

CAVER OWNERSHIP AND MANAGEMENT OF SULLIVAN CAVE, A WILD CAVE IN INDIANA, USA.

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Abstract

Sullivan Cave has been known to cave explorers for over 150 years. It came to the attention of the newly-formed Central Indiana Grotto of the National Speleological Society in the 1950s. Discovery and mapping increased the known cave to 9.63 miles (15.8 kilometres) making it the fourth longest cave in Indiana.

In 1997 the property containing the cave entrance went on the market. This was viewed as an emergency by the caving community and two cavers purchased the property. The Indiana Karst Conservancy began a fund raising drive and was able to take ownership of the property on October 27, 1998.

This paper briefly describes the cave and its recent history and outlines the management guidelines and practices that the Conservancy has established for this, its first wholly owned cave preserve, which consists of 28 acres (11.3 hectares) of woodland overlying part of the cave and the cave's entrance.

DESCRIPTION OF THE CAVE

Sullivan Cave is the fourth-longest cave in Indiana with 9.63 miles (15.8 kilometres) of mapped passage. The cave is developed in the Ste Genevieve Limestone of the Crawford Upland. Entry into the cave is a series of climb downs to the waterfall room. A passage to the right connects with the famous Backbreaker, a long, low passage. The Backbreaker passage to the right leads to the Lost Dome area. To the left the passage goes to the main part of the cave. The passage becomes higher as you approach the T. To the right is the Merry-Go-Round, a circular canyon passage. To the left is the main portion of the cave. A low crawl off the Backbreaker leads to the Mountain Room, some 60 feet (18 metres) high and 100 feet (30 metres) across. The flood route of the Sullivan River is reached here. Downstream leads to the South Y and the Sullivan River. The river passage is 15 to 20 feet (4.5 to 6 metres) high. Upstream the passage ends at breakdown. Downstream leads to Armstrong's Folly—a dig through clay fill—and the Spiral Room. A crawl from the Spiral Room leads around a breakdown blockage of the Sullivan River and out Speed Spring.

Upstream from the Mountain Room leads to the North Y, the Quarry Room, and Beyond-the-Beyond. Continuing upstream from the Quarry Room is the deep water and a 70-foot bathtub with six inches of air space. Beyond the bathtub are the Coliseum and the Colossus, the largest room in Sullivan Cave. The Colossus is 120 feet (37 metres) high and 200 (60 metres) feet long. There are eight rooms in this section of the cave. The passage upstream ends in a sump with a good flow of water, suggesting the cave extends onward if only a by-pass could be found. The north section is a difficult trip even if the route is known.

Biological life in the cave consists of a small bat population, cave crayfish, salamanders, isopods, amphipods, and beetles. The famous Sullivan cavefish is a sculpin entering from the surface. They and a few surface crawfish can be found in the Sullivan River from the South Y to Speed Spring.

HISTORY OF THE CAVE

The 40-foot section of Sullivan Cave from the entrance to the Waterfall Room and some of the crevice passage in that area has been known to explorers since the 1840s. Signatures from the turn of the century are found in the Backbreaker passage. In 1952, National Speleological Society cavers became interested in the cave and the Backbreaker.

Art Davis, a member of the newly formed Central Indiana Grotto, took an interest in Sullivan Cave in 1956. His first trip to Sullivan Cave was on 22 January 1956. At that time the known part of Sullivan Cave consisted of the Backbreaker passage and the three branches of the Water Room Passage. The ceiling drips in the Water Room were the only known water in the cave (other than at the entrance). The Popcorn Connection to the lower level was unknown (the crawl hole into the Water Room is now blocked by a ceiling collapse in the room). Art was sure the cave must contain an active stream. He decided to check every possibility between the entrance and the "end" of the cave.

On 5 May 1956, Davis and John Danner discovered the Mountain Room. The discovery passage is a small crawl under the ledge, about 30 feet toward the entrance from the present crawlway. The present crawlway passage to the Mountain Room was dug after the discovery. On 29 December 1956, Davis and Ruben Vig discovered the Quarry Room.

In August 1962 a group of seven cavers, led by Mike Wischmeyer, a teenage member of the Central Indiana Grotto, spent two weeks in Sullivan Cave. The group's main objective was to complete surveying of the cave. They surveyed 5,588 feet (1,717 metres) of passage and discovered about 2,000 feet (600 metres) of new passage. Exploring north of the Quarry Room they surveyed a side passage believing it to be the main passage. They noticed the main passage but, thinking it was a side passage, did not explore it.

Four months later, Wischmeyer, along with Leigh Lawton, Sam Frushour, and Ron Pflum checked out this side passage and discovered the Beyond-the-Beyond section consisting of 8,000 feet (2,460 metres) of passage and eight large rooms.

