

Cave exploration in “The D Word”: Rites of Passage Beneath West Virginia

text and photos by Greg Springer (NSS #29328)

A heavily forested ridge rises abruptly east of Morgantown, West Virginia. Chestnut Ridge spans the horizons like a great rolling wave, but is broken where the Cheat River has carved a narrow, 1250-foot gorge. Among the rocks exposed on the gorge walls are limestones of the Greenbrier Formation. Elsewhere in West Virginia these limestones are much thicker, purer, and home to such long caves as Friars Hole, Organ, and Scott Hollow. But, here the limestones are only 180-feet thick and largely impure. The lower beds are so sandy that some are classified as sandstones rather than limestones. These rocks are the Loyalhanna Limestone of Pennsylvania where they thin and eventually disappear completely. As the last gasp of the cave-rich Greenbrier Formation in West Virginia, the limestones in the canyon form the northern-most large caves in the state. However, only 2 of 120 known caves in the two county area are longer than 2500 feet: Cornwell and Druid caves.

Cornwell and Druid caves could not be any more different from one another. Cornwell has been known for over a century and consists of 3.4 miles of flat, sandy mazes. The cave is popular with tennis shoe cavers despite an approach hike that once required rescuers to erect a 1000-foot high set of Tyrolean traverses from the cave to canyon rim. In contrast, Druid Cave is poorly known and was only found in 1980. The cave consists of 2.31 miles of stream canyons, muddy crawls, and surprisingly large paleo-passages. More importantly, Druid has a reputation as an evil cave.



Pat Smith crawling in The Side Lead

Druid was found and explored by the West Virginia University Student Grotto (WVUSG). Exploration has been episodic because of grotto turnover and the unfriendly nature of the cave. Ill will toward the cave was once so great that some grotto members argued strenuously that the cave should be blasted shut. The name of the cave was banned at grotto meetings and the cave could only be referred to as, “The D word.” Why such distaste for what is arguably one of the most unique caves in West Virginia? Two reasons leap to mind: inexperience and the unforgiving nature of The “D” Word. This article examines exploration of the cave as it progressed through three distinct generations of students. Emphasis is placed on surveys conducted in the 1990s that revealed over two miles of virgin passage.

PHASE ONE: DISCOVERY

The WVUSG set about ridgewalking the 14-mile long Cheat River gorge in 1979 and 1980. Locally, the Greenbrier limestone is thin and outcrops rare because soil and boulders cover almost everything. As the story goes, an enterprising pair was seeking the limestone a few miles upstream of the gorge mouth within Chestnut Ridge when they heard a waterfall. No surface streams could be found nearby. So, the two followed the noise down a steep slope until they came upon a lost waterfall where an impassable spring issues a 30-foot wide stream that drops over ledges and cascades before sinking in rubble beneath a broad moss-covered waterfall. A crawlway, floored with wet leaves, beckoned on one side of the waterfall beneath orange and tan rocks. Druid had been found.

Exploration yielded a 160-foot long crawlway notable for raccoon and rat excrement, mud, and a surprise ending. The crawlway led to the top of a 40-foot high stream canyon. Geary Schindel and friends surveyed the entrance crawl and downclimbed the canyon. The passage below was crumbly with dark walls and a rushing stream. Although relatively straight, the passage is made complex by rock fins projecting from all surfaces. Lines of sight are very short even where ceiling heights are 20 to 40 feet. The passage averages 5 feet wide. Over a series of three trips the student grotto surveyed 1100 feet downstream to a grapefruit-sized blowhole. They found that the stream exits before the blowhole as an impenetrable crawlway beneath a 12-foot waterfall.

