

January 1975

## Intercom, Volume 11, No. 1, January-February 1975

Tom Hruska

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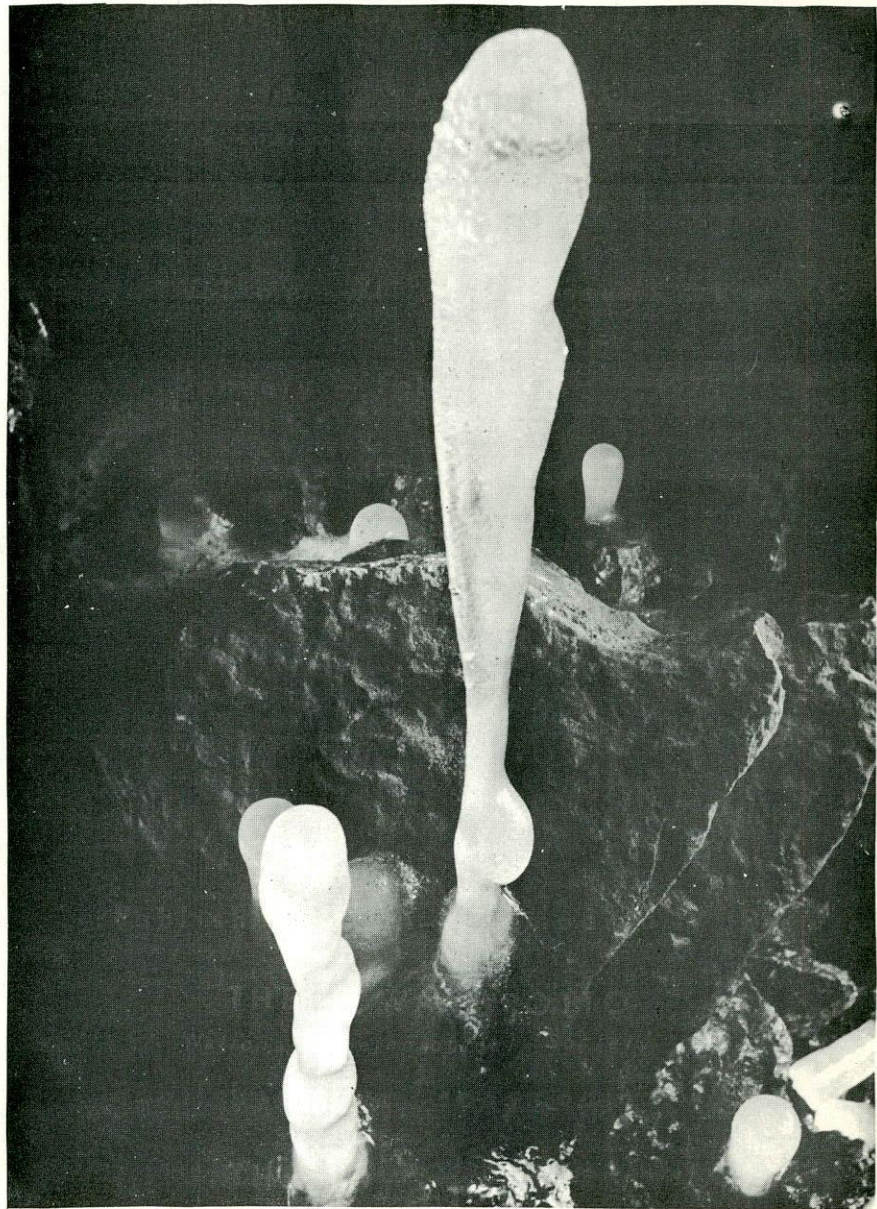
Vol. 11 #1

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THE IOWA GROTTO  
*National Speleological Society*

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Volume XI Issue 1

January — February 1975



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IOWA GROTTO INTERCOM  
P. O. Box 228  
Iowa City, Iowa 52240

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*INTERCOM* STAFF

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COVER PICTURE: Ice formations found in Sowards Cave. These club shaped stalagmites were very unusual. With the small end at the base, they almost seemed to be defying gravity.

Photo by John Johnson

IOWA GROTT  
National Speleological Society  
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Iowa City, Iowa 52240

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Chairman - - - - - John Johnson  
Vice-Chairman - - Lowell Burkhead  
Sec'y-Treas.- - - - - Tom Hruska

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INTERCOM

GROTTO MINUTES AT A GLANCE

Thomas Hruska, Secretary

Regular Meeting January 8, 1975

Room 3109                      Called to order: 7:45 PM                      Adjourned: 8:50 PM  
Attendance: 10 members and one guest                      Treasury: \$108.25  
Walt Mauer is checking into the possible gating of Becker Quarry Cave and the temporary closing of the water valve in Glom Shaft of Level Crevice. Jim Hannon reported no additional work done on the survey transmitter. Jerry Hemingson is organizing the Black Hawk Grotto at Cedar Falls. The mailing address is Hemingson's place, 2122 Olive Street, Cedar Falls, Iowa 50613. Greg McCarty reported on a trip to the Monona area. Loren McVey and John Johnson reported on the Level Crevice portion of Becker Quarry Cave. Greg McCarty is planning a trip to Winneshiek County and a digging trip to Horsethief Cave in Linn County. John Johnson proposed another trip to Becker Quarry.

Regular Meeting January 22, 1975

Room 3407                      Called to order: 7:50 PM                      Adjourned 8:35 PM  
Attendance: (not taken)                      Treasury: \$110.75  
Jim Hannon is doing some research work on the receiver portion of his survey transmitter. Gating and surveying of Becker Quarry Cave was discussed. John Johnson suggested a Cold Water Cave project to finish the exploration and survey. Greg McCarty reported on a trip to the Decorah area. Bob Lehman, Loren Schutt, and John Johnson reported on activities in Becker Quarry Cave. Greg McCarty is planning trips to Horsethief Cave in Linn County and to Duttons Cave.

Regular Meeting February 12, 1975

Room 3401                      Called to order: 7:55 PM                      Adjourned: 8:50 PM  
Attendance: 6 members and 1 guest                      Treasury: \$113.25  
Walt Mauer reported that the quarry entrance to Becker Quarry Cave will probably be closed by the owner. John Johnson will talk to Kenneth Flatland concerning the possibility of the grotto doing work in Cold Water Cave. Mike Bounk has been checking into getting the use of a gymnasium in the old University High School to use for vertical practice. Greg McCarty reported about two caving trips. One to Duttons Cave and the other to Jackson County with the Black Hawk Grotto.

Regular Meeting February 26, 1975

Room 3400                      Called to order: 7:50 PM                      Adjourned: 8:30 PM  
Attendance: 6 members and 1 guest                      Treasury: \$128.50  
Mike Bounk reported the gymnasium in the old University High School will be available for vertical practice starting April 1, 1975. John Johnson has made an appointment to talk to Kenneth Flatland concerning Cold Water Cave. The Kentucky Speleofest will be held May 23 - 26, 1975. A questionnaire will be sent out to members to help plan the spring picnic. Loren Schutt gave a trip report on his trip to Indian Bluff Cave. Greg McCarty reported on a trip to Glenwood Cave. Mike Bounk has proposed a trip to Perry County, Missouri, this coming spring. Greg McCarty suggested a future trip to the Monona area. Lowell Burkhead again mentioned the trip to Wyoming that is planned for this summer.



HIGHLANDVILLE CAVES AND GLENWOOD CAVE

Greg McCarty

January 18-19, 1975

Ed Smith, Jerry Hemingson, Jim Hannon, Lowell Burkhead, Steve Hurley, Pat Quaas, and Greg McCarty.

