**Mission**: to promote and coordinate the cooperative conservation of our rare plant species and natural communities to ensure no local extinctions.
Georgia Plant Conservation Alliance

- Started in 1995
- Multiple annual planning meetings with partners
- Over 30 official partners
- Over 100 species in recovery
- Over 50 in ex situ safeguarding
- Inspired many other statewide networks
History of the TPCA

• Formed 2017
• Coordinator hired 2018
• Inaugural spring meeting 2019
Who is the TPCA?
Coordinator
Who is the TPCA?
Steering Committee

- David Lincicome, Tennessee Division of Natural Areas
- Geoff Call, US Fish & Wildlife Service
- Anne Ballentine, Lichterman Nature Center
- Mark Pistrang, US Forest Service
- Cayce McAlister, Garden Club of Nashville
- Dr. Jon Evans, Sewanee

- Dr. Dwayne Estes, Southeastern Grasslands Initiative
- Adam Dattilo, TVA
- Stevia Morawski, Arnold Air Force Base
- Dr. Jessica Budke, UT Knoxville
- Dr. Jennifer Mandel, U of Memphis
- Clea Klagstad, Circadian Consulting
Who is the TPCA?
Partners
What is a TPCA Partner?

• Adheres to ethical and science-based practices of conservation
• In development
• Follows guidelines set forth by many conservation organizations
Integrated Plant Conservation

**In situ**
Conservation in natural habitat

**Ex situ**
Curated outside of natural habitat; includes seed banks, living collections, etc.

- **Restoration**
- **Collection**

**Research, Education**

Running Glade Clover
*Trifolium calcaricum*

- S1G1 Rank, State Endangered
- Threats: Private Property
- Conservation Efforts: Introduction in protected land, ecological research
In-situ Safeguarding
Ecological Research
Chattahoochee False Foxglove
*Agalinis plukenetii*

- 1 (maybe 2?) populations in TN
- Considered extirpated until 2011
- Project led by Mark Pistrang, Cherokee NF
Coreopsis delphiniifolia

Toxicodendron pubescens

Manfreda virginica

Aureolaria pectinata
Solidago porteri
Solidago porteri

**In situ**
- Occurs on loblolly plantation
- 2 acre preserve
- Thinning of canopy and understory
- Invasive Species Management
- Controlled Burn
- Research

**Ex situ**
- Seed bank
- Propagation
- Safeguarding garden at Nashville Zoo
Before...
Overstory and Understory Thinning
Controlled Burn
Harbison’s Hawthorn
*Crataegus harbisonii*

- 2 populations worldwide

- Davidson County
  - Natural populations
  - *Ex situ* collections

- Obion County
  - Roadside, private property
  - *Ex situ* collections

- Next?
  - Searches
  - Habitat Management
Whorled sunflower
*Helianthus verticillatus*

- Federally Endangered
- Critically imperiled
  - 5 populations
  - 1 on protected/managed land
Whorled Sunflower Biology

Obligate outcrosser

Few individuals in each population

→ loss of genetic diversity

→ reduced likelihood of survival
Conservation Actions

In situ

• Surveys for new occurrences
• Monitoring
• Introduction in protected land
• Management recommendations
• Research

Ex situ

• Seed bank
• Propagation
• Safeguarding garden
Whorled Sunflower Genetic Consideration
Dr. Jennifer Mandel
Fig. 2 Principle coordinates analysis based on 13 loci of the six *Helianthus verticillatus* populations plus the herbarium specimen collected in 1892. The analysis of the four previously known populations (McNairy Co., TN, Madison Co., TN, Georgia, and Alabama) match with previous results from Ellis *et al.* (2006). Axis 1 explains 14.65%, axis 2 explains 11.51%, and axis 3 explains 6.69%.
Barbed Rattlesnake Root  
*Nabalus barbatus*

- S2/G3...not as rare, but...
- Dunbar Cave State Park
- Conservation Actions
  - Seed bank
  - Propagation
  - Introduction into Dunbar Cave Prairie
Conservation Horticulture Partners

- Memphis Botanic Garden
- Cheekwood Estates
- Knoxville Botanic Garden

Species
- Porter’s Goldenrod
- Whorled Sunflower
- Willow Aster
- Mud Plantain
- Trumpet Penstemon
- Pink Turtlehead
- Tennessee Trillium
Historical Observation Recovery
Historic Observation Recovery

• Pilot in 2021 with limited group
• Stay tuned for announcement...
• One preliminary success
  • Not seen since 1991
Coming up this year...

• Fall Meeting
• Potential field trip
• Updated website
Thank You!

Cooper Breeden
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