

DESCRIPTION OF PETER CAVE
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Peter Cave (OZK010) is entered by way of a steep-side sink about 10 feet deep, 10 feet by 7 feet wide. It is freely descended, but some may prefer a handline. The descent takes one to the top of a talus cone that descends both to the east and west. To the east, one can proceed some 50 feet to a surface collapse fill. One pipistrelle, some raccoon scat and some very minor dry stalactites were seen here.

To the right, west, the talus descends to a cobble-floored passage that gives way to a clay-floor and marginal walking passage with dry flowstone covered walls. Some short dry soda straws were noted. The dry clay floor rises in about 100 feet to stoopway. Six cave salamanders were seen, raccoon scat and a ceiling of interbedded sandstone. After a left hand turn, some old etched graffiti was seen including "Ethel Schofield 1923." This is not the oldest graffiti seen in the cave. Sections of ceiling consist of sandstone, other sections consist of soft partially dissolved dolomite with a clay consistency. Pack rat scat was seen and two pickerel frogs. After two more turns the first of many dozens of ring fungi were seen on walls and ceiling. This fungus finds dead heleomyzid flies and envelopes each carcass in a one-inch ring structure. Also seen in this section are some minor calcite dikes (blades) in the ceiling. There is then a section where the ceiling lowers and floor rises, resulting in a section of crawlway mostly two feet tall. Here there are about three old bear beds (further into the cave are some bear claw marks in clay on the walls). After 50 feet of crawlway, both the ceiling rises and floor descends to passage heights of 20-30 feet. The floor has some small foot holds dug into it to allow easier descent. There are calcite crusts on the walls here, not really picturesque, possibly aragonitic. There are some stalactites and soda straws high on the ceiling, but not particularly impressive. At the first slump pit, approximately 1,000 feet into the cave, the passage is a little over 30 feet tall. Here a skunk was encountered, and although it retreated about 200 feet further into the cave to another slump pit (actually a series of three slump pits), it was decided not to go further in a cave that appears to be 2,200 feet in length judging from the 1977 Charles Coatney map. In the span of passages seen this visit, 24 pipistrelle bats were counted.

The cave is an excellent example of a cave formed prior to the current surface topography that was formed phreatically (beneath or at an ancient level of water table prior to the formation of the deep surface valleys) and later modified by vadose (above the water table) cave streams that are no longer active. The cave shows signs of ponding after major rain events as flood debris was seen on the ceilings of the crawlways. On the visit on 11/11/2014 no water was seen except the smallest of drip pools below minor active speleothems.

Other than a pill bottle at the entrance, no trash or garbage was seen in the cave, although the heel of a shoe was seen 1,000 feet into the cave. There is a fair amount of etched graffiti to be seen along walls in the cave, but no spray paint graffiti. Overall, the cave has been treated very well by modern human visitors through the last 100+ years. It is recommended that graffiti created after 1950 be removed to enhance the natural appearance of the cave.

Random factoids:

1. The cave is formed in the Cotter Dolomite Formation, a 200-foot thick rock of late Ordovician Age, roughly 420 million years old as determined by the geological community. A dolomite is a rock that was originally deposited as a limestone (calcium carbonate) that was later modified by immersion in marine water to a dolomite (calcium magnesium carbonate). It has an average of 4.0 on the Mohs hardness scale and is slightly less soluble than limestone due to dolomitic

matrices in the rock. The Cotter Formation typically is a buff-colored, finely crystalline rock consisting of dolomite and a few interbedded sandstone layers that are often called the "Swan Creek Sandstone" but are really just minor, discontinuous sandstone facies.

2. Speleothems noted in the cave include soda straws, stalactites, stalagmites, flowstone, aragonitic crusts.
3. Fauna includes pipistrelle bats, cave salamanders, pickerel frogs, heleomyzid flies, a skunk. Fecal remains of raccoons, solitary bats and skunk were noted. Raccoon and bear claw marks were seen on walls and undisturbed floors and some bear denning beds were seen. No signs of modern bear were found. Pipistrelles are the most common bat in Missouri, seen in virtually every cave. Cave salamanders (orange with small black spots) are the most common of species of salamanders that use caves in Missouri. Pickerel frogs are often found in caves whereas other frog species are rarely found in caves. Heleomyzid flies (*Amoebalaria defessa*) are very common in caves, also known as cave flies or two-winged flies. Skunks usually aren't found in caves, but when they are found in caves, usually near entrances. They very rarely venture far into caves. There was no evidence of the cave being used as a roosting site for social bats such as the gray or Indiana bat.
4. White nose syndrome (WNS) is a fungal disease that is spreading throughout the eastern half of the United States. It affects only bats. The U.S. Fish and Wildlife Service and other agencies are strongly recommending that people who visit caves should thoroughly clean their clothing and equipment using the protocol developed by the agencies. This includes removing all mud, then wiping down the equipment with Lysol disinfectant wipes or Formula 409 and washing clothing in Woolite. These products contain chemicals that kill the fungal spores of the fungus that causes WNS (*Pseudogymnoascus destructans*). The fungus is being spread from bat to bat, but if people disinfect their gear between caves, they will not spread the fungus.