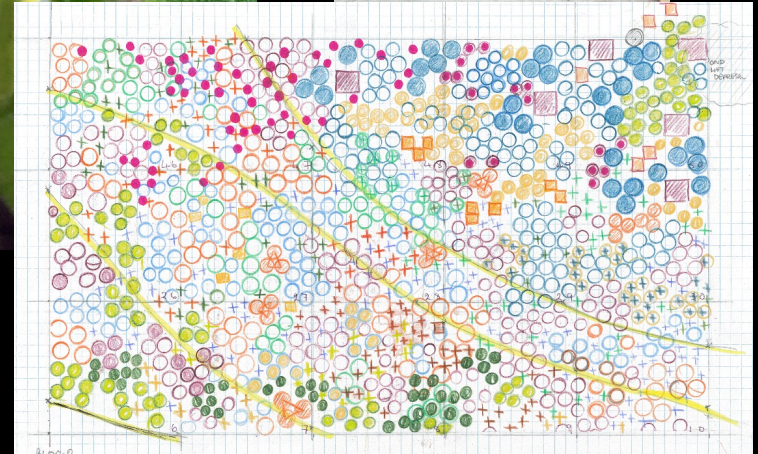
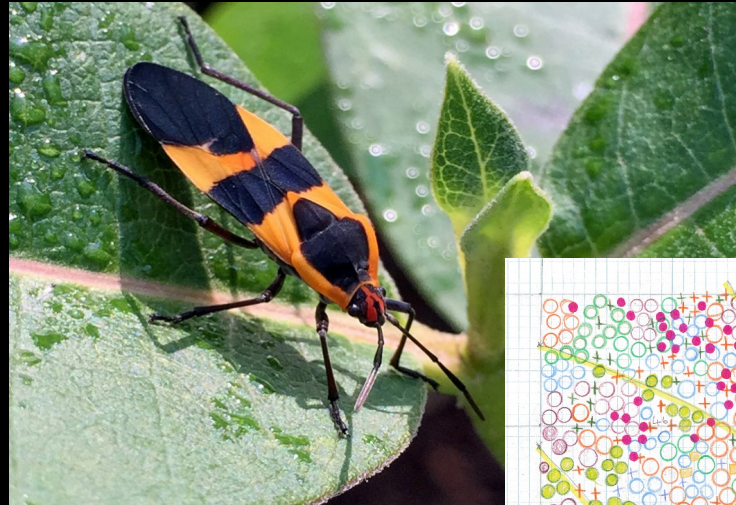
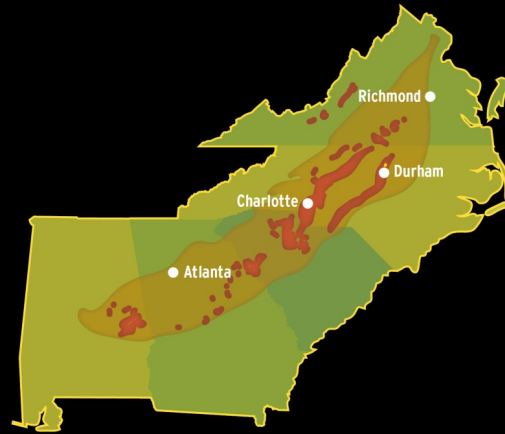


A Rare Interpretation

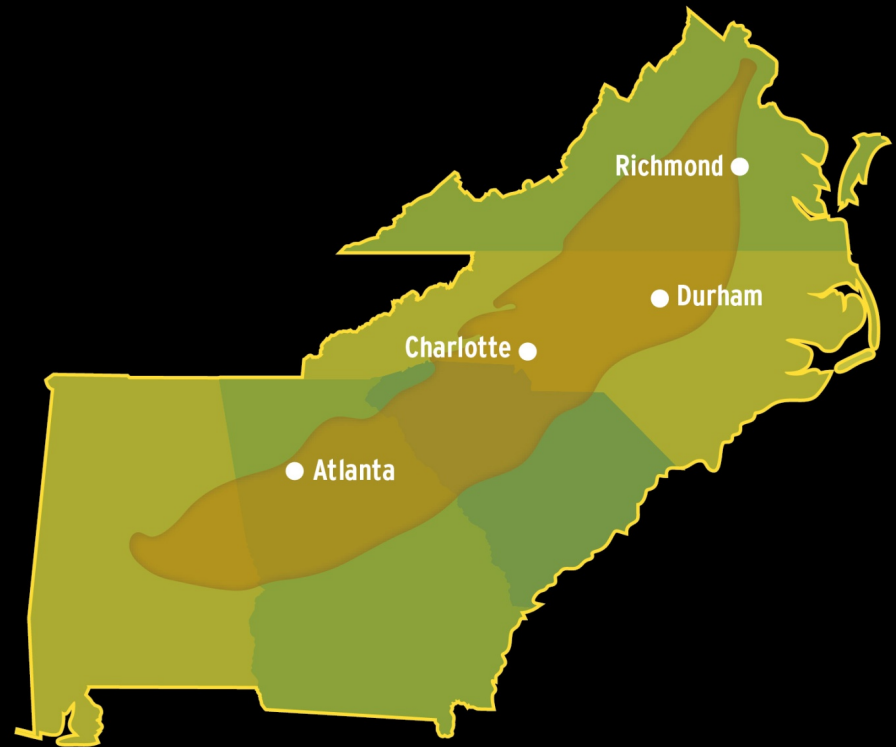
Garden Design Meets A Vanishing
Ecosystem

