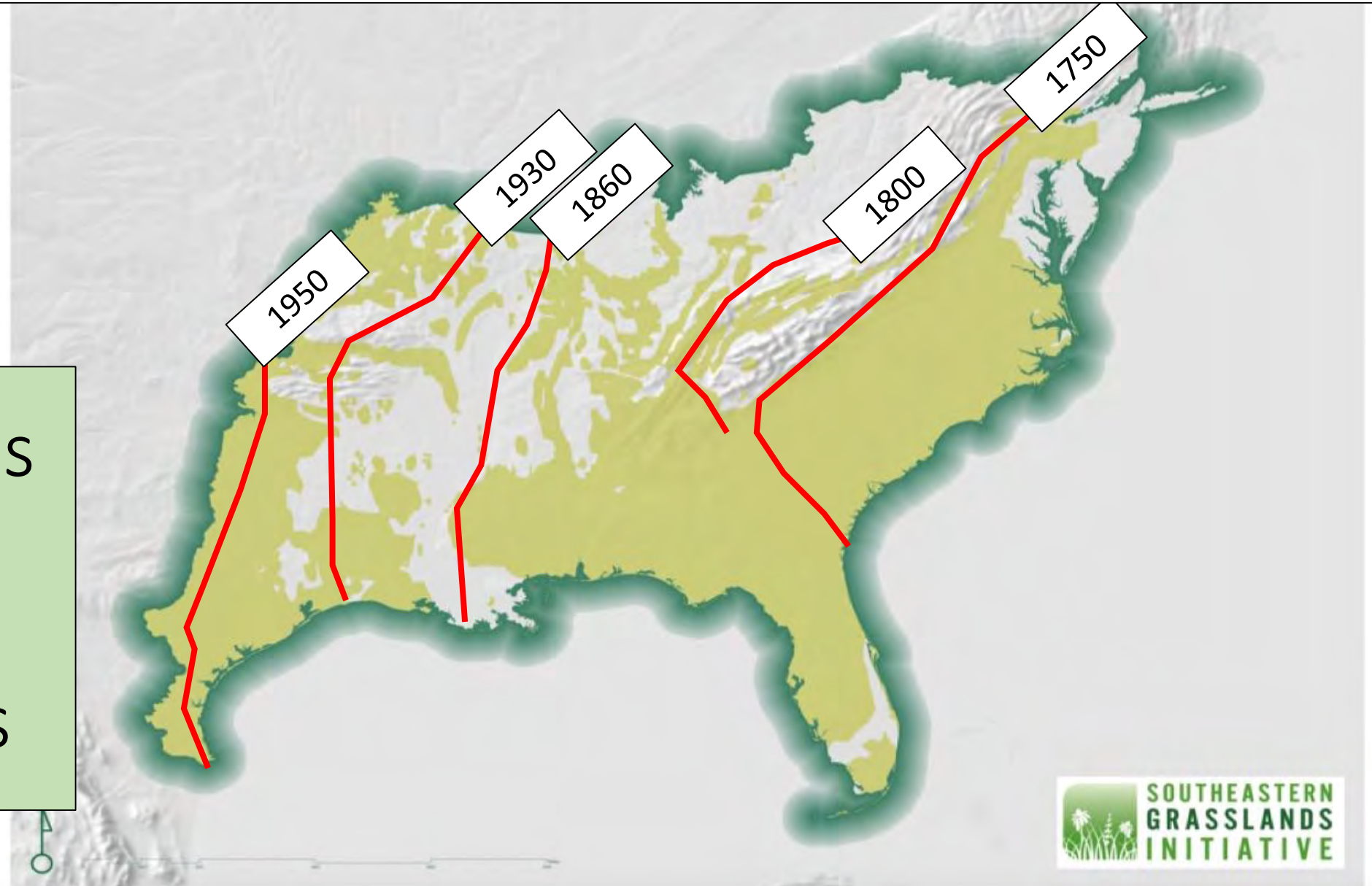
Savannas succeeded
to forests



Credit: Andy Vanderyacht

Shifting Baselines: Erosion of Common Knowledge

The 5 States
of
Southern
Grasslands



I. Relatively Secure Grasslands



Old Growth Grasslands

Roan Mountain Grass Balds, Mitchell Co., NC

Credit: Malcolm MacGregor Photography

5 FT SEA LEVEL RISE PREDICTIONS

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



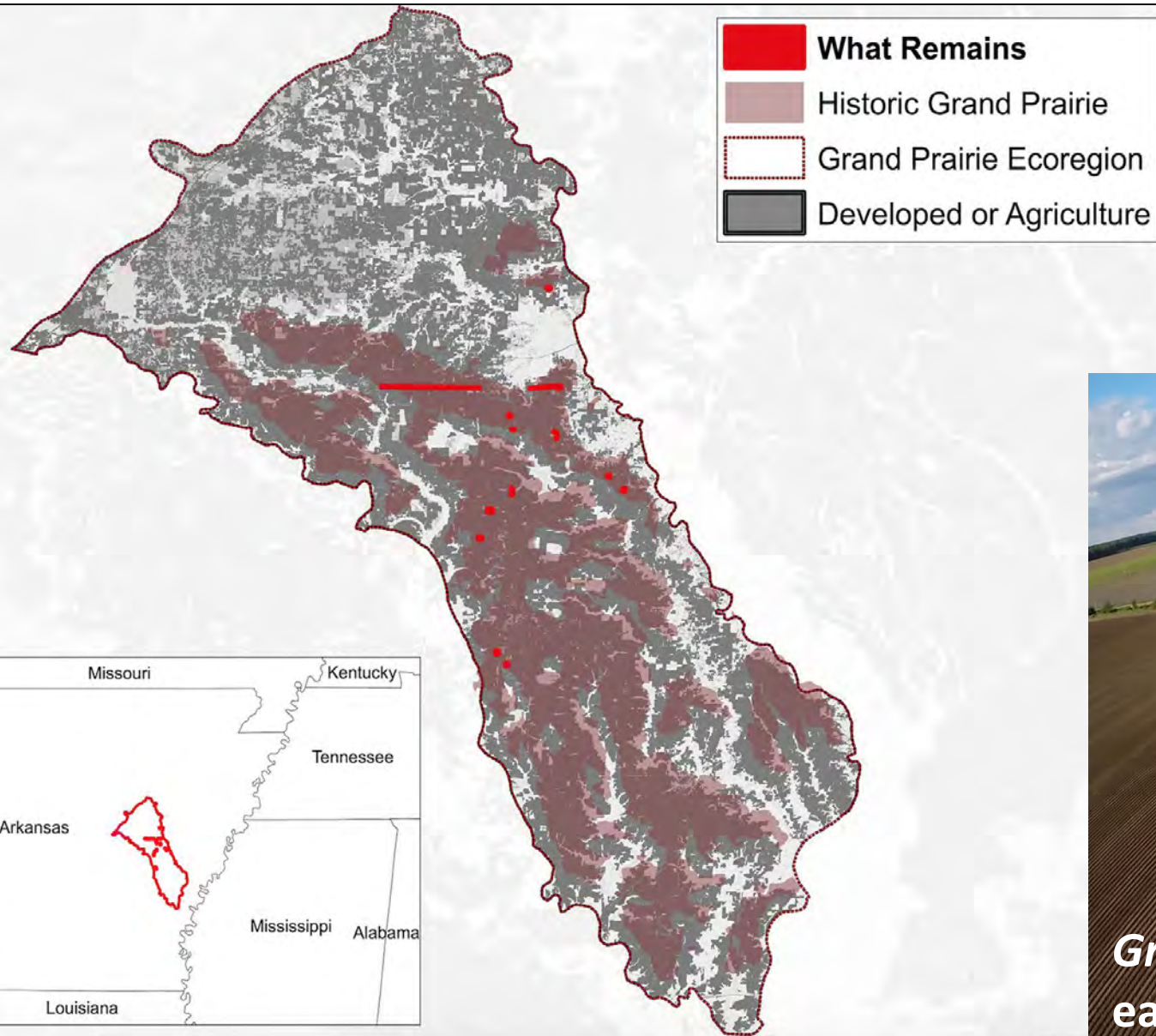
“IT’LL BE GONE IN 30 DAYS...”

