



# The SECAS Third Thursday Web Forum

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Southeastern Plants Regional Species of Greatest Conservation Need

1-18-2024



# Agenda

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- Introduction
- Monthly topic
- Q&A and discussion
- Preview of next webinar
- Staff updates



# Zoom basics

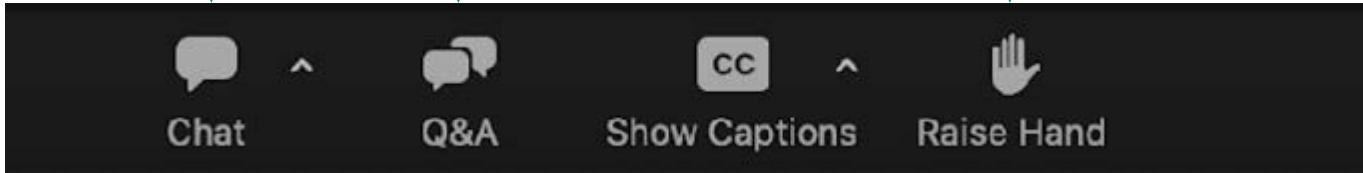
\* We are recording

Enable closed captions

Raise your hand to ask question

Ask questions

Chat is disabled



# Southeastern Plants Regional Species of Greatest Conservation Need

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Carrie Radcliffe, Emily Coffey & Sarah Norris, Atlanta Botanical Garden

1-18-2024





# Southeastern Plant Conservation Alliance

Southeastern Center for Conservation



ATLANTA BOTANICAL GARDEN

Dr. Emily Coffey, V.P. of  
Conservation & Research



Sarah Norris, Conservation  
Partnerships Assistant



Carrie Radcliffe, Director of  
Conservation Partnerships



To promote innovative  
strategies and  
partnerships to conserve  
imperiled plants and  
natural communities



Southeastern Center  
for Conservation

1. Understanding long-term threats and trends is the start and end of all species conservation actions.

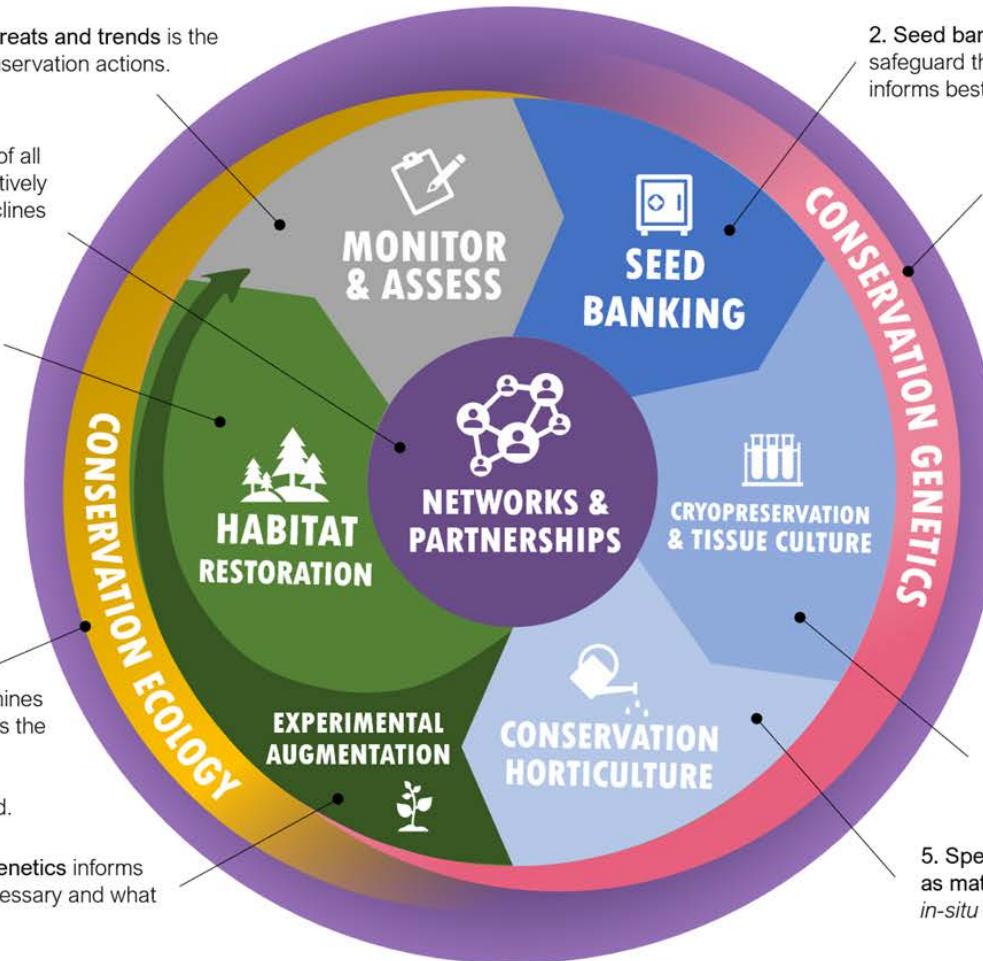
9. Teamwork is the foundation of all that we do. It is critical for effectively curbing regional and global declines in plant diversity.

8. Degraded habitats may be restored based on studies of species ecological needs.

## IN SITU CONSERVATION

7. Conservation ecology examines how the environment influences the distribution and abundance of threatened species to inform conservation actions in the wild.

6. Population ecology and genetics informs whether augmentation is necessary and what parent material is suitable.



2. Seed banking is the most efficient way to safeguard threatened populations. Seed research informs best ways to store different seeds.