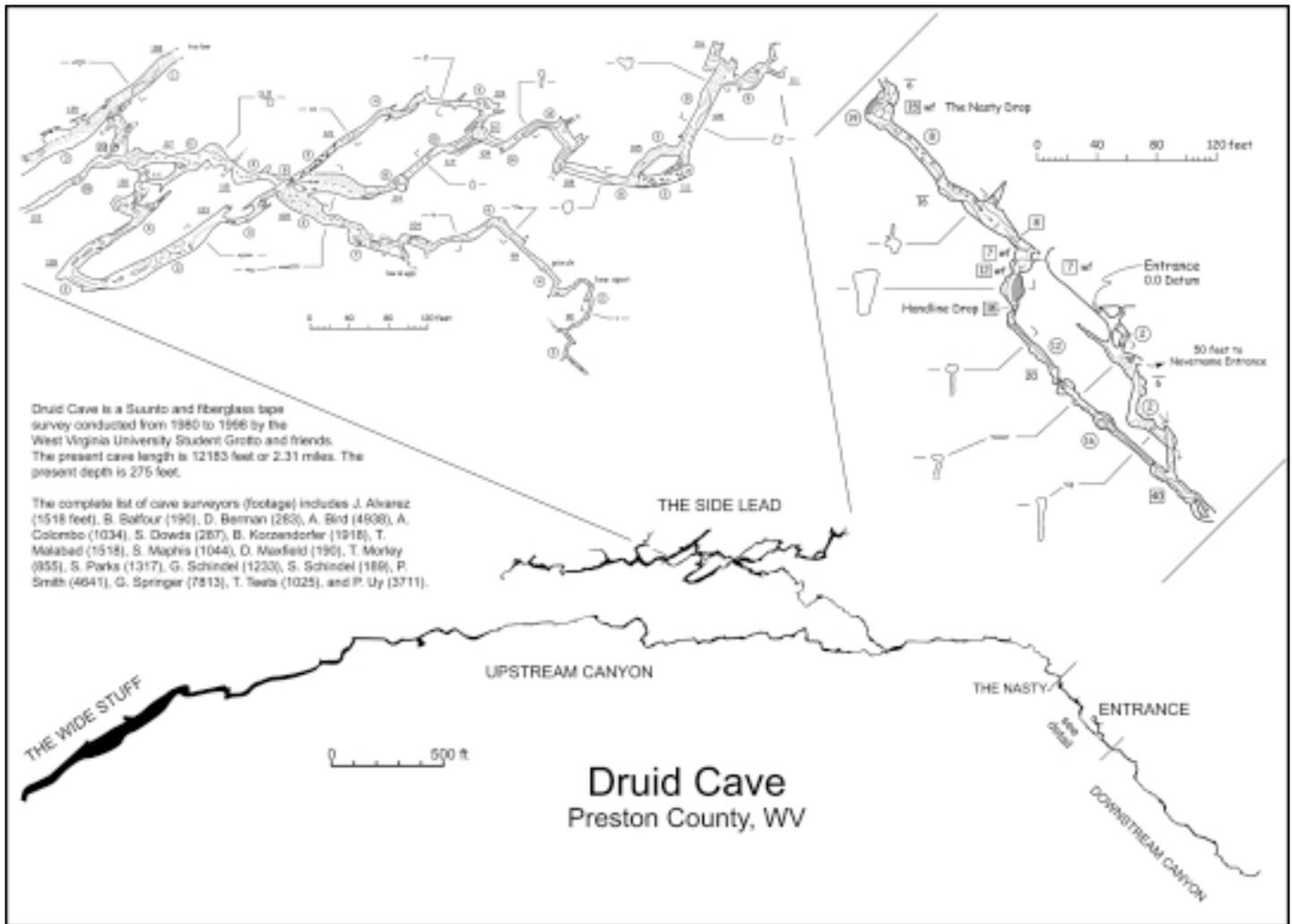
The upstream continuation of the canyon was subsequently pushed through a broiling whitewater crawl and an overlying, muddy straddle canyon high above the stream.



Phil Uy in the virgin mainstream above The Nasty climb. The ceiling and upper passage walls are composed of a relatively well-cemented, sandy limestone. The lower half of the passage is the crumbly, limey sandstone that makes the rest of the cave so unstable. Water levels were comfortably low during this trip.