**5,000 year old
“Pimple Mounds”**



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

IV. Functionally Extinct



V. Highly Restorable Grasslands



Seedbanks & rootstocks
have persisted for decades



Rare grassland birds
are returning

Contributions to Biodiversity & Wildlife



Florida Dry
Park, FL
Credit: Reed

52 species in 1 m²

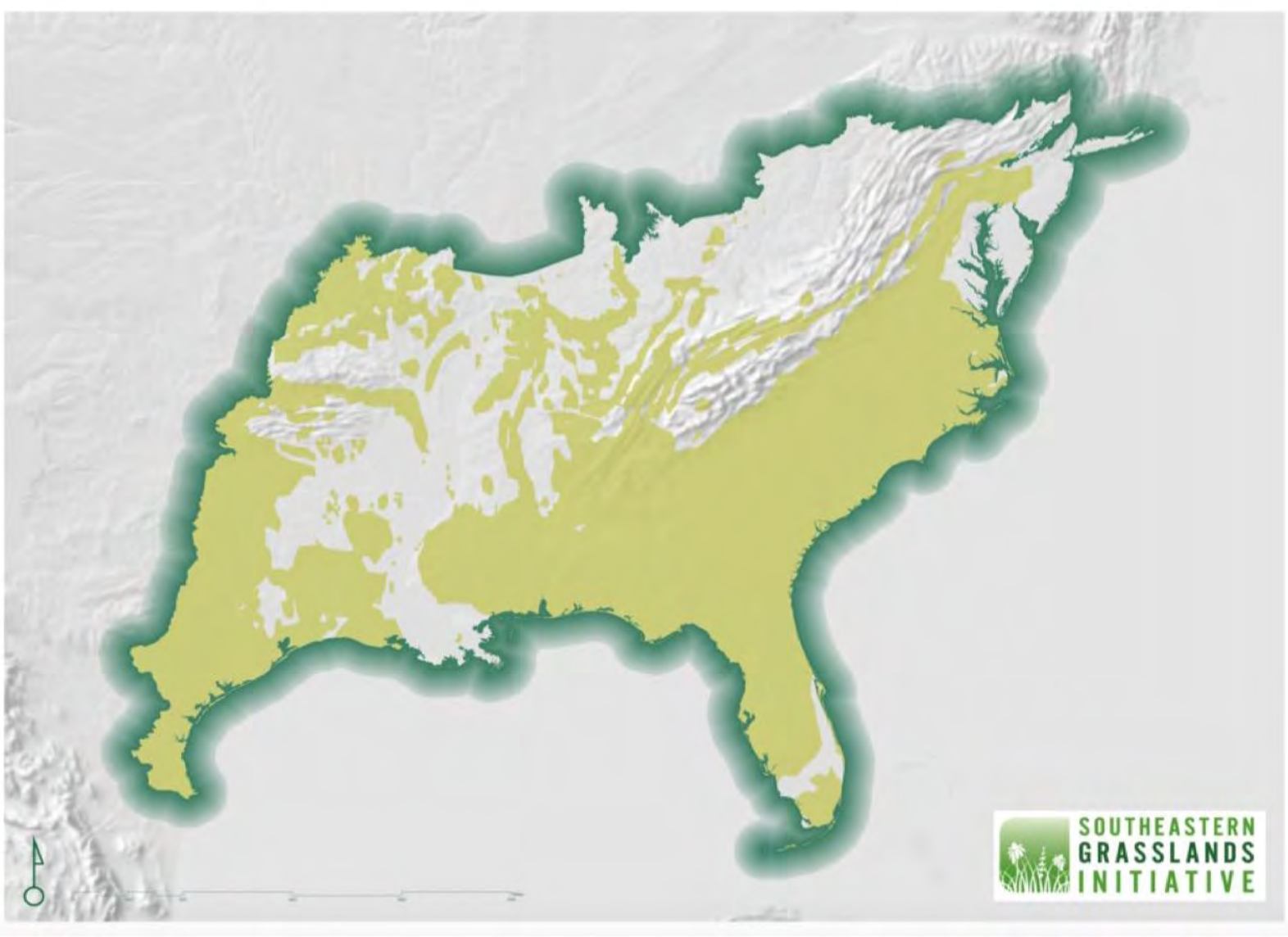


Longleaf Pine Savanna
Eastern NC
Photo by: Reed Noss

The World's Newest (36th) Global Biodiversity Hotspot



CONSERVATION
INTERNATIONAL





Photos: Theo Witsell

The Grassland Floor of the Shortleaf Pine Ecosystem



Gymnopogon ambiguus

Photo: Gary Fleming



Helianthus hirsutus

2001 7 3



Eurybia hemispherica



Solidago petiolaris

2001 9 24



Echinacea pallida

Photos: Warren Montague



Desmodium ciliare



Lespedeza virginica



Tephrosia virginiana



Rhynchosia latifolia



Asclepias tuberosa



Asclepias amplexicaulis



Asclepias variegata



Asclepias verticillata



Oxalis violacea



Viola pedata



Delphinium carolinianum



Phlox pilosa



Corylus americanus



Ceanothus americanus



Malus & Crataegus

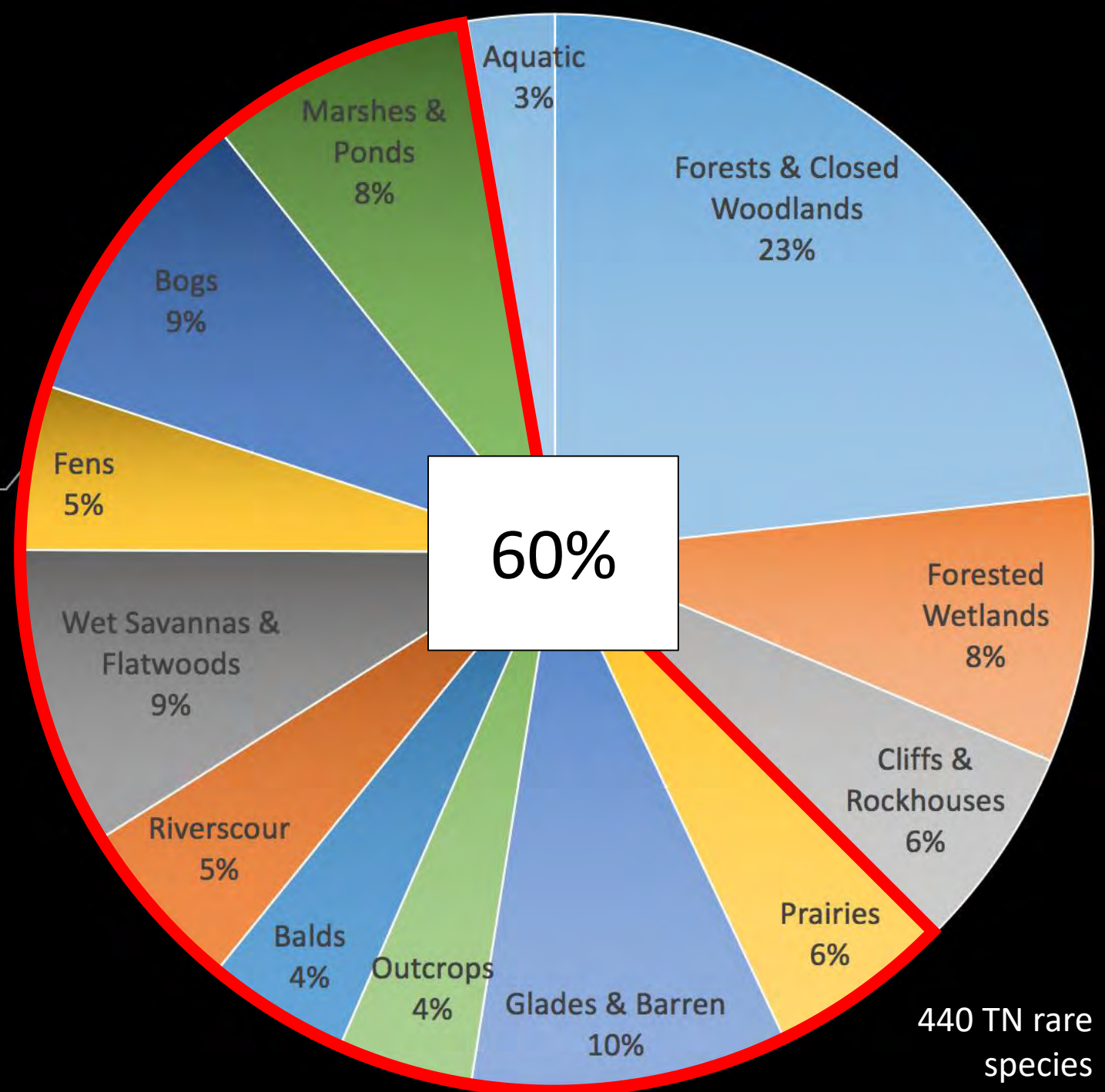


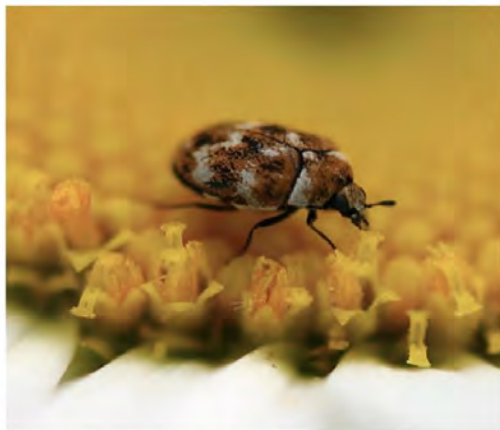
Plant Biodiversity



© 2009 Will Cook

Buffalo Clover
Trifolium reflexum
Credit: Will Cook



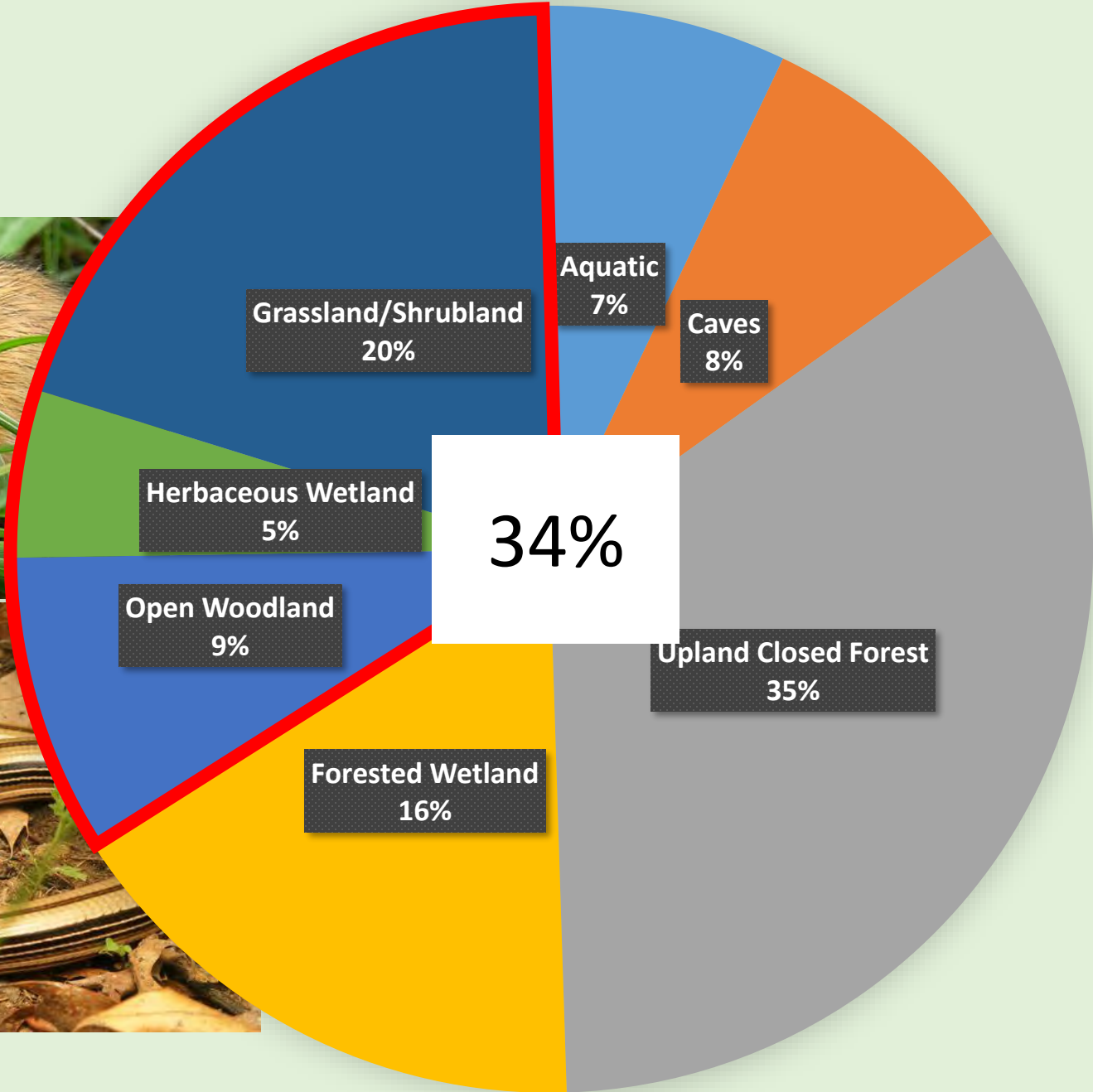


Groceries on the Ground

(Theo Witsell, Chief Ecologist)