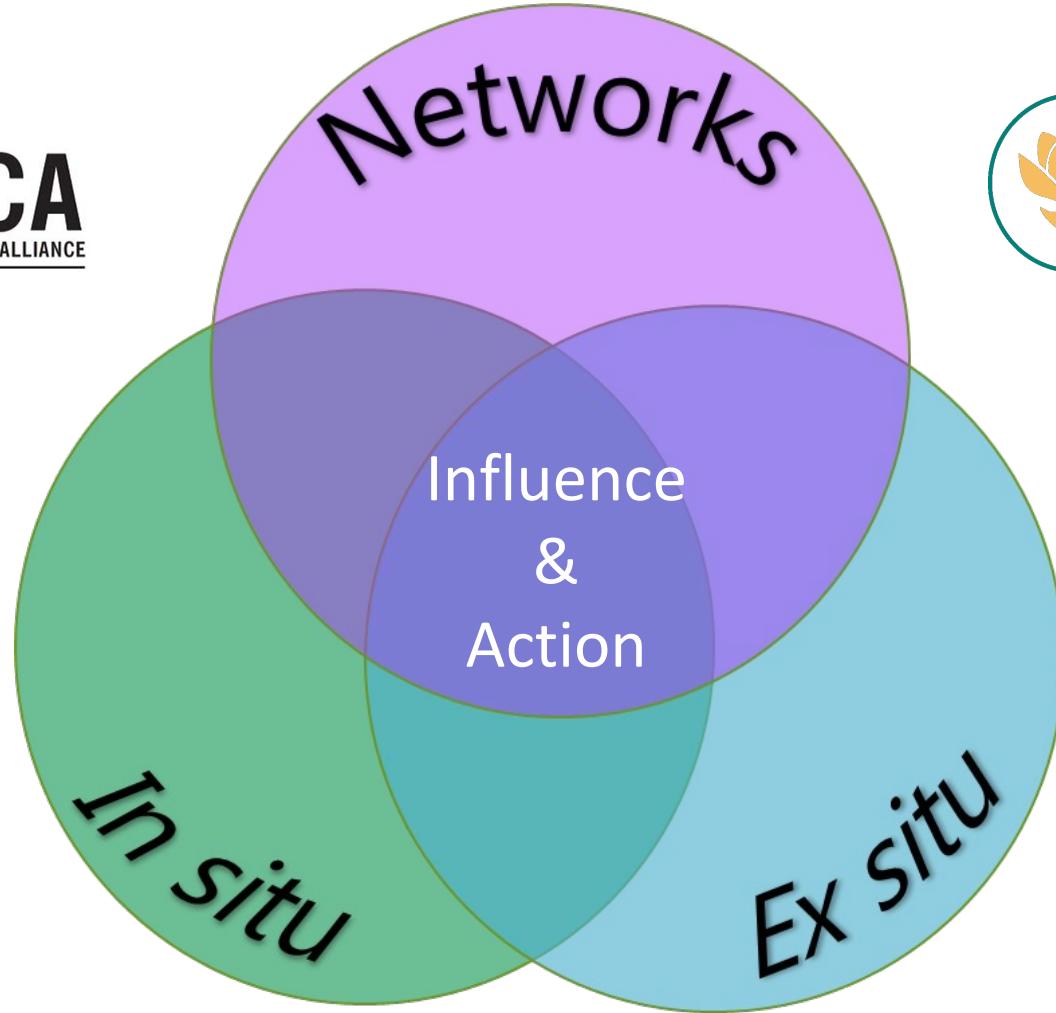
3. Conservation genetics underlies all *ex situ* conservation and *in situ* augmentation, to maintain the genetic diversity of collections and protect evolutionary processes in the wild.

## EX SITU CONSERVATION

4. Non-orthodox species seeds that cannot be banked may require research into other means of safeguarding, such as cryopreservation.

5. Species may be safeguarded as mature plants or produced for *in-situ* augmentation experiments.

# NETWORKS PARTNERSHIPS



# Southeastern Plants

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## Regional Species of Greatest Conservation Need

SE PCA | NatureServe | Terwilliger Consulting Inc.

— Flora of the Southeastern U.S | ABG | SEAFWA —

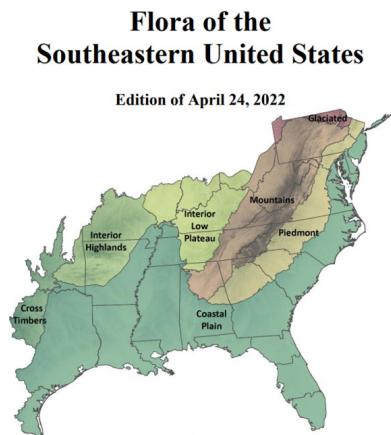
*Funded by USFWS SE*



# Partner Acknowledgements



ATLANTA  
BOTANICAL  
GARDEN





NATURESERVE  
NETWORK



ALNHP  
Alabama Natural Heritage Program



WILDLIFE RESOURCES DIVISION



# SE Lands Acknowledgement

The Southeastern Plant Conservation Alliance (SE PCA) humbly acknowledges the Tribal Nations & Indigenous Communities of our focal area. We are working on the homeland of many Indigenous Peoples, and it is with gratitude and appreciation that we seek to conserve species and natural systems that were nurtured by those stewards possessing unparalleled relationships with these lands since time immemorial.

**The SE PCA recognizes the many impacts of colonialism and the irreparable losses that have been endured by the original inhabitants – including humans, animals, plants, and stones – and the land itself.**

**We commit to providing access to resources and opportunities for informed partnership, building bridges, expanding perceptions, and weaving together approaches.**



## Learn More About Tribes in the Southeast

*These are on-going works in progress that are not meant to represent official or legal tribal boundaries; to learn about definitive areas, please contact the nation(s) in question.*

► [Southeast Climate Adaptation Science Center \(SECASC\) Tribal Story Map](#)

► [Native Land Digital Interactive Maps](#)



[www.se-pca.org/land-acknowledgement/](http://www.se-pca.org/land-acknowledgement/)

# Southeastern Plant Conservation Alliance

The SE PCA is a network bridging gaps between local and national plant conservation efforts and collaborating to prevent and restore the loss of plant diversity in the Southeast.

- **Highlight** plant conservation's essential role in ecosystem stability & climate resilience.
- **Collaborate** to prioritize and coordinate conservation activities.
- **Increase diversity** of representation.
- **Leverage funding** through coordinated science and conservation actions.
- Create and implement a **regional strategy** for plant conservation that benefits everyone.



[www.se-pca.org](http://www.se-pca.org)

# Plant Conservation in the Southeastern U.S. and Beyond

## Biodiversity in Focus: United States Edition



- *State of the World's Plants and Fungi* (2020) indicated that **two-fifths (40%) of all plants are at risk of extinction**.
- *Biodiversity in Focus: United States Edition* (2023) reveals that **34% of plants and 40% of animals are at risk of extinction, and 41% of ecosystems are at risk of range-wide collapse**.
- Of the 65 plants that have vanished in North America since European colonization, **25 (40%) have been from the Southeast** (*Vascular plant extinction in the Continental United States and Canada*, Conservation Biology, 2021).