Stefan Bloodworth and Annabel Re





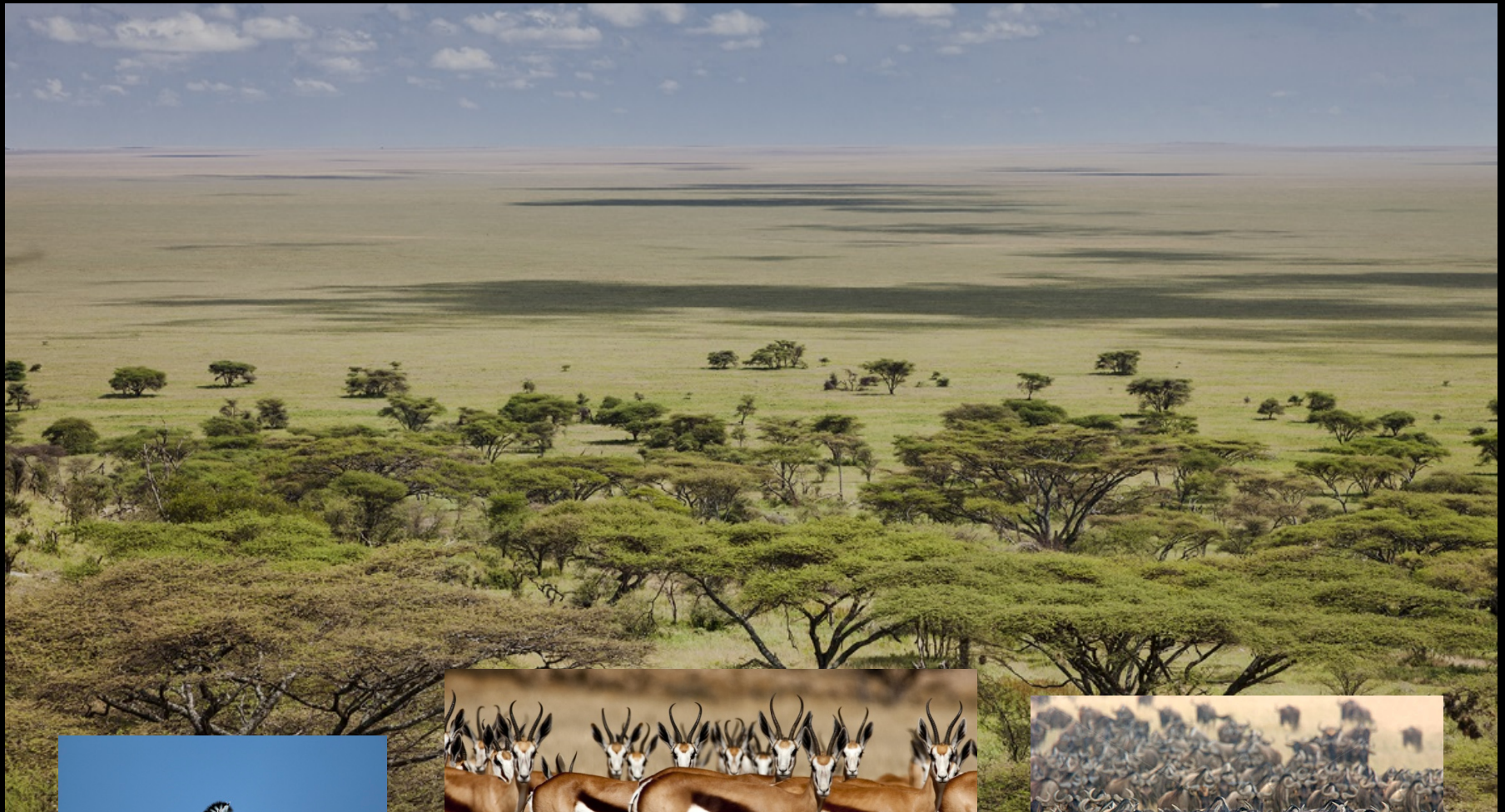
welcome to DUKE GARDENS







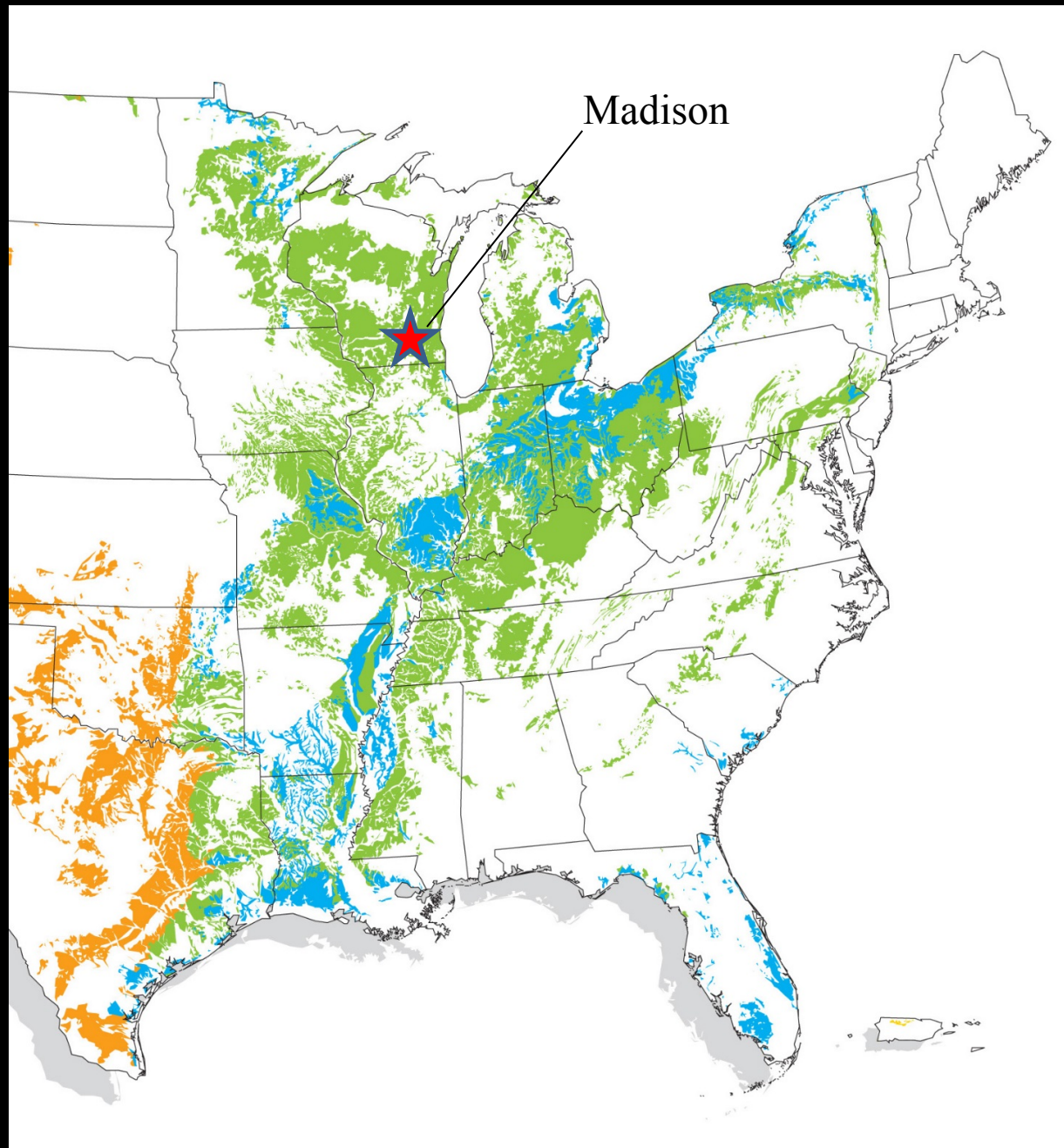
Serengeti



Curtis Prairie
UW Madison Arboretum



Alfisols





Picture Creek
Barrens

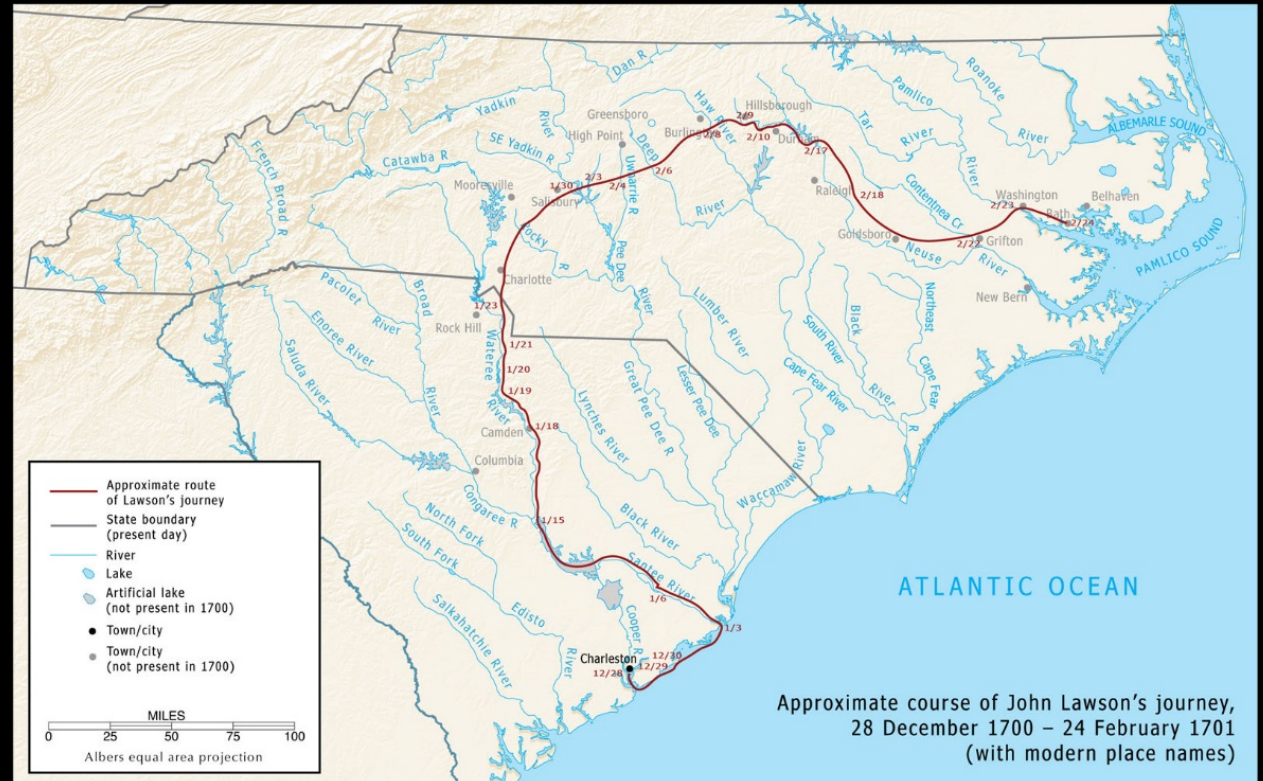
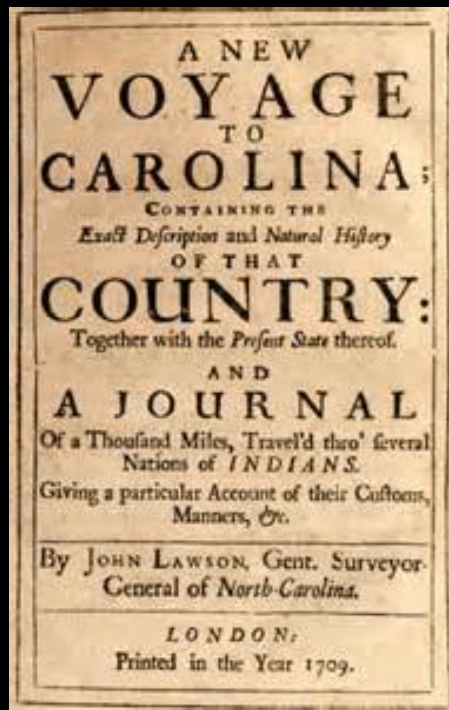


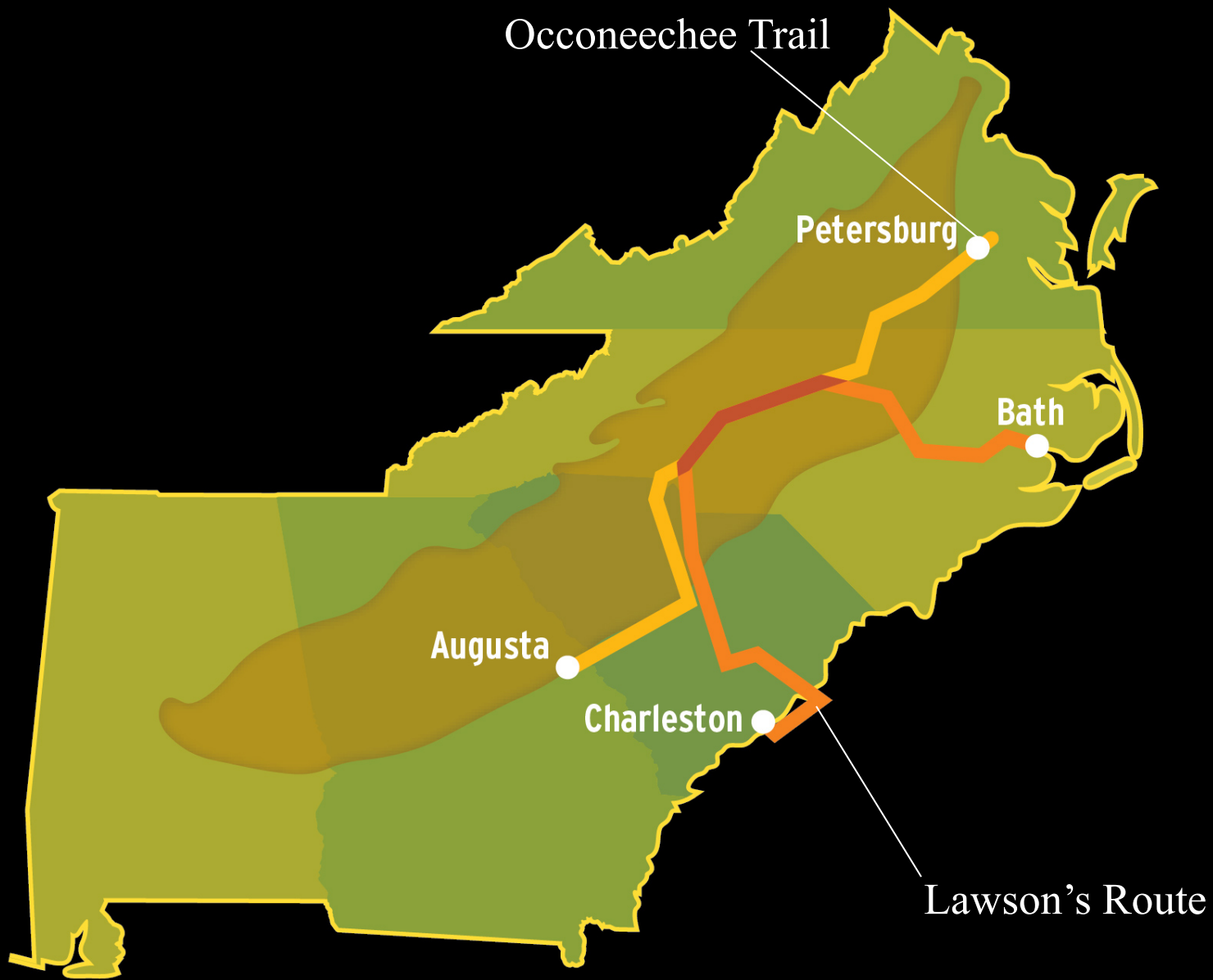
Shuffletown Prairie



“We traveled today some twenty-five miles over pleasant savanna ground, high and dry, having very few trees upon it, and those standing at a great distance. The land was very good and free from grubs or underwood. A man near Sapona (the Yadkin) may more easily clear ten acres of ground than in some places he can one”