We all met at a cafe in Decorah Saturday morning, except Steve who was to arrive that night. After everyone had eaten, we took off for Highlandville and the Valley of the Caves. The gravel road leading up the valley had a fresh coat of snow on it and was a little slick, so when Jim dropped me off to talk to the owner, Ed had to back down the hill and get another run at it. We parked on top of the hill and walked down over the bluff to the east of the eastern most cave. There are eight or nine caves in the valley, so we just walked on up the valley taking each cave as we came to it. At first, we saw all of each cave. But then we started getting lazy, and everyone just listened to my descriptions of a couple of caves. We spent a fair amount of time in the largest cave, which the grotto mapped in 1968. Admiring the abundant speleothems, and cleaning out some of the bottles and vials left by some pseudo-scientific morons in the past. When the grotto was invited to go caving at Minnesota Mystery last fall, two of the Minnesota cavers told Jim Dockal that a passage in this cave that is marked on the I.G. map as ending, actually continues. Jerry and I crawled to the side of the room in question to check this out. It does indeed continue, if you can get through the first part which is only five inches high. We crawled back out into the warm afternoon sun to see the second largest cave on the south side of the valley, and maybe the second largest cave overall, but we missed it somehow. The entrance must have been covered up with snow.

After we got our mud caked coveralls off, everyone else drove on down the road to turn the cars around while I ran back to the farmer's house. The Minnesota cavers also told Dockal that there was another cave in the area that was larger than any of the caves in this valley. When I told the farmer that we were leaving, I wanted to ask him if he knew where it was. Unfortunately, the farmer had left while we were in the caves, so I didn't get to talk to him. When I was walking back up the hill, I had gotten tired of standing around and waiting, I saw an outcrop of rock in the ditch near the top. I went over to check it, and as I thought, it was Root Valley sandstone. This confirmed my suspicion that the caves are formed in the Oneota, the lowest and thickest member of the Prairie du Chien formation. When they finally got back and picked me up, we headed back toward Decorah to check a pit lead above Malanaphy Spring. At least we tried to head back toward Decorah. Like always, I was reading the maps and directing the drivers. I was distracted after we got back on the pavement, and wasn't paying attention to where we were. We arrived at a stop sign, and Jim mentioned that there was a church on the other side of the road. I raised my head up and thought we were on Locust already, so I said turn left. Ed Smith was driving ahead of us for a while, waiting for us to pass him, so when he came to the stop sign he turned right. I'd shown him earlier where we were going, so he knew that that was the right way to go. We just sat there and waited for him to turn around and come back for us. When he came back, we just charged off down the road confident that we knew where we were going. After a few miles, we reached an intersection that didn't look right. I said to go to the right while I dug out the map and figured out where we were. It was obvious that we weren't where we wanted to be, because the road was gravel, so I had Jim pull into a farmers driveway so we could turn around. There was a nice looking valley behind the farmers house, and Lowell suggested



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that since we were here I might just as well ask the farmer if he knew of any caves in the area. He didn't know of any, though. When I got back to the car Ed was finally coming down the road. He had been left behind for some unknown reason. But as he was roaring down the road toward us, it became obvious that he didn't see us. I jumped up and down waving at them, but they didn't see me and roared right on by. I got back in the car, and we just sat there waiting for Ed to realize that we weren't ahead of him and to come back to find out where we were. After a while, I convinced Jim that he wasn't coming back, and that he was probably waiting for us at an intersection up ahead a couple of miles. So we took off after him, we were no longer in Winneshiek county but were now in Allamakee, finally crossing the Upper Iowa River. When we reached the intersection, there was no Ed. So I got out of the car and waited at the intersection while Jim and Lowell took the road to the right. I knew from the map that the road to the left turned into a dirt road, so I thought that if Ed went that way he would soon be coming back. Sure enough, after standing there for five minutes here came Ed. So I jumped in the car with them, and we chased down Jim's car. We then proceeded down the road to a five way intersection, which got me confused as to where we were. So Ed and I took our maps into a little country store there and asked the girl behind the counter where we were. She wasn't real sure herself, but we got sufficient directions to get us headed toward Decorah.

After a stop for gas, we headed out toward Malanaphy Spring. We drove down the road that goes up the side of the plateau above the spring, looking for the farmhouse that we wanted. When we finally decided which one it was, we found out that it was unoccupied. We stopped off earlier to look at a sink in the ditch that we had found on a trip last summer, but it hadn't changed. We drove down to a neighbor's house to see if he had any information, and he told us that the owner of the first farm lives in Decorah now. He also told us that he heard of some Luther College students being trapped in a cave back there, or something like that. He wasn't positive that it was a cave.

Our next stop was Mudslide Pit along Highway 9 southwest of Glenwood Cave. Jim Dockal and I located this pit during the 1974 NSS Convention. It was about 45 feet deep, and was floored with deep water. There was a passage leading off the far side of the pit, but I decided to wait for it to dry out some before I tried traversing over to it. Now that it was winter, there was a good chance that it was dry. After getting permission from the owner, we walked down to the top of the pit to drop some rocks in. Rocks were hard to come by, and a constriction combined with a ledge 15 feet down kept grabbing the rocks I threw down. It always was hard to get rocks to go past that ledge, but now there were curtains of ice hanging down in the first 15 feet. I finally got one rock to go all the way, though, and we all heard the distant splash echoing back up to us. Disappointed, we drove on down to Glenwood Cave, to make sure the water was low enough for us to enter the cave on Sunday. When we got there we were surprised to find a bunch of cars parked beside the lane leading to the entrance. When we reached the entrance, we were met by about 20 Luther College students who were having a beer party in the entrance. Their minds were blown by the idea that we were there because of the cave and not the party. Ed had been very pessimistic about the cave being dry enough to get in, but was very excited to find that I was right. The cave was very open, but Ed noticed that the water was still very cold. He celebrated by chugging a glass of beer with the partiers.

Some of the people thought that it was getting a little late, and I could not convince them to march off into the wilds to have a look at April Cave, so we headed back to Decorah. Lowell and Jim were going home that night, so when



we got back to Decorah I had to transfer all of my gear into Ed's car. When that monumental task was finished and Lowell and Jim had left, Ed, Pat, Jerry, and I went to a cafe to grab a snack. We asked what time the cafe opened in the morning, and discovered that we would have to eat breakfast at the Cliff House Sunday morning. As they would be the only place open at the early hour we wanted to get moving. We were spending the night in Dr. George Knudson's basement and it was now time to drop off our gear at his place. Nothing like having a bunch of dirty cavers in your basement. We thank Dr. Knudson for letting us use his basement. Four of us even got to sleep on beds. After depositing our gear in the basement, and readying some of it for the trip to Glenwood, we took off to wash our coveralls at a laundromat. We were going to wear our coveralls over our wet suits, since three of the suits were borrowed and the other two didn't have knee pads. I told the others that it wasn't necessary to wash the trog suits, as they would get even worse as soon as we got started into Glenwood. They said that it would be nicer to put on if it was clean, but I held out and didn't wash mine. They looked a little disgusted the next morning when I pulled a clean pair of coveralls out of my duffle bag. While the trog suits were washing, we ate supper at a nearby diner, then Ed dropped me off at Mabe's Pizza to wait for Steve Hurley to arrive. Steve was given some wrong information by a friend about how long it takes to drive to Decorah, so I had to wait for over 1½ hours. I was so tired, I was about to fall out of my chair. Back at Knudson's we got our gear ready to just throw on in the morning, so that we could get started as early as possible. Then we retired for the night.