Photo credit: Wide Open Spaces, Cabelas

Animal Biodiversity



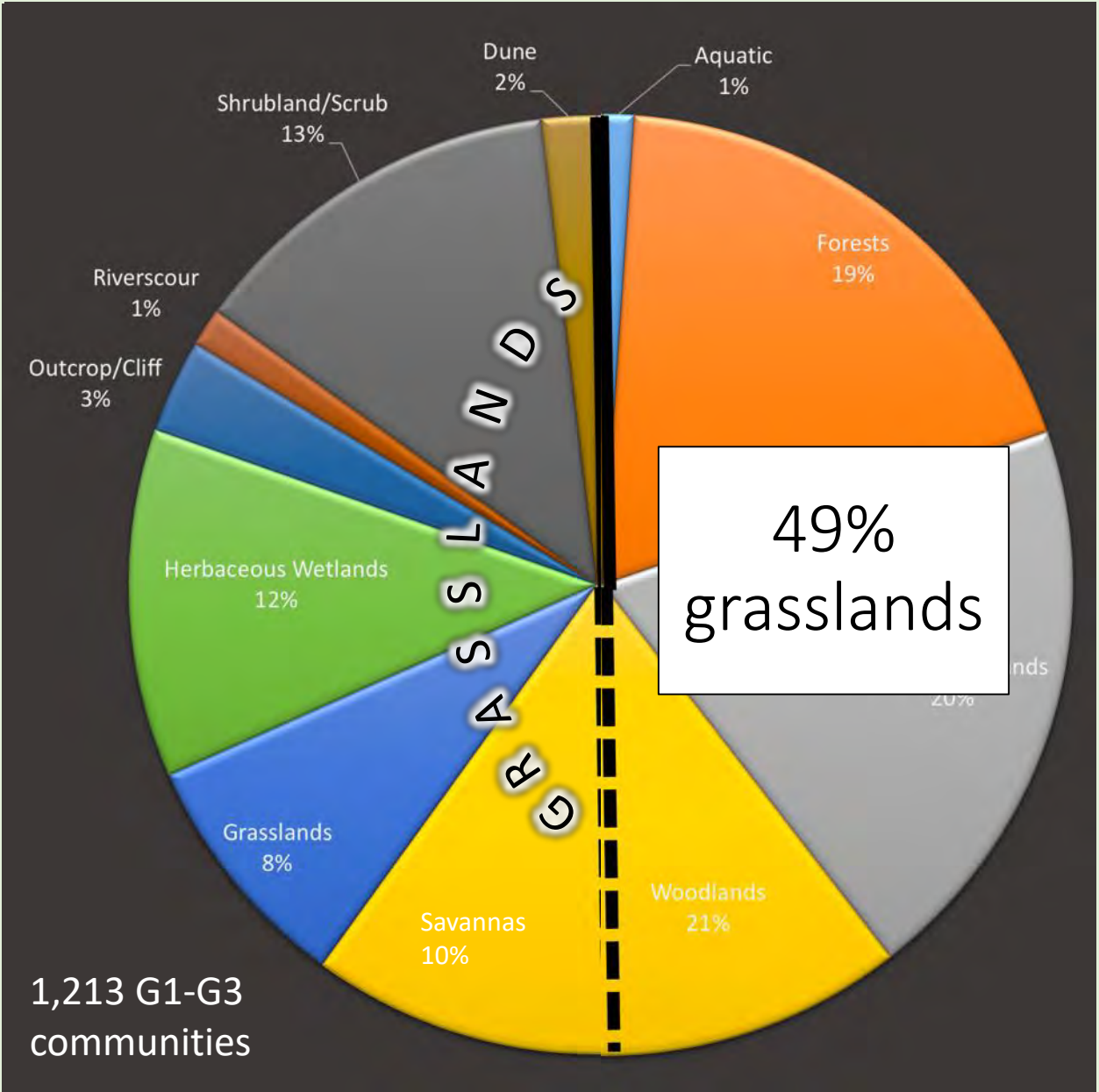
© Jeff LeClere www.HerdNet.net



Photo: Bill Holimon

Restored Pine-Bluestem Woodland – Ouachita National Forest

The largest category of rare plant community types

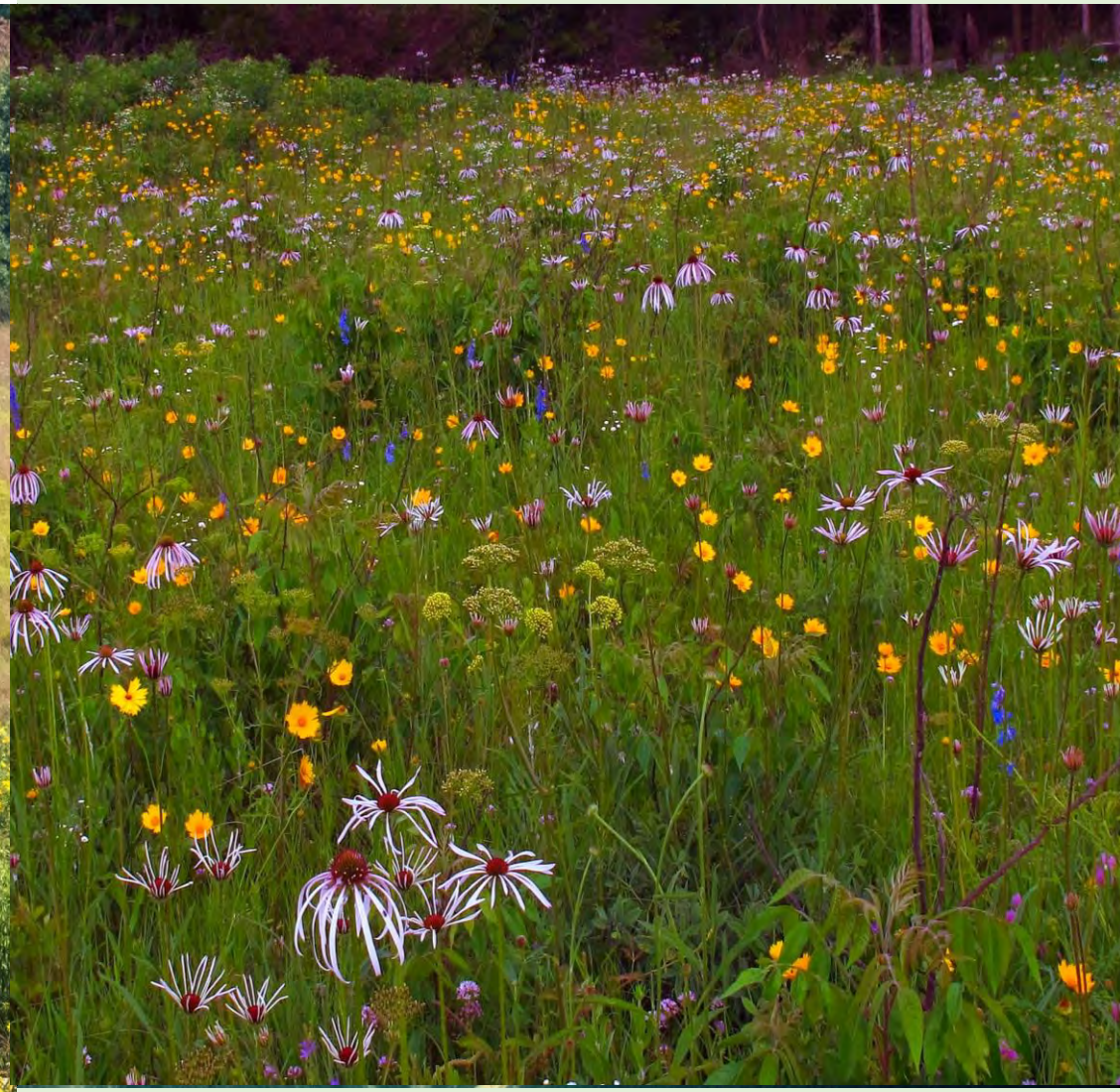


We're Down to the Last 1 %



© 2017 Charles Larry

Landscape-Scale Conservation



Small-Scale Conservation

Biodiversity

Economics

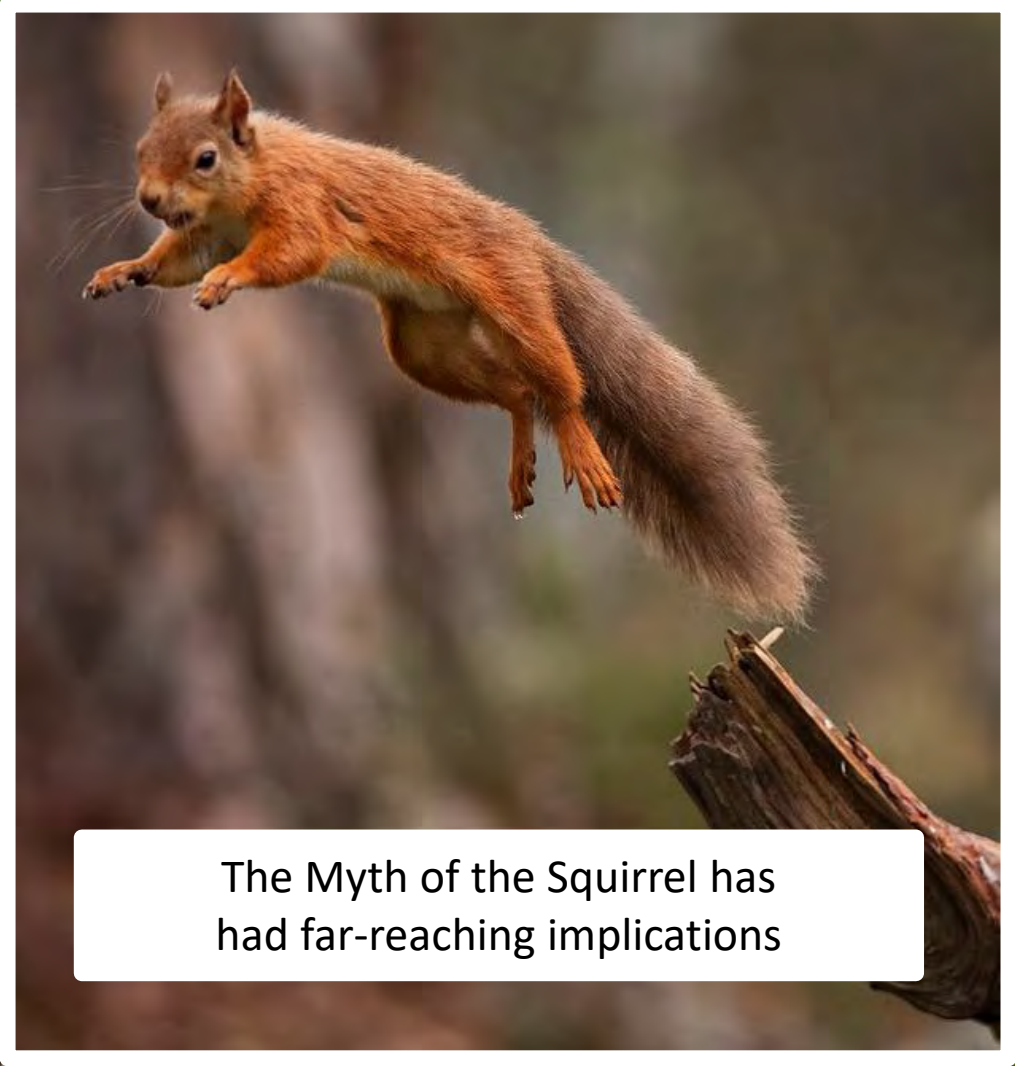
Services

History





FORESTS



The Myth of the Squirrel has had far-reaching implications



WETLANDS



RIVERS



**Mercy
Mercy Me**



**Things ain't
what they used to
be**



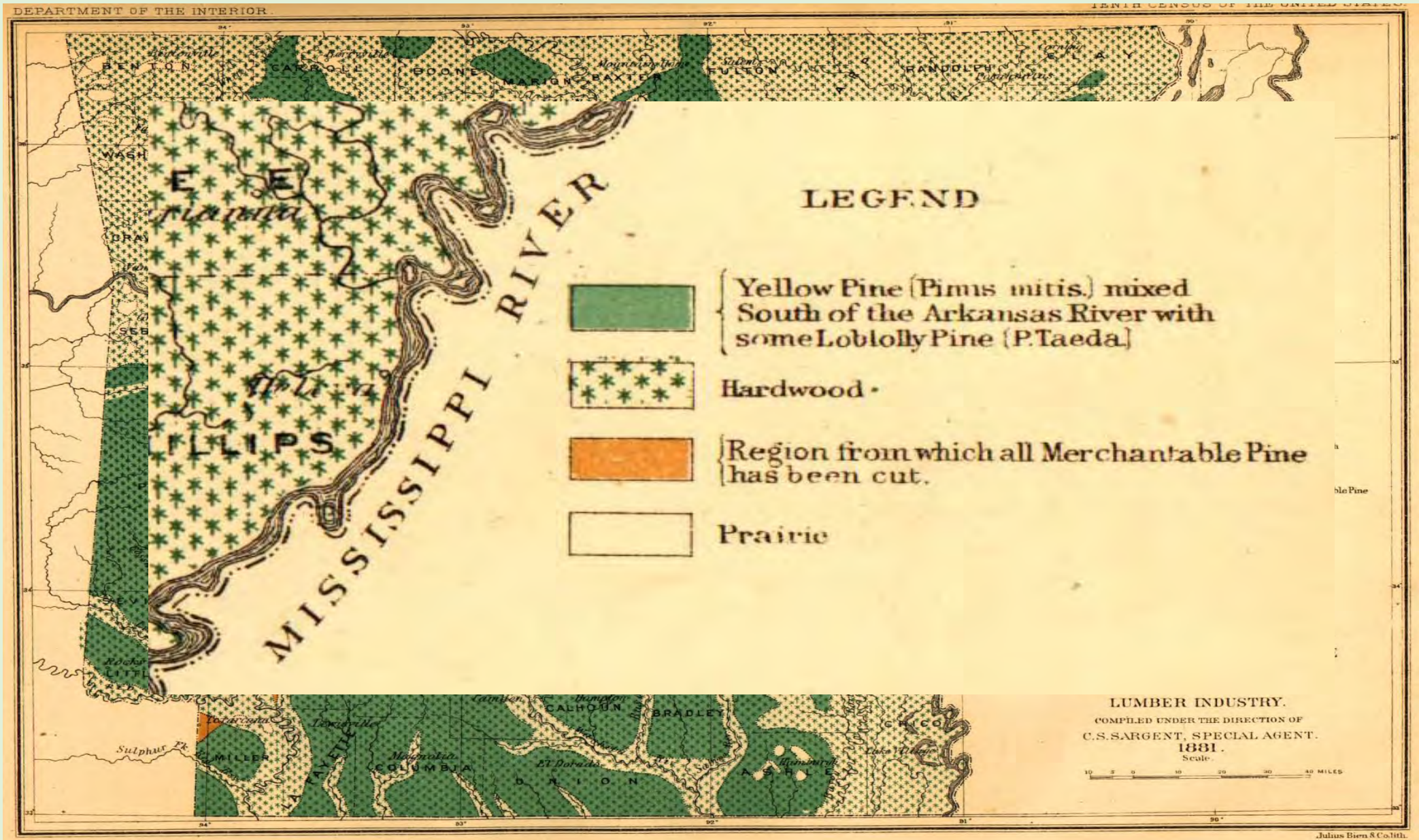


Natural Pine-Oak Stand (Fire Suppressed)