John Lawson, from “A New Voyage to Carolina”





Occoneechee Trail

Petersburg

Bath

Augusta

Charleston

Lawson's Route



“fine physical specimens due to the deer, bear, elk and bison in their diet”



Plains Bison

- Bulls average 730 kg. (Cows, 410 kg.)
- Shorter neck
- More rounded hump
- Smaller and stockier
- Chaps of long hair on forelegs
- Cape is usually lighter in color
- In summer, cape forms distinct boundary with the rest of body
- Frizzy hair on head
- Larger more rounded beard



Wood Bison

- Largest native land mammal in North America
- Bulls average 840 kg – 10 to 15% heavier than plains bison (Cows, 475 kg)
- Taller and squarer hump
- Darker in color
- Generally taller and larger
- Little or no chap hair on forelegs
- Cape usually does not form distinct boundary with rest of body
- Long, straight hair, sloping down on forehead
- Smaller, more pointed beard

“except such as have been affrighted away since the invasion of the Europeans. The buffalo, once so very numerous, is not at this day to be seen in

Symphyotrichum georgianum Georgia Aster

A relic of the Post Oak prairies that existed in the southeast prior to large-scale fire suppression, Georgia Aster is now limited to along woodland borders and roadsides. Road development and expansion, as well as woody plant succession as a result of fire suppression, are some of the major threats to the survival of *Symphyotrichum georgianum*.



Conservation Status:
NC Threatened

Echinacea laevigata Smooth Coneflower

A native of the piedmont prairie ecosystem, Smooth Coneflower has seen its native habitat diminish greatly over the last century due to fire suppression. Without fire in the landscape, *Echinacea laevigata* has suffered from competition with other, non fire-adapted species.



Conservation Status:
Federally Endangered

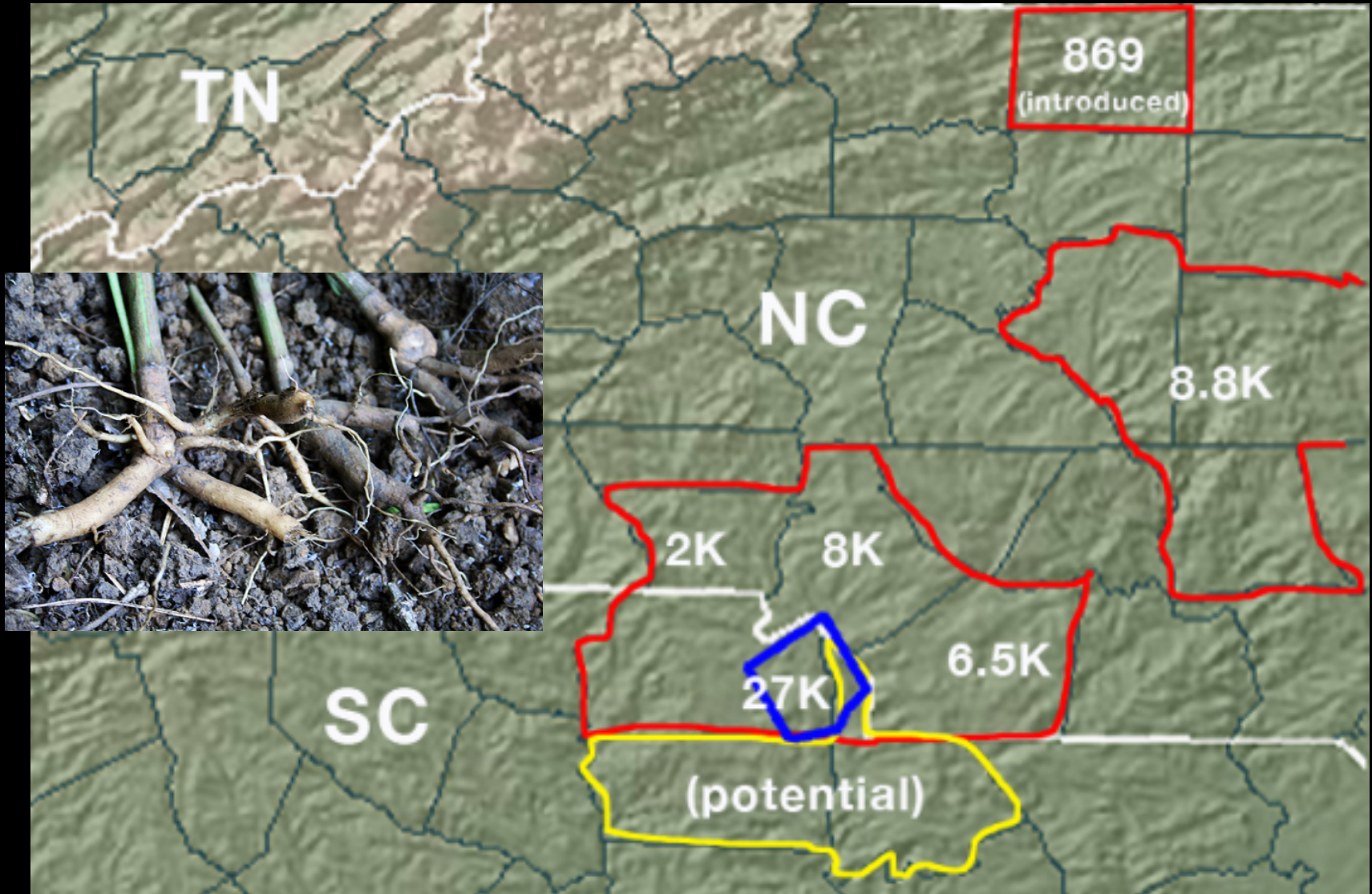
Helianthus schweinitzii Schweinitz's Sunflower

Native to the piedmont prairie ecosystem, Schweinitz's Sunflower is currently known from only 10 populations in North Carolina and 6 in South Carolina. Fire suppression is the main reason behind the decline of the piedmont prairie, and by connection, *Helianthus schweinitzii*.