We were up, dressed, and at the Cliff House for breakfast by 6:50 AM. They don't start serving until 7:00 AM, so we had to wait for 10 minutes before we were waited on. After breakfast we hurried back to Knudson's and put on our wet suits and trog suits, then took all our other gear out to the cars. Soon we were standing inside the high shattered entrance of Glenwood Cave, one of the most difficult caves in Iowa. And it is the second longest non-Dubuque cave in the state, with the possible exception of Spook Cave. It was cold out, but we didn't know how cold until later, with a very strong wind. But we ignored it and charged off into the lake passage. It was obvious even before we entered the cave that I was sick, and would be greatly slowed, but I felt that I could still make it to the end of the cave. And maybe even all the way back out if I was lucky. I was sure that there would be little danger in my attempting to go all the way, and I was determined to make it even if I had to crawl all the way, but I sure wasn't going to set any speed records. Jerry and Pat had 3/16 inch wet suits, which though thinner allows greater freedom of movement, so they had a tendency to go faster. They probably were also in better shape. Ed had a ¼ inch farmer john suit, and I had a 3/8 inch farmer john. Steve also had a 3/8 inch farmer john, but his jacket was 3/8 inch. The thicker suits provide more insulation, and bouy you up more so you can float on your back with complete ease, but they restrict your movement more than a little. Also, in a cave as dry as Glenwood you can easily have trouble with overheating. If you traveled at a very fast pace, and didn't continuously run fresh water through your suit, you could pass out from the excess heat and loss of water. Or, if you just floated in deep water you could get quite cool. Another factor in the restriction of movement, was the fact that the trog suits we wore over our wet suits weren't big enough. They were bought to fit our bodies, not all that neoprene. You really notice it when you go to chimney, and you can't raise your legs. I would recommend the heavy (3/8 inch) suit for cave diving, and a lighter (¼ inch) suit for all other wet caves. The farmer john suit is best by far, which ever suit you want.



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Some of you might wonder why we chose to go into Glenwood in January. It's as simple as "you have to take it when you can get it", because Glenwood was flooded all spring, summer, and fall in '74. So we braved the cold and charged off into Glenwood with the intent of taking a lot of pictures. Steve and Ed both brought their cameras, and we hoped to get a lot of good slides of this seldom seen cave. I was on the last grotto trip into Glenwood, in January '72, and as we were going through the first part of the lake passage I began to get suspicious that a few things had changed. I got my first clue when Steve almost disappeared into a hole just ahead of me. There were three or more holes in the first 400 feet of passage, Steve picked the deepest. Later on we had to clamber over a large piece of breakdown, in a place that was now a very high knee crawl. To the best of my memory, when I was there in '72 there weren't any large holes in the floor and there wasn't a large piece of breakdown to clamber over. I think all of these things were covered up by mud in '72 and that the mud was washed out by the torrential floods of the past year. If the block of breakdown was well covered with mud, it could lower the ceiling to low knee crawl or high belly crawl, which is how I remember it as being. In '72 there were extensive mudflats, but these weren't nearly as extensive even though the water was at least as low. The side passage where my crew stopped surveying in '72, this also marked the furthest point into the cave my crew reached, had a small entrance. This passage runs parallel to the main passage for a ways, and now a large mudbank has had the top carved off, making the entrance to the side passage 10 feet wide. We changed carbide in front of the side passage, because there was a ceiling pocket here that allowed us to sit up. Now you can sit up anywhere, and you could stoop in the ceiling pocket. It's not very often that you find a cave in Iowa that is being cleaned out instead of filled in.

I carried a crowbar into the cave, because I wanted to check a lead Steve Barnett told me about. It was in the top of a ceiling crevice in the lake passage, and it involved moving some loose rocks jammed in the ceiling of this crevice. I left it on a mud bank half way through the lake passage when it became obvious that I had to concentrate all my energy on just making it through the cave, without making any side trips. The inability to make side trips was to have a bad result later on, but I didn't realize it until I got back home. But first, back to our trip up the lake passage. We stopped at several points along the way to make a photographic record of our journey, for all posterity, and also to cool off. The three of us with heavier suits had a lot of trouble with overheating, due to our fast pace, so we had to take frequent rest stops to just lay down in the water. About 650 feet from the entrance is a large passage to the right. I took a peek at it, then told the others to go on ahead while I went up the side passage. Just as I thought, there was a portal reconnecting it to the main passage after 100 feet. The side passage and the portal were large, but the effort involved in clambering back out of there completely exhausted me. I picked myself back up out of the mud, and managed to continue though. When we reached the "T" we got a surprise. Laying on a mudbank was a milk can. I had seen the one that used to be at the side passage near the entrance, but Dr. Knudson removed that one from the cave in the summer of '72. According to trip reports published in the past, there was more than one milk can present in the cave. But I think that all of these were in the lake passage. The milk can was buried in the mud bank, so I don't think it could have been more than half filled with air. It would take a lot of force to move a heavy can like that around if it was full of sand instead of air. Past trip reports described the stream passage as having a bedrock floor, with solid mud banks on the sides. While this is true in places it is not generally true. Also in some places the mud is very soft on the floor, and you sink up to two feet into it making travel very strenuous. We stopped at the first 25 foot dome to take some pictures but we didn't climb up to the upper passage. Jerry and Pat Went on ahead while



I helped Ed and Steve take pictures. When they reached the 40 foot dome they climbed up the mud slope for a quick look, then continued up to the "waterfall" that marks the end of the stream passage. Ed crawled right underneath the dome without even seeing it, and so did Steve. I pointed it out to them, but we decided to save it for the trip out. The cascade at the end of the stream passage is tantalizing because it's just high enough that you can see that the passage continues for at least 30 feet, but not high enough so you can enter it. After recording the great scene on film, we backtracked and went up the side passage leading to the upper level. All of our lamps were getting low by then, but I managed to chimney to the upper level before mine went out. I had a little difficulty chimneying, because my trog suit binded so much that I could hardly lift my knees. Eventually everyone was up with me, and had changed carbide, so while they were taking some pictures in the first part of the passage I scouted on up ahead to see how far they should bring their cameras. We had company in the upper level, in the form of a bat flying around. This may be the first live bat seen in Glenwood Cave, as only skeletons have been reported in the past. I went about half way to the end of the upper level, and stopped when I reached the dome that has a shower of water coming down between curtains of flowstone. There is a huge rimstone dam at its base. After resting, I started back for the others to make sure they brought their cameras that far. I soon heard them coming toward me, so I just laid down in a pool of water and waited for them. The way sound is modified when it travels a long distance in the upper level is facinating. To me, their approaching footsteps sounded like a roaring waterfall. Which reminds me of something I forgot to mention earlier. When I first got to the top of the dome, and entered the upper level, I stepped off into a deep pothole. This was a great place to just lay back and relax. My stepping into this pothole greatly increased the flow of water out of the upper passage and down the dome. Knowing that Ed is always fearful of being trapped in a cave by high water, I made some rapid movements which caused a torent of water to go down the dome. Immediately after that I yelled that a flash flood was coming and was going to wash me out of the upper level. It had the desired effect on Ed. But, back to the sound effects. The voices were completely unintelligible from a long distance, and had an erie quality about them. We made weird noises back and forth at each other, and it sounded like the sound track for some erie scene in a movie. The trip report by Dave Jagnow describing the discovery of the upper level stated that the passage was mostly of walking height, and that there was no mud present. Neither of those statements are true, at least at this time. The passage is of stoop height for most of its length, and mud is always present except right at the entrance to the passage. You never sink more than a foot into it, but it bogs you down in a couple of places. Most of the water that was flowing out of the upper passage was coming from the dome with the shower, although there was water all the way to the grotto cave register. Of course the registers pens didn't work, so we couldn't sign it. It's rare indeed when you can find a usable cave register in Iowa, but that doesn't bother me because I'm not in favor of cave registers in most caves anyway. Only in the case of caves traveled by a lot of locals. And Glenwood certainly doesn't fit in that catagory.

