

Cover Story

Artesian Well Cave

Artesian Well has been known to both the local and caving communities for a long time, but its nature remained unknown. I believe this was due to two factors, a saw mill (since abandoned) and a breakdown pile that both limited access to the cave. James Rebmann's description of the cave seems to be based on earlier second hand accounts even though, just to the southwest, he mapped Artesian Well Annex Cave (since resurveyed by Kalnitz et. al) Our work in Artesian is on going, and this report is preliminary in nature. We have 3840 ft. surveyed (the map shows 2406 ft. and estimate the cave should max out around one mile long.

The geology of the area surrounding the cave is different than most others and this impacts the cave in various ways. Artesian Well Annex and Artesian Well caves lie to the north of and drain into Roundstone Creek. They were once connected together as a side branch of the supposed Roundstone master cave system that has eroded totally through the Newman limestone. This has left these two cave valley systems perched over 100 ft. higher in elevation almost as if they were hanging valleys or products of the rock being very low. This slows the down cutting of the cave streams which couldn't

match the downcutting of Roundstone Creek. The main factor is that the Roundstone is now downcutting through softer rock formations of the Borden group allowing a faster rate of erosion.

The cap rock in this area is the Pennsylvanian Livingstone Conglomerate Sandstone (composed of sand and rounded quartz pebbles) That was deposited in a channel eroded in the Newman Limestone in places to depths of over 100 ft. The sandstone crops out as amphitheater type cliffs at the valley heads with both intermittent and year-round waterfalls falling into breakdown sinks in the limestone. This provides well defined water inputs for the cave system. While these areas are very scenic, they seldom produce easy access to going passage due to the breakdown, sandfill, and small sized leads.

The entrance is one of impressive size about 80 ft. wide by 25 ft. high, but after 125 ft. into the cave it shrinks to 25 ft. wide by 10 ft. high at a breakdown pile that appears terminal. A small lead to the left goes through a breakdown leading back to the main stream passage. About 400 ft. of walking leads one to a junction area with two leads to the right going to the Blue River section, while staying with the stream, one hits the Blue Lagoon area. While the names Blue La-

goon and Blue River might seem to imply scenic deep pools or streams, actually they are named for a shale blue film over a black film deposited on the bottom of the pools in Blue Lagoon and the stream in Blue River. It's kind of eerie to see these and end up crawling in them. Are they some kind of pollution? The films have no smell and what it is is unknown. My guess is that it is a form of residue from the saw mill burning waste wood and burying it in the fill dirt in the valley floor (an area roughly 600 ft. long by 200 ft. wide and 50 ft. deep). This cave also has a black algae-like growth in the stream, even in the total dark zone. At first, we seriously wondered about the safety of entering this cave, but after 10 to 15 trips with no ill effects, I guess it's okay. Actually, this influx of organic matter seems to help cave life as this cave teems with life forms (from Isopods, to you name it, it's there) in seemingly abundant numbers, so end of health hazard message.

Anyway, at Blue Lagoon the main stream enters the pool from a near siphon in the left hand wall, there's no air flow, so it sumps out. The main stream passage is a lower tube than the main tube and this is the Artesian well when the cave is in flood. The main tube is 3 ft. here and continues for another quarter of a mile and

and knee crawl called slime city for the black slime on the floor. From the junction are before Blue Lagoon, taking either of the two right hand leads, one hits a key-hole type passage. This walking passage has a lead at the start that parallels and rejoins the main passage at the upstream side of the breakdown pile. Continuing up the keyhole passage, a small stream flows into a hole in the floor making a 10-12 ft. waterfall, past this the passage branches. The right hand lead is (generally) a water tube 3-4 ft. high with 2 ft. of water running about 500 ft. to a breakdown choke. The left lead is the Blue River.

This walking lead has two upper levels of small cracks passages and various small leads and after 250 ft. degrades into a flat out dig. If it wasn't for the near siphon/sump of the main stream this cave could be around 2-3 mile range. The valley system is big enough for one. As it is Artesian is not trashed out by litter or graffiti and if one wants a short trip (2-3 hours or more) **MANY STRANGE THINGS CAN BE SEEN HERE.**

NOTE: We have not entered the cave since the road work/blast-ing was started, impact on the cave is unknown. Information on geology is based on geologic overlays of Mt. Vernon, Wilde, Johnetta, and Livingston Quads by USQS

Kevin Delk NSS 22841