"The line which separates the difficult from the dangerous is sometimes very shadowy, but it is not an imaginary line. It is a true line, without breath, It is often easy to pass, and very hard to see. It is sometimes passed unconsciously, and the consciousness that it has been passed is felt too lately. If the doubtful line is passed consciously, deliberately, one passes from doing that which is justifiable, to doing that which is unjustifiable."

Edward Whymper

AMERICAN CAVING ACCIDENTS 1973

A REPORT OF
THE NATIONAL SPELEOLOGICAL SOCIETY

SPELEOBOOKS PRESS

American Caving Accidents

1973

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THE NATIONAL SPELEOLOGICAL SOCIETY

SPELEOBOOKS PRESS
ALBUQUERQUE, NEW MEXICO
1975

Published by
Speleobooks
P.O. Box 12334
Albuquerque, NM 87105

Contents

Introduction

The accidents during 1973 followed the same general trends as in previous years. That is, roughly 40 percent of the accidents were in vertical caves. Most accidents were relatively minor incidents in horizontal caves. As in the past, the typical cave accident victim was a male, between 15 to 30 years of age, who was unaffiliated with any organized caving group and had little or no caving experience. Almost two-thirds of all accidents happened on either Saturday or Sunday.

In spite of the general trend of accidents following the patterns of earlier years, there were several types of incidents which had not been reported previously in **American Caving Accidents**. (1) Cavers contracted histoplasmosis in three widely-separated caves in North America. (2) A man evidently was killed by vampire bats in Mexico. (3) Almost all cavers are told of the dangers of caving alone, yet surprisingly, prior to this issue of **American Caving Accidents**, there was only one report of a solo caver being injured. The 1973 **American Caving Accidents** has two examples, one of which was a drowning.

Incidents have been included if they occurred in a North American cave during 1973, and either involved an injury or a rescue effort by persons outside the caver's party (even if there was no injury). The accident reports have been arranged in chronological order. The sources for the accident information have been listed at the end of each report. Hopefully, this will be useful to cave historians or others interested in particular accidents.

Although four drownings in caves are reported here, this report covers only a small fraction of the cave diving accidents which have taken place. David Desautels of the National Association for Cave Diving states that in 1973 there were fifteen cave drownings in Florida alone.

Readers familiar with earlier editions of **American Caving Accidents** will notice that this issue has reports of many more accidents than in past years. Possible reasons for this include the rapid growth of the caver population, less emphasis on training and safety, and carelessness because of overconfidence. All of these are undoubtably contributory factors for some accidents; however much of the large rise in the number of accidents is probably due to an increased awareness of the importance of reporting accidents. Cavers will learn of the wide range of safety hazards which exist in caves only if they are reported. An unreported accident serves as an object lesson only to those involved. In summary, the greater number of accidents reported is probably due more to a willingness to report accidents than to an actual rise in the number of accidents. We are indebted to the many cavers who have contributed to this publication either by writing an accident report or by sending information on an accident.

Hopefully, these reports will increase the cavers' consciousness of caving hazards. Can we distinguish not only the dangers in caves but also the dangerous caves? In rereading back issues of **American Caving Accidents**, it was noticed that certain caves are mentioned several times. More specifically, Shaft Cave in Indiana has had five accidents, Dead Deer Cave (Texas) had four, and Knox Cave (New York), Cass Cave (West Virginia) and Organ Cave (West Virginia) have each had three accidents. Nine other caves have each had two accidents. Many of these caves are well-known to the general public and therefore are repeatedly the scenes of rescues of novices.

The methods which can be taken to decrease the number of accidents in a particular cave depend on the cave. Texas cavers felt it necessary to gate Dead Deer Cave after publicity about the cave led to several accidents. Other grottos have taken similar action. Yet many of us are philosophically opposed to being "protected from ourselves". Alternatives to gating include increased training, restricted access, and warning signs. There is no single universal solution to cave safety.

Richard L. Breisch
American Caving Accidents Editor
NSS Safety and Techniques Committee

Accident Reports

Indiana, Brinegar Cave Sunday, 4 February 1973

John Brinegar and two others were exploring a high canyon area of Brinegar Cave, when some of the breakdown collapsed. "Brinegar dove forward toward the 12 foot deep canyon but the falling rocks trapped his left leg, which was caught in such a fashion that the weight of the rock was supported by the heal of the caver's boot, and a rock jutting up from the floor, so that there was no weight of consequence on the caver's leg. However, he was left hanging out over the canyon in a very strained position."