These paths merged after 100 feet beneath a remarkably smooth 12-foot high waterfall that was climbed by forming a human pyramid. Just upstream of this waterfall is another waterfall spilling from an impenetrable ceiling hole. The ceiling water comes from the entrance waterfall, but joins a second stream entering from beneath a breakdown choke at floor level. Climbing over the choke, Geary Schindel and Bill Balfour found a short stretch of walking-sized streamway leading to another waterfall room. Their immediate question was, “Where does the second stream come from?” The question was made all the more enticing when Bill found a distributor cap in the whitewater crawl. No surface streams were known anywhere nearby, so the pair began to suspect that mysterious second stream might be an important find. The real fun had begun.

Exploration stopped when the initial cave explorers graduated and the only non-student surveyor, Bill Balfour, decided he had much better fish to fry. By this time, the cave had established itself as a cold, challenging hole with the largest drop in northern West Virginia (which isn't really saying much). There had been several accidents during exploration. A 40-foot long ledge collapsed and smaller ledge collapses made free climbing the canyon pitch unsafe. As a result,



interest waned but did not disappear and Bill dutifully filed the survey notes and a working map for a future generation of student grotto members.

PHASE TWO: THE "D" YEARS

Virtually nothing was accomplished in Druid between 1982 and 1987, but a new crop of students decided to push upstream in the late 1980s. A small canyon was visible atop the last waterfall seen by Geary and Bill, but reaching the passage proved a substantial problem. The drop itself is only 15 feet high including a 4-foot deep plunge pool, but the walls have the consistency of sand patties made by cats in a child's sandbox. The lip of the waterfall is armored so that human hands and the waterfall have combined to create an overhang. The pounding waterfall prevented a pyramid attack during early visits and bolts were obviously impossible. After a few failed trips, the grotto decided to pound 18 inch long rods of rebar into the mushy walls for footholds. This too failed. The rods were pounded into the walls, but even with 17 inches of rebar in the wall the inch-long nubs wiggled.

The physical toll of the failed trips severely taxed the largely inexperienced grotto

members. Team members were faced with a long approach hike from the canyon rim, air currents best described as winds rather than breezes, and water everywhere. Hypothermia, exhaustion, "rock" falls, and the forcible rearrangement of body parts led to establishment of the "D" word rule. Hypothermia was such a problem a fire was built outside the cave after the ill-fated rebar trip to revive some of the most incapacitated

cavers. This was also the trip that led some to argue in favor of blasting the cave shut to prevent accidents.

Fortunes changed when Brett Wilmore and Phil Uy topped the waterfall in 1988. The pair scooped a series of walkways and stoopways for several hours before turning around beneath another small waterfall. Their fading lights made the passage above appear too low, but no attempt was made to



The author in one of the virgin tubes found at the beginning of the walking passage in The Side Lead. Photo by Pat Smith



Phil Uy pulling tape into virgin paleotrunk in The Side Lead. This was the first of the large paleopassages found in The Side Lead and a taste of what was to come.

reach the top. Brett and Phil had established that Druid definitely “went” and they noted a walking side lead as they returned to “The Nasty” waterfall.

PHASE THREE: ADVENTURES IN LEARNING

The WVUSG experienced significant turnover shortly after Brett and Phil topped The Nasty. Phil became grotto president and led a trip with Carol Conroy, Pete Shifflet, and Greg Springer. Carol and Pete were veteran cavers while Greg was relatively new to caving and the WVUSG. The trip goal was to check the walking side lead for a bypass of the last waterfall seen by Phil and Brett. The trip proved ill-fated.