I had forgotten that you have to go down an incline and through a narrow passage to reach the sump that has stopped exploration in the upper passage, so when I got to this point I thought perhaps the sump had dried out. It was obvious that this passage flooded often, as the walls were caked with mud. I charged ahead to see if indeed it was virgin passage, but I saw marks on the wall in a tight spot. Soon I reached the sump, and everyone except Ed followed me to have a look. Steve and I stayed behind to take some pictures, and also made several stops on the way out to take some more. We changed



carbide, then everyone except myself descended the dome. Steve waited in one corner of the dome for me to climb down, so I could throw my millstone down, while the other three headed out. We didn't realize that it would be quite a while before we saw each other again. When Steve and I got to the 40 foot dome, we climbed up the mud slope into it so we could take some pictures. When we turned to leave, I located a large passage leading off the side of the dome that is above the stream. It is 25 feet above the stream, and it would be possible to chimney up to it. I checked all the past trip reports published in the *Intercom*, and there is no mention of a passage leading off from this dome. I also talked to Steve Barnett about it, and he has no knowledge of a passage there. That'll be something to check out next time we go in the cave. My progress out of the cave was anything but fast, but once we reached the "T" intersection I felt a hell-of-a lot closer to the entrance than I did way back at the sump in the upper level. The "T" is 1600 feet from the entrance. I glanced downstream before we started into the lake passage, and thought there was 1½ to 2 feet of air above the water. I was too exhausted to realize what that meant at the time, and certainly too exhausted to crawl downstream and have a look. On the way home, I got to thinking that there was supposed to be less air than that. So I checked all the trip reports in the *Intercom*, and they said that there was 10 inches of air. I also talked to Steve Barnett about it, and he confirmed that figure. This was the bad result from not being able to take side trips that I mentioned earlier. Ed Smith and I came back on the 22nd of February to see if I was right, but all we proved was that I really was sick that day. The mud floor in the downstream passage hasn't washed out, and there is still only 10 inches of air.

I was doing alright knee crawling, but most of the passage was stoopway. Glenwood has more stoopway than any other cave I've ever seen. In my exhausted state I couldn't stoop for more than 50 feet without having to rest. Fortunately the water is deeper in the lake passage, so when ever I could I just turned over on my back and pushed with my feet. You can make real good progress this way. Steve also did this off and on, but since he didn't have wool underwear on the cold water running down the back of his neck bothered him more. Ed, Jerry, and Pat were going slow because they could hear our voices. Steve and I could hear them also, they were singing cave songs (of course we couldn't hear the words), and we knew that we were catching up to them. We expected to pop out of the cave into the sun basked countryside and discuss our seven hour excursion with them. How wrong we were!

When Steve and I crawled up the rock slope into the huge entrance chamber of Glenwood, we immediately noticed that something was wrong. One of them had left their water jug in the entrance, and they had almost taken my stocking cap. They obviously had gone up to the car in a hurry. My hair had gotten very wet from all the floating on my back that I did, and when I went to take my helmet off I found that it was froze tight to my head. And we weren't even out of the entrance to the cave yet! We laughed at this, and at our bodies which had become almost instantly coated with an armor of ice. We hurried the 150 yards to the car, and were shocked to find that the others had left. We had been right behind them, and couldn't see how they possibly could have gotten undressed and redressed in that amount of time. And if they had, why had they left? First let me explain that it wasn't my idea to change out of our wet suits at Glenwood. I wanted to go to Luther College and jump into the showers at one of the dorms. Ed was convinced that we could just change out of them quickly, and that we shouldn't risk being thrown out of the college. I knew that it would be extremely uncomfortable, but I knew it could be done if the weather wasn't seriously cold. That is the whole point. We didn't find out until that night that the temperature when we came out of the cave was just



a few degrees above zero, if that many. There also was a very strong wind, which is what really did us in. Steve and I started removeing gear, and it dawned on me all of a sudden where the others had gone. To the first warm place that came to mind. I realized that we couldn't take off our wet suits here without getting frostbite, and possibly not without dying, so we threw the gear into the car and took off for Luther College. We were going to save our skin at any cost, and no one could have thrown us out of the dorm. Steve's car has one main fault, which I've mentioned in past trip reports, it doesn't have a heater. We were cold with our wet suits on, but a least we could live. The ice was creeping ever deeper into our suits, and any exposed parts were in bad shape. Steve didn't have wet suit socks on, so his feet were starting to freeze solid. When we got to Decorah I had a hard time convincing Steve that we should drive two blocks out of our way to see if the others had gone back to Dr. Knudson's. We went on by but they weren't there. I couldn't imagine where they could have gone, unless it was to Luther College, but at the time we were so cold that we didn't care. The windshield was so frosted over that we could hardly find the college. I rolled down the window and asked some girls which building was the dorm we wanted, but they were too shocked by our appearence to give much of an answer. When we jumped out of the car and grabbed our clothes and towels, the wind was just butcher-ing us. Just staggering against the wind, we plodded through the snow. I couldn't tell right away which building was the dorm, and my hands were so frozen I was having a lot of trouble carrying my duffle bag, so I yelled at a guy and asked for help. He took my duffle bag and quickly led us to the nearest shower. We are eternally grateful. Just turn on the warm water and all your troubles start to melt away, along with all the ice. That's the only way to go wet suit caving in the winter. you can thaw your wet suit off of you and clean the mud out of your ears at the same time.

After getting ourselves all cleaned up, and washing down the walls and floor in the shower, we headed back to Dr. Knudson's. Sure enough, there was the rest of our merry group. We couldn't believe the story they had to tell. I would have given anything to have seen it. That is, anything except enduring the pain that was involved in being part of the action. Steve and I went through a terrible amount of pain, but the others went through torture. They worked as fast as they could, and they managed to remove a lot of their clothes before they realized they were in trouble. Their speed was almost their downfall. Ed got his wet suit completely off, and was standing out in the 30 mph winds in just his soaking wet mesh cotton underwear and wet wool socks. Remember that the temperature was 5° above zero at best. I'm not sure what Pat had taken off, but Jerry had his covralls off and his wet suit jacket off. They were freezing up bad, and finally realized that it was only going to get worse. At the rate they were going, they could have been in grave danger of dying in a few minutes. They jumped in the car and took off for a farmhouse one mile away. Ed had talked to these people a couple of times during the convention last August. They would have taken the first farmhouse they came to, but they were afraid they might get stuck in his long driveway. They roared into the driveway, and Ed ran up to the door in just his long underwear, socks, and parka. He knocked on the door, but immediately burst on in without waiting for an answer. He ran up to the farmer and explained in one breath that he was ths caver that had talked to him last summer, that they were frozen, and he asked directions to the bath-tub. They ran upstairs and jumped in the tub to melt the ice off them. The farmer must have been shocked by all this, and even more so because they were having a family reunion. There were about 25 people there. What a scene! After they were warmed up, they drove back to Glenwood to see if we were there.