Brinegar's companions could not free him so left for help. Six members of the Bloomington Indiana Grotto responded with considerable mechanical equipment. "They tried to jack the rock up but could not; after a bit of examination and discussion, they removed the collapsed pile one rock at a time, located the trapped foot and the specific rock which was causing the hangup, and removed it with the jack."

"Brinegar remained cool and calm throughout the event, even though he had been holding himself in a strained position for some time. He assisted with moving rocks and advising during the rescue operation. When he was freed and removed from the trapped position, it was discovered that his boot was serving as a keystone, and additional rock collapsed near the rescuers, but caused no problem. From that point the removal of the caver was routine, and he was found to have suffered no injuries other than pulled muscles." (Shofstall)

Analysis: Many caves contain unstable breakdown, and even experienced cavers may not always recognize the instability. It is not known whether the victim took an unusually foolhardy chance by exploring that particular breakdown area.

Sources: Shofstall, Don. (April 1973) "Accidents do Happen. **Petroglyph**. Vol. 10, No. 1, pp. 6-7.

Anon. (7 February 1973) "Heroes - Six Bloomington Cavers Save Illinois Man from Rock Pile." Bloomington, Indiana **Courier Tribune**. (This was reprinted in various grotto publications in the Midwest.)

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Maryland, Crabtree Cave Saturday, 17 February 1973

Two groups with a total of 15 persons had entered Crabtree Cave. One group split further when several members decided the cave was too difficult and turned back. At 4:30 p.m. Roy Johnson dislocated his left knee.

The Western Port Volunteer Fire Department Ambulance Squad was summoned and arrived before 7:00 p.m. They attempted unsuccessfully to pass a wire-frame stretcher through the fissure entrance. After admitting there was nothing they could do, and because of the cold, inclement weather, the rescue team left.

Meanwhile Johnson had dragged himself to the top of a wooden ladder but was unable to climb down. With assistance from members of his group and four

additional local cavers, he got out of the cave at 11:00 p.m., 6½ hours after the accident.

Analysis: The group selected a cave which was too difficult for them and it seems that there were not enough experienced cavers. Some of the group showed good sense by turning back when they realized the cave was too difficult for them; however, they should have been accompanied by an experienced caver. The rescue squad showed poor judgement in giving up and leaving the scene; in so doing they took first aid equipment and training from a situation where it was greatly needed. Even if it was impossible to get a stretcher to the victim they should have gone to him and tried to render assistance.

Source: Pilsitz, Edward F. Jr. and Tiderman, Carol. (1973) "Accident in Crabtree." **Baltimore Grotto News**. Vol. 13, No. 2, pp. 9-10.

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Kentucky, Crump Spring Cave Sunday, 18 February 1973

Two carloads of cavers entered Crump Spring Cave around 8:00 a.m. Saturday. A party of two consisting of Douglas B. Welker (26) and Thomas W. Ramsey reached the rear of the cave in 4 or 5 hours and then mapped for several more hours. Due to fatigue, the return trip took over 8 hours. Although experienced, this was Welker's first cave trip in over a year. Carbide lamp problems and a torn cave pack slowed down the trip further.

Close to the entrance was a near-vertical, 20-foot pitch with a cable ladder and a belay rope still in place. Both cavers were using flashlights because of carbide lamp problems. Ramsey was very chilled due to water crawls they had gone through and suggested that they dispense with a belay on the ladder climb in order to save time. Welker started climbing but backed down and rested while Ramsey climbed the ladder. On Welker's next try, the strength of his arm gave out and he fell backwards, landing near the base of the ladder. Most of the force of the fall was absorbed by his left wrist, left hip, left knee and jaw. The accident occurred at about 7:00 a.m. Sunday.

Welker told Ramsey that he could not move but later did not remember talking to Ramsey. Ramsey then left the cave and got help. Welker was out of the cave within a half hour after his fall.

Analysis:

"(1) What was done (or went) wrong:

(a) Too strenuous a trip for my physical condition;

(b) Inadequate equipment (caving pack which disintegrated);

(c) Carbide lamp problems;

(d) Attempting to climb ladder using a flashlight, instead of taking the time to fix the carbide lamps, in spite of our proximity to the entrance.