# Benefits of developing an RSGCN list

- Leverage the **SE PCA & NatureServe** networks.
- Serve as a resource for **State Wildlife Action Plans**.
- **Communicate** shared priorities between partners.
- **Prioritize** status assessments & ranking updates.
- Fulfill a goal of the **SEAFWA Wildlife Diversity Committee** and complement the existing Southeastern Animal RSGCN list.
- Prepare for the passage of **Recovering America's Wildlife Act (RAWA)** and more support for plants through State agencies & Tribal nations.

The Southeastern Plant Conservation Alliance (SE PCA) is a public & private partnership of professionals bridging gaps between local and national plant conservation efforts and collaborating to restore plant diversity in the southeastern United States.

PLEASE VISIT US ONLINE TO LEARN MORE! [SE-PCA.ORG](http://SE-PCA.ORG)

## THE NEED FOR PLANT CONSERVATION

Globally, 40% of plant species face extinction.<sup>4</sup> While the United States supports a larger variety of ecosystems than any other nation, the plants and habitats of its richly biodiverse Southeast are particularly vulnerable to continued anthropogenic influences.<sup>4,5</sup>

Of the 65 plant species that have vanished in North America since European settlement, nearly 40% (25) are from the Southeast. Of an additional 7 plant species extinct in the wild (only known from ex situ collections), four are from the Southeast.<sup>6</sup>

An estimated 1 million plant and animal species will face extinction because of habitat destruction, invasive species, pollinator loss, climate change, and other threats, if we fail to enact change.<sup>7</sup>

## OUR GOALS

- Highlight plant conservation's essential role in ecosystem stability and climate resilience
- Collaborate to prioritize and coordinate conservation activities
- Leverage funding through coordinated science and conservation actions
- Create and implement a regional strategy for plant conservation

## OUR ACTION ITEMS

SUPPORTING UNITED CONSERVATION EFFORTS IN THE SOUTHEAST AND BEYOND

- Develop a List of Species of Greatest Conservation Need for Southeastern plants
- Use the List to identify and conduct conservation status assessments for priority species
- Secure 60–75% of Southeastern rare plants in seed banks and cultivated (ex situ) living collections<sup>8</sup>
- Implement recovery and restoration projects that return 10–15% of ex situ collections into the wild (in situ) within the next 4–6 years<sup>9</sup>
- Promote the utilization of the Center for Plant Conservation's Best Practices<sup>10</sup>
- Support the National Seed Strategy for Rehabilitation and Restoration<sup>11</sup>
- Increase public awareness of the critical and essential roles of plants in recovering biodiversity
- Focus conservation funding on efficient and cost-effective recovery efforts

## HOW YOU CAN HELP CONSERVE PLANTS

- Integrate plant conservation with efforts to conserve wildlife diversity
- Facilitate the inclusion of plants in State Wildlife Action Plans
- Fund programs in urban communities that promote public health, climate resilience, and social & environmental justice
- Recognize the important role of plants and natural ecosystems in climate resilience
- Support the Bureau of Indian Affairs in conserving and restoring native plant communities in Native American communities
- Incorporate native plant restoration and conservation into green infrastructure legislation
- Increase Endangered Species Act funding for plant species
- Support Recovering America's Wildlife Act
- Fund State & Tribal Wildlife Grants
- Enhance scientific capacity through the support of botanical research, training, and employment

# NatureServe Conservation Ranks and Methodology



**Table 1. Method for levels of conservation concern.** \*Consideration of subnational ranks (srank(s)) only for states within the SE U.S.

Sum of Taxa

|  |                      |      |
|--|----------------------|------|
| GX, GH, G1 (incl. G1, G1G2, G1?), or G2 (incl. G2?)  | Very High            | 697  |
| TX, TH, T1 (incl. T1, T1T2, T1?), or T2 (incl. T2?)  |                      |      |
| G2 (incl. only G1G3, G2G3) or G3 (incl. G3?) with only rounded S1, S2, SH, or SX* srank(s)   | High                 | 251  |
| T2 (incl. only T1T3, T2T3) or T3 (incl. T3?) with only rounded S1, S2, SH, or SX* srank(s)   |                      |      |
| G3 (incl. G3?) with SNR, or rounded S3, S4* or other rounded G3 (incl. G2G4, G3G4) or G4 (incl. G4?) w/ ≥5 states with rounded S1, S2, SH, or SX* srank(s) | Moderate             | 876  |
| T3 (incl. T3?) with SNR, or rounded S3, S4* or other rounded T3 (incl. T2T4, T3T4) or T4 (incl. T4?) w/ ≥5 states with rounded S1, S2, SH, or SX* srank(s) |                      |      |
| G4 (incl. G3G5, G4?, G4G5), G5 (incl. G5?), or GNA<br>T4 (incl. T3T5, T4?, T4T5), T5 (incl. G5?), or TNA   | Low                  | 6646 |
| GNR, GU<br>TNR, TU   | Manual Review Needed | 801  |
|  | Total                | 9271 |

# INVITATION FOR PARTICIPATION

## SOUTHEASTERN PLANTS

### REGIONAL SPECIES OF GREATEST CONSERVATION NEED

The Southeastern Plant Conservation Alliance (SE PCA) is requesting your expertise and involvement with the development of the nation's first RSGCN for plants.

#### Survey Team Tasks

- Review NatureServe preliminary taxa list and associated data.
- Share additional species-specific information about distribution, status, threats, and conservation needs.
- Inform decision-making by the Technical Team to spotlight species with decline, issues for collective action, and regional responsibility.



#### Resources

- Preliminary taxa list with screening methodology
- Survey Team instructions + FAQ
- RSGCN species assessment survey
- Sample Southeastern Animals RSGCN List

[Click here to access resources](#)

Please share this invitation with other plant conservationists with knowledge of imperiled Southeastern species:

- Natural heritage network/state agency botanists
- Federal agency biologists/botanists/ecologists
- State Plant Conservation Alliance coordinators
- Other botanical experts



Survey responses must be received by Monday, April 18, 2022



# RSGCN Assessment Overview

## ● Survey Responses

- 30 submissions
- 15 states

## ● Feedback incorporated into list

- Taxonomy updates (SE Flora)
- Changes to level of concern
- G-rank updates
- S-rank updates