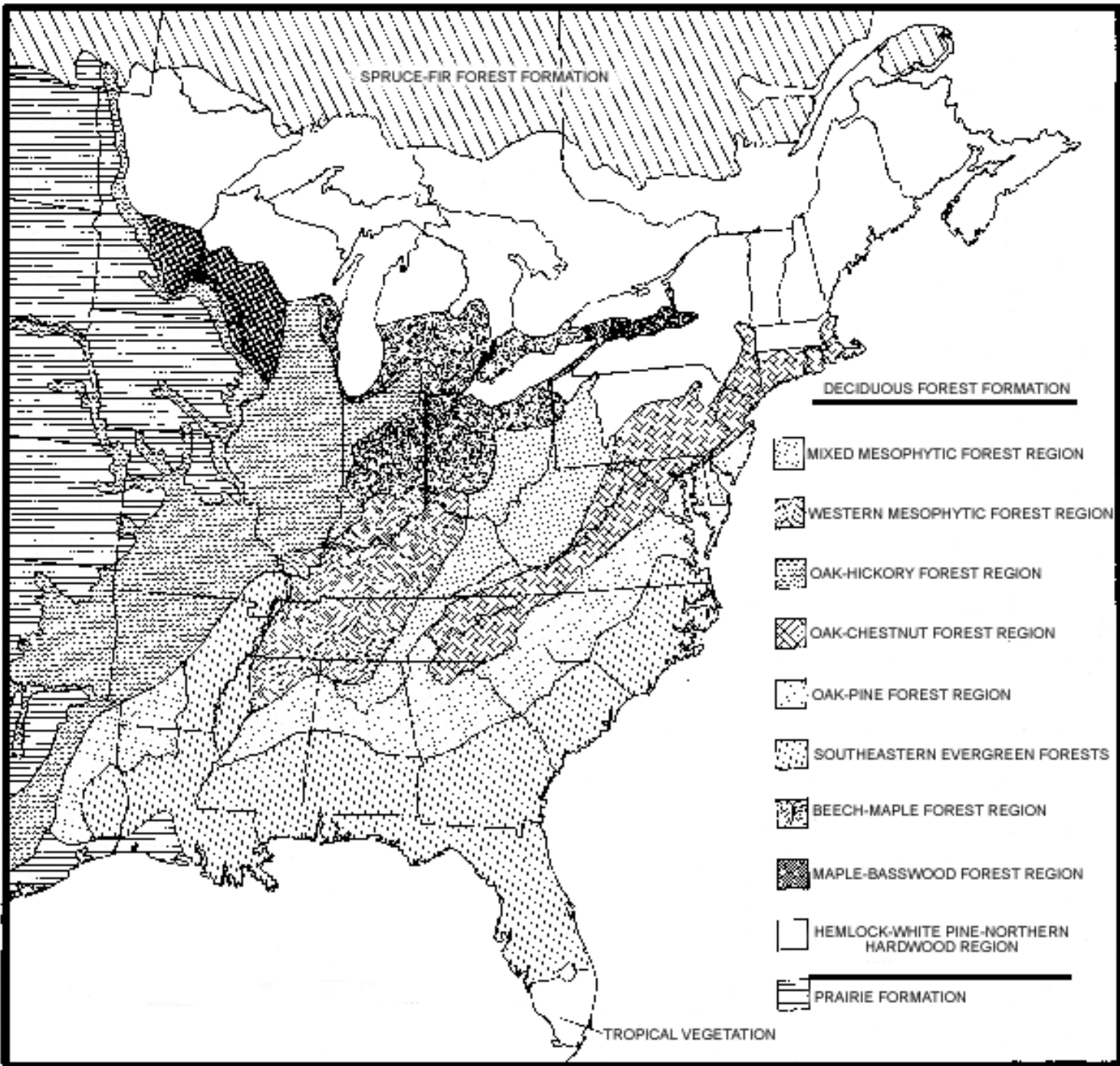




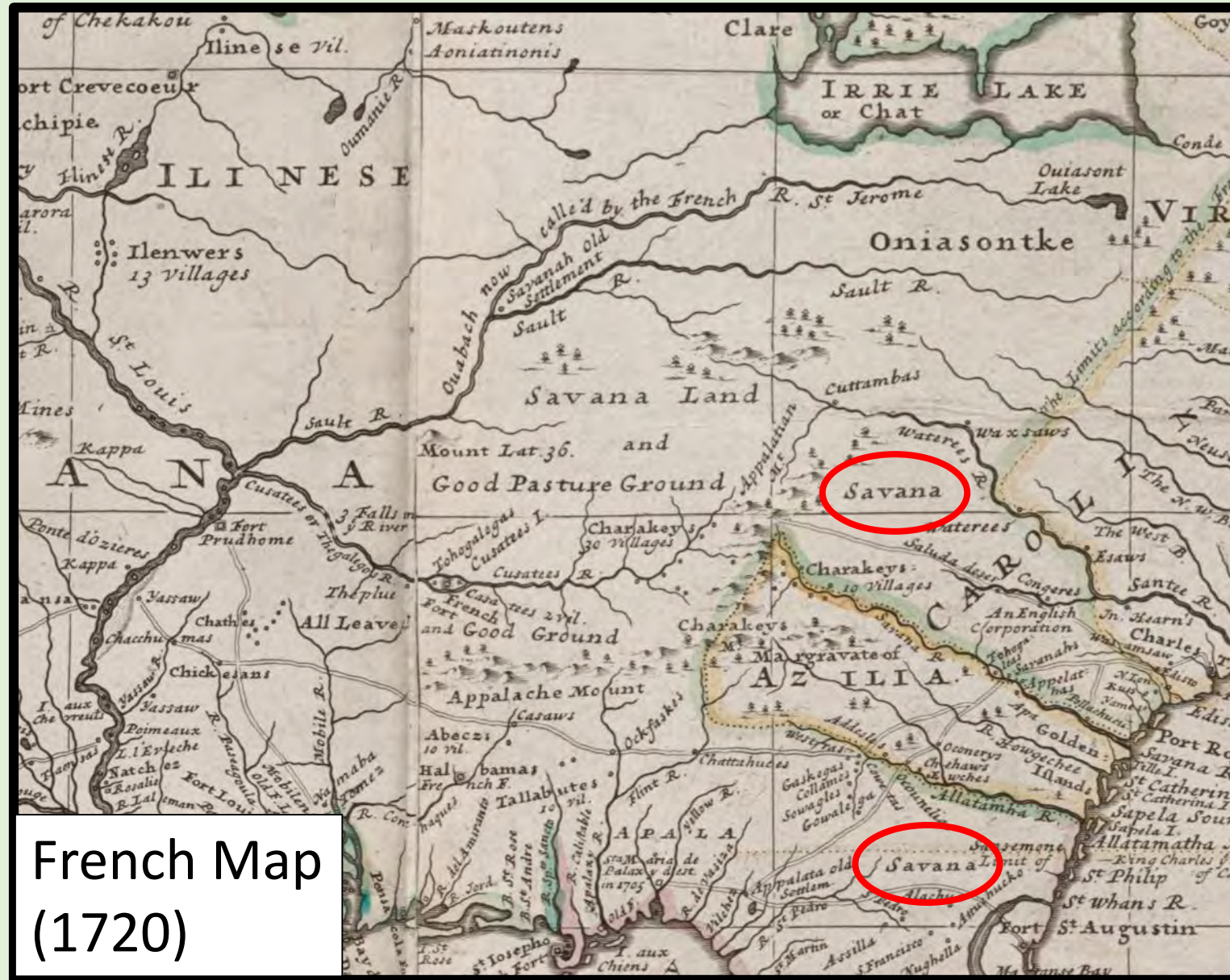
Forest Type Map (Sargent, 1881)



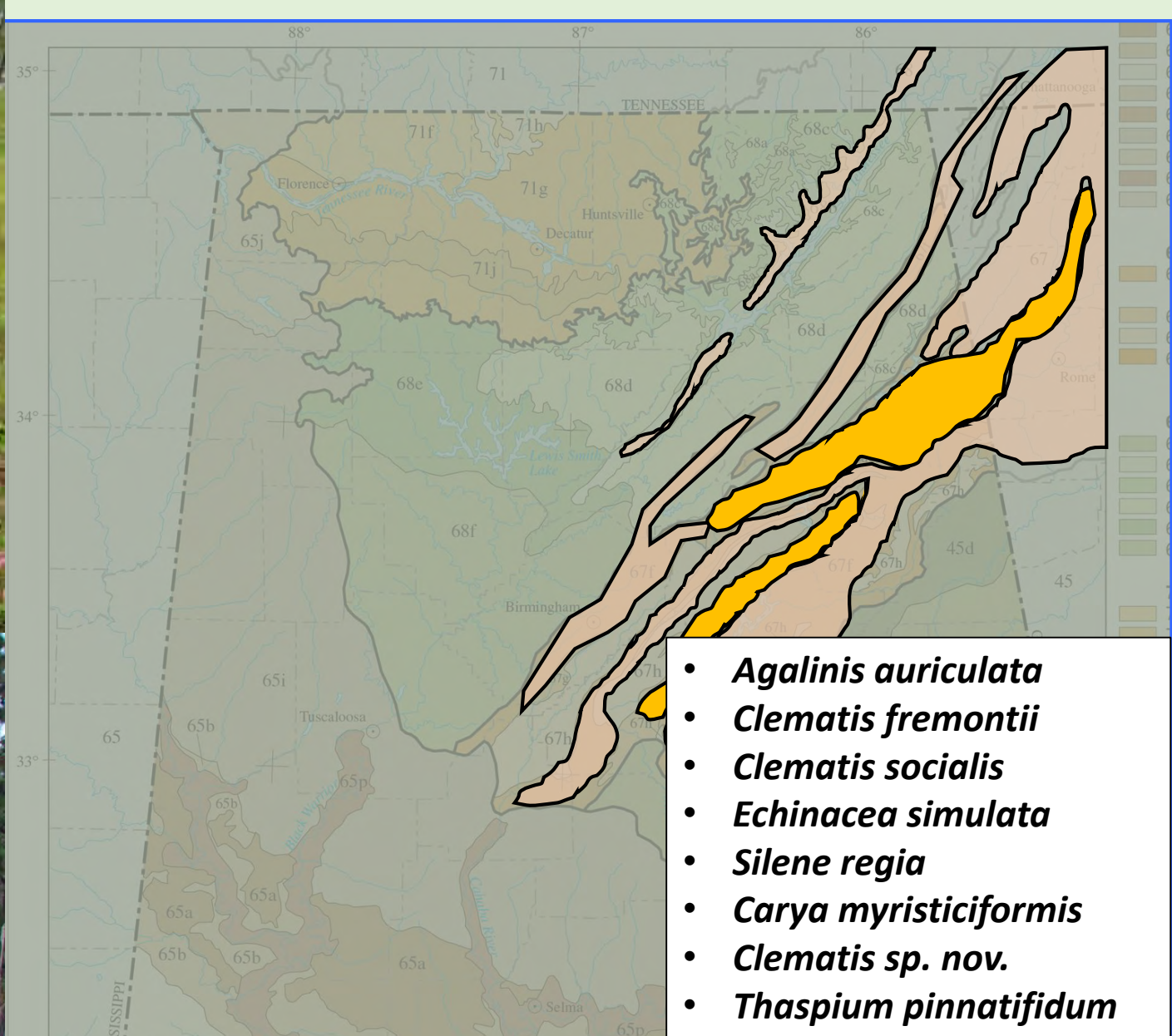
Braun (1950)



How do we know where grasslands were?



French Map
(1720)



**Ridge & Valley
Savanna**

- ***Agalinis auriculata***
- ***Clematis fremontii***
- ***Clematis socialis***
- ***Echinacea simulata***
- ***Silene regia***
- ***Carya myristiciformis***
- ***Clematis sp. nov.***
- ***Thaspium pinnatifidum***
- ***Rudbeckia grandiflora***
- ***Rudbeckia truncata***
- ***Trifolium reflexum***