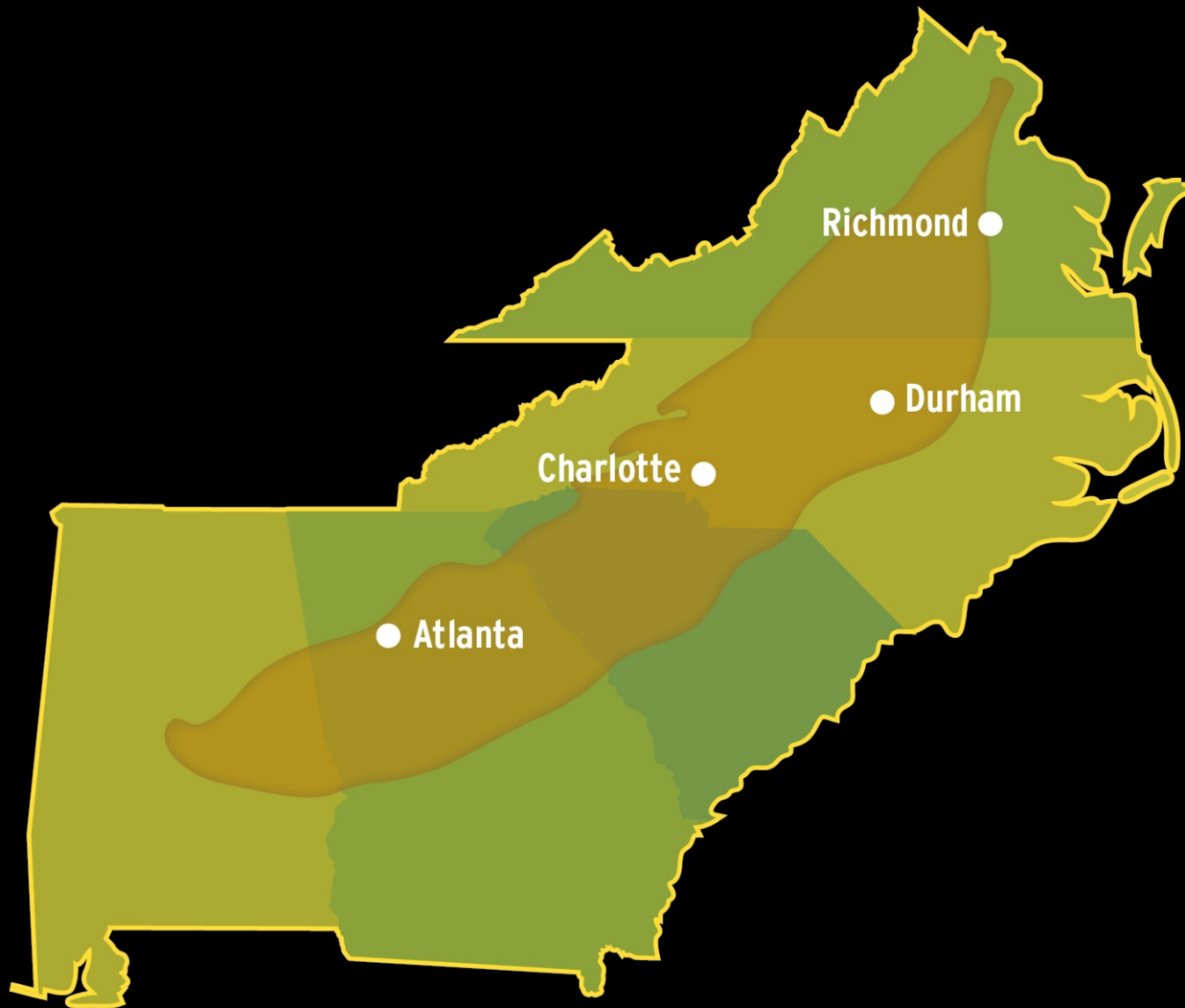


Conservation Status:
Federally Endangered

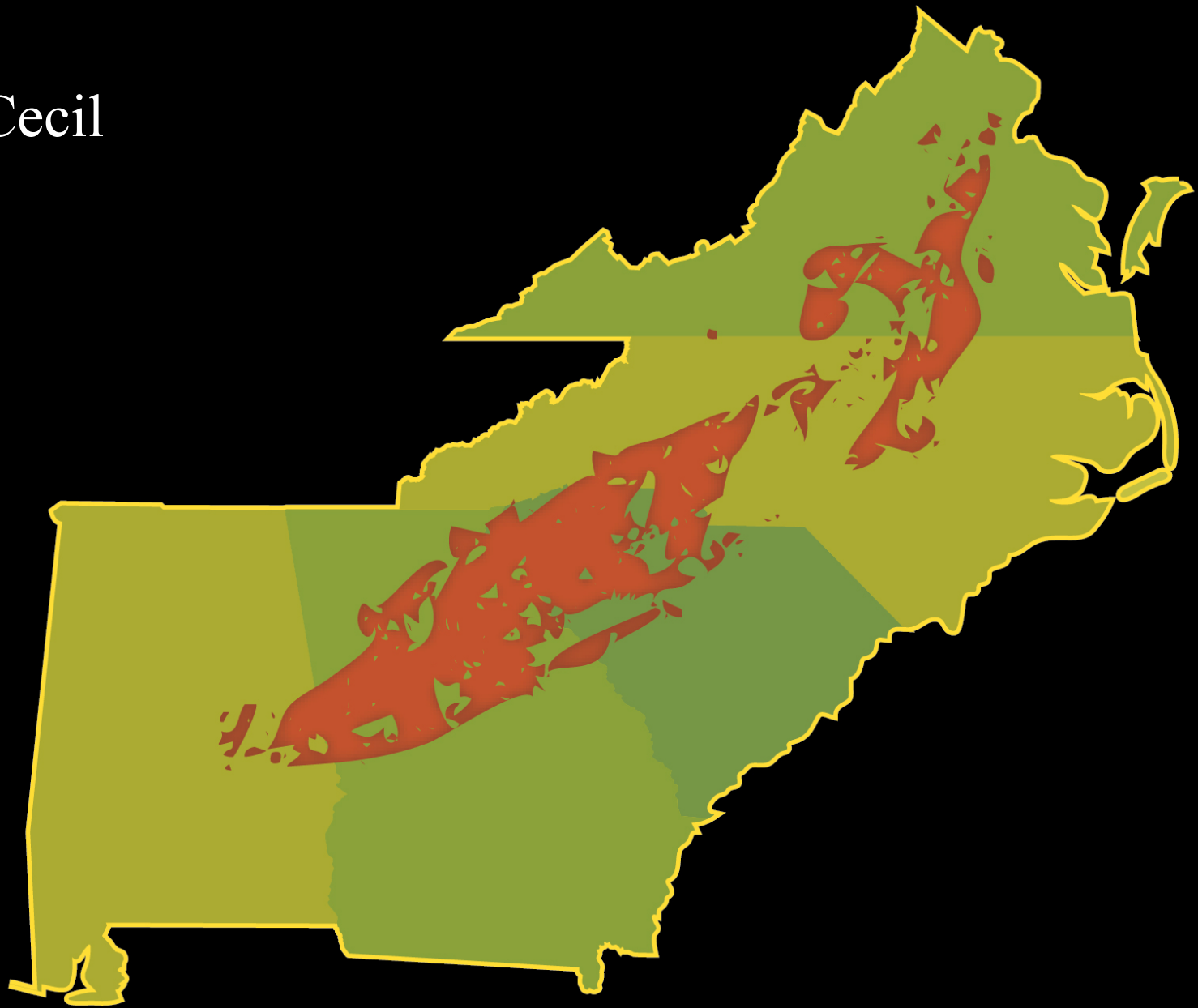
Flowering stems of *Helianthus schweinitzii*