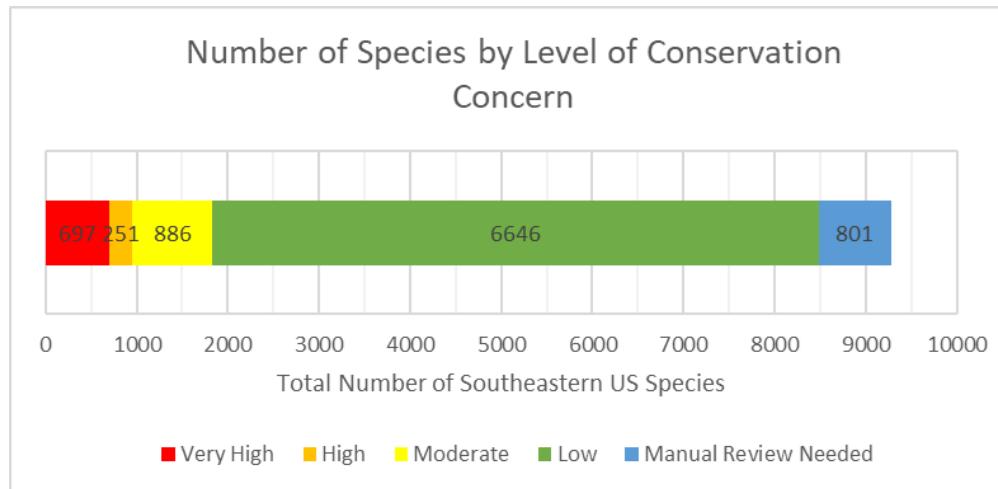
## ● High Response Priority

- Species requiring consensus
- Technical Team assessment

# Southeastern Plants RSGCN List Results

9,271 total SE taxa assessed

- 1,824 taxa on RSGCN list (19.7%)
  - 697 Very High (7.52%)
  - 251 High (2.71%)
  - 886 Moderate (9.4%)
- 6,646 Low (71.7%)
- 801 Manual Review Needed (8.64%)



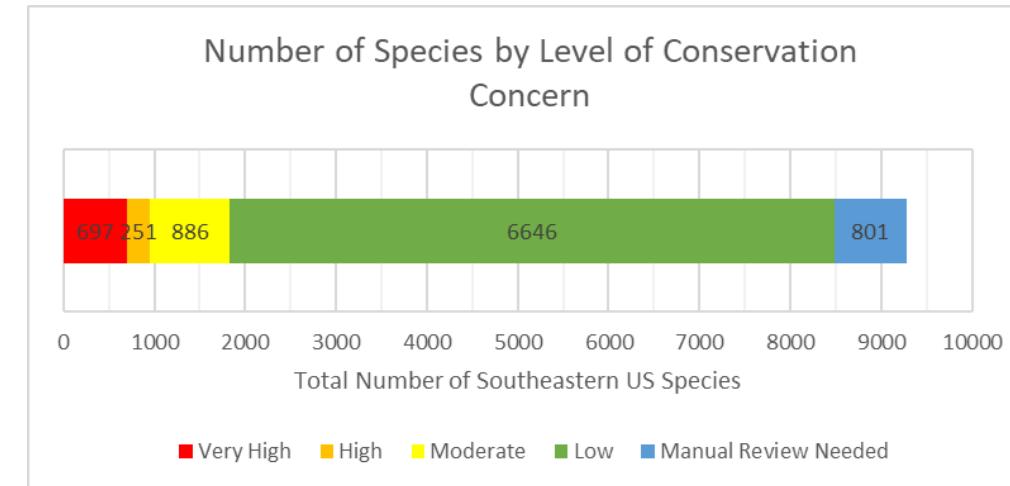
# SE Plants RSGCN List

## Additional criteria (sub-categories):

- Taxonomic families
- Species and habitat threats
- Conservation & research needs
- Ecological system groupings (USNVC)
- Taxa in need of ranking updates
- ESA listed and at-risk species (FWS)
- Medicinal & economic taxa, culturally significant species (examples); Case studies Historically marginalized groups, Tribal Nations, Indigenous Communities & Knowledge, Indigenous Communities & Knowledge; Inclusion strategies



*Cultural Species & Indigenous Knowledge*



**Very High**



*Dionaea muscipula*  
Venus flytrap

**High**



*Sarracenia jonesii*  
Jones' pitcherplant

**Moderate**



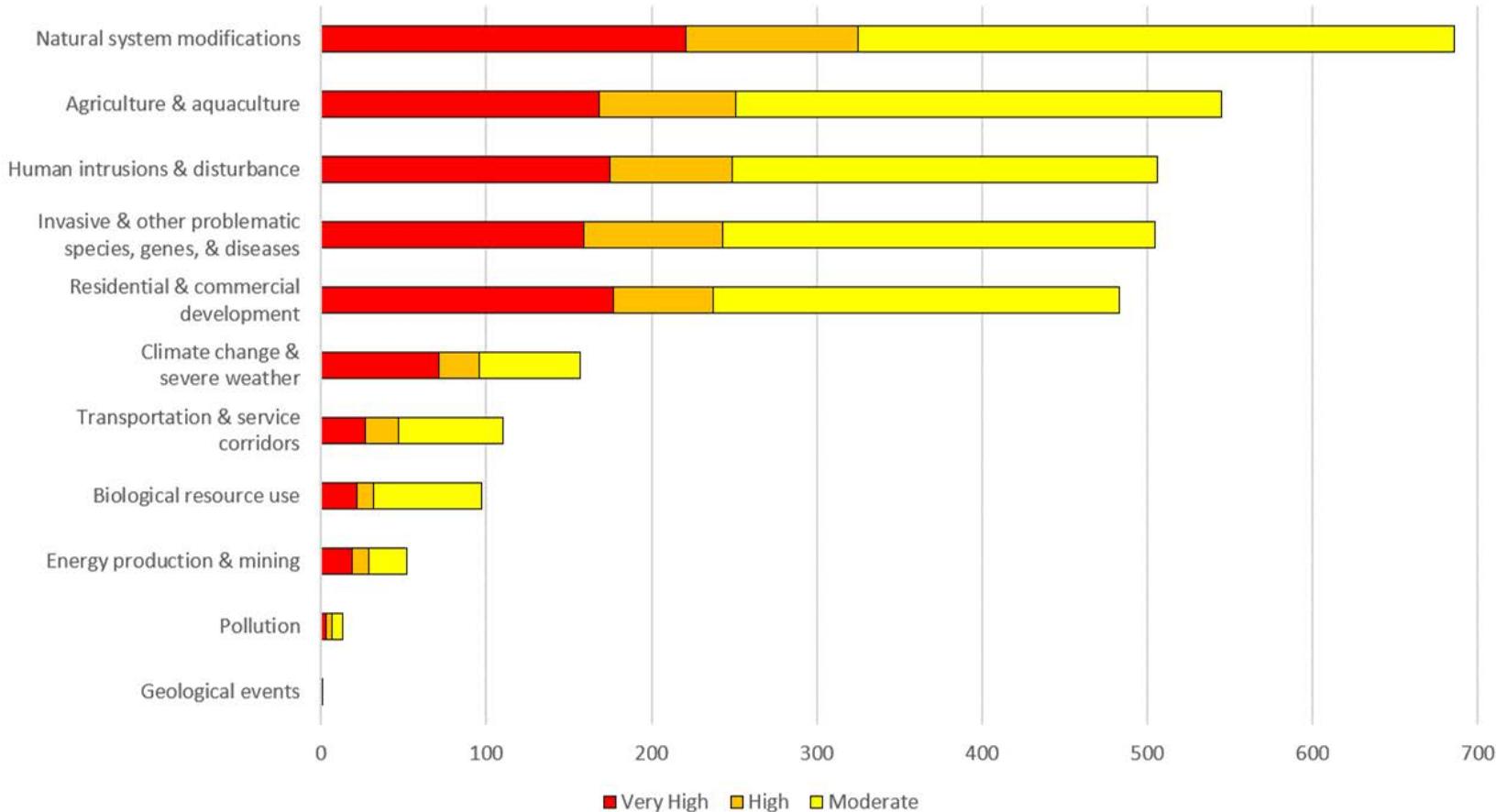
*Panax quinquefolius*  
American ginseng

