**Cliff and Rock Outcrop Communities of the Southern Appalachians**

Highlands Biological Station, July 18 – 22, 2022

**Instructors:** Laura Boggess, Mars Hill University (lboggess@mhu.edu)

 Gary Kauffman, USDA Forest Service (gary.kauffman@usda.gov)

**Text:** Optional: *Cliff Ecology, Pattern and Process in Cliff Ecosystems.* (2000) Larson et al. (instructor copies available) and 3-4 articles (provided).

We will use Michael Schafale’s *Guide to the Natural Communities of North Carolina, Fourth Approximation* (2012 and 2021 partial web draft from NCNHP web site) for reference and determinations of natural community types

**Description:** Rock outcrop and cliff communities represent a small fraction of land area in the Southern Appalachians but contain over 100 rare and uncommon plants, 30 lichen species and over 20 unique community types. This course will familiarize you with a broad swath of cliff and rock-outcrop community types through first-hand exploration as well as through lectures and paper discussion. You will gain a better understanding and appreciation of the diversity, ecology and conservation value of Southern Appalachian outcrop and cliff communities.

#### **Methods**: We will cover material in two required daytime and one optional evening session per day. The morning will usually involve a trip to a local cliff or outcrop, afternoon sessions may include lecture or paper discussions (one all-day trip) and evening sessions will include guided time in the lab for identification of your collection. We take at least one all-day fieldtrip and offer the option to rappel and see the cliff ace (this is fully optional so don’t worry if heights make you woozy!) Together we will compile a species list of cliff and outcrop-associated species from the sites we visit.

#### **Attendance:**  You are responsible for all information covered in lectures, field-trips, and readings. If you must miss a session, please speak to Laura or Gary about ways to cover missed material.

#### **Field Trips**: Sunset/Sunrise Rock, Satulah Mountain, Whitesides, Dry Falls, possibly Panthertown Valley, Laurel Knob, Doubletop and Cedar Cliff Mountain, Waterrock Knob and more (so many possibilities!).

**Tentative Schedule** **(Subject to change depending on the weather etc.):**

**Schedule At-a-Glance**

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| **Day** | **Morning** | **Afternoon** | **Evening** |
| **Monday****7/18** | 9am: Introductions and Intentions,HBS boulders | 2pm: Satulah | After Dinner:Lab / Reading Time |
| **Tuesday****7/19** | 9 am: Outcrop EcologyLeave forLaurel Knob | Panthertown  | After Dinner: Lab Time |
| **Wednesday****7/20** | 9am: Cliff Ecology 10am: Leave for Whitesides | Whitesides, 4pm: Paper Discussion | After Dinner: Sunset Rock |
| **Thursday****7/21** | 9am: Spray cliffsSpatial modeling  | Dry Falls  | After Dinner: Zahner Lecture or Reading Time |
| **Friday****7/22** | Wrap-up: Exam and Paper Discussion  | Potluck (rock tripe soup anyone?) andClosing Circle | N/A  |