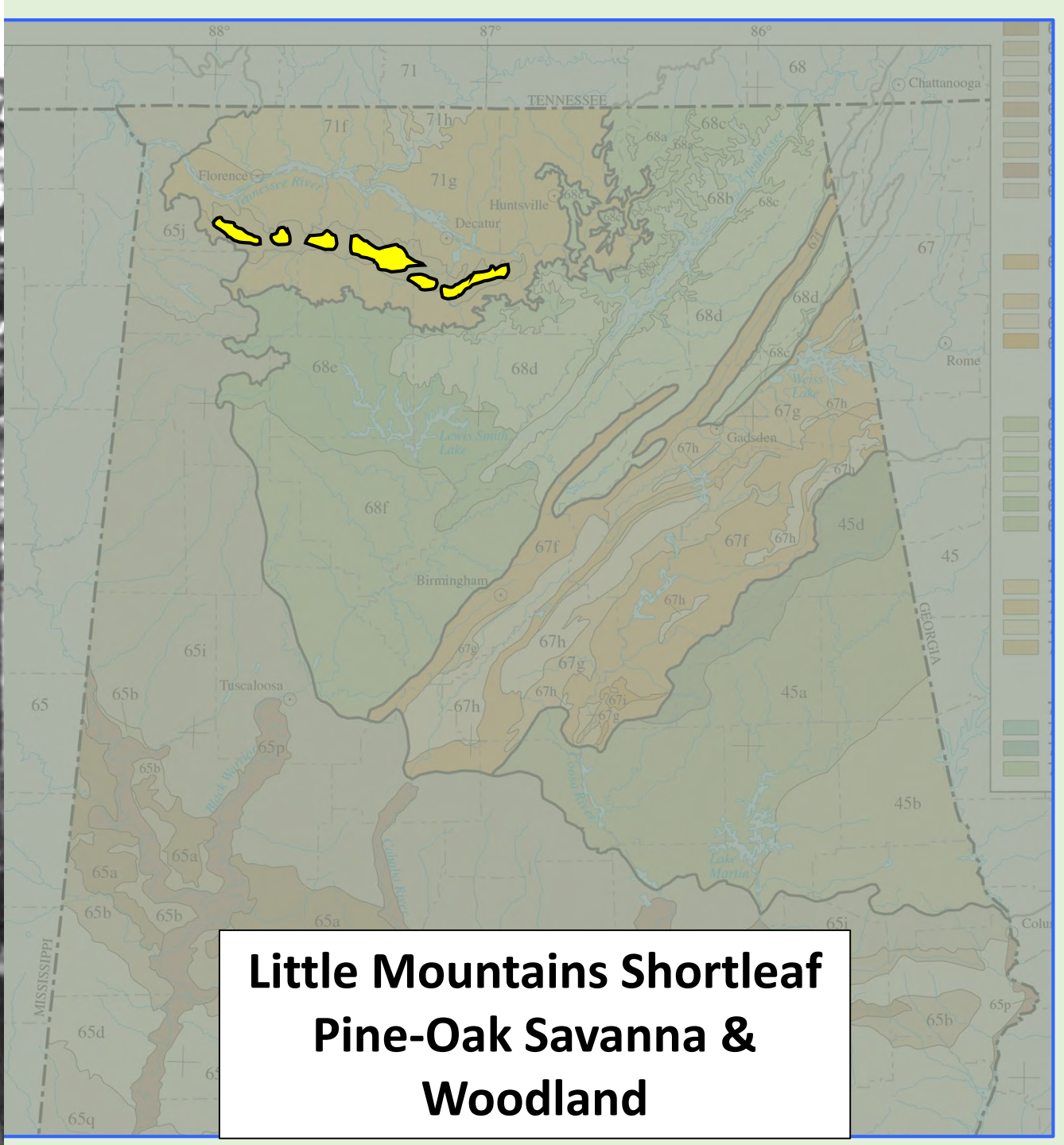
Photo: Theo Witsell

North Fork Pinnacle – Ouachita National Forest

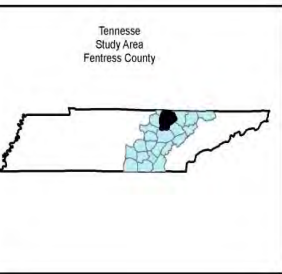




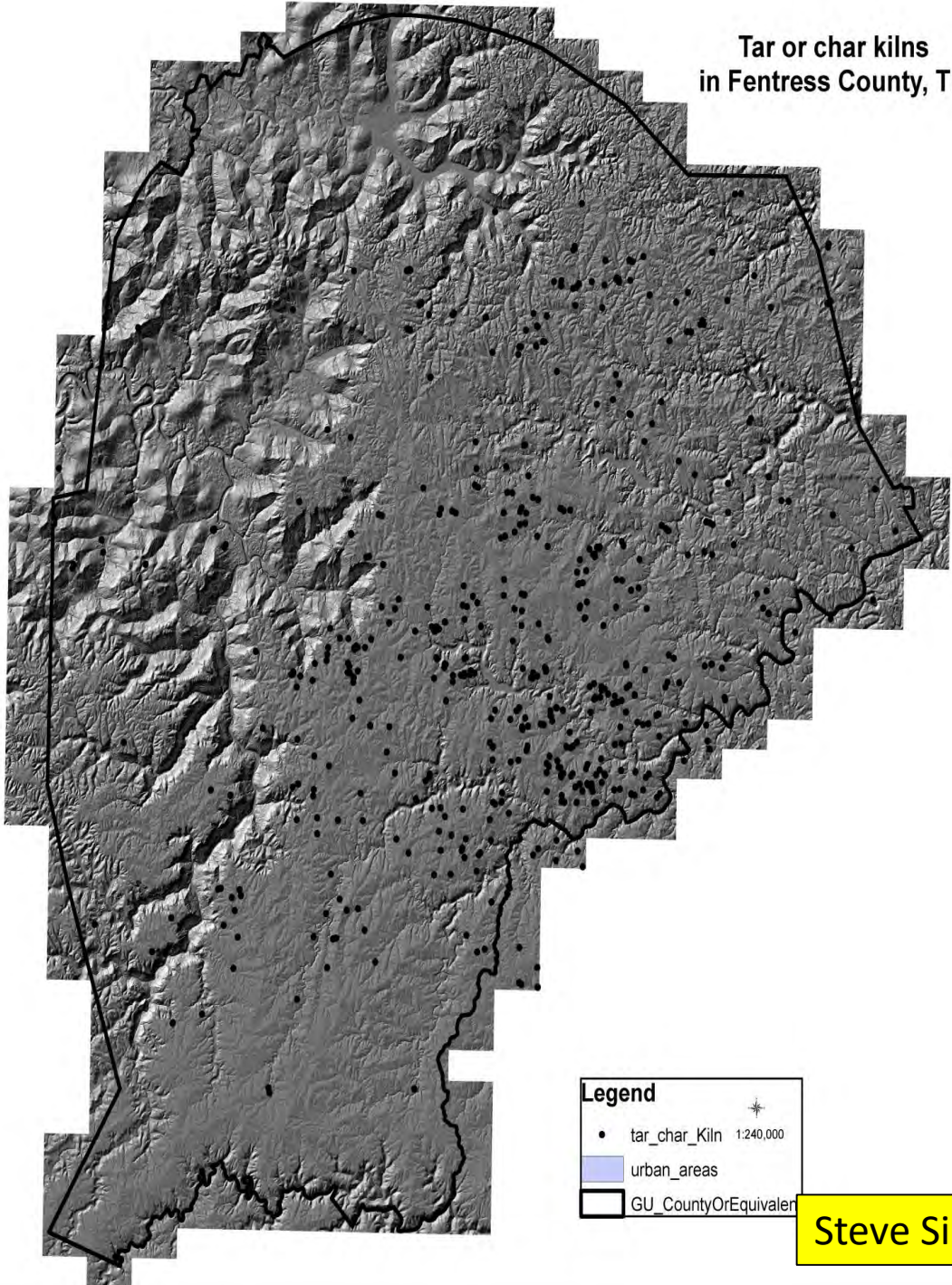
Roland Harper (1910s), Little Mountains



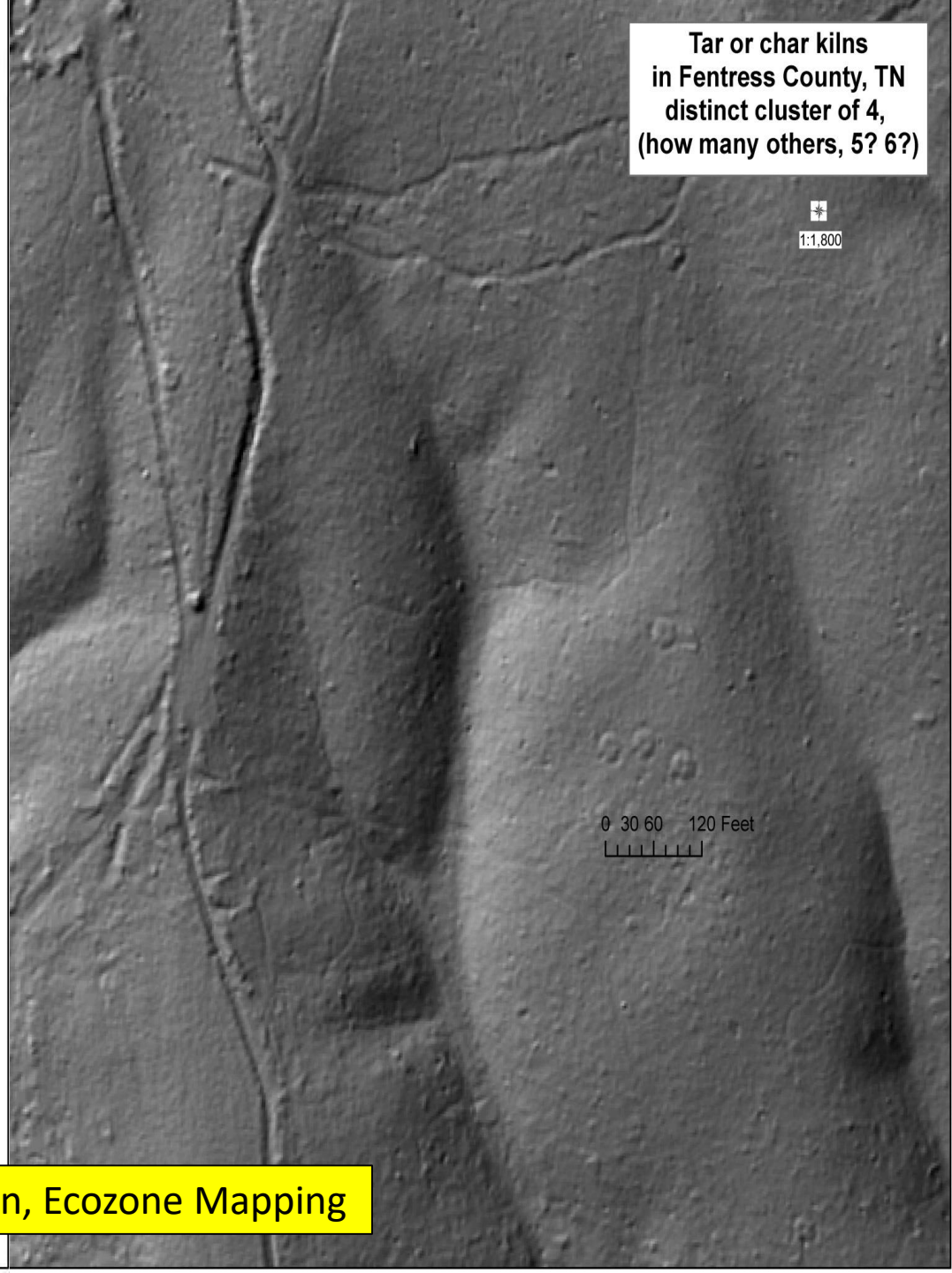
**Little Mountains Shortleaf
Pine-Oak Savanna &
Woodland**



Tar or char kilns in Fentress County, TN



Tar or char kilns
in Fentress County, TN
distinct cluster of 4,
(how many others, 5? 6?)



