



The SECAS Third Thursday Web Forum

River cane ecosystem conservation and connection to
Keetoowah traditional practices



Agenda

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



River cane ecosystem conservation and connection to Keetoowah traditional practices

Roger Cain, Office of Environmental Services and Historic Preservation
of the United Keetoowah Band of Cherokee in Oklahoma

2-16-2023





Keetooowah River Cane Conservation





Canebrake Status

Canebrakes are considered critically endangered ecosystems with a 98% decline of river cane ecosystems as measured through area loss or ecological degradation.



River Cane

- *Member of the Grass family*
- *River cane is one of three indigenous bamboo to North America with the other two Switch Cane and Hill Cane*



Remnant canebrake at Baron, OK

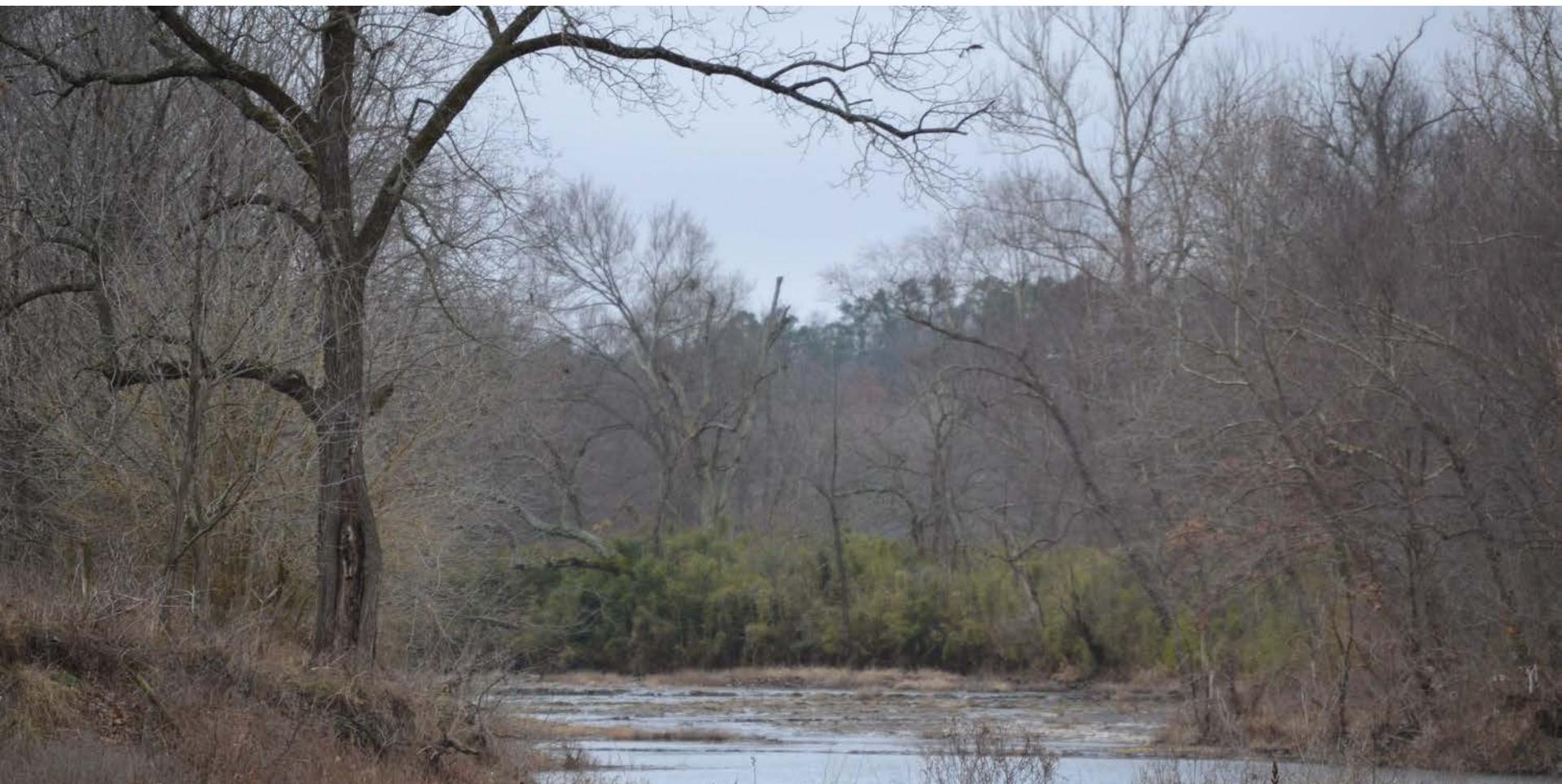
Carren Fork Creek this place at one time was thick with cane brush. There is still cane to be found along its banks. Some think that this cane was what brought the Indians here, for the wild animals lived on this green cane all Winter. The buffaloes came from the West on the prairie and came East for the Winter. The Plains Indians came along with the Buffaloes. They also found deer in this part of the country. Fish was also found in abundance in the creeks in this part.