**Low**

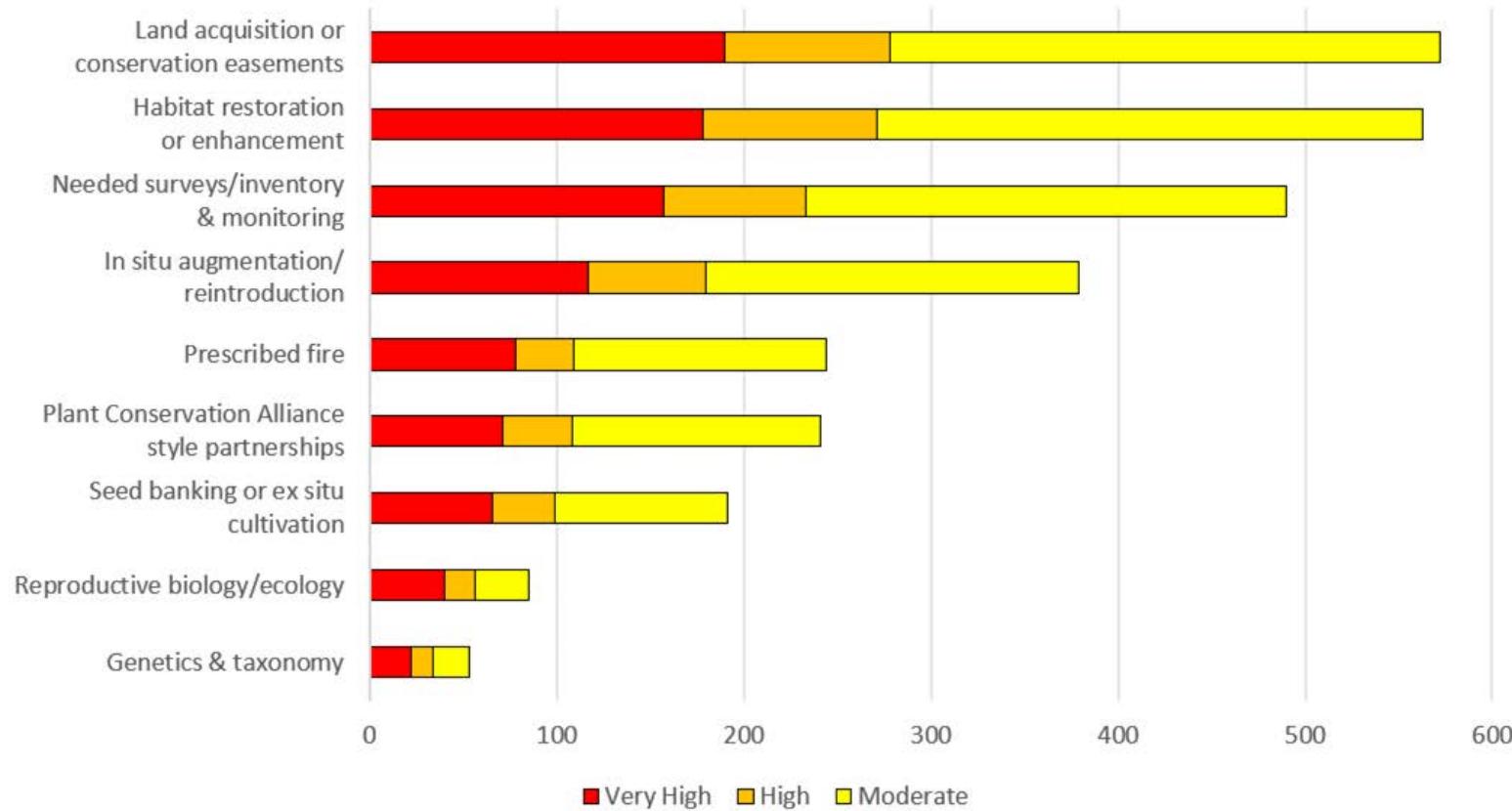


*Arundinaria gigantea*  
Rivercane

# Southeastern Plants RSGCN - High Level Threats



# Southeastern Plants RSGCN - Needed Conservation Actions



# RSGCN Ranking Workshop

## Goals

- 1. Update Global and Subnational rankings**
  - Taxa prioritized during RSGCN assessment process
  - To clarify between Moderate & Low categories (on/off list)
- 2. Assess at least 30 of the 50 species supported by the RSGCN project**