(e) Failure to observe the standard safety practice of belaying on a ladder climb, regardless of the circumstances;

(1) Tom should not have suggested that we forego the belay.

(2) I should have insisted on the belay.

(f) Problems with hung-up ladder rung, etc.

(2) Rescue operation:

(a) Tom probably acted wisely in getting other cavers to help, because of his condition and their proximity;

(b) Bringing gorp into the cave was a good idea, as it provided me with quick energy;

(c) Warming the car was a good idea;

(d) Bringing the sleeping bag into the cave was also a good idea, as they were unsure of my condition when they entered the cave and the possibility existed that I might not be able to make it up the ladder and out of the cave for quite a long period of time.

(3) Regardless of the things that went wrong, if a belay had been used on the climb there would have been no accident." (Welker)

It is likely that this accident was caused by the effects of hypothermia (exposure). One of the first effects of hypothermia is lack of coordination and good judgement.

Source: Douglas B. Welker

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Texas, Dead Deer Cave Saturday, 24 February 1973

Two ill-equipped local boys entered the vertical Dead Deer Cave. After going down a short pit, one of the boys reportedly fell 50 feet when he was unable to make a hand-over-hand climb out.

The uninjured boy was rescued by Bexar County Civil Defense volunteers, led by Dick White, and by cavers from the Alamo Area Chapter of the NSS, led by Safety and Rescue Chairman Chuck Stuehm. Experienced cavers rappelled in and rigged the victim for vertical rope climbing using a Jumar system. The victim was able to climb out under his own power when properly equipped.

Analysis: This is another example of lack of knowledge of proper vertical techniques and a gross underestimation of the difficulty in climbing a rope hand-over-hand. Although the cave is on posted property, it has often been entered by local youths. They have stashed some gear, including a mildewed, 1-inch manilla rope, for spur of the moment caving trips.

The television news coverage of this accident was so complete that the camera crew was able to enter the cave and film the rescue. Unfortunately, the location of the cave was given to the viewing audience, and this led to another incident the very next weekend. This was the third rescue at this cave in as many years. (See also 31 December 1972 accident in the **1972 American Caving Accidents** and 4 March 1973 in this issue of **American Caving Accidents**.)

Sources: Report by Glenn Darilek.

Darilek, Glenn. (1973) "Dead Deer - Ditto." **The Texas Caver**. Vol. 18, No. 4, p. 115.

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Tennessee, unnamed cave Sunday, 25 February 1973

Don Bowman (16) and a companion (18) entered a small cave which was unknown to local NSS members. "About 50 feet into the cave a very narrow slot leads into a narrow zig-zag passage which descends about 20 feet to a crevice about 30 feet deep. Here the two boys jammed a small log in the upper part of the passage and tied to it a doubled Perlon rope to be used for ascending hand-over-hand. The ropes lay in the narrowest part of the crevice causing a person on the rope to have to chimney out about 3 feet to get around the constriction. They rappelled into the pit on the Perlon (using either a carabiner wrap or single brake bar) and spent several hours in very muddy passage at the bottom. The older boy was able to climb out of the pit on the rope. But because of fatigue and mud now coating the rope Don was unable to climb out, so his companion went for help. The Knox County Rescue Squad was alerted and they in turn requested the assistance

of local cavers."

Four NSS members responded to the call for help. Jim Wilson was able to squeeze down through the narrow slot that led to the pit where the boy was trapped. "Since a direct pull was impossible because of the narrowness of the crevice and the zig-zag nature of the passage it was decided to attempt to get him out under his own power since conversation with him implied that he wasn't hurt. Connie Pierce, another suitably slender caver, joined Jim at the pit. The belay line was tied to the Perlon as a safety in case the log pulled loose. No other rigging point was available. Jim rappelled into the pit and found Don unhurt but shivering uncontrollably. He was given a denim jacket and quickly rigged into the rope using Jumars (Mitchell system). He had no difficulty until he reached the constriction at the top of the pit where it took him 20 minutes with help from Connie to get through. After resting briefly he was able to leave the cave under his own power." (Wilson) It took 6 hours from the time the rescue squad was contacted until the victim got out of the cave.