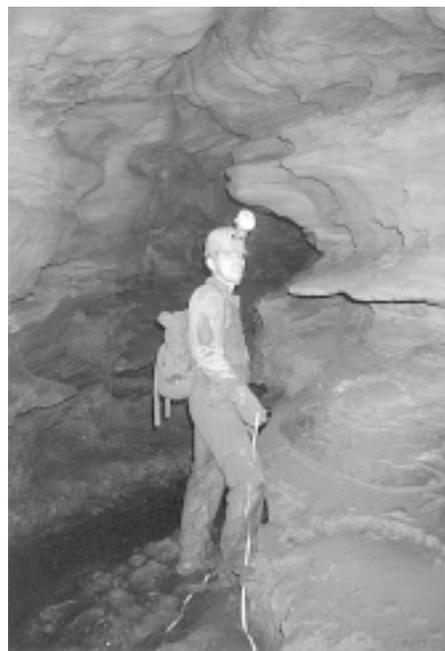
Several days of heavy rain pounded the area ahead of the trip, but the allure of virgin cave would not deter the team. Clad in wetsuits, the foursome headed upstream in raging floodwaters that made rope ascents of the waterfalls extremely difficult. Carol had added trouble because the wind and water kept extinguishing her carbide lamp. A small crisis erupted at The Nasty when the force of the water stopped Carol’s ascent. Greg and Phil were, comparatively speaking, exploration neophytes and in their desire to head upstream the pair did not realize that Carol was in trouble for quite some time. Eventually, they returned to the drop and the trio pulled Carol up the drop. Afterward, Pete explained in no uncertain terms that Phil and Greg had better get their priorities straight.

The 5-foot high canyon upstream of The Nasty was frothing whitewater. Small waterfalls made the going even tougher and the team passed several near-sumps filled

with swift floodwaters. Eventually, the passage enlarged to a small walking trunk and refuge was taken in a side passage filled with roaring from the nearby stream. The team decided to continue after a lengthy debate. Their goal, the walking side lead, appeared about 1000 feet from the entrance. Carol and Pete decided to wait at the entrance while Phil and Greg pushed ahead. The passage almost immediately became a muddy crawl in a trickle stream. Greg repeatedly pleaded to turn around, but Phil only relented when the passage split 600 feet later and the stream fork became too tight. Greg poked his head into the dry fork and saw a small tube heading off into the unknown before the pair returned to Pete and Carol.

The trip confirmed that Druid continued, but no end was found to The Side Lead and no surveying was accomplished. Worse yet, sand in Pete’s wetsuit abraded his legs and led to a serious staph infection that required hospitalization. After Pete’s severe illness, Phil and Greg became the only people interested in visiting Druid and Greg assumed charge of the survey. The pair thought that a second entrance might ease surveying, so ridgewalking began. A new entrance was found by Kim Clayton and dug open only 100 feet from the main entrance, but once again Druid proved a challenge. Greg developed pneumonia after ridgewalking on north-facing, snow-covered slopes above the cave and so surveying had to wait. But, once again the survey languished for several years.

Fortunes changed in 1991 when a young caver named Aaron Bird moved to the Morgantown area. Aaron jumped at the chance to visit Druid and recruited his caving partner, Troy Teets, to join Phil and Greg on



Phil Uy pulling tape into walking passage in the mainstream during low flow

a survey trip. Their goal was to survey as far upstream as possible. They began at the 40-foot canyon pitch and racked up 600 feet before their instruments broke. With no spares, they pushed upstream to try and circumvent the waterfall found by Brett and Phil. Aaron and Troy were sent up The Side Lead to see if it reconnected to the mainstream while Phil and Greg headed upstream. Greg climbed the “terminal” waterfall and found a 3 foot high, 10 foot wide passage heading into the unknown. Over the next three hours, he and Phil traversed 2000 feet of passage. Most of it was abusive; walls were forever raining sand and their wetsuits began to rub them raw. Eventually, Greg received an eye full of sand in a tight fissure high above the stream. They turned around after using the last of their water to clear Greg’s eye. Meanwhile, Aaron and Troy had given up on the crawls in “The Side Lead” and begun searching for Phil and Greg.

Both teams moved through the awkward passages with gradually diminishing energy. The stream is full of holes filled with liquid sand that look harmless until you step into them and sink up to your waist. Of course, you dare not grab the walls because they might fall too. Phil and Greg eventually encountered Aaron, traveling alone, an hour into their return. A very angry Troy was later found without light beneath a waterfall.