## INTERCOM

When they didn't find us they became concerned that we had gotten into worse trouble than they had. So they called the hospital emergency ward in Decorah to see if we had gone there for treatment of frostbite. Then they grabbed some food from the burger joint and waited for us at Knudson's.

This trip taught us several things. For everyone except myself, it was the first wet cave they had seen, so they learned a lot about techniques. The photographers in the group that it's best not to breathe when your taking pictures. And everyone learned that it's best not to listen to Ed when he says you can change out of your wet suits in the snow. A memorable trip to say the least.

## HORSETHIEF CAVE, LINN COUNTY

Greg McCarty

January 26, 1975

Terry Sires, Lowell Burkhead, Greg McCarty, and a friend of Jim's

This trip was organized to hopefully find air where only water had been before. We had reason to be hopeful, but you know how these things usually turn out. The story of Horsetheif Cave, which is inside the city of Cedar Rapids, starts way back in the 1880's. Various pieces of the story have been published before, and I have little firsthand knowledge, so I'll just give some background information for those of you that don't know about the cave. The entrance and first room of the cave were supposed to have been quite large originally, and horses were supposed to have been hidden there. Since the entrance was one of the few natural exposures of bedrock in the area, it was turned into a limestone quarry. Part of the entrance was quarried away, and the way into the cave was eventually blocked. Mostly by dirt. It looks like if you remove all the silt and sand from the entrance and the first room, you really could run horses in there. Back in the late 1950's a grotto member enlisted the aid of a bunch of boy scouts and dug through the debris into the cave. The less than 150 feet of passage was explored and mapped, and then the cave was largely forgotten except for occasional visits. The local rumors held that the cave went all the way to Anamosa, a mere 23 miles away, or that it connected with Newlend Cave one mile west of Center Point. That cave is only a few miles closer to Horsetheif than Anamosa. Both places are too ridiculously far away to even consider a possible connection with Horsetheif. But the persistent rumors about a large cave being here, and talk of an underground stream, and the fact that many wells to the southeast have broken into cave passage, make this a very interesting area. When Steve Barnett was still living in Cedar Rapids, he became very interested in Horsetheif Cave. He talked with all the oldtimers he could find that knew anything about the cave. He found one man that described the part of the cave that was presently open very accurately, and he described going beyond that point down a long wide crawlway to where it met a stream passage. He didn't go down the stream passage, but it was supposed to be large. Steve followed the passage described to him, which slants downward at a good angle, and started digging in the silt plug at the end. Eventually, he tunneled into a wide passage where there was a couple of inches of air above the mud. And there were obvious water marks on the mud floor. Hot on the trail, he began digging down this passage. But the next time he came back to dig, the passage leading to the place where he was digging was flooded to the ceiling. At a place where



it reached the lowest point and then slanted back up again, forming a nice little sump. Although he checked the cave on several occasions after that, it appeared as though the water had taken a liking to the cave and intended to stay. Steve tried pumping the water out once, but his pump wasn't working right and he made little progress. Though still intriguing, the cave was put aside and nearly forgotten. In the winter of 1972, six years after Barnett, Terry Sires (then a new grotto member) entered the cave. He lives only one city block from the entrance. He got to the water, and found a few inches of air below a flat ceiling. Thinking that the cave ended there, he didn't try to go farther. I'd been interested in Horsethief Cave for a long time, but had never gotten around to going up and having a look at it. In the fall of 1974, I stopped off at Terry's to have a talk. He'd been too busy with his job to go caving for almost a year. We walked down and looked at the entrance to Horsethief, and Terry told me what he'd found in '72. I told him what I had found out from Barnett, and we made tentative plans for a digging trip in January.

Now you know what we hoped to find on this trip, air above the water so that we could get back to the place where we wanted to dig. The owner was in Florida, but Terry had made arrangements with the owners son earlier in the week. The wind was very chilling outside, and the warmth of the cave was welcome. While everyone else waited for their glasses to clear, I crawled down the passage we wanted to check to end the suspense about our chances for further progress. It was ended alright. The passage kept getting damper the further down I went. Finally there was a large pool of moistness ahead of me that went all the way to the ceiling. Terry soon joined me, and we worked our way through the deep sloop alongside the pool so we could get a better look at the sump. Terry could see some water over the top of a mud bank to the right, so I went back and got the shovels. There was a faint hope that we would be able to dig around the sump, if there was passage on the other side of the mud bank. Of course what we found was just a space between the mud bank and the rock wall. Terry then poked around in the pool with his shovel, testing the water depth. At the sump it was about two feet deep. For anyone thinking that it was too bad that we didn't come in the winter of 1972, let me explain. The water was almost three feet lower on this day than when Terry was there in '72. There is a low room about 12 feet long and six feet wide at the sump. This room has a fairly flat ceiling. On this day, it was floored with about  $\frac{1}{2}$  to one foot of water. In '72, when Terry saw it, the water was just a couple inches short of the ceiling. The passage showed very obvious signs of flooding up to five feet higher than the present level. There are no signs in the first room, or in the entrance of any inflow of water. The water that fills the sump has to come from the passage that Barnett dug into. There was no sign of any water before he dug through the plug, and the traces in the mud in the sump indicate that the water backed up into there from deeper in the cave. If the passage that Steve Barnett dug into did connect with a stream passage, that would explain everything at the sump. A flood in the stream passage could back up through the passage Steve was digging in, and fill the sump with water. I'm sure that originally the passages were much higher, and that the real floor is far below the silt and sand fill. Because the ceiling dips down before getting to the passage Steve dug into, and because that passage is silted up quite bad, the flood waters that back up to this low spot are trapped by the sediment dam and seep out very slowly. So slowly that the next flood refills the sump before it is emptied from the last flood. The fill in the passage ahead, which the water has to flow over to escape back to the stream, is high enough to back the water up to the ceiling and beyond in the low spot. I imagine that the reason the passage was silted shut in the first place, was because very little water comes in the entrance to keep it cleaned out. All the dirt that was introduced into the cave when the entrance was filled must account for a lot of the fill.



With the advent of farming in the area, tremendous amounts of extra silt would be carried into the sinkholes feeding the steam passage. When flood waters backed up into the passage coming from Horsethief Cave, and then slowly receded, much silt would have been deposited in the passage because the water never moved fast enough in this passage to clean it out. The low spot would have been filled up to the ceiling with the sediment, and the other passage nearly so. Perhaps in time, that passage too would have been entirely filled. Of course, most of the above is just conjecture from the few facts we have, but I think that it's a very reasonable explanation. The only way to find out what really is the case, and the only way to find out if there really is a large cave system there, is to pump out the sump and artificially drain the passage. We are making plans to attempt this some time in the future, and are open to suggestions on how to go about doing it.