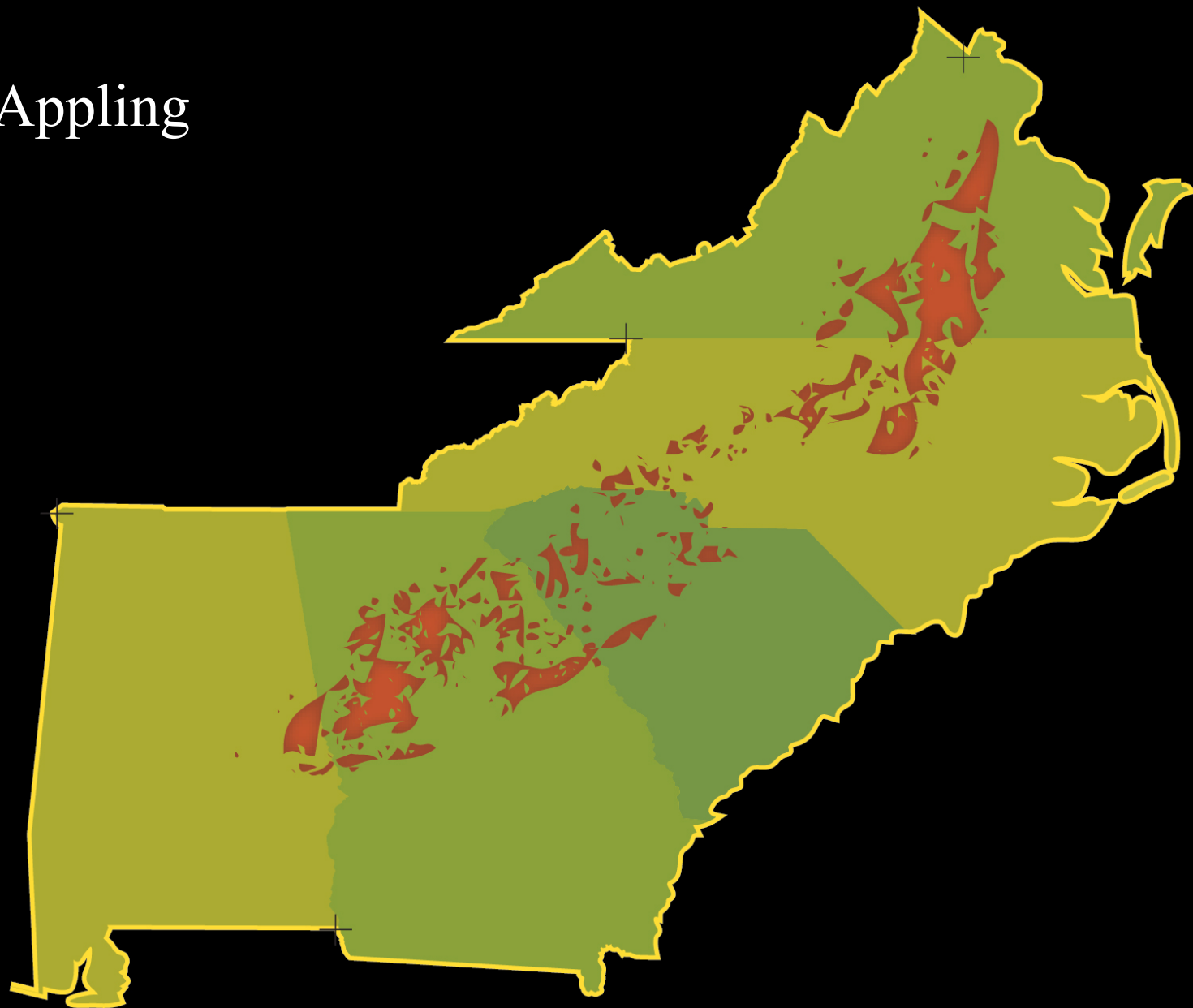
Southeastern Piedmont Ecoregion



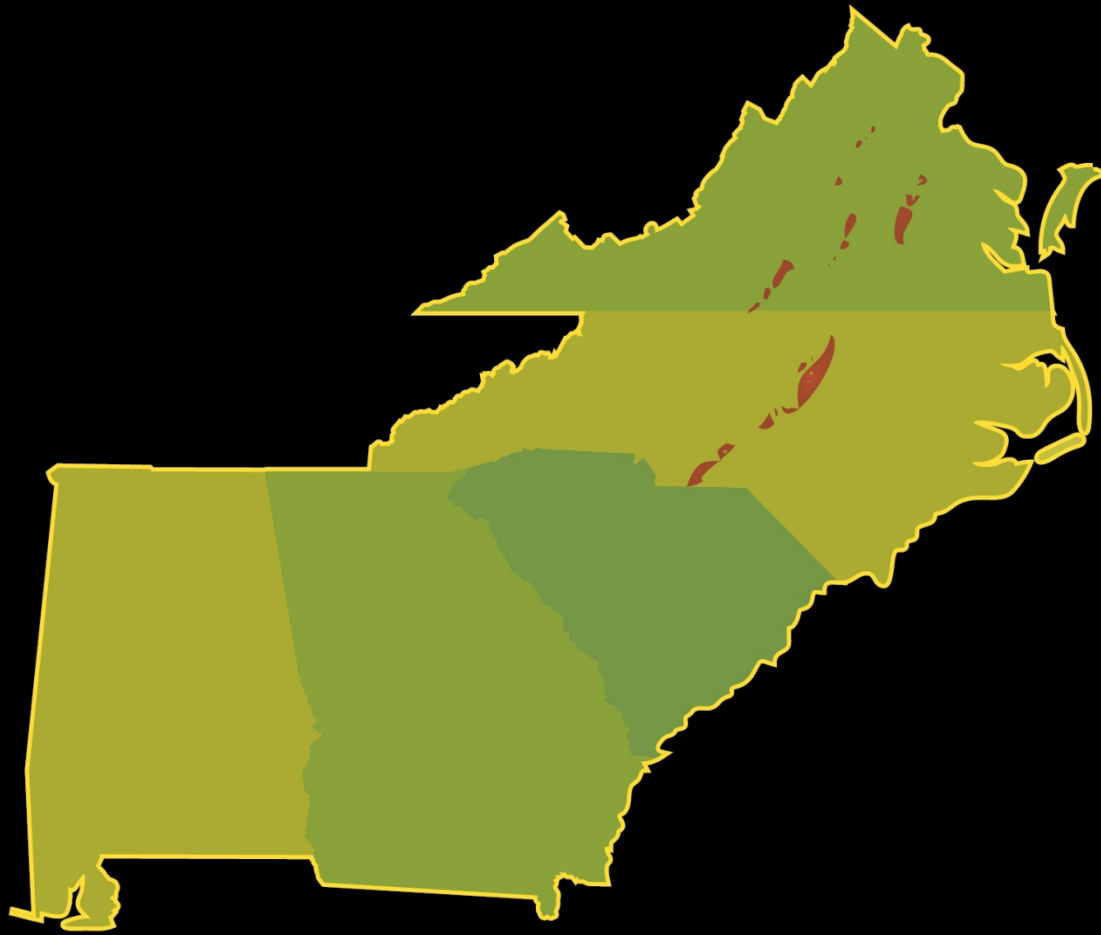
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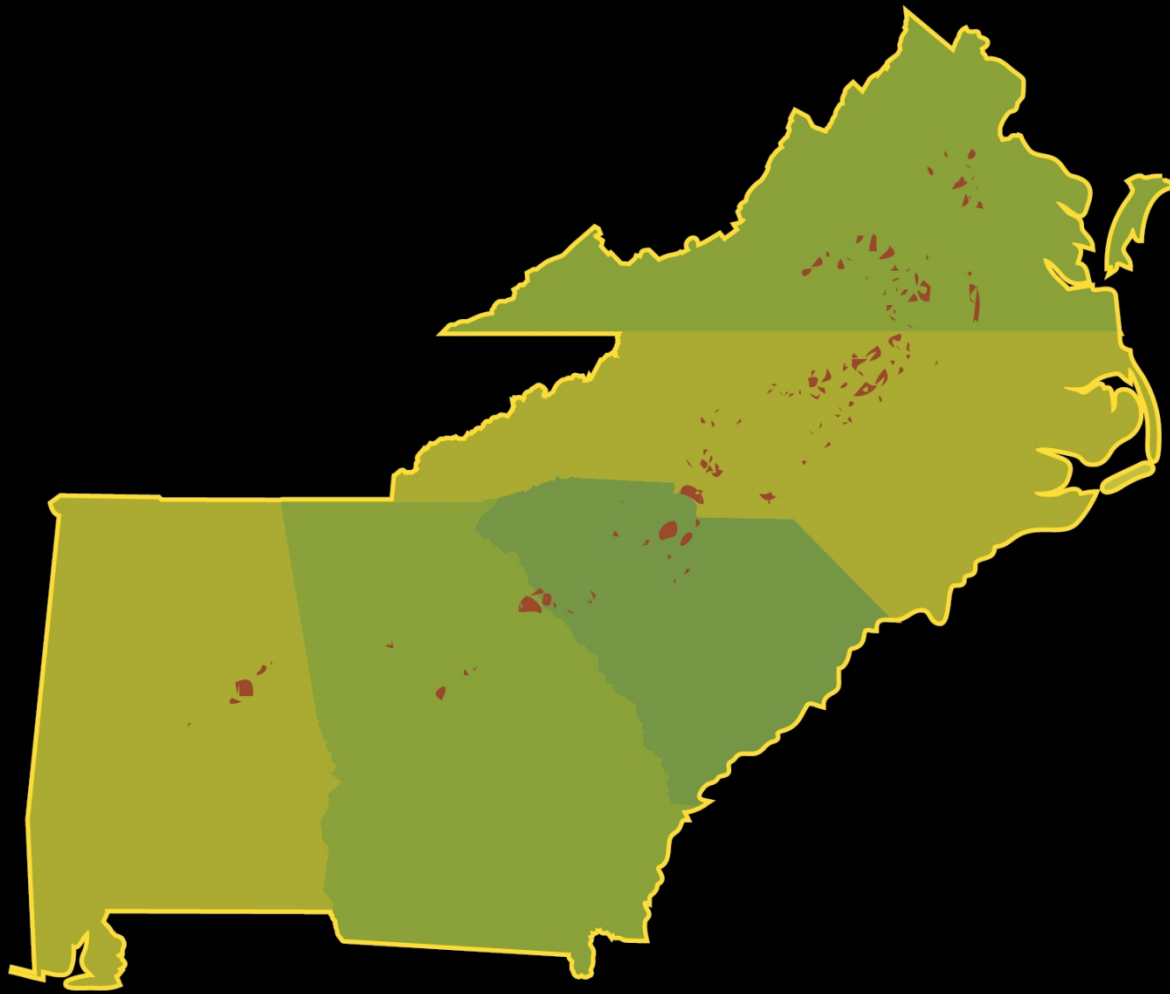
Appling