Druid was showing no sign of ending, but once again excitement had led to a near disaster. During the trip, sand had infiltrated everyone’s food, their wetsuits, and various orifices leaving everyone extremely uncomfortable. Hypothermia struck the entire team and the hike out was grueling. Afterward, Aaron was amazed to find that the cave had sandblasted all the paint off his Petzl generator; Greg declared he had reached a new low point in life; and Troy announced that he hated Druid. On the other hand, Phil gave every indication of having had a good time. But, poor in-cave decisions and general inexperience had sown dissension and scoop totals had suddenly reached large proportions. As a result, Druid was again placed firmly on the backburner.

The project was reinvigorated in 1994 when Aaron and Troy dug open Helix Cave in southern West Virginia. Traversing the single, 4000-foot long passage in Helix requires seven hours of travel time and involves an almost constant series of squeezes, stream crawls, and prone straddles. Druid had begun to look downright pleasant by the time exploration of Helix was complete, especially because there were viable leads.

Aaron, Troy, and Greg returned to Druid and spent several unsuccessful trips trying to enlarge the downstream blowhole. Soon afterward, Aaron and Troy threw down the gauntlet by surveying 1000 feet of passage



Aaron Bird in the downstream canyon. Note the cross-bedding and irregular passage walls in the limey sandstone walls.

in the upstream direction. Phil and Greg took the challenge and added another 1100 feet the very next weekend. Two weeks later Greg and Aaron returned and surveyed another 1500 feet in the stream. Most importantly, the survey finally passed the end of Greg and Phil's scoop. Druid was yielding virgin cave again and now stood as a 5100-foot long stream passage with no end in sight.

The two-man trips were extremely productive because the group had seen a lot of caving in the years since the last Druid disaster. Aaron, in particular, had matured into a strong caver and Phil had learned to use his long distance runner's metabolism to good use. Fortunately for everyone though, Helix had provided the final polishing. One might argue that the caves make the caver and the survey of Helix was definitely a character-building experience for the group.

The long-standing mystery surrounding the source of the Druid stream was solved about the same time as the new surveys. Greg Springer and Mark Korman found an insurgence 1.25 miles updip of the cave entrance where a large stream abruptly drops into the Cheat River gorge. This revealed that the cave stream flows 500 vertical feet down-dip within the Loyalhanna Limestone and parallel to the gorge walls before rising in a spring at river level. The downstream end of the cave is 100 feet above the spring, but the terminal blowhole has not yielded a continuation. Aaron and Greg dug extensively at the insurgence, but no upstream entrance has ever been found. Amidst the sudden activity, this third generation of student grotto members soon left Morgantown and surveying once again

came to an almost complete halt.

The next trip was a year later in 1995 when Adam Colombo, Steve Parks, Pat Smith, and Greg Springer began surveying The Side Lead. They reached the fork where Phil and Greg had turned around after 600 feet. The dry tube Greg had seen years earlier continued as a belly crawl for nearly 400 feet and required digging at several spots. Eventually, after 1000 feet of crawling, the team broke into a stoopway where the stream reappeared. They turned around where a 3-foot diameter tube crossed overhead and the passage became walking height.

The overhead tube was clearly old. Corrosion residue clung to walls that were deeply pitted with age. Clearly, the foursome had stumbled onto a paleo-passage complex, but they did not scoop. The team crawled home after leaving a station underneath the tube in walking passage. However, Druid never fails to get the last laugh. A cave-shaking "boom" startled the team by racing by them in the 1000-foot long crawlway. Pat, who was temporarily without a girlfriend, was elected to lead out and find the source of the sound because everyone else was married or engaged. No surprises were found, although mainstream water levels had risen from a record low during the inward trip to raging floodwaters on the way out.

Scooping may have been abolished, but bad decisions had not. Aaron, Phil, Pat, and Greg paid the cave a visit some months later during a snowmelt event. The team chose to survey in the stream rather than in the drier Side Lead despite near-freezing water through the nearly mile-long stream passage. As a result, hypothermia and exhaustion almost caused a rescue because the wind and water overwhelmed the insulation of their wetsuits. Hypothermia incapacitated one of the team members who then had to be assisted through the last 4000 feet of the cave. Aaron and Pat did not regain feeling in their toes until several days after the trip. For their effort, 600 feet of new survey was conducted in belly and stream crawls.