REHISTORIC LANDMARKS, MISSION
ITES AND INDIAN SCHOOLS
lummingbird & Bigby
November 19, 1937



In years long past parakeets in large numbers frequented the bottom. These birds of bright colored plumage were in large flocks and their food was found in the insects and seeds of various wild plants. With increasing population in and about Fort Gibson and vicinity, and the clearing away of the timber in the bottom and cultivation of the land, the parakeets disappeared and none have been seen in many years.

John M. Adair, Manard, Oklahoma, late Henry G. Meigs, Fort Gibson, Okla.



I can remember when there was hundreds of acres of the river bottomland in the vicinity of Ft. Gibson Covered with canebrakes. I recall an old road through the low land northeast of Ft. Gibson and that we traveled going between where we lived and Ft Gibson that the cane was so tall and of such, a dense growth that it would be impossible for a man on foot to get off the roadway through the cane. The canebrakes afforded wonderful winter range for stock as people could drive a herd of cattle into those brakes in the fall and they would stay all winter and come at in the spring fat and in good shape, as the green blades on the switch cane was good feed for the stock all winter. The brakes afforded a wonderful refuge for all kind of game, but now there is no cane in this part of the country, like many other things Indians used to gone, gone forever. FRANK WOFFORD, Informant Pioneer Papers 443 J.A. Buchannon

Cherokee, bears, woodlands & river cane

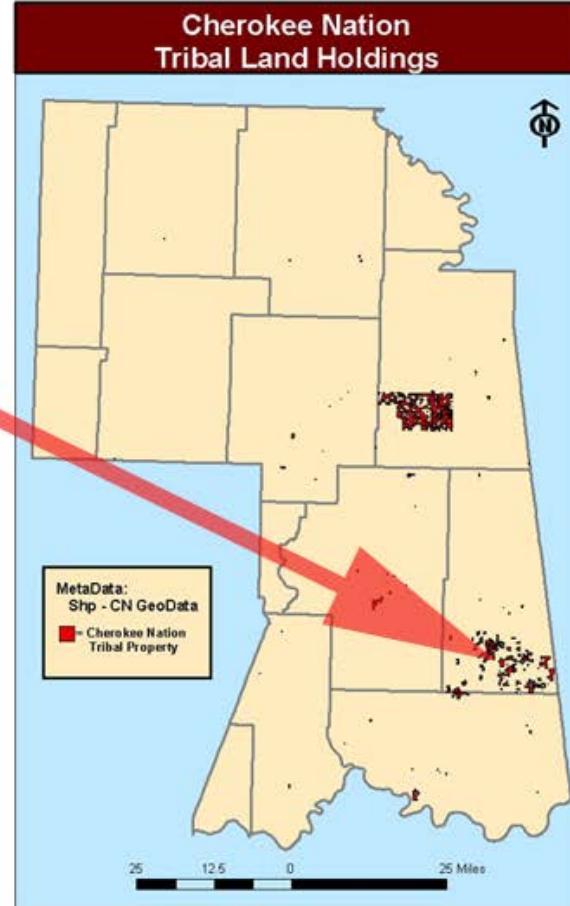
Cherokee Nation
Tribal Land Holdings



Black bears in Oklahoma

Areas of greatest concentration are shown in red. Areas where bears are uncommon but have been sighted or where sightings are anticipated are shown in yellow.

