The Southeastern Grasslands Initiative
Talking points

SGI is telling a story that is largely untold in American history and conservation, that of the true extent and biological richness of our once widespread native southeastern grasslands.

Grasslands were an integral part of the Southern landscape as well as the Midwest. Southern grasslands were large and small and of a wide variety.

We are directly contradicting the myth of the squirrel.

It is sometimes said that at the time of first European exploration of North America a squirrel could travel from the Atlantic to the Mississippi River leaping from tree to tree without ever touching the ground.

SGI wants to reclaim a largely unrecognized part of our natural and cultural heritage.

Most Americans are unaware that cities such as Charlotte, Chattanooga, Huntsville, Montgomery, Nashville, Raleigh-Durham, Richmond, and Tallahassee, among others, are as much "grassland cities" as Austin, Fort Worth, and Tulsa. They were founded in different kinds of grasslands. They were settled early because they were hospitable, relatively flat environments, often with deep, fertile soils, so the natural grasslands were gone before they could be painted or sketched...gone before they could be described. In essence, most have become erased from our collective memory as a society. Much of the original landscape, which was also important to indigenous people and the earliest settlers, has been lost thus eroding our connection to and understanding of the land and a significant part of American history.

America's most biodiverse grasslands are in the Southeast, and SGI's region is ranked as one of the world's 36 biodiversity hotspots!

A biodiversity hotspot is defined as one of the Earth's most biologically rich –yet threatened–terrestrial region. To qualify as a biodiversity hotspot, an area must meet two strict criteria:

- Contain at least 1,500 species of vascular plants found nowhere else on Earth (known as "endemic" species).
- Have lost at least 70 percent of its primary native vegetation.

The North American Coastal Plain (NACP), which is encompassed within SGI's 23-state focal region was recognized in 2016 as the world's latest global biodiversity hotspot. The count of endemic plant species in 2014 was 1,816 endemics (Noss et al. 2015). It includes one of the major global hotspots for turtle species richness and endemism, and levels of endemism in ants, grasshoppers, and lichens also indicate hotspot status for the NACP. On the negative side of the hotspot equation, current analyses indicate that 85.5% of the natural vegetation of the NACP has been highly altered or converted to anthropogenic land cover, with the greatest losses among grasslands, savannas, woodlands, marshes and glades (Noss et al. 2015).

The South's interior grasslands (beyond the coastal plain) contain high biodiversity and habitat diversity as well. Southern grasslands come in the form of prairie, savannas, open woodlands, barrens, glades, meadows, fens, bogs, riverscour riparian grasslands, dune grasslands, and some marshes.

We care about Southeastern grasslands because they are part of our culture and natural heritage, they are economically important, and their biodiversity and unique species are a form of wealth that we would be foolish to squander.

- We care about Southeastern grasslands for the very reasons that we have made them rare: they were desirable for settlement, valuable for agriculture, and beautiful. Compared to introduced grasses, native grasslands are better at building soils, preventing the loss of topsoil, filtering runoff and purifying water, sequestering carbon (primarily underground, not subject to loss from fire), and providing habitat and refugia from pesticides for native pollinators. They also can serve as flood detention basins and slow the flow of floodwaters.
- The beauty of native grasslands is of direct economic value to the outdoor recreation economy, the horticultural trade, and landscape architecture. The species are of direct economic value to biofuels production and the grass-fed beef industry (compared to introduced

species, natives support greater weight gain, require less fertilizer, are more drought resistant, build soils more quickly, and do not contain the endophyte that causes fescue toxicosis).

- Above all, we care about native grasslands because they harbor a myriad of unique or rare species that both have a right to exist as denizens of planet Earth and that contain an untallied biological wealth of genetic diversity that we are only just learning how to tap. Who could have guessed that the Pacific yew tree would become the source of Taxol, the best-selling cancer drug ever manufactured? Current research on the value of millions of native endosymbionts that have evolved with native species is in the process of revolutionizing agriculture. We would be foolish to allow the products of millions of years of evolution in southeastern grasslands to be erased before we have even had a chance to understand their worth.

Southern native grasslands are in dire need of action to save what is left. They have been reduced by 90 to 99% across SGI's 23-state focal area, and they support a high concentration of species of conservation concern.

