



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS Carolinas Chapter

**Field Course to Explore Modes of Rock Failure, Hickory Nut Gorge
Rutherford County, North Carolina
Saturday, October 26, 2024**

9:00 AM to 4:00 PM

Field Course Leaders:

David Korte - North Carolina Geological Survey

Jeremy Jurgevich – North Carolina Geological Survey

Event: Explore rock failure mechanisms and history in Hickory Nut Gorge

Details: This field trip will examine a variety of rockfall features in Hickory Nut Gorge in Rutherford County, western North Carolina. We will see the spectacular and challenging terrain of Chimney Rock State Park that poses hazards from rockfalls, rock slides, and debris slides and flows. We will explore rockfall hazards in the park on both sides of the Gorge (Rocky Broad River). **Please bring your own lunch.**

Location: We will meet at the Lake Lure Welcome Center parking lot, 2932 Memorial Highway in Lake Lure, NC, <https://maps.app.goo.gl/ratC4tC5jcX7FLNW6>, at 9:00 am for Field Course Orientation to the Gorge and Chimney Rock State Park. We will end the day exploring the Hickory Nut Falls Trail in Chimney Rock State Park.

https://www.chimneyrockpark.com/view_trail/hickory-nut-falls-trail/

Cost: \$25 for AEG members and spouses/SO's, \$35 for non-members, free for student members of AEG

Registration: Register online at www.aegcarolinas.org/news.

Reservation deadline: 5:00 PM, Wednesday, October 23, 2024

Field Trip Waiver: Please sign/date and **return the field trip waiver** to Rick Kolb at [rick.kolb1@gmail](mailto:rick.kolb1@gmail.com) by October 23, 2024 or bring it with you to the field trip.

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

Background:

The one-day field course will examine a variety of rock fall features in Hickory Nut Gorge in Rutherford County, western North Carolina. Hickory Nut Gorge is an area of concentrated prehistorical and historic rockfall events. We will explore historic events that happened in 1916, 1996, 2013, 2014 and 2018. The Gorge is analogous to other post-orogenic, brittle cross-structures that control reentrants incised into the Blue Ridge Escarpment in North Carolina.

We will focus on rock slope movements with varied transport rates such as rapid-catastrophic failures, slow-moving incremental failures, and complexes with multiple failure mechanisms and timings. Field trip leaders will present work on the recently completed landslide-hazard mapping for Rutherford County, research on landslide controls, and lessons learned from responses to landslides.

Field Trip Description:

Stop 1: 9:00 am - 9:30 am. Scenic overview of Hickory Nut Gorge from the Town of Lake Lure Municipal Parking Lot.

- Overview of local bedrock geology and tectonics
- Overview of geomorphic features and evolution the Blue Ridge Escarpment, topography, and stream capture

Stop 2: 9:45 am - 11:45 pm. Rumbling Bald rock climbing and bouldering access area, north side of Hickory Nut Gorge.

- Hiking tour of debris deposits, block fields and cliff source areas (approximately 1.5 miles round trip).

Stop 3: 12:00 pm. - 4:00 pm. Chimney Rock State Park, south side of Hickory Nut Gorge.

- Lunch and pit stop; take shuttle buses to the upper parking lot (AEG arranges).
- Tour of Chimney Rock
- Overview of historical mass wasting features and bedrock structural framework
- Hike along Hickory Nut Falls Trail to examine the 2014 rock fall, and large exfoliation faces and detached blocks on the way to Hickory Nut Falls (approximately 1.4 miles round trip)