COURTESY/Oklahoma Department of Wildlife Conservation



A great case for preserving our hardwood forest woodlands and river cane ecosystems is through the recent mapping of bear sightings by the Oklahoma Department of Wildlife Conservation. The single red area in the OK bear sightings map is located in southern Adair County. This area located in Adair County is known for having the largest Cherokee population per capita in the country consisting of approximately 16k of tribal land holdings, numerous river cane ecosystems along areal creeks (98% of our tribal river cane is located in this area) and streams, hardwood forest lands and remoteness. Conservation of flora ensures the success of reintroducing indigenous fauna as indicated by the mapping of bears by the OK Department of Wildlife Conservation.

•Preservation and conservation of critical habitats for species on the Endangered Species Act.
American Burying Beetle, Ozark Big-eared Bat, et al.

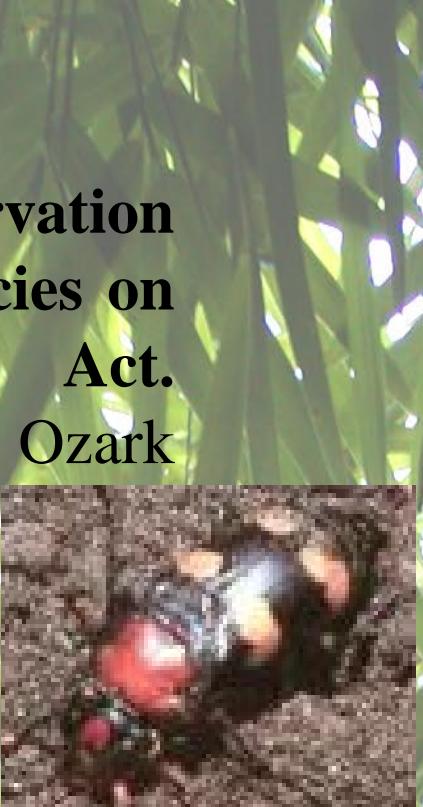
Passenger Pigeon
(extinct)



Long eared Bat



Cherokee Attakullakulla



Burrowing Beetle



Swainson's Warblers



Cane Rattler



Parakeet
(extinct)

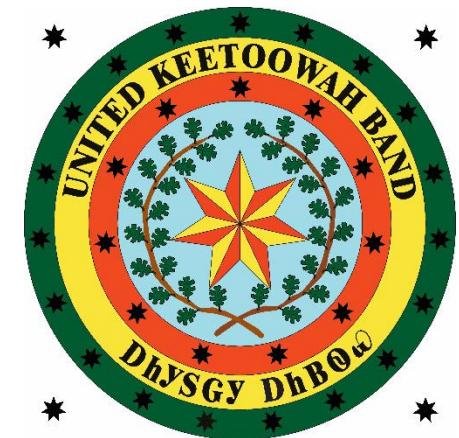


- Research utilizing River Cane as a riparian system for agricultural purposes discovered that it not only reduced nitrogen and phosphorus from surface runoff but in the groundwater as well. SIU research has found canebrake ecosystems were effective in reducing groundwater nitrate levels by 90% and dissolved phosphorous concentrations by 28%. (Schoonover 2003, Blattel 2005).