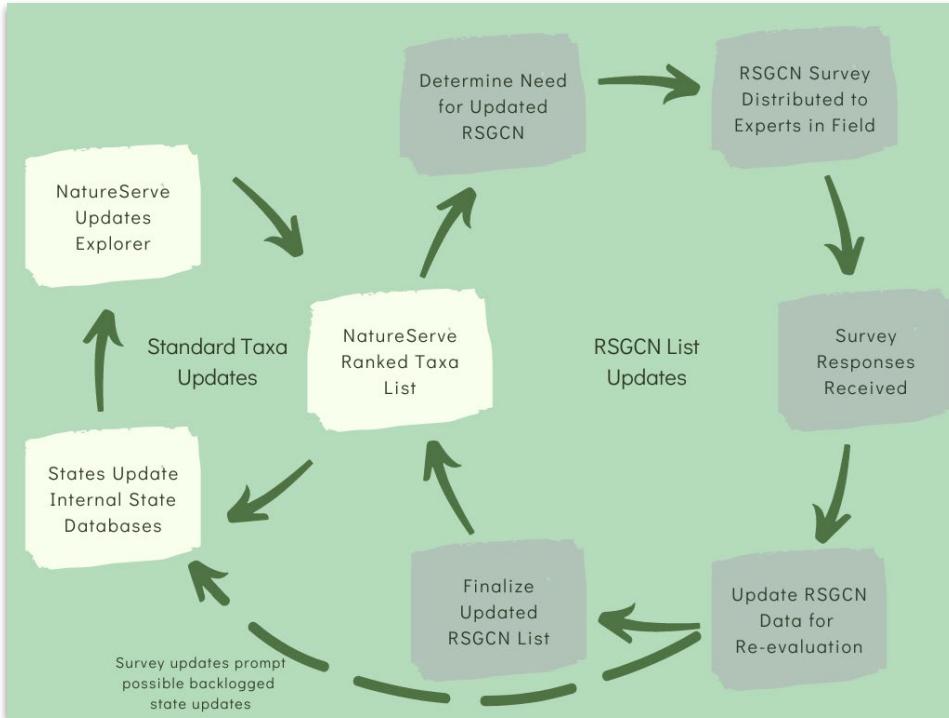


## Accomplishments

- 1. Assessed 71 species**
- 2. Ranked 20 species never before ranked**
- 3. Updated ranks led to the inclusion of some species previously assigned "Low"**
- Hybrid participation (13 states, 27 attendees)**
  - 2 North American botanists (NatureServe)
  - 2 regional advisors (SE Flora & SEAFWA)
  - 7 states in-person; 6 states virtual; 2 additional states involved in preparation & follow-up
- Coordination of results includes all 15 states**



# Complementary Data Updates



## Standard taxa updates

- Ongoing process with NatureServe network member programs
- Ensures consistent updates to taxa lists and rankings

## RSGCN list updates

- Request updated information
- Technical teams overview updates
- Prioritize species for conservation
- Survey also prompts state updates

## Innovative approaches

- Utilizing standards
- Adapting models of success
- Synergy of partners

# Southeastern Plants RSGCN - Ecological Systems

- **Taxa assigned to U.S. National Vegetation Classification system (USNVC) Groups**
- **Documented by NatureServe for 846 species**
  - 669 assigned to a single Group
  - 137 affiliated with two Groups
  - Some associated with up to 7
- **Updated per supplemental crosswalk (FSUS)**
- Post-doc Dr. Alex Loomis & Dr. Jen Cartwright (ORISE & USGS on behalf of SE CASC)
- **USNVC Groups correlate to LandFire**
- Review of available climate models for RSGCN
- User-friendly climate impact summaries
- **Inform state & tribal wildlife action planning, monitoring, and management**



Alan Cressler



**SOUTHEAST**  
Climate Adaptation Science Center



# Top 15 USNVC Ecological Associations for SE RSGCN Plants

| Group  | Number of Taxa |
|--|----------------|
| Wet-Mesic Longleaf Pine Open Woodland (G190)                       | 88             |
| Xeric Longleaf Pine Woodland (G154)                                | 60             |
| South Florida Slash Pine Rockland (G005)                           | 49             |
| Central Interior Alkaline Open Glade & Barrens (G179)              | 42             |
| Tamaulipan Dry Mesquite & Thornscrub (G099)                        | 34             |
| Appalachian - South-central Interior Mesic Forest (G020)           | 29             |
| South Atlantic & Gulf Coastal Dune & Grassland (G494)              | 26             |
| South Atlantic & Gulf Coastal Plain Pondshore & Wet Prairie (G915) | 24             |
| Blackland & Coastal Tallgrass Prairie (G335)                       | 23             |
| Florida Xeric Scrub (G177)   | 21             |
| Atlantic & Gulf Coastal Plain Seep (G187)                          | 19             |
| Southern Coastal Plain Mixed Evergreen Swamp (G037)                | 18             |
| Southern Appalachian Rocky Outcrop (G670)                          | 15             |
| Southern Mesic Beech - Oak - Mixed Deciduous Forest (G166)         | 13             |
| Caribbean Hardwood Hammock & Coastal Strand Forest (G765)          | 12             |

# Southeastern Plants RSGCN - Ecological Systems

- **Species-habitat crosswalk led by Flora of the Southeastern U.S. (FSUS) using**
  - NatureServe habitat information
  - FSUS FloraManager system
  - Dozens of traditional floras
  - Experience of experts Dr. Alan Weakley and Scott Ward (NCBG at UNC)
- **Complete for Very High and High, plus most Moderate RSGCN Categories**
  - USNVC Groups (1 to 3)
  - Some downscaled to Alliance level



Alan Cressler

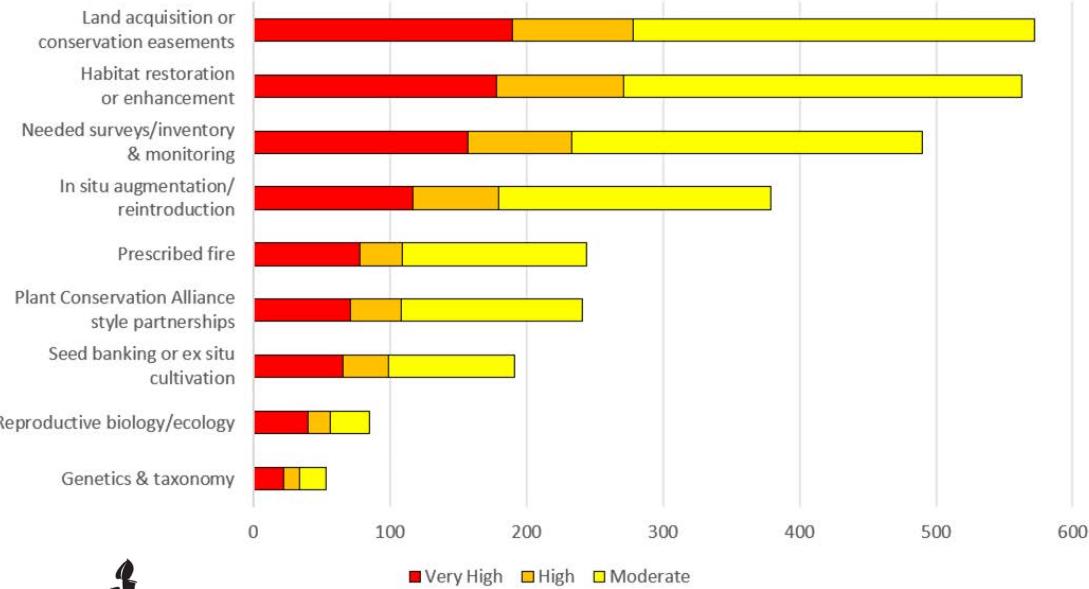
- **RSGCN concentrated in habitats that are**
  - Naturally rare (with additional threats)
    - South Florida Pine Rocklands
    - Glade and Barren habitats
    - Mountain Bogs and Fens
  - Matrix communities (altered/ destroyed)
    - Longleaf pine ecosystem communities
    - Texas-Louisiana Coastal Prairies
  - ***Updated list of prevalent Associations available***