The next trip was, wisely, to The Side Lead. Pat, Phil, and Greg picked up the survey by crawling into the nondescript paleotube atop the virgin walking passage. The tube led to small paleotrunk after only 400 feet. Shocked, the team surveyed through passages that averaged 10 feet wide and 12 feet high for 300 feet before reaching a terminal collapse beneath the valley wall. Up

until now, this was the most comfortable passage in the cave and nice by almost any standards. The floor was level and firm, the walls were brown and tan with a white frosting, and sight lines were long. For a brief time, this passage claimed the title of nicest passage in this two county area where cave passages are rarely larger than crawls. However, no good deed can go unpunished in Druid.

The trio returned to the start of the survey and headed into the opposite end of the tube where they had begun. After 400 feet of crawling, they suddenly hit a walking-sized canyon and quit for the day. Scooping had been abolished, so the trio packed up and started back through the crawls. On the way back, Greg spent over 30 minutes negotiating one particularly nasty uphill chest compressor. Happy, but exhausted, the trio made it home where a line plot revealed that the second crawlway had looped back to the walking passage where they had begun. The trio could have avoided over 400 feet of crawls and the wicked chest compressor by walking 80 feet to the start of the survey. Druid had the last laugh again, but at least this one was humorous.

The trip that followed was memorable for everyone involved. Two teams entered the cave in October, 1997. Aaron Bird led a trip to the upstream "end" of the mile-long mainstream and Greg Springer led a trip into The Side Lead. Pat Smith, who had become an important part of the project, and Benny



Phil Uy climbing one of the many waterfalls in the mainstream during low flow.

Korzendorfer began surveying with Greg in the canyon beneath the tubes. They headed up-canyon and to their amazement the passage became 25-to-30 feet high and up to 35 feet wide at the ceiling. Soon they noticed a large tube at ceiling level and doggedly left the large trunk because killing side leads had become mantra. The tube was 20 feet wide and 4 feet high, but became too low after 300 feet as it approached the valley wall.

The trio returned to the trunk and continued surveying, as the passage became larger and larger. At one point, Pat pulled the tape around a corner and said something about "huge passage". Sure enough, they were now surveying in a 40-foot wide tubular trunk at ceiling level with a 30-foot canyon in the passage floor. This is easily the largest passage anywhere in northern West Virginia. After killing another "small" side lead, the trio continued up-trunk until the floor gradually rose and the passage became a level trunk averaging 12 feet on a side. They bagged the survey after 1500 feet with great expectations of razzing Aaron's team for having gotten the short end of the stick. But, once again, Druid had the last laugh.

Aaron, with Tom Malabad and Jamie Alvarez, had begun surveying in a wide stream crawl about a mile from the entrance. Tom stuck his head in a low lead as they approached what appeared to be a groveling stream crawl and announced that the lead blew "serious" air. The crew abandoned the stream and surveyed the crawl through a

series of turns until they emerged in a 40-to-80 foot wide stoopway. The passage went over 1000 feet and rejoined the stream at several spots. Excitedly, Tom declared that they had just taken Druid from "slimehole status" to "real cave" status. The team returned to the surface with 1500 feet of passage in the book and ready to give Greg's team some serious brag and abuse. The greatest disappointment either team experienced on that day was their apparent lack of bragging rights.

After years of mixed success, Druid had finally yielded significant finds. The 3000 feet of survey placed the cave length at well over two miles and the large paleo-passages established Druid as the most significant cave in the area. Nine years of intermittent work in Druid had revealed that the cave was primarily a single, 1.25-mile-long stream passage dropping 300 feet and sprouting a single, long side lead. But, the sudden success was only a mixed victory. Travel time to The Wide Stuff at the upstream terminus is 8 hours through a mile of windy passages filled with crumbly climbs, sand, and suckholes. As a result, Aaron foreswore visiting The Wide Stuff ever again without an upper entrance. Moreover, a subsequent trip to The Side Lead revealed only a brief continuation of the large paleo-passage and no passable leads. The Side Lead had abruptly ended after 4400 feet of survey and no one wanted to visit the upstream end.

