Cave Geology at Friars Hole Cave Preserve

Trip Leader: Roy Jameson

Dates: Session 1: June 23 and 24. Arrive the night of Thursday, June 22 if possible. The session will start by 10:00 a.m. at the North Entrance on June 23. The session will end by 3:30 p.m. on Saturday, June 24, to allow participants time to drive north (1:50 hours, 78 miles) to the NSS Convention site and set up camp in daylight.

Session 2: July 1 and 2. Arrive by 1:00 p.m. on Saturday, July 1. The session will end by 3:30 p.m. on Sunday, July 2. There may be the opportunity for additional caving after the session ends, or for trips in other parts of the cave system on July 3 or later.

Location: Friars Hole Cave Preserve, Pocahontas and Greenbrier Counties, West Virginia

Scope: Detailed examination of cave and geologic features in Snedegar Cave.

Snedegar Cave has significant geologic, lithologic, and hydrologic features. These include, but are not limited to, the following:

- abundant thrust faults and associated fractures and tension gash veins;
- quartz crystals on calcite-fiber slickensides;
- clay-rich layers with framboidal pyrite, which is chemically attacked and leads to the growth of gypsum crystals and chip breakdown;
- abundant vermiculations;
- abundant condensation corrosion and deposition features, including drop dents, rill trails, splash patches, condensation drill holes, calcite rings of deposition, and calcite crusts surrounding drop dents;
- high-nitrate waters;
- and breakdown features of a variety of types, including canyon slabs and fault wedges.

The cave exhibits a developmental history that allows inference of a great deal of information about early flow paths from *fracture conduits* aligned on *single fractures* (bed partings, several joint sets, faults, and associated fractures), *intercepts of fractures*, or within zones of closely-spaced fractures. Many passages in the North Canyon, the Saltpetre Maze, and even parts of the main trunk passage provide abundant evidence of subsequent growth through a period of extensive narrow entrenchment followed by a period of wider entrenchment.

In addition, there are cultural features of some significance. These include saltpetre deposits; saltpetre workings, including gob piles and remnants of vats and logs; and graffiti from several historical periods.

Participants will be provided extracts of text, diagrams, and maps from a guidebook on the geology of Snedegar Cave.

Participation: Limited to 10 participants each session. Participants will provide their own transportation to and from Friars Hole Cave Preserve. To participate, contact Roy Jameson at rjcb19 at comcast.net.

Facilities: Grass areas for tents. Outhouse. Water from springs. If the upper cabin is available, then there may be electricity, a fridge (limited space), and loft sleeping space for about 6 cavers. If the upper cabin is not available, then electricity from a generator at the lower cabin near the swallet cave entrance may be available. The lower cabin provides space to get out of rain in the case of inclement weather. There is no cell phone service.

Character of the Cave: Horizontal, primarily walking. Some clambering over and down large boulders. Some crawling and duck walking. Some climbing past log jams and downclimbing in the North Canyon.

In the summer there may be significant condensation in the Trunk Passage and a slippery floor. The North Canyon has a swallet entrance that is likely to be dry at the time of the convention but will not be visited if the area is threatened by thunderstorms over the Cave Run drainage basin on Jacox Knob.

Cost: Donation to Friars Hole Cave Preserve