Alan Cressler

- Habitat degradation/ loss is the primary driver of imperilment
- Needed actions are land-based
  - Acquisition & easements
  - Restoration or enhancement
  - Surveys/ inventory & monitoring
  - Augmentation/ reintroduction
  - Prescribed fire
  - Partnerships
- Concentration of RSGCN taxa in habitats present efficient targets
- Correlation of RSGCN plants & animals will identify **Conservation Opportunity Areas (COAs)**
- Promote efforts (**NS, FWS, SWAPs**) to inform landscape and habitat conservation in region and nation

## SE Plants RSGCN - Ecological Systems & Needed Conservation Actions



PARTNERSHIPS & NETWORKS

# Accomplishments & Next Steps

## Completed

- SEAFWA Wildlife Diversity Committee review, approval, and promotion
- SE states using list for SWAPs
- SE CASC ORISE Postdoc (Dr. Loomis) collating available climate model info & creating SWAP resources
- SECAS developing SWAP content
- RSGCN list & report available online
- RSGCN Threats & I updated version



## In Progress

- Conduct additional Ranking updates and IUCN Red List assessments with NatureServe network
- Inform Species Status Assessments to support U.S. Fish & Wildlife Service Listing Workplan
- Continue crosswalking to finer NVC levels for all species (Alliance & Community Associations)

## Seeking Funding to

- Support standardization of ecological system correlations for RSGCN animals and plants
- Inform the enhancement of data availability and prioritization of species for Puerto Rico & U.S. VI
- Revise list to incorporate data updates, including State SGCNs (5 yrs.) & PR & U.S. VI (10 yrs)
- Support review and development of a strategy for conserving cultural, economic, & medicinal species



# Recovering America's Wildlife Act

## Bi-partisan legislation

**RAWA** would be a significant investment in wildlife conservation to states & tribes.

- Provide state and territorial agencies with up to \$1.4B annually to implement Plans
- Invest up to \$98M annually in the wildlife conservation efforts led by Tribal Nations
- Support state, tribal, private, and national efforts to recover wildlife identified as threatened or endangered
- Classify PLANTS as Wildlife and provide \$ incentives for their inclusion in SWAPs

Contact your  
Representatives now!



**34% of  
PLANTS**  
are at risk of extinction

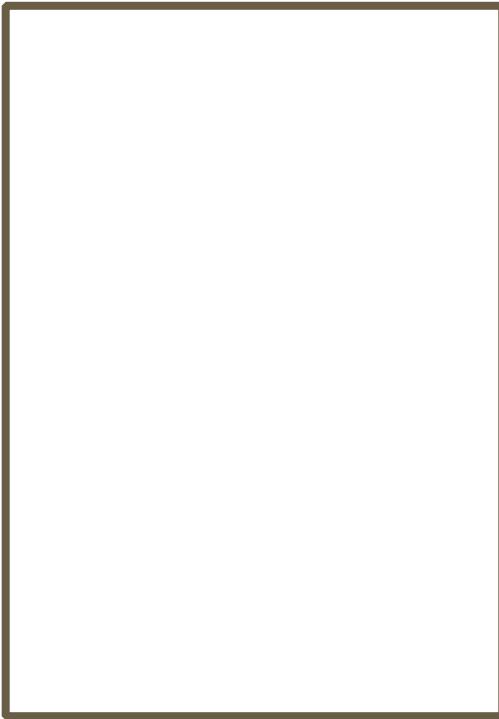
**40% of  
ANIMALS**  
are at risk of extinction

**41% of  
ECOSYSTEMS**  
are at risk of collapse



**RAWA** was reintroduced by the Senate - Our goal is for support & bill passage to move it to the House of Representatives.

**The SE Plants RSGCN is dedicated to Jon Ambrose (1956 - 2023)**



**May we carry on his efforts to conserve species & natural communities.**

# Thank you!

**Sign up for general updates:**

[www.se-pca.org](http://www.se-pca.org)

**Like us on Facebook:**

<https://www.facebook.com/SoutheastPCA>

**Follow on Instagram:**

[https://www.instagram.com/southeastern\\_pca/](https://www.instagram.com/southeastern_pca/)

**Follow on Twitter:**

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[eastPca](#)



*Let us know if you are interested in joining a Plants & Habitats for SWAPs session for SePPCon.*