Greg Springer moved across the country soon after the last survey trip into The Side

Lead. As a result, the project became bereft of a leader and short on willing bodies. There was some talk of a camp trip to The Wide Stuff, but this was soon dismissed as both unsafe and unjustified. The survey terminus is only 1000 feet from the insurgence, so once again digging appears to be in order. Since then, a set of map sheets has been completed using Adobe Illustrator for everything but The Wide Stuff (<http://www.bedrockstreams.org/caves/druid/>).

PHASE FOUR: UNWRITTEN

Druid has proven to be a very effective teacher. Student grottos often suffer from high turnover rates and this can be a special problem when a grotto project requires unusually difficult caving. Multiple generations of the WVUSG have thrown themselves at Druid, but serious progress was only be made when one generation had extra time to develop as cavers. Unfortunately, with that generation now spread across the country the Druid survey languishes again. Because of this, all the survey notes and working maps have been handed over to a younger generation of WVUSG alumnus led by The Wide Stuff veteran Tom Malabad. His merry crew is threatening to assault the upstream end of the cave, but as with Bill Balfour they have much larger fish to fry in southern West Virginia. Nonetheless, Tom and friends can be assured that no matter what happens Druid will be waiting for them.

Hydrogeology of Druid Cave by Greg Springer (NSS #29328)

Druid Cave is developed along joints and bedding planes in sandy limestones and limey sandstones of the Loyalhanna Member of the Greenbrier Formation. The Greenbrier Formation is exposed where the Cheat River has cut through the Chestnut Ridge anticline and exposed the Greenbrier Formation as arch-like belts on either side of the gorge. Limestones extend 600 feet above the river, but descend below river level on both flanks of the anticline. Druid Cave is found where a tributary stream flows off an upland near the anticline apex. No cave entrances are known along the stream, but water sinks in sediment-choked joints and collapsed alcoves throughout the limestone reach. The water is next seen 1000 feet away in an unexplored stream crawl at the end of The Wide Stuff in Druid Cave.

The cave stream once flowed through The Wide Stuff and into passages of The Side Lead. The connection between these passages is now blocked by collapse and fill. The water originally flowed through vadose tubes between 40 and 80 feet wide.

The upstream-most tubes are perched atop a thin shale and apparently fed a series of springs where they intersected the valley wall. The outlet gradually moved away from the insurgence as new outlets were found down-dip and the shale was breached. The old routes are recorded as multiple, north-trending passages atop The Side Lead. Curiously, many of the piracy routes resulted in formation of large meanders (see map). The last of these springs was at the end of the northeastern-most passage of The Side Lead.

A dramatic change occurred when the cave stream was diverted to the southeast toward the present entrance through what is now the 1000-foot long crawlway at the beginning of The Side Lead. This diversion was probably in response to formation of the Downstream Canyon, the lost waterfall stream. These spring waters are, apparently, fed by diffuse infiltration because the waterfall never changes size or color.

The shift to lower passages downstream of The Side Lead caused a series of waterfalls to march upstream through The Side Lead.

These receding knickpoints halted abruptly when The Wide Stuff and Side Lead were abruptly abandoned for a smaller passage to the south, but tall canyons and keyhole passages of The Side Lead still record the change from a low to high stream gradient. The new piracy route is the stream passage running from the entrance to The Side Lead to The Wide Stuff (see map).

Joining of the two cave streams resulted in aggressive downcutting in the Downstream Canyon, so passages are generally narrow with impassable cracks separating multiple levels. The stream can be followed to within 100 vertical feet of the Cheat River and to within 1000 feet of a spring on the riverbank. This spring is over 4000 feet away from the former spring outlets in The Side Lead and over 1.5 miles from the insurgence near the gorge rim. The total fall for the hydrologic system is roughly 500 feet, but exploration has thus far failed to achieve the full vertical range.