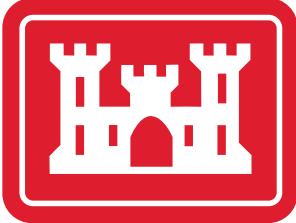
River Cane Gathering

April 4-6, 2023

Tahlequah, OK



<https://usfs.tribalgis.com/index.php/rivercane-home>

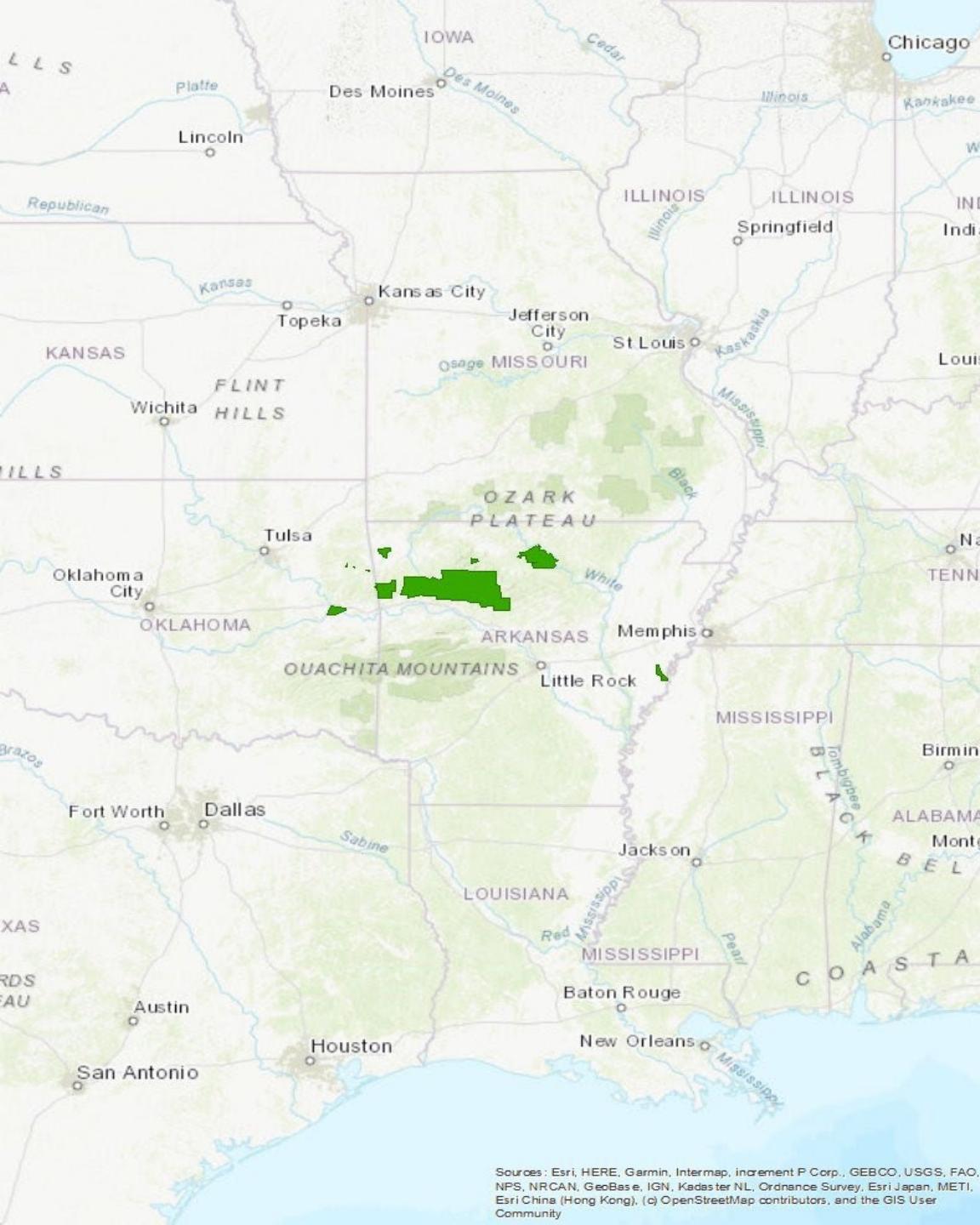


Cultural keystone species as a concept has been defined as a, "...culturally salient species that shape in a major way the cultural identity of a people, as reflected in the fundamental roles these species have in diet, materials, medicine, and/or spiritual practices" ([Garibaldi and Turner 2004](#)).