We spent a little more time in the cave checking around for another place to dig, but found nothing of interest. When we exited from the cave, we found that it had warmed up considerably. We met the owners son and told him what we had found, then waited at Terry's house for 20 minutes while he changed boots or something. Then it was off to look at a sinkhole Lowell knew of, northeast of Robins. When he looked at the sink several years ago, there was rock exposed underneath rolls of wire and it looked like it would be a very promising dig site. Things have changed drastically since, however. Massive siltation has almost completely filled the sink. It's hopeless now. Cursing the soil conservation practices, we headed back toward Marion to look at a major swallow hole in the bed of a dry creek. Lowell had checked this several years ago with Steve Barnett, but they found the water flowing down through rubble in the bank of the creek. It also was swallowing a lot of sand as well as water. During very low stages of the creeks flow, no water would get past this swallow hole. After some indecision about the exact location, caused by a new bridge over the creek, Lowell showed us where he thought it was. We couldn't tell exactly where it was, or even if it still exists, because of all the ice. As we were heading back to Terry's house to drop him off, Lowell suggested we take a little side trip and look at an antique sale. Mainly just to see Jim's reaction, as he had been following us in his car. The antiques turned out to be just expensive junk, so we dropped Terry off and everyone headed for home. Lowell suggested on the way home that he and I should go look at a possible sinkhole near Waubeek. We stopped off at his house first so that he could grab a quick snack. Our total time there was going to be less than five minutes. I was sitting in the car waiting for Lowell to come back out of the house, when John Johnson drove up. He had driven there to pick up the minutes of the last grotto meeting, which Lowell had taken in the absence of Tom Hruska. A few minutes later or earlier, and he would have missed us. After John left, Lowell showed me the place near Waubeek. The owner wasn't home, however, so we still don't even know if the hillside dent is a sink. We drove around on some gravel roads, to see if we could see anything interesting, then called it a day. We didn't accomplish anything great on this trip, but at least we had a firsthand look at some things of interest.



CAVING AROUND WEST UNION

Greg McCarty

February 2, 1975

Steve Hurley and Greg McCarty

This trip was supposed to have a few more participants, but the fates wouldn't allow it. Ed Smith was sick all week with the flu and had to drop out at the last minute. Jerry Hemingson sprained his ankle so bad that he could hardly walk, just two days before the trip, so he had to cancel. And two other people from the Black Hawk Grotto, who were also to meet us, were stopped by car failure the night before the trip. Unfortunately, Ed was the only one who got word to me that they wouldn't be coming. So Steve and I waited around at the meeting place for an hour, before we decided no one else was going to show up. We did pick up a good cave lead, and the promise of more if we stop back in a couple of weeks, from an attendant at the Deep Rock station in West Union.

The area around West Union is facinating geologically, and the factors that make the geology different also make the caves different. The land here was uplifted and exposed to erosion for a long period of time after the Silurian age rocks were laid down. The erosion cycle lasted so long, that the Niagarin series was almost completely removed. This left only the Alexandrian series to represent the Silurian period. The only younger rocks in the area are a few thin outliers of Devonian age limestones, which are so thin that they are unimportant. Underneath all the Silurian age rocks in the state lies the massive Maquoketa Shales formation, of Ordovician age. Since the shales are insoluable, the loweat two members of the Silurian are the only cave bearing rocks in the area. Of these two, the Edgewood is the most important. It is underneath the thicker, and very cherty, Kankakee. In most of eastern Iowa these limestones are completely dolomitized, but in the West Union area is the border line between the dolomite and the limestone. Dolomite is less soluable than limestone, so it is less conductive to the formation of caves. The long erosion cycle, with the base level of the area controlled by the down cutting Turkey River and the impervious shales, made for a long period of shallow phreatic conditions ideal for extensive cavern developement. Unfortunately, erosion of the bedrock containing the caves led to the destruction of the lower portions of these cave systems. Leaving only part of the main passages, and some of the side passages. The same situation as you have at Maquketa Caves State Park in Jackson County. Undoubtedly the destruction was aided by the crushing weight of the glaciers, and the formation of sinkholes above the passages. At present we know of three cave systems in the West Union area and all have undergone this process of destruction. Jim Hedges has done some good interpretation of the karst features that are left of the three cave systems. He published a report on the Geology of Duttons Cave in the NSS Bulletin Vol. 29 No. 3, but his work was mainly in describing the surface geomorphology and its relation to the ancestral cavern systems. I suspect that if Jim had seen some of the things that have been found in the area since he did his study of Duttons Cave, he might have come to different conclusions on a couple of items. I intend to write an article some time in the future arguing against aome of his conclusions, but right now I'm too busy exploring to really sit down and study a particular cave.

Attempting to explore further in Duttons Cave was the main purpose of this trip, but I also wanted to show the other people (Steve was the only one who made it) what the other two cave systems are like, because each has its own unique features. We went first to see what's left of Ancestral McCreary's Cavern. After gaining permission from the owner, we drove down the road to Falling Spring. All of the caves we were to see today have been described in



the past, so I'll just mention a few things of interest. Falling Spring comes out of a bluff face 20 feet above the floor of its retreatal gorge. The water flows from a cave entrance three feet high by four feet wide, which is very picturesque, and drops 15 feet straight down into the gorge. A huge block of rock is breaking away from the face and part of the water runs down behind it. When we were there, some large ice curtains were hanging on the face beside the flow of water. They were in a state of decay, due to the weather not being cold enough to conquer the continuous flow of warm spring water, but still looked pretty nice. The climb up the block to the cave entrance is simple in the summer, when you only have to worry about staying dry, but when the rock is covered with a sheet of ice it's considerably more difficult. I managed to make it anyway, though. After I got back down we climbed over the bluff, to avoid a deep snow drift we encountered walking down into the gorge, and changed into our cave gear. We were mainly here to see Wet Cave, but stopped off along the way to look at Spider Cave. The least significant of the three tributary branches of Ancestral McCreary's Cavern. It was here that we saw the best ice formations of the trip. Every cave entrance we saw had at least some minor ice formations, but the beautiful blue-white curtains of ice at Spider Cave really out shined all the rest. In the center of the shelter was a huge ice column, 15 feet high and wide, sitting behind a deep plunge pool of clear water. Steve was really sorry he hadn't brought his camera. I left my box camera in the car and we didn't have time to go back and get it, so after spending some time just soaking in the beauty we headed on over to Wet Cave. After a quick tour of the dry section, we started up the wet passage. I checked out the side passage to the right, 50 feet from the entrance, to see if it had changed any with all the high water the past year. I was surprised to find obviously human tracks on the mud floor. I'm sure that no Iowa Grotto member has been to the cave since I was there two years ago, and it's unlikely that a local would have squeezed in as far as the crawl marks went. Perhaps the marks are the ones that I left on my last visit to the cave. Using straddling techniques to stay out of the water, we soon reached the breakdown section. After worming our way through the breakdown, we took a quick tour of the large breakdown chamber that marks the end of the explored passage. There were a few bats present. When I was crawling around on the left side of the room it seemed to me that something had changed. There were definite water marks in the sand and mud floor, which seemed to have come from the opposite direction that the main stream comes from. The floor of this breakdown chamber is at least eight feet above the stream, but flood water runs up through the blocks of breakdown and flows through the room. If the marks I saw were caused by water flow from the left side of the room, the water must have originated from a side passage feeding the main stream. At first glance, the passage the water came out of appeared not to be a separate passage. It appeared to be just part of the chamber separated from the rest by breakdown going all the way to the ceiling. It actually is a separate passage, however. I had to dig for 15 minutes with my hands before I could fit. The passage went for two body lengths, then curved to the left and dropped down. On the level I had been crawling on, the passage dead ended four feet beyond the curve. Four feet lower down, though, a tiny streamlet flowed out of one passage and into another. The downstream side was underneath the crawlway I had come in on. It obviously is just a route through the breakdown, and on to the main stream 30 feet away. It looked like the passage the streamlet comes from would be enterable as a low belly crawl. I had hopes of being able to squeeze in far enough that I would be able to bring my feet below me and turn around. But the further I got, the dimmer my hopes got. So I tried to crawl vertically to the streamlet so that I could see where it went, and if it was enterable. But the corner I had come around was shaped like a foot trap. Even though I was hanging upside down, I couldn't get my feet to come around the corner. Steve had gone to the stream to refill his carbide lamp with water. He was back now so I had him crawl up to



my feet and do some more digging. I was able to loosen the dirt by pushing with my feet, so this went pretty fast. I finally had enough room to get my head all the way to the bottom, but I couldn't manage to get into a position where I could look up the passage. There was just no way I could turn from my position into one where I could see. So we both backed out to the breakdown room. If we would have had more time, I would have tried going in feet first. I think I could have made it if I could get my feet into the downstream side and turn around, maybe after some more digging on the corner. We had a lot more to do, though, so we headed on out. Once we got through the breakdown, my carbide lamp started getting awfully dim. I put some more water in it, but the flame remained at 1/8 inch. So I turned on all of my speed, to try and make it out before my lamp went out. Minutes later I was entering the photic portion of the cave, triumphant because my lamp was still glowing dimly. All of a sudden I found a spider web hanging from my nose, and climbing up the web, about four inches from my nose, was an extremely large spider. In the two seconds it took me to realize what was going on, its long strides had reduced the distance to half. I wasted no time in knocking it off my face, while shouting obscenities at all the spiders that reside in that cave.