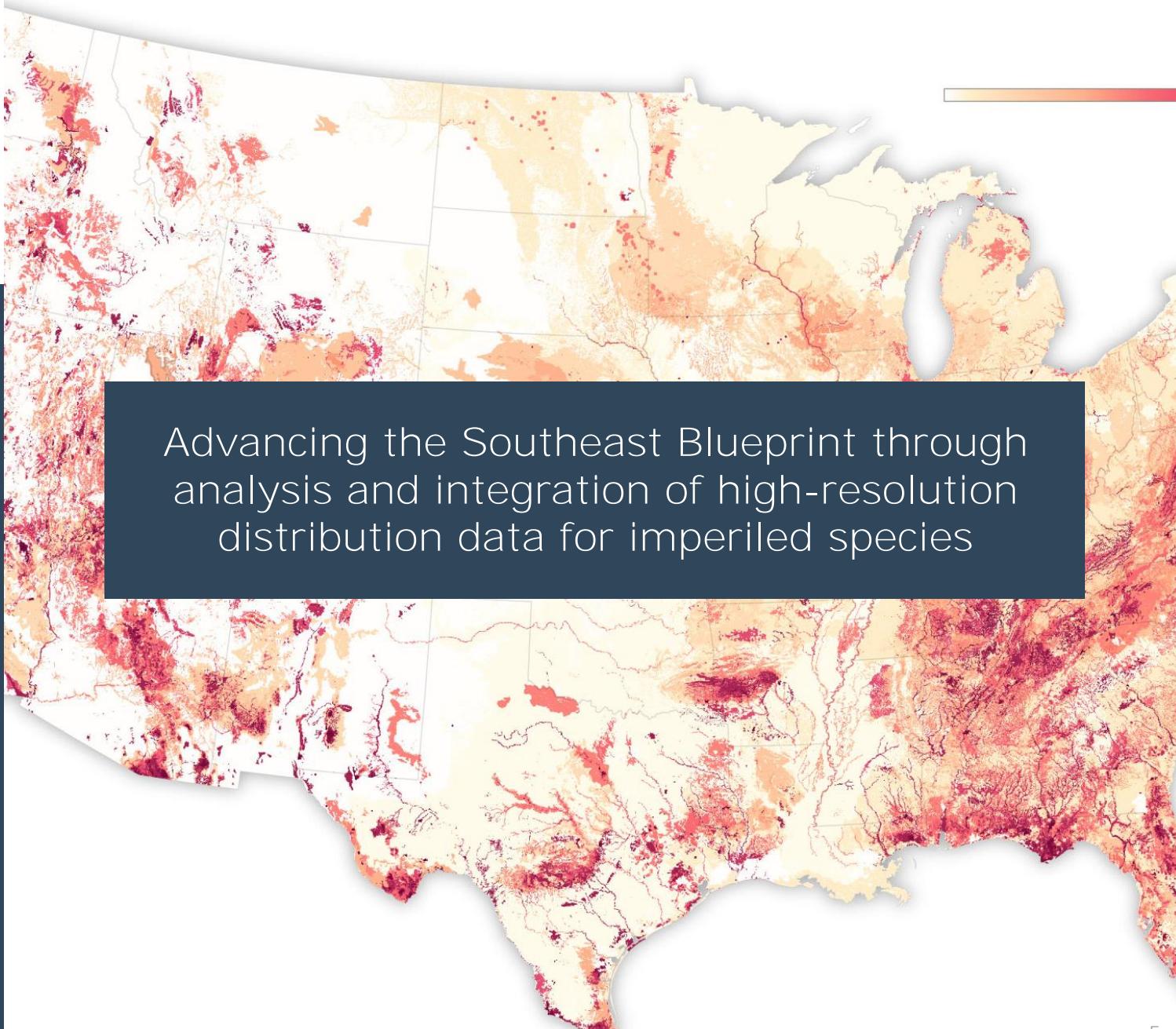
Next Third Thursday  
Web Forum

2-15-2024

10:00 am ET

Chris Tracey and  
Regan Smyth,  
NatureServe

Advancing the Southeast Blueprint through  
analysis and integration of high-resolution  
distribution data for imperiled species





## Staff updates

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- Plan for the 2024 Southeast Blueprint update
- Southeast CASC announcements

# Plan for the 2024 Southeast Blueprint update

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- Updates to a small number of indicators in the continental Southeast based on known issues and new data availability
- Methods improvements to increase speed/efficiency, account for regionally significant indicator values, and better support users doing regional prioritization
- Continental Southeast workshops planned for Fall 2024 (after the Blueprint release) so that all viewers and indicator data are **available to better understand what's driving Blueprint priority**

# Southeast CASC announcements



## A Vivid CAnVAS: Visualizing Climate Projections for Status Species Assessments

Kathie Dello, Corey Davis, and Haven Cashwell

**February 15 | 1PM ET**

*Zoom registration required*



Register here:



# Southeast CASC announcements

## GLOBAL CHANGE RESEARCH FELLOW APPLICATIONS OPEN!

Are you a graduate student studying global change in the Southeast? You could be a member of the 2024-25 cohort!



**SOUTHEAST**  
Climate Adaptation Science Center



# How to get involved in SECAS

- Sign up for the SECAS newsletter

[secassoutheast.org](http://secassoutheast.org)

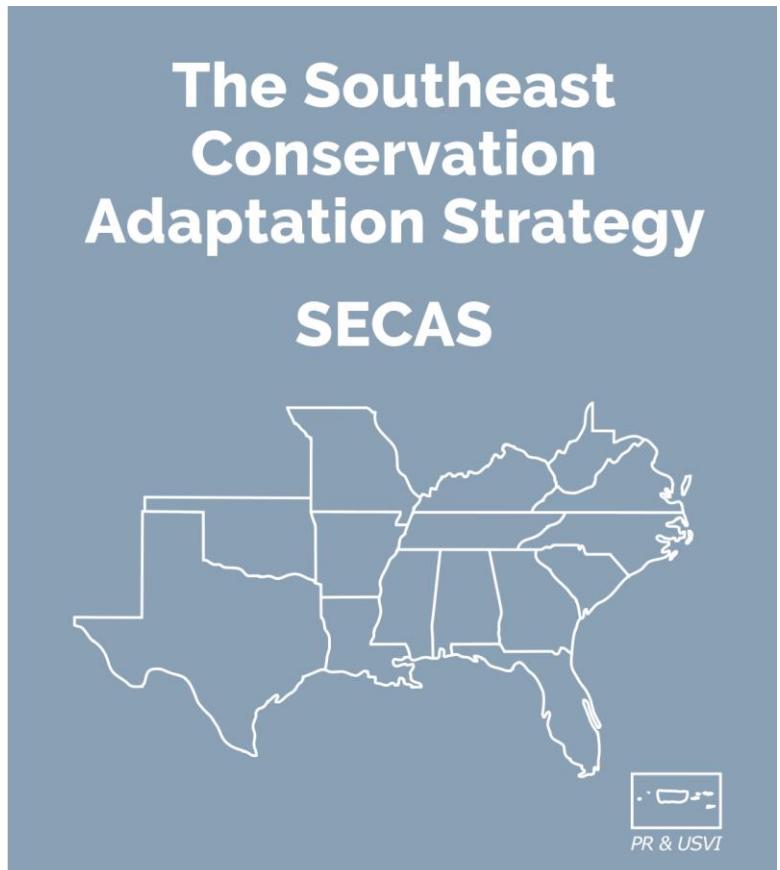
- Connect with SECAS staff or partners

[secassoutheast.org/staff](http://secassoutheast.org/staff)

[secassoutheast.org/partners](http://secassoutheast.org/partners)

- Explore the Southeast Conservation Blueprint

[secassoutheast.org/blueprint](http://secassoutheast.org/blueprint)





Questions?