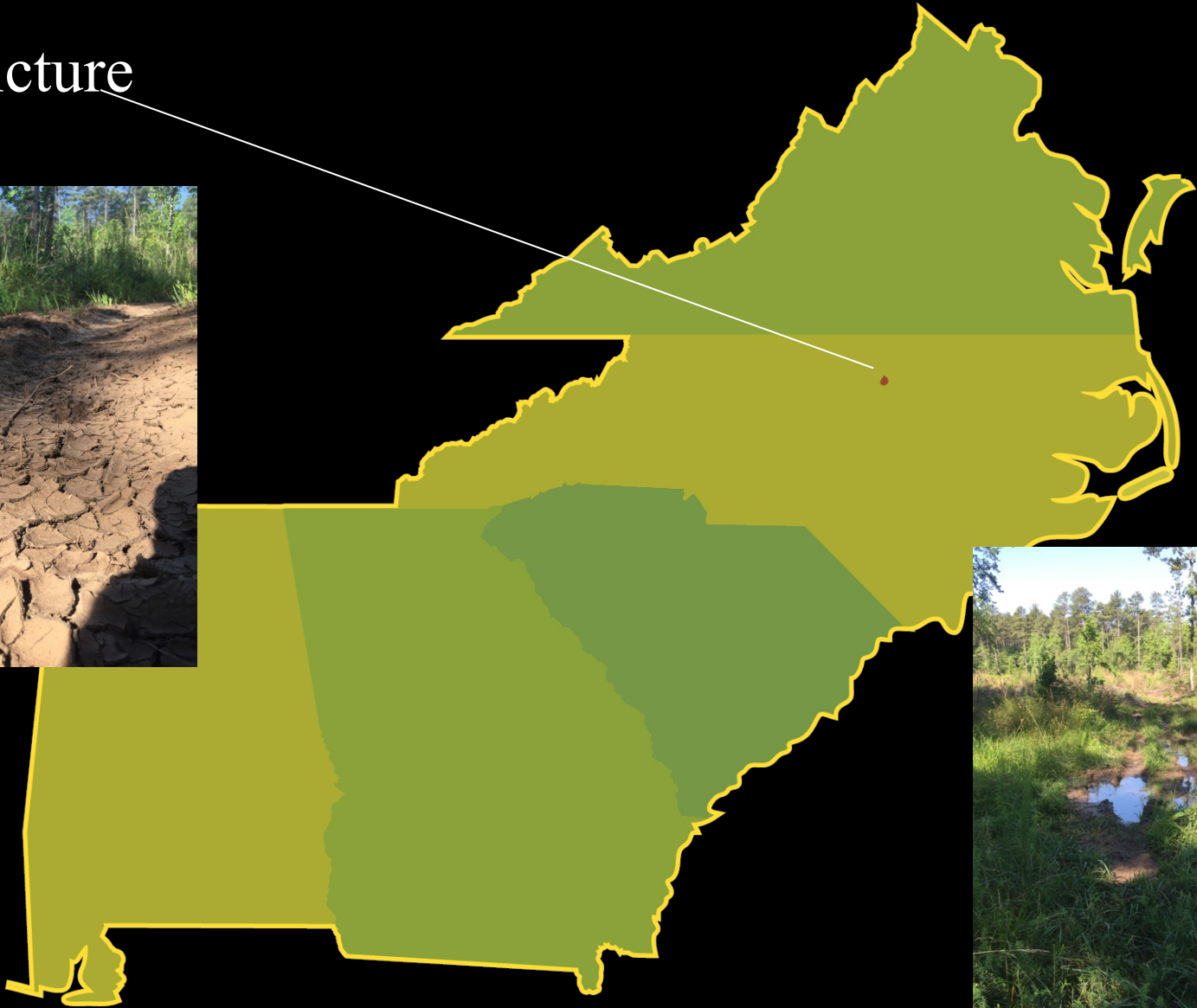
Creedmor



Iredell



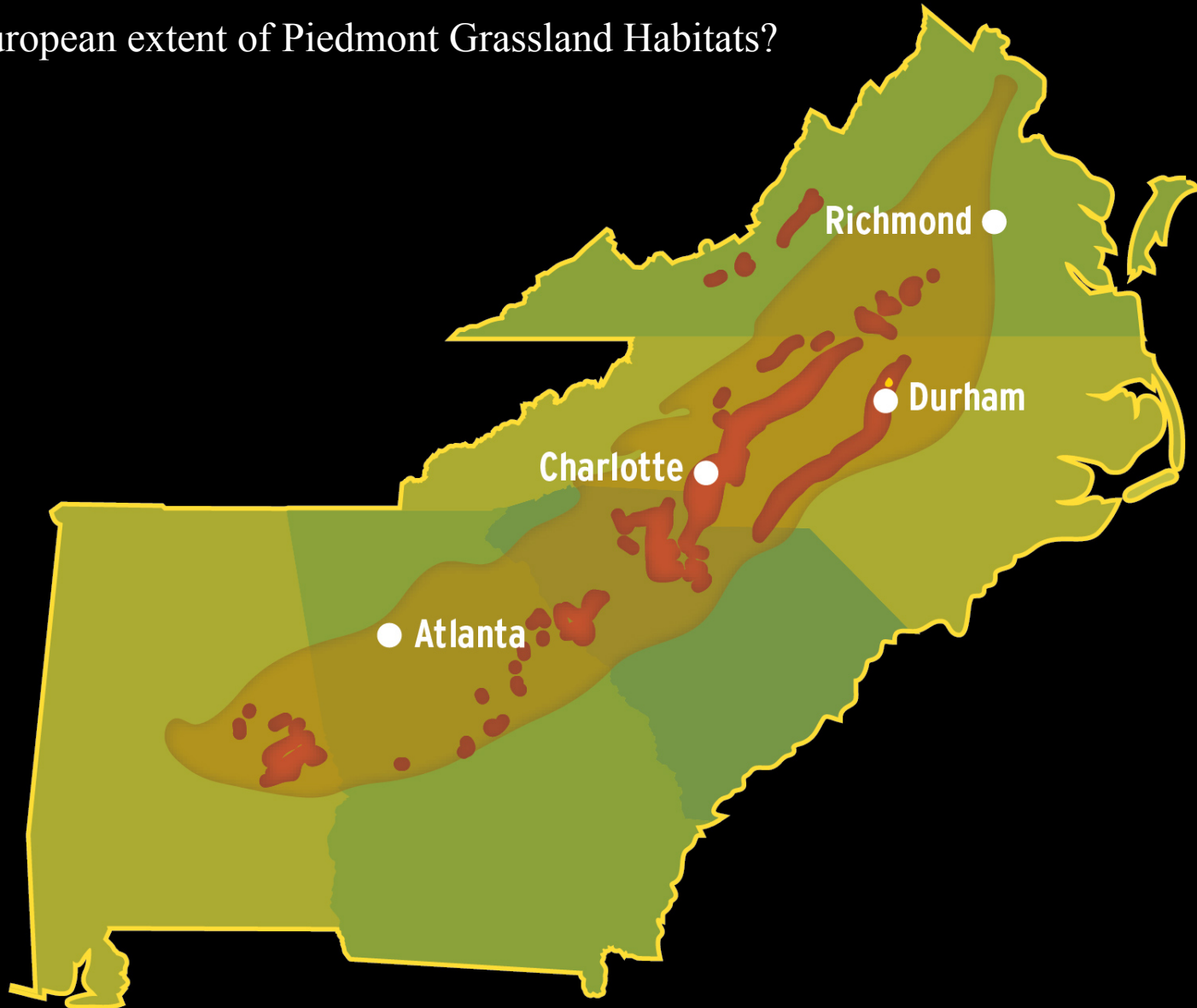
Picture



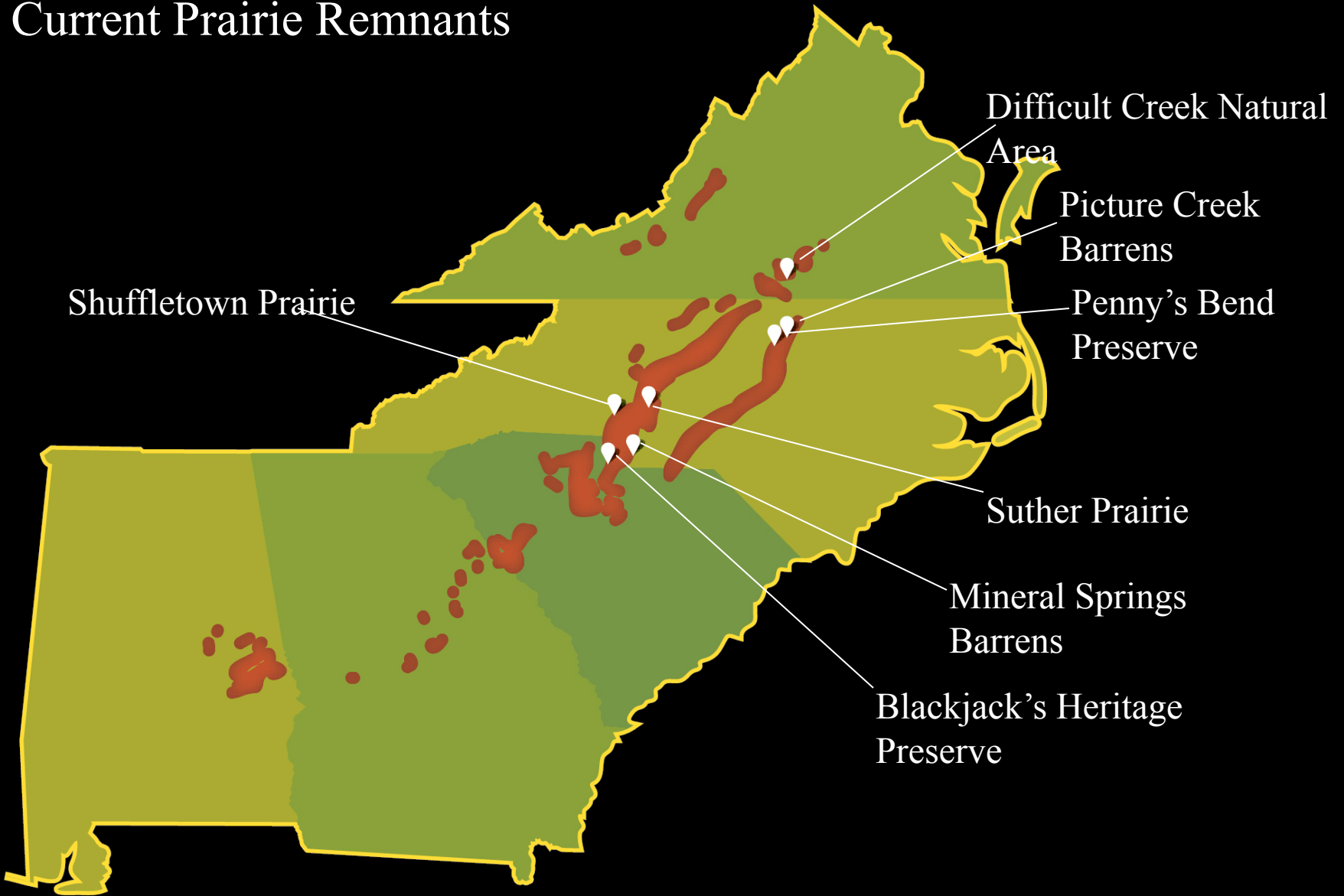
Picture Creek Barrens



Pre-European extent of Piedmont Grassland Habitats?



Current Prairie Remnants





2014











 NORTH CAROLINA
BOTANICAL GARDEN



LONGWOOD
GARDENS

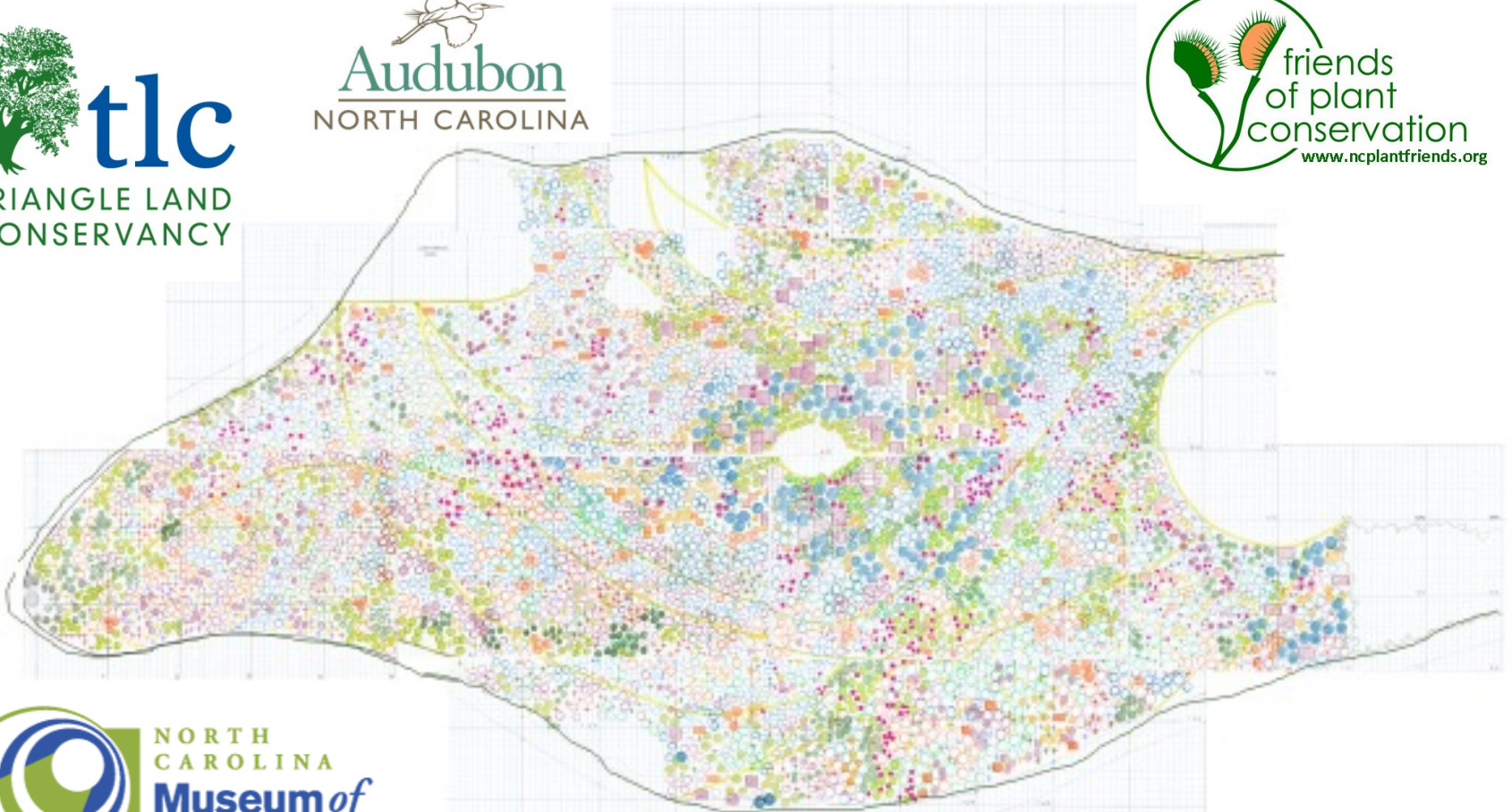


M^T. CUBA
CENTER INC.

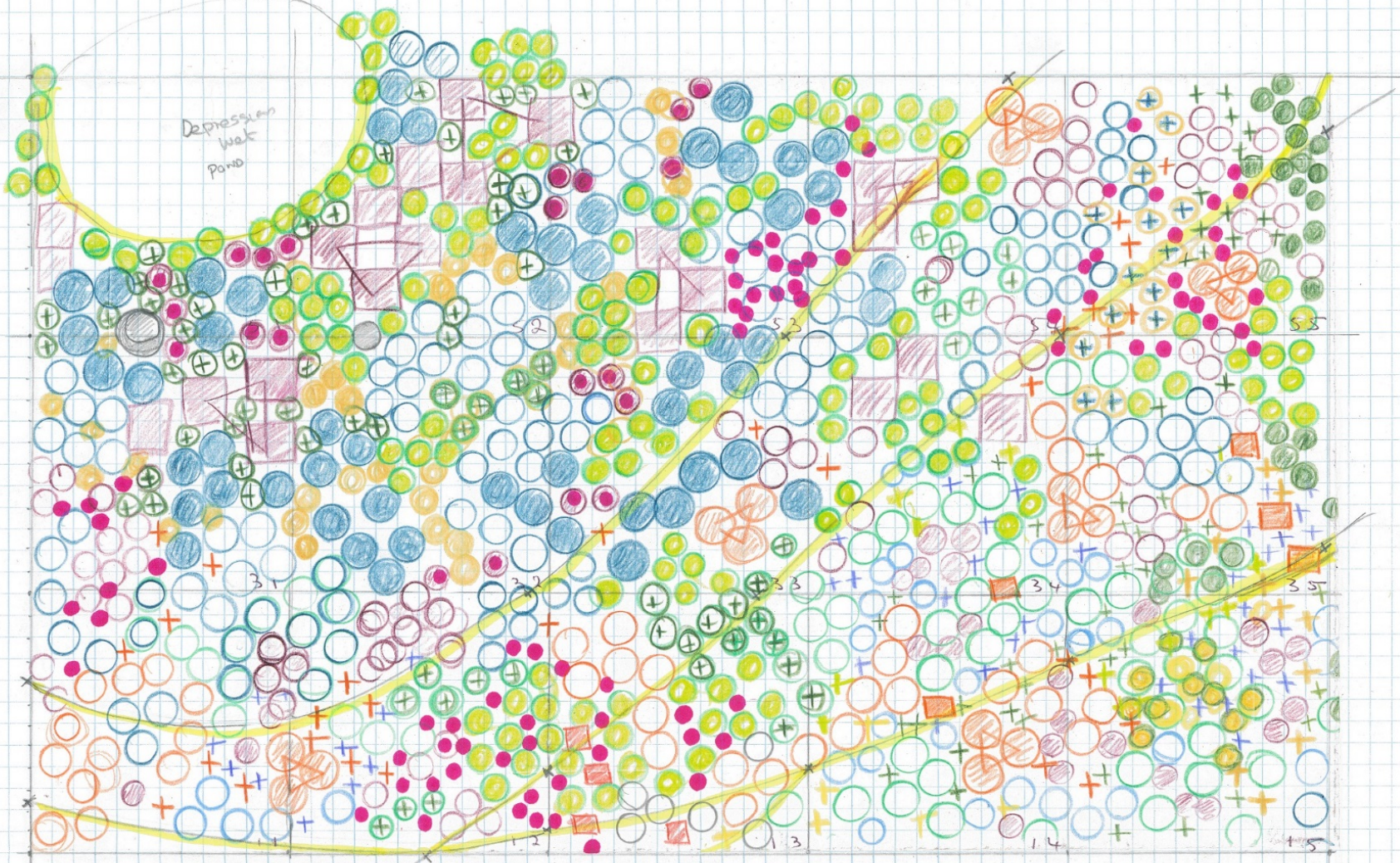
CELEBRATING NATIVE PLANTS OF THE PIEDMONT