Many ecologists consider the loss of southeastern grasslands to be the greatest threat to the terrestrial biodiversity of eastern North America. This region has lost more than 100 million acres of grasslands and today much less than 10 percent of the original grasslands remain. These formerly rich grasslands important for sequestering carbon and protecting water quality are now largely gone, and their loss likely has contributed to climate change also.

The losses have played a significant role in the decline or imperilment of thousands of species of plants and animals. Rare and declining grassland species include birds, pollinators and other insects, plants, and small mammals. Approximately half (~600) of all rare habitat types (~1,200) in SGI's 23-state focal region are grassland ecosystems. In many places, we are literally down to the last 1% of what once existed. The status of native bees (such as the first-ever bumblebee listed in the U.S. under the endangered species act, the Rusty-patched Bumblebee) as well as the decades long decline in the iconic Bobwhite and migratory Monarch butterflies are all

harbingers of what is to come without expanded and concerted conservation action.

The solution to conservation of U.S. southeastern grasslands is a vastly expanded and sustained initiative for the conservation, restoration, and management of native grassland ecosystems through science-based partnerships, community engagement, and increased support. Accordingly, SGI is building a movement to bring back the native grasslands of the Southeast. Put simply, SGI's role is to lead grassland conservation efforts at a regional/national scale while also increasing the resources available to achieve conservation results on the ground.

Among conservation organizations, SGI is unique in that we are concerned with the conservation of all native Southeastern grasslands.

SGI seeks to provide leadership and increase science-based partnerships to identify priorities (conservation planning) and develop solutions for on-the-ground grassland conservation across 23 states and numerous ecoregions of the southeastern U.S. The SGI focal region includes portions of 23 eastern states, largely focused on the Southeast, spanning from Pennsylvania and Missouri, south to Florida and east Texas.

Conservation priorities for this region include

- identifying areas of high biodiversity at a finer scale across the region, including climatic refugia
- protecting these key areas in new reserves
- including small but highly diverse remnants into large-scale conservation planning efforts
- conducting extension to promote and inform long-term management of native grasslands on private lands
- maintaining and restoring movement corridors
- restoring or mimicking natural disturbance (especially fire) and hydrological regimes.

SGI will work with partners to advocate for and develop sound policies that promote greater awareness of the importance of native southeastern grasslands, enhance their conservation, and eliminate subsidies to their destruction.

We will form coalitions with local, state, and national leaders to achieve policy priorities such as leveraging management of power line rights-of-way and roadsides for grassland conservation, increasing federal and state agency support and incentives to private landowners to manage for native grasslands, and supporting ways to plan or incentivize the reduction of urban sprawl.

SGI will foster community support for native grassland conservation by recruiting, training, and engaging a volunteer grassland conservation army across the Southeast.

Increasing resources through community engagement

Because so many native grassland remnants are small, they are ideal for engaging volunteers at the local level. SGI will work with partners across our focal region to develop a grassroots (!) grassland conservation army of hundreds, perhaps thousands, of volunteers. In doing so we will build well-trained local volunteer teams in dozens of cities and communities who can assist with restoration while spreading the word about native grasslands.

Examples of the volunteer activities assisted via SGI training and the latest mobile technology include:

- cataloging biodiversity in the field
- Helping to compile historical documentation that tells the story of our native Southeastern grasslands
- Assisting in maintaining living collections in a Research & Teaching Garden at Austin Peay State University (APSU)
- becoming experts at native seed collection and cleaning
- directly assisting restoration efforts in the field
- assisting SGI staff in the APSU herbarium
- wrangling invasive exotic species
- assisting with research

- acting as spokespersons to help spread awareness and understanding of the importance of southeastern grasslands among their peers and their communities

SGI seeks to chart a new course for conservation in the Southeast by correcting the historical disparity between the loss of southeastern grasslands and the resources allocated to their conservation.

Increasing resources through expanded funding and support

While there is currently major funding from many sources for the conservation of forests, wetlands, streams, and coastal habitats of the Southeast, by comparison there is an extreme paucity of funding for the South's endangered grassland ecosystems. SGI seeks to bring major new funding support from philanthropic, corporate, and government sources into the efforts to conserve native southeastern grasslands. Our goal is to thereby provide support to partners implementing conservation priorities by developing a granting program administered by SGI that will fund grassland conservation projects across our focal region.