When Steve caught up with me, we took off for Sowards Cave, after refueling with some sandwiches and donuts. The owner of Wet Cave told us some very interesting information that has come up recently about Falling Spring, but I'm not going to mention it here. I want to go back in the summer and do some more checking on it. We were pretty cold by the time we got our trog suits back on and started across the fields to Sowards Cave, so we ran almost to the start of the gorge. We were stopped there by some deep snow. It's always exciting crossing the ledge above Sowards Cave when it's covered with snow, but at least this time there wasn't much ice. There was ice in the cave, though, well into the first room. There also were a lot of hibernating bats scattered throughout the cave, with no more than two together in one spot. We crawled and climbed through almost all of the cave, excepting the water passage and two of the side passages, and headed back to the car. We didn't have time to see the Annex.

Our next stop was the farm house beside Mittelstadt Cave, to see if we could change into our wet suits in their basement. I'm embarrassed to say that I don't know the names of the couple that live in this house. They have been a continuing source of help and information since I met them. He has done a fair amount of crawling in caves himself and is really interested in what we are doing. We had a spare wet suit, so I asked him to come with us into Duttons. He really wanted to come, but a neck injury that didn't heal right after it was operated on prevents him from doing anything that strenuous now. So Steve and I put on our wet suits, parked the car at the upper entrance to Duttons Cave County Park, and started down the hanging valley to the steps that go down the side of the gorge. Before we left the car, though, we looked back up the valley at the sink-hole entrance to Mittelstadt Cave. For if everything went extremely well, that would be where we would be exiting from the cave system. Close to one-half mile as the crow flies. Probably farther as the bat flies. The cave system should extend well beyond Mittelstadt Cave. So, filled with great hope and the thought that we might be able to accomplish something really significant in the annals of Iowa Caving history, we approached the impressive entrance to Duttons Cave. The spring on the south side of the gorge was still flowing quite heavily, but not nearly as much as last summer. This meant there was still a stream flowing in the cave. Our hopes rested on the fact the water had been doing a lot of downcutting as it flowed into the newly opened side passage that connected with the spring. It was entirely possible that the stream had cut down far enough that there would be air above the water, when the stream was at very low flow. We took a quick tour of the entrance chamber, which had some fairly nice ice



formations, then made our way down into the water passage. Steve had some important things to do at home, so we skipped the side passages to save time. The lakes were smaller than I had ever seen them, but I had a feeling that they weren't small enough. We made good progress for a while, just taking short stops to look at the various rooms. Then we reached one of the rooms that has a passage leading off it. Only two of the rooms beyond 100 feet from the entrance have passages leading off them. Unfortunately both of these passages lead off at ceiling height. I was getting nowhere trying to climb up the slick (and hard packed) mud slope, so Steve gave me a boost up to where I could reach a handhold. The passage was of walking height, and went for 15 feet at a right angle to the main passage. I didn't check at the time, but it appeared to be at least partly of vadose origin. At its end you could look up the joint it formed for about 10 feet. There was some pretty nice flowstone here. I slid back down, and we crawled on to the next room that had a passage leading off it. We did some comic slides on the mud bank here before we finally figured out how to climb it. It is a high passage that runs parallel to the main passage. Going back the way we came, the passage got higher and formed a dome. This has to be the 30 foot high dome that David Jagnow mentioned in his trip report in Vol III page 27 of the *Intercom*. This dome has nothing in common with the dome in the entrance room, however, as this one is totally of phreatic origin. One or two bats were hibernating in this dome. It looked like there might be a passage leading off the dome, but we didn't chimney over there until later. In the other direction, the high passage went back down into a little room. A slot in the floor of this room connects with the side passage that drains the cave now. I checked the side passage, but it's changed little since last August. Anxious to find out what the fate of this trip was going to be, we charged ahead to the small room where all Iowa Grotto exploration efforts have been stopped in the past. The flow of water was really reduced from when I was there in August, but alas it was enough to stop us. The floor of the main passage rises in each room, and this room is no exception. So water is held in lakes between each room. At the place where the passage sumps, the ceiling is at its lowest. It just barely meets the water. The water has been doing a lot of downcutting between the sump and the side passage. It wouldn't have to cut down much farther before the water level no longer meets the ceiling. Unfortunately the downcutting has now come to a halt. The water has removed most of the sand and other fine sediments, and is now flowing over streambed type pebbles. These pebbles are too heavy to be moved by the water except during flood conditions. When the cave floods, however, so much new stuff is brought in that it nullifies any good that it does. We have to go back with shovels and dig a trench through this last room, a simple task, and also dig out the floor of the side passage. The water has cut down to the pebbles here, too. That is probably the only way that we will get to see the rest of the cave system, if we continue to have the kind of wet weather we have been having the last two years.

WE did some digging with our feet, which showed how easy our task would be, but of course you need tools to make any real progress. After sitting there and discussing what should be done next time we were there, we crawled back to the room with the dome beside it. We climbed up to a hump of mud in the high passage, then traversed over to another hump underneath the dome. This had to be accomplished with our feet on one wall and our backs on the other wall. It was very slippery, and the wet suits made it more difficult. When we got to the hump, we could see that there was a small room off to the side. And that there was a connection between this room and the main passage, via a mud slope. Once we stopped crying about all that effort for nothing, I turned my attention to another passage leading off the dome. I chimneyed off the slope, and tried to go up when I reached the end on that level. I had to go back and start over again a couple



times, as the mud covered walls were like grease. Finally I made a move upward, but couldn't finish it without having Steve hold my feet in place. Using everything except my teeth, I managed to scramble to the top of this mud slope, almost 20 feet above the floor of the main passage. Finally my head could see around the corner and view the glorious wonders that lay ahead. The passage dead ended after three more feet. Of course! When I managed to stop laughing, I slid back down and over to the mud hump. A word of warning for anyone with thick wet suits. Shoulder pressure doesn't work too hot on smooth mud covered walls. You expect the narrow spots to slow you down, but your suit just compresses and you slide on by. We jumped down into the other room, and slid down the slope to the lake. Such fun! We hurried on out of the cave and back to the car as fast as my wobbly knee could manage, stopping only to rinse off our wet suite in the stream outside the cave entrance. The spring on the south bank was flowing muddy water of course.