TRIANGLE LAND
CONSERVANCY

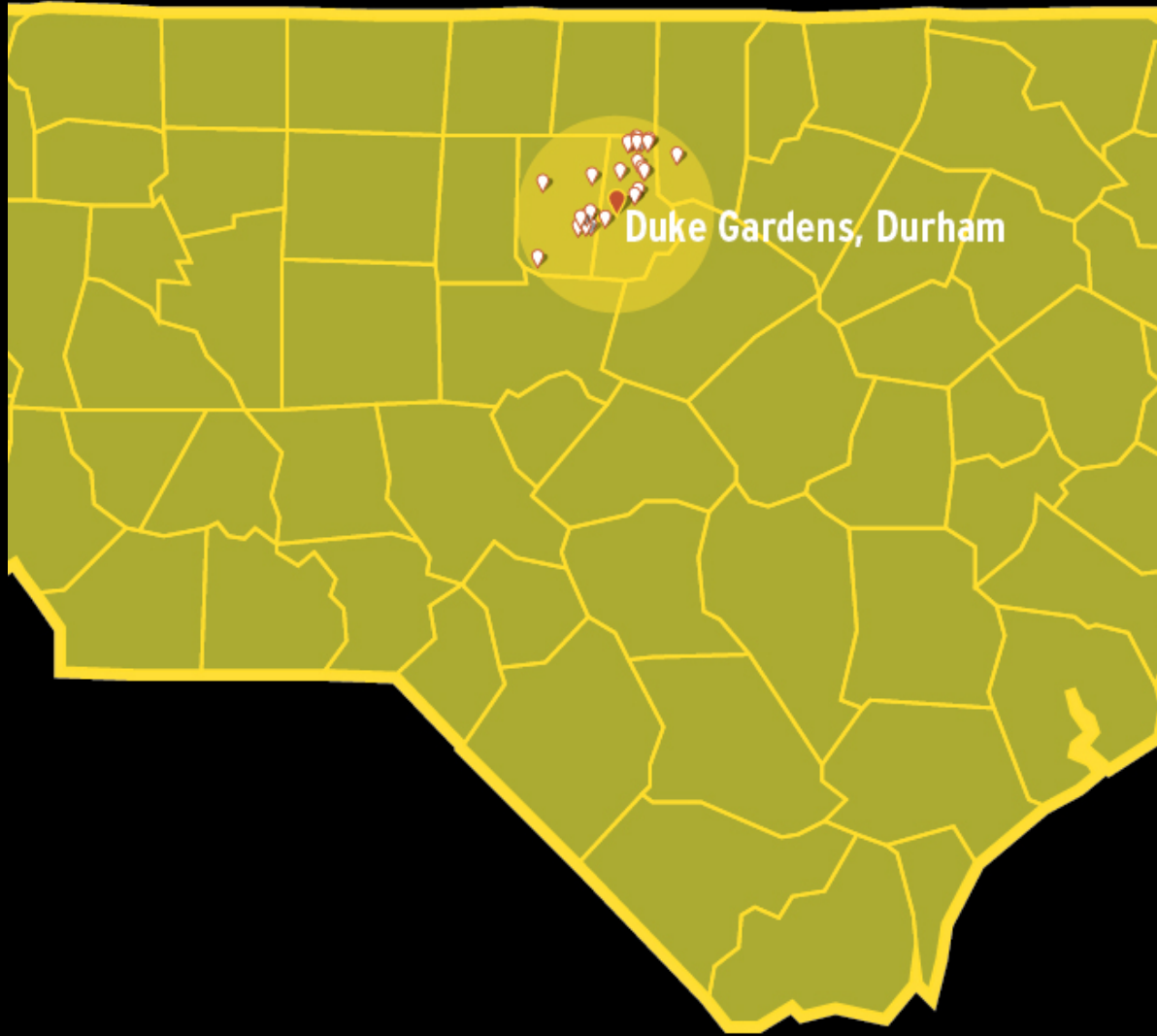


Depresion
iwak
Pond



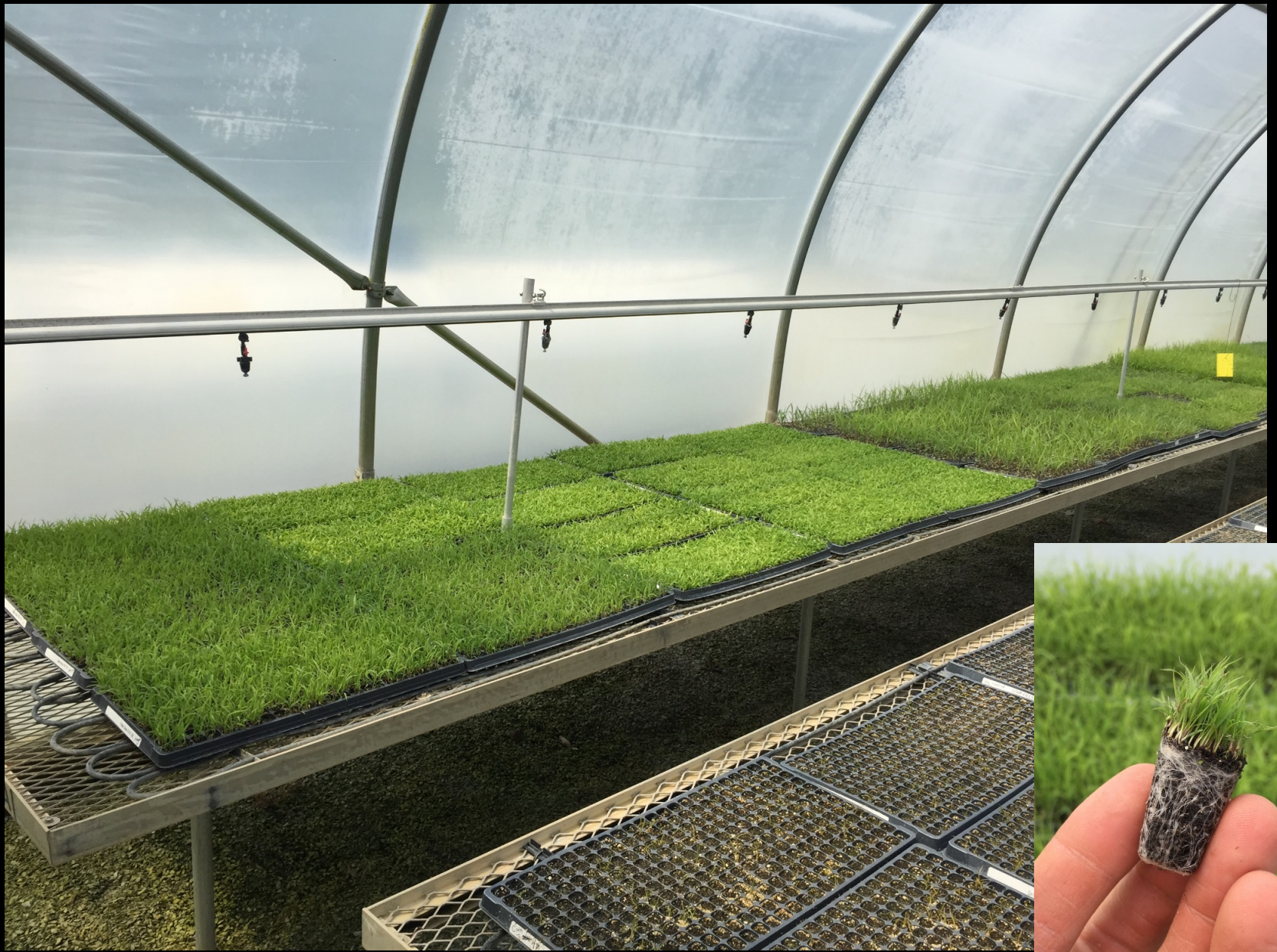
Block 3



























FOR ALL BED PREPARATIONS

DIEHARD™ BED PREP



Net Weight: 10 lbs. (4.54 kgs.)