Steve Simon, Ecozone Mapping



Photo: Meredith York

“The Powerline Effect”









Importance of Reference Sites













The challenges facing Southeastern grasslands are complex

Major Knowledge Gaps

Extreme Rarity

Scarcity of Funding

Diminished Resources

Declining Expertise

Untapped Workforce



- 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

4 PROGRAMMATIC PRIORITIES

- Education, Outreach, Capacity Building
- Policy & Advocacy
- Granting Program
- Leadership & Implementation of Grasslands Conservation

8 STRATEGIES



SGI's Volunteer Corps



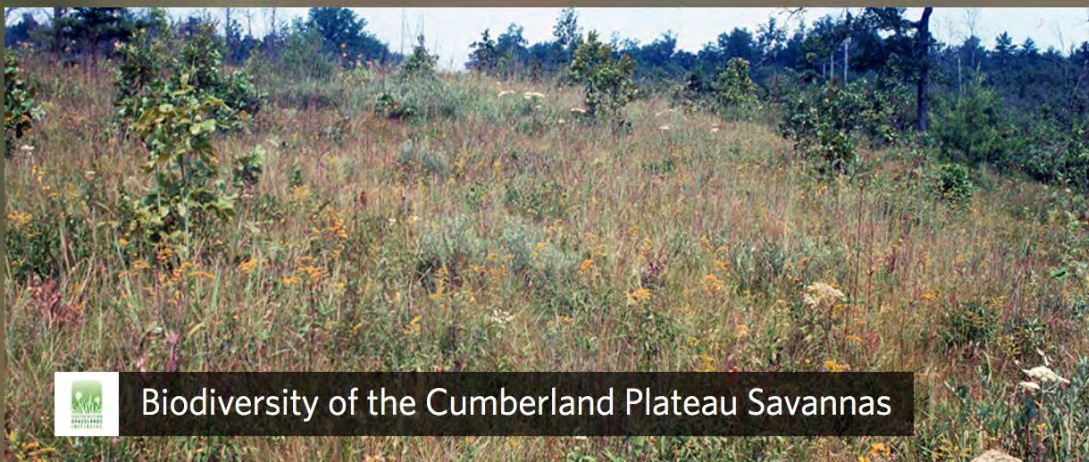
Play




Invasives



Seeding



 Biodiversity of the Cumberland Plateau Savannas

About Members 16

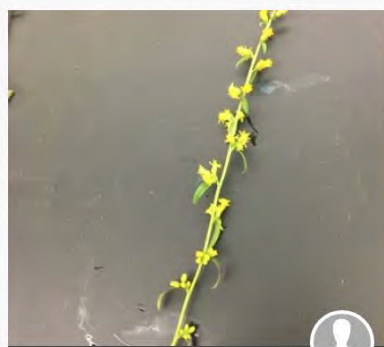
To document the biodiversity of the Cumberland Plateau Savanna ecosystem.

[Read More](#)

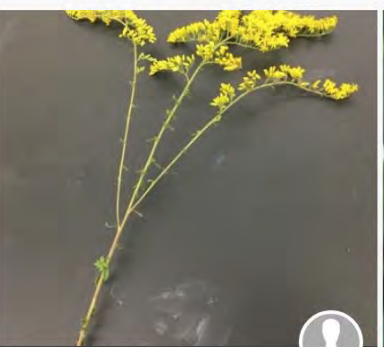
[Edit Project](#) NEWS

Overview **1,496** OBSERVATIONS **261** SPECIES **194** IDENTIFIERS **227** OBSERVERS Stats


[Map](#) [Grid](#) [List](#) [Identify](#) [Search](#) [Export Observations](#)