The second Sullivan Cave expedition was organized for August 1963 with the objective of exploring and mapping the Beyond-the-Beyond. This time a group, again led by Wischmeyer, spent three weeks isolated in Sullivan Cave.

Sullivan Cave has been a well-known and popular cave since the 1960s. Vandalism has always been a problem and one of the objectives of the two expeditions was to clean graffiti off the cave walls. The discovery of spray paint by the vandals in the 1970s made the problem much worse. By the late 1980s the owner of the cave was tiring of all the traffic and noise. In January 1990, in order to help protect the cave and to persuade the owner to let the cave remain open to cavers, the Central Indiana Grotto placed a stout gate, designed by Keith Dunlap, on Sullivan Cave's main entrance.

In summer of 1997, Sullivan Cave's owner indicated the property would be put up for sale. The sale of a large, popular cave is always an emergency for the caving community. Anything can happen with a new owner, and the fear is that it will not be good for cavers. Two Indiana Karst Conservancy members, Keith Dunlap and Bob Decker, purchased the cave, then offered it to the Indiana Karst Conservancy (IKC). In December 1997 the Board of Directors of the Conservancy voted to purchase the cave and to begin a fund raising drive. The Indiana Karst Conservancy purchased the property on 27 October 1998.

SUBSURFACE MANAGEMENT

Sullivan Cave will be managed as a natural, wild cave. No improvements for the convenience of the visitors will be allowed or desired. Digging or other alterations for exploration or expansion of the cave is prohibited without approval of the IKC board.

Cave restoration (other than trash removal) is limited to IKC sponsored trips. The purpose is to keep all restoration practices consistent with IKC approved practices. Due to the concerns about the impact of food, cooking, elimination, and the like, no camping will be allowed in the cave.

ACCESS POLICY

The cave is open to organized, responsible cavers. Those wishing to visit Sullivan Cave should contact the Cave Patron to obtain a permit. All persons entering the cave will be asked to sign a liability release, follow surface and subsurface rules established by the IKC, and agree to protect the cave's natural resources. The cave patron can authorize or deny ordinary cave trips. Trips with some extra-ordinary purpose require IKC board approval.

All trips must have an approved leader. An approved leader is someone who practices conservation and safe caving as generally defined by the IKC and has first

hand knowledge of the cave. The cave patron will determine if the caving group leader meets the requirement of an approved leader. There will be an approved leader for each 12 cavers in the group. There must be an adult of the immediate family for every child under the age of 12.

At this time there is no limit on the total number of cavers in the cave. Experience may show that a maximum number should be established in the future.

Prior to the trip, the trip leader will receive a liability waiver/information form and the visitation rules to be followed while on the property. Participants under 18 years of age must have a parent or guardian signature on the liability waiver/information form. The trip leader will also receive a Letter of Permission which will act as a parking permit and serve to verify that the group has received authorization to visit the property. Each vehicle is required to prominently display a signed copy of this Letter of Permission while on the property.

The trip leader will be responsible for having each participant read and sign a copy of the liability waiver/information form, then return the waivers to the patron before the trip. The trip leader will also inform all the participants of the visitation rules before entering the property. The rules will cover the maximum number of participants per trip, where to park, appropriate precautions while changing clothes before and after the trip, the rules to assure a low profile, the specific path to take from the parking area to the cave, precautions related to the weather, and information pertaining to emergencies. Any improper behavior reported to the patron may result in those persons or the grotto being barred from future visits. Organizations such as the Boy Scouts are expected to comply with their internal rules in addition to the policies outlined by the Indiana Karst Conservancy.

Monetary compensation of the trip leader (cave-for-fee) is strictly prohibited. The release forms will be kept on file and will not be required each time the cave is visited. The patron will maintain a log of trips and visitors to the cave to assess visitation impact on the resource.

The Conservancy will vigorously prosecute any violations of the Indiana Cave Resource Protection Act or any other vandalism on the property.

SURFACE RESOURCES

The property consists of 28 acres (11.3 hectares) of mostly wooded terrain. The property is roughly 850 feet (260 metres) wide (east-west) and 1,400 feet (430 metres) long (north-south) with a notch cut out of the northwest corner of the tract. The property is bounded by State Road 54 along its northern border which provides access to the property. The cave entrance is located very near the eastern border and all the known underlying passages are confined to the eastern half of the property.

Approximately 20 acres (8 hectares) of the property can be considered mature forest, although the quality of the trees is better towards the east side of the property.

There is a small clearing (approximately one acre) in the middle of the property, just west of the cave entrance (hereafter referred to as the "central" clearing), another small clearing (approximately one acre) on the western side of the property just south of the notch, and several acres of recently pastured land on top of the ridge towards the southern end on the property. The property has over 130 feet (40 metres) of relief from the ridge top down to the ravine near the cave entrance. There are several rocky, wet-weather streams of interest and a sometimes-active spring.

