**ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS** **Carolinas Chapter**

**Geological Hike of the White Pines Nature Preserve+**

**Chatham County, North Carolina**

**Saturday, October 16, 2021 - 9:00 AM to ~5:00 PM**

**Field Trip Leaders:**

**Phil Bradley and Emily Michael**

**North Carolina Geological Survey**

**Event:** Geological Hike of the White Pines Nature Preserve + bonus field trip

**Details:** Field trip of the nature preserve 9:00 AM-1:00 PM; lunch on the patio at the Carolina Brewery & Grill in Pittsboro (**lunch/tea/soft drinks/tax/tip included in registration**). Bonus field trip after lunch to an old quarry on the shores of Jordan Lake.

**Location:** Starts and ends at the parking lot closest to the confluence of the Rocky and Deep rivers – https://goo.gl/maps/cEcRgek9VwieSCLZ8. It is a little tricky to find the preserve.  Give yourself a few extra minutes for travel; good to have a navigator to help with the turns.

**Cost:** $50 for AEG members, teachers, and the public; $60 for non-members, $25 for student members of AEG

**Registration:** Go to [www.aegcarolinas.org/news](http://www.aegcarolinas.org/news). ***Field trip is limited to 25 participants.***

***Reservation deadline: 5:00 PM, Monday, October 11, 2021***

**Field Trip Waiver:** Please sign/date and return field trip waiver to Rick Kolb at rick.kolb1@gmail by October 11, 2021.

**Continuing Education Credits:** 6 hours for North and South Carolina geology boards

**Masks:** Recommended; vaccinated even better

***Background:***

The White Pines Nature Preserve is at the confluence of the Rocky and Deep rivers in Chatham County. Recent detailed geologic mapping by the North Carolina Geological Survey identified a previously unknown small portion of Triassic sediments surrounded by Carolina terrane rock units (Bradley et al., 2020). White Pines Nature Preserve info: https://www.triangleland.org/explore/nature-preserves/white-pines-nature-preserve

***Field Trip Description:***

This field trip will involve an approximate 2-mile round trip hike along trails in the White Pines Nature Preserve. The hike will highlight the results of detailed geologic mapping by the NC Geological Survey and interpretations of various outcrops and landforms within the Preserve.

Stops will include:

1. Metamorphosed dacitic tuffs of the Hyco Formation of the Carolina terrane.
2. Metamorphosed dacitic lavas of the Hyco Formation
3. Discuss the surface expression of topographic lineaments and their relationship to Mesozoic faulting
4. Outcrops of Triassic conglomerates and sandstones of the Pekin Formation
5. View steeply incised Rocky River valley and discussion of geologic interpretations from LiDAR topographic data of area

Bonus field trip after lunch will be to an old quarry on the shores of Jordan Lake to observe andesites and felsic tuffs, and then a short walk to observe outcrops of diabase and Triassic sediments

***Reference:***

Bradley, P.J., Rice, A.K., Grimley, D.A. and Blocher, W.B., 2020, Geologic map of the Colon 7.5-Minute Quadrangle, Chatham and Lee counties, North Carolina: North Carolina Geological Survey Open-file Report 2020-04, scale 1:24,000, in color. https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Geological%20Survey/OFRs\_Geological\_Survey/NCGS\_OFR\_2020-04\_Colon.pd