After leaving Duttons Cave, we returned to the farmhouse. We spent some time sitting in front of the fireplace, warming ourselves and drinking hot cocoa. We told them what we had found and chatted for a while, then we had to thank them and head for home. It was too bad we didn't have time to look at Mittelstadt Cave and see if the water level was any lower in there, but I doubt if it was. We left our wet suits on for the trip home, and were pretty comfortable. In spite of the fact that Steve doesn't have a heater in his car. I did not take my wet suit jacket off, not wishing to get my parka dirty by putting it on over the vest pants, and it binded quite a bit in the armpits, causing a lot of pain, but other than that it was quite practicle to wear home. Then you can jump in your shower to take it off and wash it at the same time, if you have the energy left at the end of the cave trip.

#### BACK TO GLENWOOD

Greg McCarty

February 22, 1975

Ed Smith, Greg McCarty

In the trip report on the January 19, 1975, trip to Glenwood Cave, which is in this issue of the *Intercom*, I said I thought the downstream passage in Glenwood now has at least one and one-half feet of air above the water. This could only be true if the deep mud on the floor had been eroded away in part. In the past there was always 10 inches of air, and then the passage sumped completely after 40 feet. If the mud had indeed washed away, then a considerable amount of passage might have been opened up.

Originally this was to have been a two day trip, with the first day spent checking leads. But everyone else was tied up, so Ed drove in from Boone Friday night and stayed at my house in Anamosa. We got an early start Saturday morning, and it looked like it was going to be a real nice day. But not so warm that we would be in danger from snow melt flooding the cave. We stopped off at the Deep Rock station in West Union on the way up to see a guy about some cave leads, but we found out he's been transfered to another station. Ed grabbed a second breakfast in Decorah. I was car sick and didn't feel like eating. We then drove over to Dr. Knudson's to change into our wet suits. We didn't wear coveralls over our wet suits this time, to give us greater freedom of movement. But I sacrificed the knee on my right leg when I chimneyed up a dome.



I again carried my crobar into the cave to check the dome lead Steve Barnett told me about, but we checked every dome and crevice in the whole lake passage without finding the one we wanted. I'm sure that Steve was mistaken, and that the crevice he was talking about is somewhere else in the cave. Ed took a lot of pictures to replace the ones obscured by fog that he took on the first trip. We really took our time on this trip, looking at things and checking out all of the ceiling crevices. I chimneyed about 10 feet up one dome and still couldn't see where it went, but I stopped because above that were some really nice formations that I didn't want to touch. A crevice not far from the entrance has a faint possibility of going farther than you can see, if you chiseled off some chert nodules, but the walls were covered with very sharp protrusions that would have massacred a wet suit. Of course the main purpose of this trip was to check the downstream passage, and we didn't delay our curiosity about what was there. Once I got to the "T" intersection it took about five seconds to decide that my judgement had really been impaired by my illness on the last trip. There was only 10 inches of air. I sloshed downstream for about 30 feet through the exhausting mud, just to see for myself what it was like, but turned back a little ways before the sump because there was only four inches of air and it was difficult to keep my carbide lamp lit. I tried to convince Ed that we should go up to the 40 foot dome and have look at the passage I located on the last trip, but nothing could convince him to make the long trek up the stream passage. On the way into the cave, when we were half way through the lake passage, we noticed that there was air flowing into the cave.

On the way out, Ed's feet got pretty cold. Wet suit socks or booties can really make a difference. Coming out of Glenwood was nothing like last trip. Thank goodness! The car was even warm from the sun. We took off our wet suits outside Dr. Knudson's house, then took a shower in his basement. He gave us a couple of new cave leads and we took off to check one of them. Ed and I spent an hour running around in snow up to three feet deep without locating the deep pit we were after, so we went back to Luther College to check with Dr. Knudson again. I'm sure we can find it this spring when we try again. We tried to contact a Luther College student that knows Dr. Knudson, as he has been doing some cave diving in the area. But he wasn't in his room, so I left my address and phone number with Dr. Knudson. I want to have a talk with him and find out if he knows what he's doing because if he dies while diving a spring it would really hinder our chances of doing much diving in the future.

It was dark when we left Decorah, so Ed drove me back to Anamosa and then left for Boone. If we had known that we really wouldn't be able to go further downstream in Glenwood, this trip never would have happened. On the other hand, if we had waited until after the cave flooded this spring and entered it again at the next dry spell, we would always have wondered whether we could have gotten somewhere if we had entered it in the winter. That would have haunted us for the rest of our lives or at least until next winter.



INDIAN BLUFF CAVE

Loren Schutt

February 23, 1975

Mike Bounk, Jerry Bybee, and Loren Schutt

The purpose of this trip was to introduce Jerry to caving, and to show Mike Indian Bluff Cave, since he had heard about the cave but never seen it. We weren't interested in establishing any endurance records, just enjoying the trip, so we left fairly late and returned to Iowa City about mid afternoon.

The day itself was mild for February. There was snow on the ground, but the temperature did rise above freezing and there was a little mud. We got to Pictured Rock County Park about mid-morning. As expected the park road was closed, with good reason. So we got ready and walked down to the cave.

Our trip through the cave was rather uneventful. We did notice an ice speleothem in one of the small parts of the cave, sometimes noted to have a block of ice. Considering the size of the passage, this was a fairly large formation but it caused no problems since most of it was in a small dome and along the side wall. One real annoyance, though, was several barriers of loose rock which someone had built accros the passage at places. The ones in the small passages were particularly annoying and they were somewhat angrily dismantled. One was a rather elaborate wall in a larger passage, but it was low enough to step over easily so it was left with only a few rocks kicked out of place. There were about three of these barriers in all. Two bats and some insects were noted toward the back of the cave.

On our way back to the car we decided to check the area for the possibility of other caves. We climbed the bluff above the cave and found that in fact it is a ridge with another valley on the other side. We found one sink hole in the area of Indian Bluff Cave but it was not enterable, at least not in February. Walking along the top of the ridge on the side away from the river, we noted several possible cave openings in the opposite valley wall. The ridge itself ends in a point back at the river where the park road reaches the river valley floor. After checking a few openings along the road, we decided to follow the valley back and check some of the openings. However, we took a wrong turn and followed a different valley system. This system proved to have few openings and no caves were found. We followed a branch of the valley system back to its begining at the youth camp on the park's border. This placed us on the hill above the road and the car. We then went back to the car and decided to return to Iowa City. It is worth noting that we observed a number of other groups of people hiking in the park and going into the cave.

For more information on Indian Bluff Cave, including a map, see the 1974 NSS Convention Guidebook (*Intercom* Vol X no 1) pages 64-66 inclusive.



1. Introduction

The purpose of this study is to investigate the effects of various factors on the growth of plants. The study was conducted over a period of six months, during which time the plants were grown under different conditions. The results of the study are presented in the following sections.

The first section of the study is a review of the literature. This section discusses the various factors that have been studied in the past, and the results of those studies. The second section of the study is a description of the experimental design. This section describes the conditions under which the plants were grown, and the methods used to measure their growth. The third section of the study is a presentation of the results. This section discusses the growth of the plants under different conditions, and the effects of various factors on their growth. The fourth section of the study is a discussion of the results. This section discusses the implications of the results, and the conclusions that can be drawn from the study.

The results of the study show that the growth of plants is affected by a number of factors. The most important factors are light, water, and nutrients. The study found that plants grown under high light conditions grew faster than those grown under low light conditions. Similarly, plants grown with more water grew faster than those grown with less water. Finally, plants grown with more nutrients grew faster than those grown with fewer nutrients. The study also found that the growth of plants is affected by the temperature of the environment. Plants grown in a warm environment grew faster than those grown in a cool environment.

The study concludes that the growth of plants is affected by a number of factors, and that the most important factors are light, water, and nutrients. The study also found that the growth of plants is affected by the temperature of the environment.