Analysis: "Inexperience was the cause of the accident. The boys had some knowledge of rope work probably acquired from mountaineering books or magazines but it was obviously insufficient as regards [to] climbing techniques. We were extremely fortunate that Don was able to get himself out when given the proper equipment. Getting an injured person out of this particular cave probably would require enlargement of the passage leading to the pit."(Wilson)

Sources: Report by Jim Wilson

Pierce, C. (1973) "How to Save a Neophyte." **Speleotype**. Vol. 8, No. 1, pp. 2-3.

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West Virginia, Elkhorn Mountain Pit Saturday, February 1973

Four people, all novices including one 12-year-old, were told about the pit by a local resident. They had been informed that the pit was 90 feet deep when it is actually 140 feet deep. Because of their misinformation, the group rigged with a rope which was too short. When the first rappeller realized the rope was not reaching the bottom, he quickly braked to a halt burning the skin on his hand. He tied himself off but had no ascending gear. The people could not pass equipment down to him because of the many ledges in the pit. After an hour, the group asked the Dorcas Volunteer Fire Department for help. A party of about 12 finally pulled him out.

Analysis: The group had no contact with organized caving groups from whom they might have learned the basic vertical techniques. It is shocking that they would consider rappelling into a pit with evidently no forethought on how to get out. In spite of the man's inexperience, he did use enough caution to avoid rappelling off the end of the rope, and he then tied himself off. One should always rappel slowly and be ready to stop should an emergency arise. For all but the shortest drops, all rappellers should have ascending gear ready for use and should be able to change over from rappel to prusik. This is especially important for the first person to go down a rope.

Source: Report by Bob Thrun

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New Mexico, Harvey's Cave Saturday, February 1973

While four cavers started surveying Harvey's Cave, Doug Rhodes (28) and Cal Welbourne headed for the back of the cave to check out a pit. They dropped several 10-to-15-foot pits and attempted to push a passage which turned into a complete siphon. Both cavers were completely soaked. As the others continued mapping or checking leads, Rhodes sat on a rock huddled over a carbide lamp and waited for his companions to finish.

On realizing that he was beginning to develop the symptoms of hypothermia, Rhodes left the group for the surface and the cars. Just inside the entrance he stopped and talked with a porcupine. On the surface, Rhodes knew to head toward the lights of a small town 15 miles away, but instead he walked in the wrong direction towards the lights of a single ranch house. After walking several hundred feet in a 20-to-30-mph wind (temperature about 15°F (-10°C)), Rhodes realized his mistake, returned to the cave, and headed towards the correct set of lights. He started his car but was unable to remove his frozen clothes or do anything else until the car's heater had rewarmed him.

Analysis: "Cal was prepared for exposure to water and knew what was in store. He had on long underwear and several layers of caving clothes. Rhodes wore one layer of cotton caving clothes. Welbourne is of stout construction and was thus also better equipped physically to handle exposure than Rhodes who has a slender build. Rhodes was in the early stages of hypothermia when he left the survey team for the entrance. Others should have been observing him and someone should have escorted him out. On reaching the entrance he was disoriented and lacking in judgement (signs of advanced hypothermia). He was probably on the verge of losing consciousness when he reached the cars. This near accident could have been prevented by better planning (warmer clothes) and an awareness of hypothermia dangers on the part of the entire caving party." (Rhodes)

Source: Report by Doug Rhodes

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Texas, Dead Deer Cave Sunday, 4 March 1973

Two local people from a nearby trailer park had to be rescued from Dead Deer Cave.

Analysis: Because of inexperience the two people had entered the cave without proper equipment. This incident occurred in spite of (or possibly because of) a much-publicized rescue in the same cave on the previous weekend.

In March, a thick steel and concrete gate was installed by several Texas cavers. Hopefully, this will halt the progression of rescues required at this cave.

Source: Darilek, Glenn. (1973) "Again!?" **The Texas Caver**. Vol. 18, No. 5, p. 149.

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Alabama, unidentified cave Friday, 24 March 1973

Army Private Randall L. Brown (20) was killed by a cave-in of dirt while exploring a cave near Fort Rucker. A companion, Private Daniel A. Harvey, tried unsuccessfully to rescue him before a rescue team removed the body two hours later.

Analysis: The newspaper article gave no description of the cave. An accident like this would be more likely to occur in a mine shaft than a limestone cave.

Source: Anon. (1973) "Services Set for Tulsa GI Killed in Cave-In." **Tulsa World**. 28 March 1973.