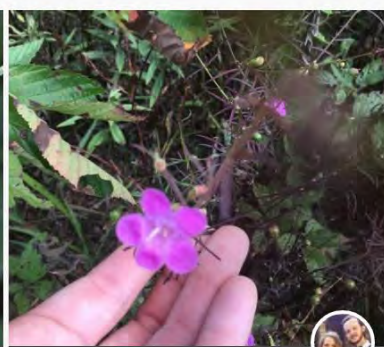
Slender Goldenrod
Solidago erecta 14d



Field Goldenrod
Solidago nemoralis 14d



Panicled Ticktrefoil
Desmodium paniculatum 6d



Purple False Foxglove
Agalinis purpurea 4d



II. Policy & Advocacy



III. Granting Program

Corporate Sponsorship

Private Philanthropy

Federal Funds



SGI
GRANT
RECIPIENTS

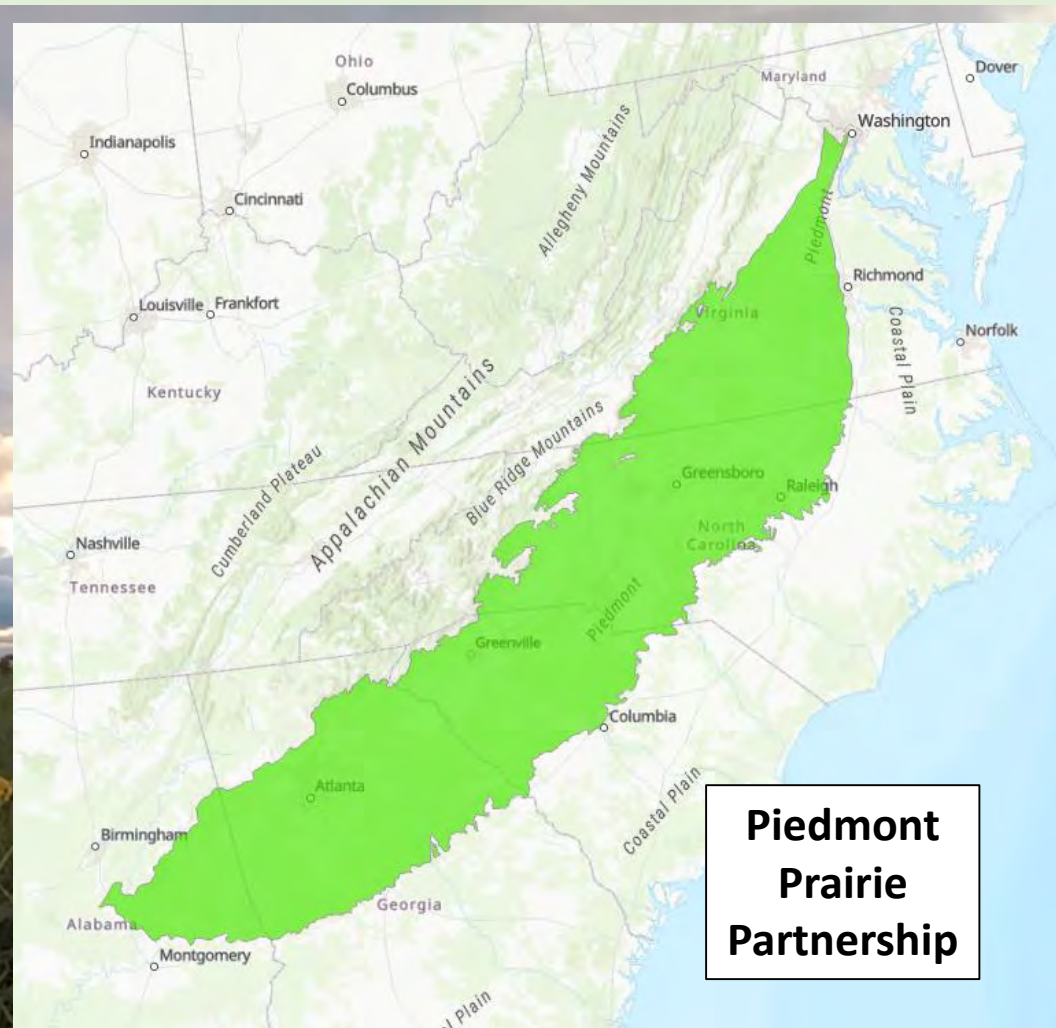


Blackland Prairie, southwest Arkansas; Credit: Craig Fraiser

IV. Leadership & Implementation of Grasslands Conservation

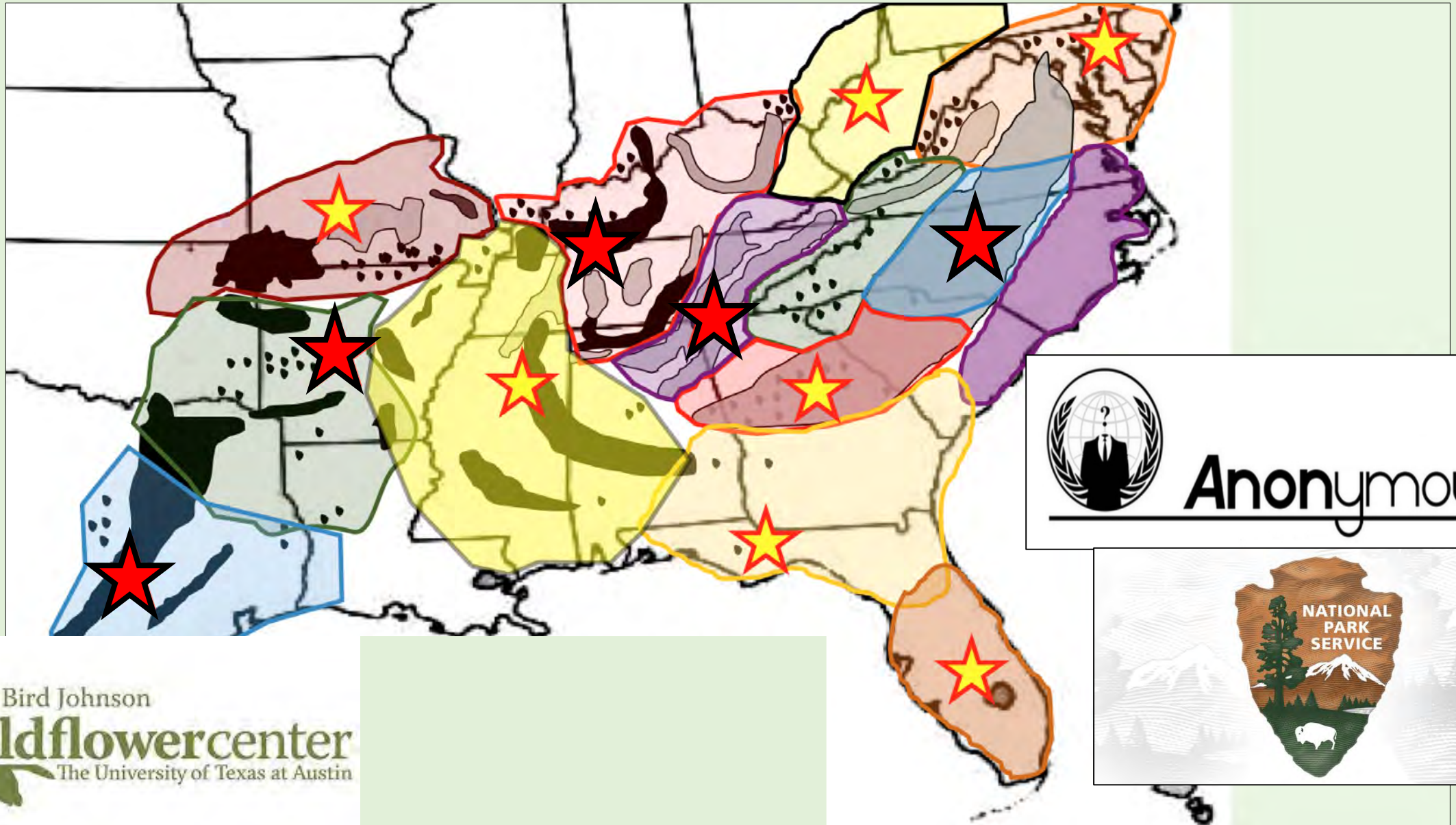


Watch our documentary:
www.segrasslands.org/video



Videos & Documentaries

Regional Coordinators & Scientific Advisory Committee



Anonymous

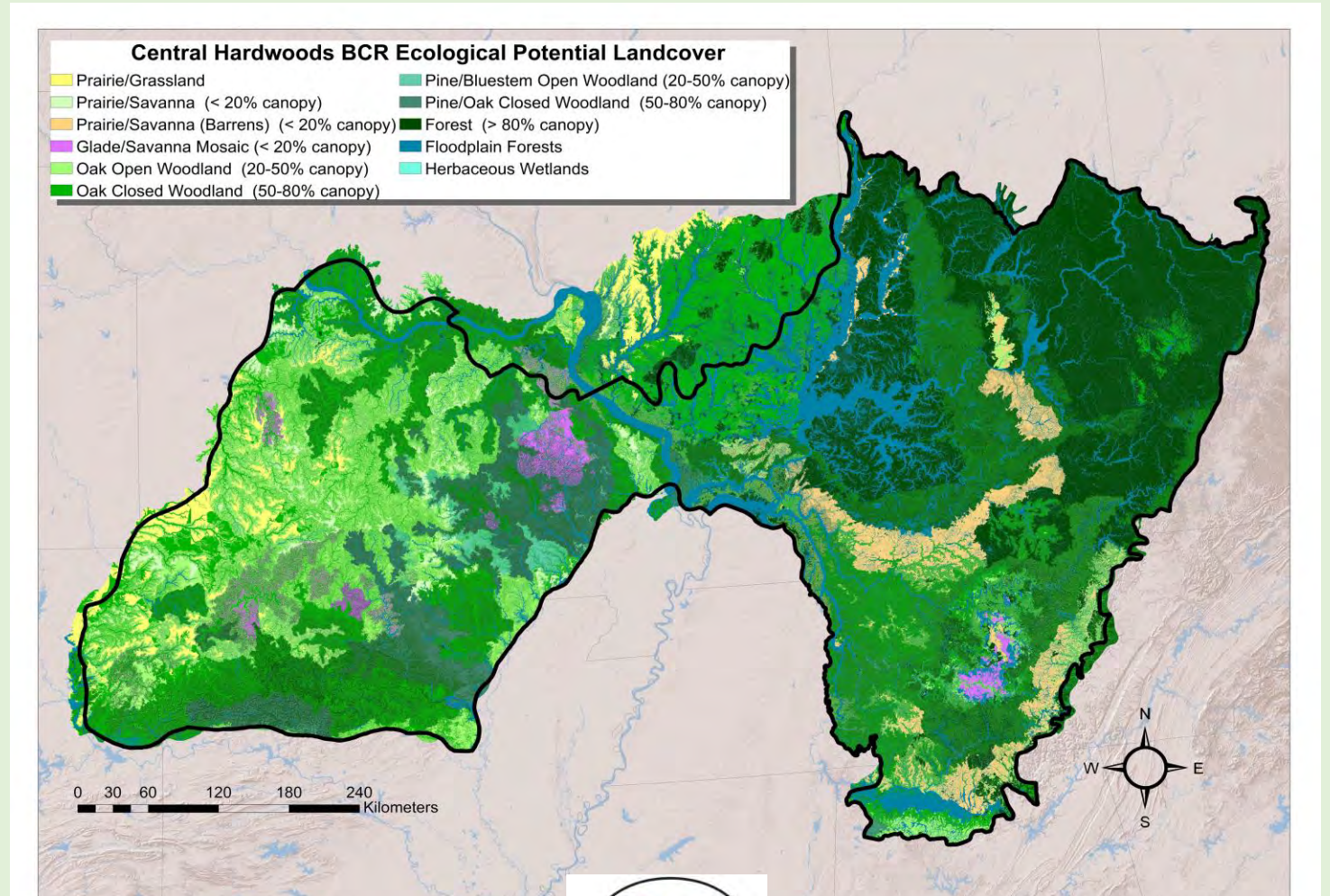


National / Subnational Leadership



Regional Leadership

NRCS Regional Conservation Partnership Program (RCPP) Grant



Development of Piedmont Ecoregion Grassland Seed Source



