

Bear Run Nature preserve -  
provided by the Western PA Conservancy

field work photos provided by Frank Nelson



natural  
areas  
ASSOCIATION

AUGUST 10, 2021, 12:00pm EST - 2:00pm EST

## State Natural Areas Program Roundtable

The Role of Groundwater in Natural Areas Stewardship

### Description:

Groundwater is an important component of the ecological functioning of many natural communities and the plants and animals they support that occur in natural areas across our world. However, its importance is often overlooked relative to more visible natural resources such as streams, lakes, soils, and vegetation. Groundwater is part of the water cycle and many of the habitats and their associated species it supports are rare, in decline, or threatened. During this virtual State Natural Area Program meeting, speakers will cover a couple of karst systems to begin a conversation on the role of groundwater in natural area stewardship. This will be followed by examples from state programs of related stewardship projects as well as a discussion by the meeting participants.

### Zoom Meeting - August 10, 2021

12-2pm EST

11am-1pm CST, 9am-11am PST, 10am-12pm MST

# Register

**Calling all state natural areas professionals and land managers to collaborate with your peers.**

**If you would like to register for notifications regarding future SNAP meetings, click [here](#).**

## Agenda:

12:00pm – 12:10pm EST	<b>Welcome and Introductions</b>
12:10pm – 1:10pm EST	<b>Presentations</b> <ul style="list-style-type: none"><li>• <b>Frank Nelson</b>, Wetland Ecologist, Terrestrial Habitat Science Unit, Missouri Department of Conservation - <b>The New Karst Fen Ecological Site</b></li><li>• <b>Jonathan P. Evans, Ph.D.</b>, Professor of Biology (Botany, Ecology, Conservation Biology), Sewanee University, Director, Sewanee Herbarium - <b>Why are the Trees Disappearing from Sinking Pond on the Arnold Air Force Base?</b></li></ul>
1:10pm – 1:30pm EST	<b><u>Stewardship Shorts</u></b> - State natural areas professionals are invited to submit short presentations to share with their colleagues. Stewardship Shorts are 5-minute, pre-recorded videos related to the topic that describe a project, methodology, best practice, or challenge.  <b><u>Click here</u></b> to view a sample Stewardship Short.  <b>The opportunity to submit must be approved in advance. Indicate your interest when you register for the Roundtable.</b>
1:30pm – 1:55pm EST	<b>Open Discussion</b> - Participants are invited to unmute to share ideas, techniques, and methodologies, articulate issues and challenges, and invite suggestions and insights from your peers.
1:55pm – 2:00pm EST	<b>Conclusion</b>

## Speaker Bio:



### **Frank Nelson**

Wetland Ecologist  
Terrestrial Habitat Science Unit  
Missouri Department of Conservation

Years ago, Frank Nelson received a B.A. in Biology from William Jewell College and a M.S. in Wildlife and Fisheries Sciences from University of Missouri-Columbia, where he studied wetlands systems and the breeding ecology of Least Bitterns. Over the last 17 years Frank has worked for the Missouri Department of Conservation as a Wetland Ecologist where his focus has been applying research and technology to enhance wetland management, monitoring, and restoration.

## **Presentation Abstract: The New Karst Fen Ecological Site**

In the past year MDC and the USFS has teamed up to develop a karst fen ecological site description (ESD) to better articulate the ecological dynamics of the unique groundwater wetlands that reside in the Ozark Highlands. Information has been pulled from the literature and combined with field data regarding the plant community and soils. This ESD will lead to better guidance on management and restoration and be an opportunity for more focused conservation efforts towards fens in the coming years.

## Speaker Bio:



### **Jonathan P. Evans, Ph.D.**

Professor of Biology (Botany, Ecology, Conservation Biology)  
Sewanee University  
Director  
Sewanee Herbarium

Dr. Jon Evans is a Professor of Biology at the University of the South in Sewanee, TN. His research in plant ecology focuses on plant population dynamics and the processes that determine the composition and structure of plant communities over time and across landscapes. He is specifically interested in the role of clonal growth as a mechanism for population persistence in plant communities. He also studies land-use history and exotic species introductions as drivers of long-term change in forest communities. Much of his research is

conducted within ecosystems of the southern United States, concentrated on the southern Cumberland Plateau and on the coastal barrier islands.

He also leads University efforts to promote landscape-level conservation across the Cumberland Plateau region. As founding Director of Sewanee's Landscape Analysis Laboratory, he led a federally funded, multi-disciplinary project that used GIS and remote sensing to examine the environmental consequences of native hardwood conversion to pine plantations on the Cumberland Plateau. This research led to fundamental changes in land-use decision-making within the region and helped to catalyze major conservation initiatives.

He has been a faculty member at Sewanee since 1994 and teaches courses in ecology, botany and conservation biology. He also directs the Sewanee Herbarium, which maintains an extensive vascular plant collection for the University's 13,000 acre campus and surrounding region.

## **Presentation Abstract: Why are the Trees Disappearing from Sinking Pond on the Arnold Air Force Base?**

Sinking Pond, an 86 acre, seasonally flooded karst depression located on the Arnold Air Force Base has been recognized as a National Natural Landmark for its unique biodiversity. This forested wetland is dominated by a disjunct population of overcup oak (*Quercus lyrata*) that is longer regenerating throughout most of the pond. This talk explores the reasons why these trees are disappearing and what it means for the future of this special natural area.