SURFACE MANAGEMENT

Little active management of surface resources will be performed. The forested areas will not be modified and no trees will be cut other than for safety considerations or existing road/trail access. The western clearing and ridge-top clearing will be reforested. Four Hundred trees were planted in the western clearing in 2000. Fourteen hundred trees were ordered and should have been planted in the ridge-top clearing on 7 April. The central clearing will be maintained by occasional mowing and may serve as a parking and camping area. This area is poorly drained and is often soft during winter/spring, so vehicle traffic should be avoided during these times. The vehicle lane into this clearing was also marginal and was rebuilt and hardened in 1999.

Due to the sale of the two-acre tract containing a home at the northwest corner of the property, no permanent access to the lane was available. To address this problem, a short segment of a new driveway was constructed from State Road 54 including a small parking area near the current lane gate. Decorative pines or similar landscape hedges or bushes to visually shield the parking area from the adjacent property owner have yet to be planted.

Two trails will be maintained by the Conservancy; the trail from the existing parking area along State Road 54, and the short trail from the cave entrance up the hill to the central clearing. The trail gate on State Road 54 and the lane gate will be maintained and kept locked. Keys will be provided to cavers and campers as appropriate.

No other permanent trails exist on the property and no other trails are planned. While there is the opportunity for a nice nature trail on the property, maintenance, labor, and related expenses for such a trail outweighs the perceived benefits at this time.

There are several locations on the property where trash had been improperly disposed. These were located and the trash removed. There was also an old trailer (caravan) on the edge of the woods in the western clearing. This was also dismantled and disposed of properly.

There is a large patch of Periwinkle (*Vinca minor*), an exotic invasive plant which apparently escaped from a former homesite. This plant is being eradicated in a manner which will not damage the other plants. This work is being done with the help and advice of a Regional Ecologist from the Indiana Department of Natural Resources.

The corners of the property are currently marked with steel posts. These posts will be maintained for easy locating of the property boundaries. Existing "no trespassing" signs along State Road 54 will be retained, but additional signs will not be erected unless problems arise.

There is an open structure on the east side of the central clearing. This structure will be retained and possibly upgraded as a privacy room for changing clothes before and after cave trips. An informational sign or kiosk will be erected on the property (probably at the lane gate) to explain ownership and access, and to display the list of donors who helped purchase the property. Specific references to the cave will not be included on this sign to avoid attracting the curious. No additional structures are planned.

Collecting on the property is prohibited with the exception of mushrooms, berries, and nuts. Hunting is prohibited, however no effort will be made to discourage neighbors from hunting. The discharging of firearms, fireworks, or other explosive devices will not be allowed. Digging or other surface modifications are prohibited.

SURFACE ACCESS

Walk-in access to the property by the public is neither encouraged nor discouraged. Permission to hike on the property is not required. However, other surface activities require permission and coordination through the management team.

CAMPING

Camping on the property is allowed, but highly restricted. Camping privileges are granted to individual Indiana Karst Conservancy members and their accompanying guests. Campers are to keep a quiet, low-profile. This is not a place to party. To promote seclusion and solitude, only one group at a time will generally be granted permission. Camping is arranged through the management team. Camping is restricted to designated areas in the central clearing, contingent upon ground conditions. Campfires are only allowed in designated fire rings. Firewood may not be collected from the property. All trash must be packed out. Expanded camping for special projects (on property or in the area) is allowed.

SULLIVAN CAVE VISITATION RULES

The following rules should be reviewed by all visitors before entering onto the Sullivan Cave property. These rules must be followed to protect the cave, the property, the IKC, and all visitors. It is also important to follow these rules to maintain a good working relationship with the adjacent land owners. Remember you are a guest on this property and represent all cavers that come after you, please be on your best behaviour.

1. Follow all rules and requests of the Sullivan Cave Patron.
2. At least one approved leader is required for each group of twelve (12).

3. Keep a low profile at all times while on the property. Talk quietly and no horse play.
4. Park in the location designated by the cave patron.
5. Do not change clothes in sight of the road or nearby property owners.
6. Follow the designated path from the parking area to the entrance of the cave.
7. Lock all gates (including the cave gate) behind you so unauthorized entry does not occur. Leave the cave gate key near the entrance in a location known to all members of your party. Do not lose or duplicate the key.
8. Do not enter the stream area of the cave during high water conditions. Do not enter the north stream area when there is a chance of significant rain.
9. Do not enter the cave under the influence of alcohol or other substances.
10. Before leaving the parking area, be sure to pick up all trash, clothing, cigarette butts, and the like.
11. There must be an adult of the immediate family for every child under the age of 12.
12. Never cave alone. Wear a helmet. Carry three sources of light. Tell someone where you have gone and when you will return. For rescue call the Indiana State Police at 812-332-4411.