RIVER CANE *Restoration Alliance*

<https://www.spa.usace.army.mil/Missions/TNTCX/Traditional-Ecological-Knowledge/Rivercane-Restoration-Alliance/>



UKB Rivercane Conservation Area

funding through



America the Beautiful

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Keetoowah Rivercane
Conservation connecting
fragmented canebrake
ecosystems.

Keetoowah Rivercane
Conservation removing debris
from canebrake ecosystems.



A photograph showing a steep hillside covered in a dense, overgrown thicket of green bushes and small trees. The vegetation appears thick and somewhat uniform in texture. In the foreground, the side mirror and part of a car are visible, indicating the photo was taken from a vehicle.

Keetoowah Rivercane
Conservation removal of
invasive species.

Keetooowah Rivercane
Conservation removing saplings and
dead culms from canebrake ecosystems.



Donadagovhi!



Agnes Christie Pumpkin



George Pumpkin



Next Third Thursday
Web Forum

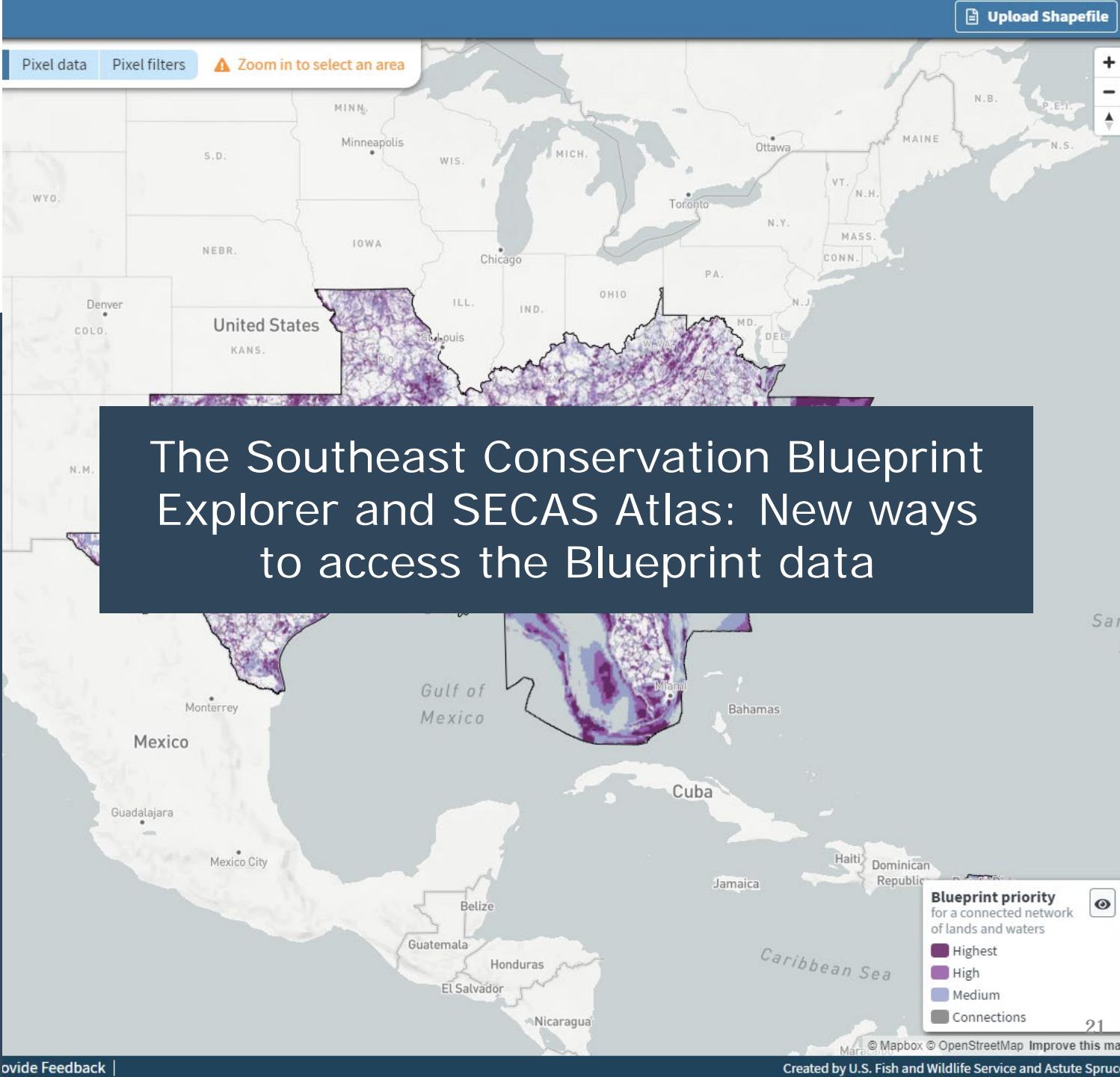
3-16-2023

10:00 am ET

Hilary Morris

Southeast
Conservation
Adaptation Strategy
(SECAS)

secassoutheast.org



A photograph of a waterfall in a lush, green forest. The waterfall flows down several tiers of dark, mossy rocks, creating a misty spray at the bottom. The surrounding trees and foliage are dense and vibrant.

Staff updates

- In-person Caribbean community of practice meeting

In-person Caribbean community of practice meeting

- Highlights from the meeting



How to get involved in SECAS

- Sign up for the SECAS newsletter

secassoutheast.org

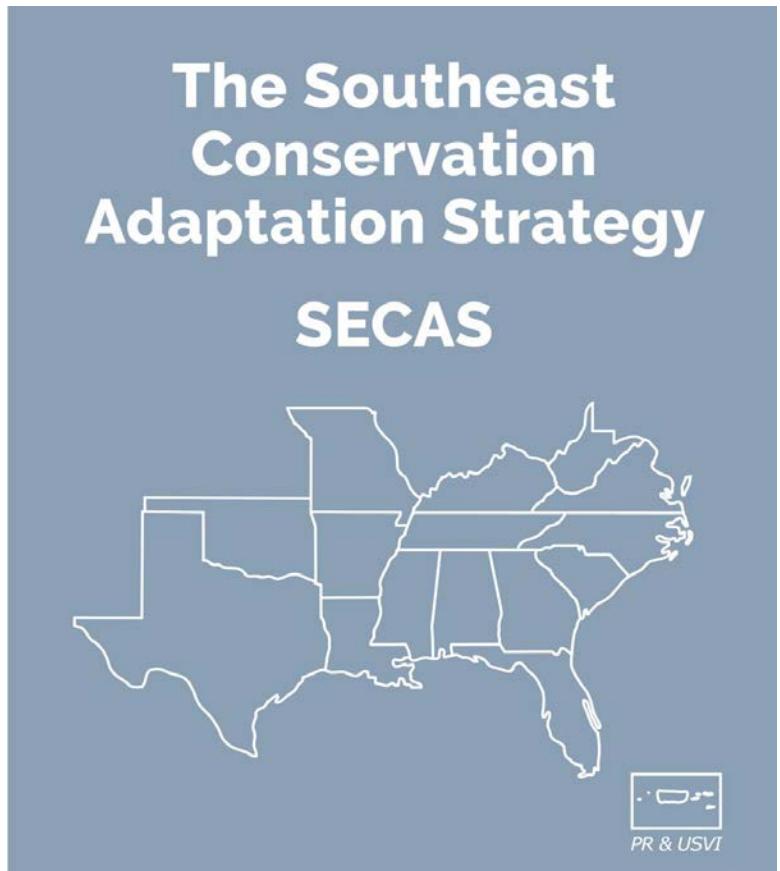
- Connect with SECAS staff or partners

secassoutheast.org/staff

secassoutheast.org/partners

- Explore the Southeast Conservation Blueprint

secassoutheast.org/blueprint





Questions?