NON PLANT FOOD INGREDIENTS

Endomycorrhizal Fungi	8.6 propagules per cc to include -7 species- <i>Glomus mosseae</i> (1.7), <i>Gigaspora intraradices</i> (1.7), <i>Glomus fasciculatum</i> (1.7), <i>Glomus ducii</i> (0.86), <i>Glomus deserticola</i> (0.86), <i>Glomus clarum</i> (0.86), and <i>Glomus microgregatum</i> (0.86).
Ectomycorrhizal Fungi	10,800,000 per cc to include 2 species- <i>Pisolithus tinctorius</i> (9,288,000), <i>Rhizopogon</i> (1,512,000).
Horta-Sorb® MD Water Gel	17% Copolymer made for agriculture.
Humic Acids	8% derived from <i>Leonardite</i>
Soluble Yucca Extract	1% <i>Yucca schottigera</i>
Soluble Sea Kelp Extract	1% <i>Ascophyllum nodosum</i>
Trichoderma	39,000 CFU's per cc Genus <i>Trichoderma</i> : <i>Trichoderma hamatum</i> , <i>Trichoderma harzianum</i> , <i>Trichoderma viride</i> , <i>Trichoderma reesei</i> .
Phosphate Solubilizing, Nitrogen Fixing and Growth Promoting Bacteria	1,000,000 CFU's per cc. Genus <i>Bacillus</i> , Genus <i>Pseudomonas</i> , Genus <i>Streptomyces</i>
Root Promoting Vitamin	Biotin, Folic acid, B, B2, B3, B6, B7, B12, C and K
Amino Acids (Protein)	Animal and plant proteins
Fulvic Acid	Plant-derived mineral

APPLICATION

Mix 3 lbs per 100 square feet and incorporate into the first 8 inches of soil. Product may be amended into prepared top soils to achieve 3 lbs of product per 100 square feet based upon the depth of soil. For example the rate per cu. yd. for a bed mix 8 inches deep would be 19.5 oz. to the cubic yard. (8" would cover 40.5 sq. ft. x 0.48 oz. per sq. ft.)

Pkg. Size	Square Feet
10 lb. box	330
40 lb. case	1320
25 lb. box	825

HEALTH & SAFETY

- Inhalation:** If dusty conditions exist wear a dust mask.
Ingestion: Drink large amounts of water, induce vomiting, and seek medical attention.
Eyes: Flush with large amounts of water.
Safety: Product becomes very slippery when wet.

STORAGE & HANDLING

Store in a cool, dry place. Avoid high temperatures and direct sunlight. Product shelf life is up to 24 months.

Limited Warranty: All information contained herein is offered in good faith. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE which extend beyond the information contained herein. Our liability is limited to replacement of any product which does not meet these specifications.

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 Ft. 34243 Tel: 941-739-9121, Toll-free: 800-628-6373, Fax: 941-752-1890
 alliance.com, E-Mail: info@horticulturalalliance.com

info • data sheets • specifications • partner programs
www.horticulturalalliance.com



SEP - 2015



2016









PLANTING SCHEDULE

AREA	NO. OF PLANTS	NO. OF PLANTS	TOTAL
A - 10' x 10' PLANTING SPACES (SEE PLAN)	1.51	20/104	31
B - 10' x 10' PLANTING SPACES (SEE PLAN)	0.55	20/104	10
C - 10' x 10' PLANTING SPACES (SEE PLAN)	0.65	20/104	13
D - 10' x 10' PLANTING SPACES (SEE PLAN)	2.24	20/104	34
E - 10' x 10' PLANTING SPACES (SEE PLAN)	0.87	20/104	17

NOTES

1. THE PLANTING SCHEDULE IS BASED ON THE ASSUMPTION THAT THE PLANTING SPACES WILL BE MAINTAINED AS SUCH FOR THE LIFE OF THE PROJECT. THE PLANTING SCHEDULE IS BASED ON THE ASSUMPTION THAT THE PLANTING SPACES WILL BE MAINTAINED AS SUCH FOR THE LIFE OF THE PROJECT.
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FEDMONT REGIONAL WWTW
 RWMA
 05' W/10' - 11' 00' W/10'
 FEED UNIT,
 SOUTH CAROLINA

MEADOW
 PLANTING
 PLAN

DATE: 11/11/11
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DESIGNER: [Name]

SHEET #:
1 of 2
 JOB #: 10017



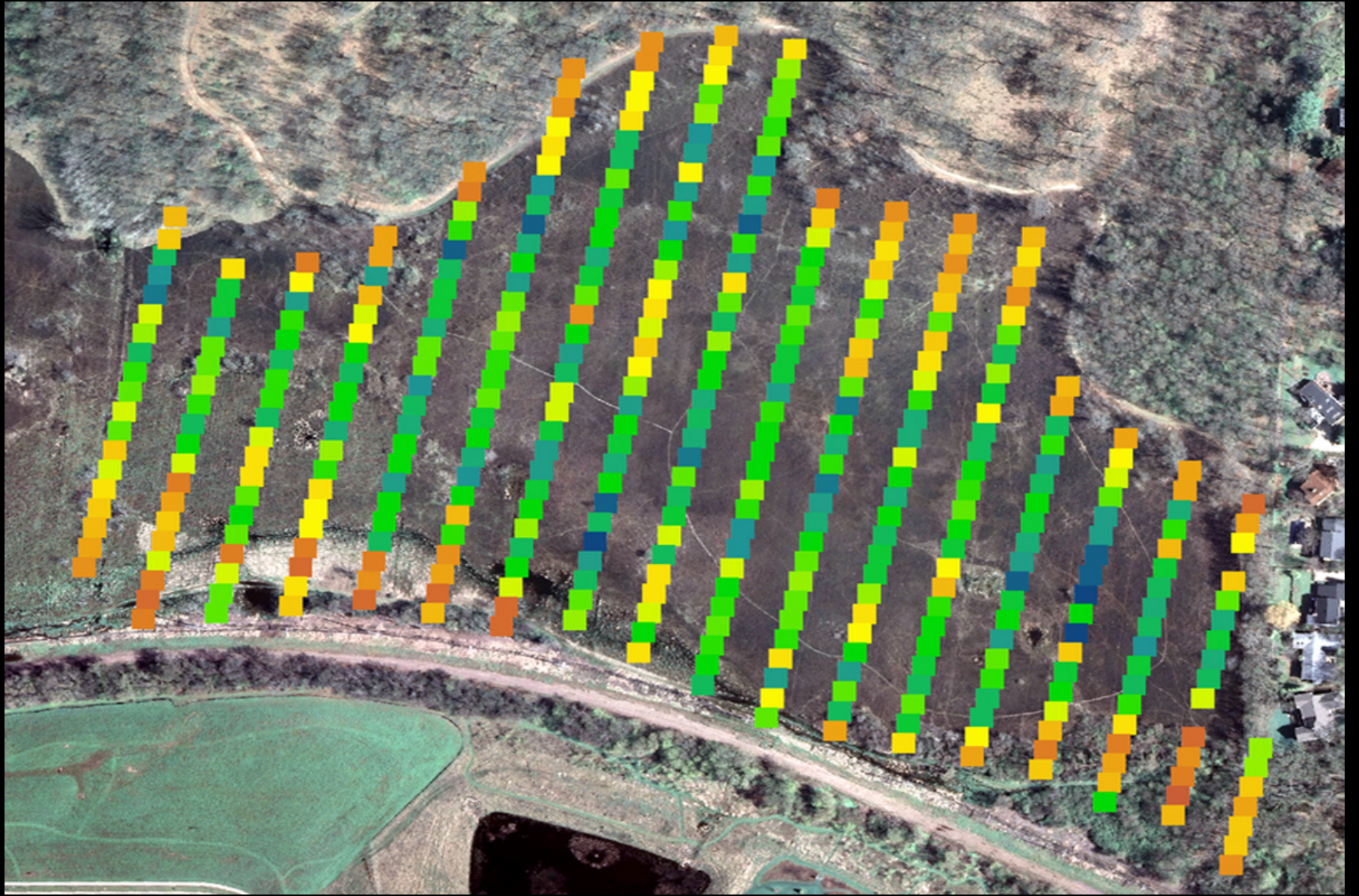
RUPPERT
LANDSCAPE













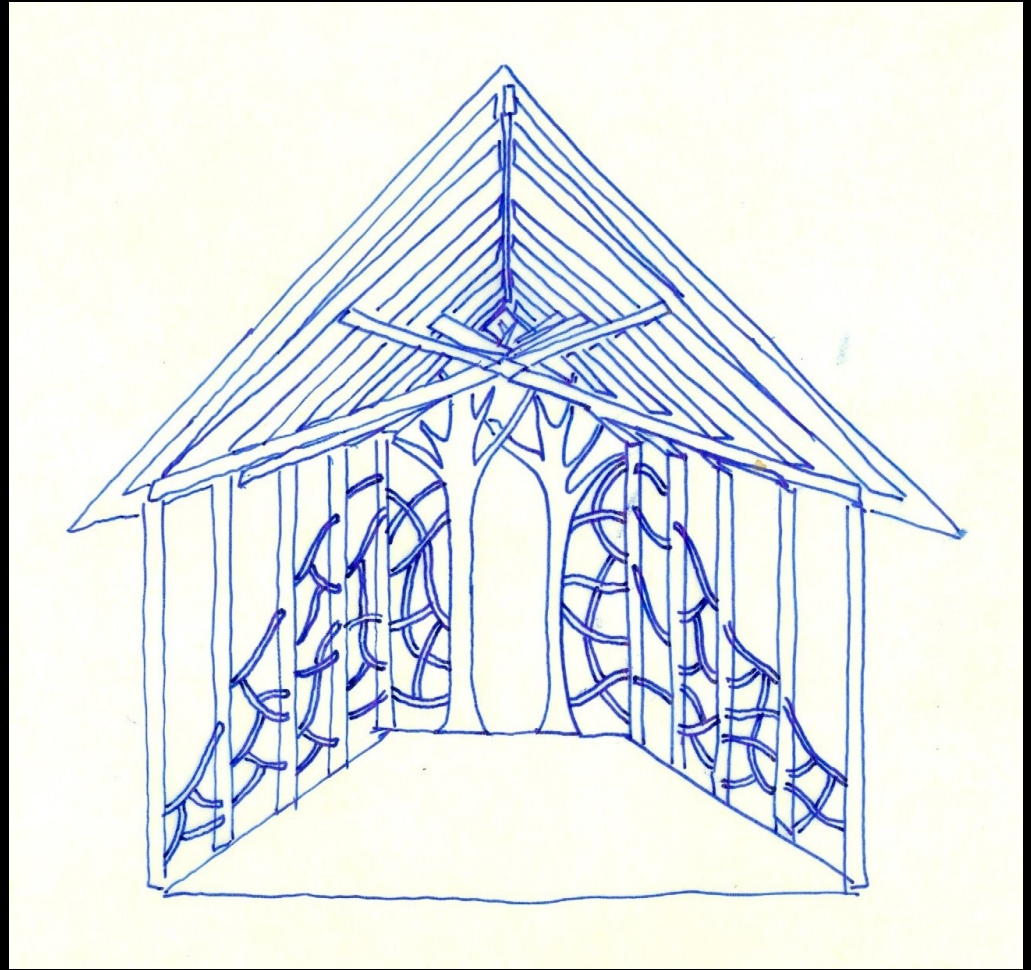






LAKE | FLATO

studioOutside













Thank You!

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annabel.renwick@duke.edu