NORTH CAROLINA
BOTANICAL
GARDEN



SOUTHEASTERN
GRASSLANDS
INITIATIVE

Local Leadership



15-acre Urban Prairie
Re-creation,
Clarksville, TN



The Southern cousins of the American Prairie Reserve





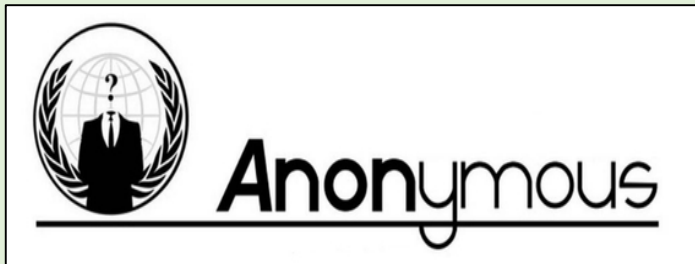
Let's Join Forces



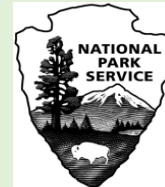
Staff



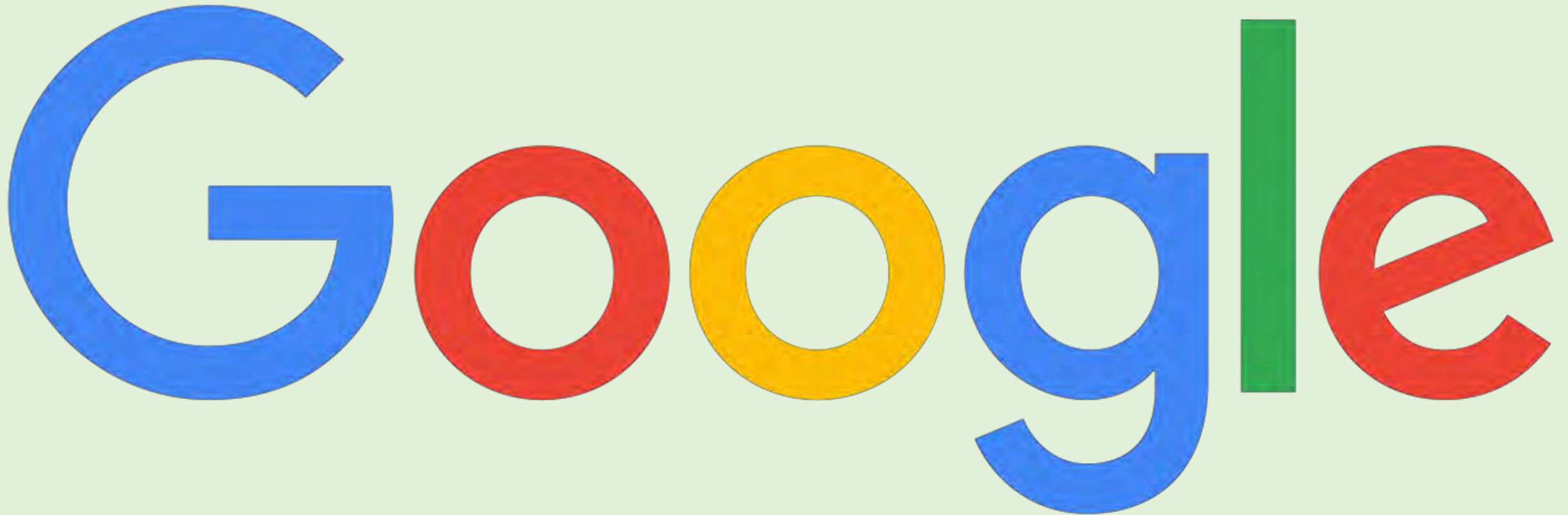
Philanthropic Donors



Government Funding



Our First Corporate Funder....

The word "Google" is displayed in its iconic multi-colored font. The letters are: 'G' (blue), 'o' (red), 'o' (yellow), 'g' (blue), 'l' (green), and 'e' (red).

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www.segrasslands.org

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Connections**

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Us**

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Volunteers**

**Watch Our
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