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Indiana, Gory Hole Saturday, 31 March 1973

Four Bloomington, Indiana, cavers, Bob Karne, Dave DesMarais, Shirley DesMarais, and Terry Cox, visited Gory Hole to take pictures for the **1973 NSS Convention Guidebook**.

"The entrance pit was rigged with one rope to the floor, a drop of 140 feet. Another drop, approximately 100 feet was rigged off a ledge 15 feet down and dropped to a large ledge about 30 feet off the floor. This was done to have a good photographic point on the opposite side of the pit room from the main rope and off the floor.

"Various pictures were taken of Terry Cox on the main line by Dave on the ledge. After Terry reached the top, Dave rappelled on down from the ledge to the bottom to photograph from there. Dave then asked Terry to descend the ledge rope to give lighting of climbers from the ledge. Terry did this and stationed himself on the ledge 30 feet off the floor.

"After these pictures were taken, Terry asked if the rope was on the floor. He was given an affirmative from below and rigged into the line he had come down on and not the one to the floor. This rope passed the ledge for only 5 to 10 feet and he fell the rest [of the way] after rappelling off the end.

"Terry landed on his side and he immediately supposed he had broken his wrist and ankle, and he had sharp pains in his lower back. With aid in balancing, he stood and walked to a drier place to await rescue." (Steele)

Within two hours after the fall, six cavers were starting to rig rescue ropes. Cox was placed in a Reeves stretcher and pulled up in a horizontal position by people on the surface. The pulling was done by fastening Jumars to the rope and walking away from the pulley rigged across the entrance.

Cox was taken by automobile to the hospital. He suffered a cracked vertebrae in his lower back, a fractured left wrist, and a badly sprained ankle. He stayed in the hospital for 3 weeks and was in an upper torso cast for another 3 weeks.

Analysis: "Terry Cox is an experienced caver with much vertical training. His accident was caused by human error in rappelling on the wrong rope. This could have been avoided by having a knot in the bottom of the rope. Knots should be on the ends of **all** ropes." (Steele) Even the precaution of a knot in the end of a rope is not foolproof. At least one mountaineer has fallen to his death after knots passed through his brake-bar rig. Some cavers tie any bulky knot such as multiple figure-eight knots; however a bowline is recommended because it provides a foothold which the caver can use while changing over to his ascending system.

Sources: Report by William Steele.
Shofstall, Don. (1973) "Accidents do Happen." **Petroglyph**. Vol. 10, No. 1, pp. 6-7.

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Tennessee, Streak of Sunlight Cave Sunday, 1 April 1973

Streak of Sunlight Cave contains an 86-foot pit and two shorter drops. Ed

Yarbrough rappelled down one of the shorter drops, and then David Stidham (25) checked the other. Stidham chimneyed down a 49-foot-deep pit to a point beyond which a rope would be required. Around 2:15 p.m. he tied off a rope to a wall projection, but as he started to rappel, the rock used as a rigging point was dislodged. Stidham estimates that the rock weighed up to 500 pounds. He was able to avoid falling farther by wedging himself in the chimney. Stidham suffered a broken lower right leg, a partially dislocated left shoulder, bruised right forearm, and a gash on his right ankle.

Yarbrough was able to chimney down to Stidham. He assisted by removing rocks from the victim, relocating his shoulder, and helping him transfer from rappel to the Texas ascending system. Stidham was able to prusik with his injured leg hanging vertically below him. Yarbrough's carbide light had nearly gone out, but he luckily reached the point where he had left his spare carbide. One rope was rerigged, and Stidham was able to climb to the top of the 49-foot pit, but could not get out of the cave without additional help. Yarbrough went for help and returned in about 1½ hours with a rescue team of six cavers. Stidham was out of the cave by 6:45 p.m., about 4½ hours after the accident.

Analysis: The rigging point was not thoroughly checked. Another anchor point was available higher up in the chimney.

Sources: Report by David Stidham.
Yarbrough, Ed. (1973) "David Stidham Injured in Streak of Sunlight Cave." **Speleonews**. pp. 25-27.

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Indiana, Shaft Cave Thursday, 12 April 1973

Two non-caver students from Indiana University decided to explore Shaft Cave using flashlights and a knotted rope. They successfully descended the entrance and second drops using the knotted rope. The students went through the water crawl and into the larger passage beyond but got lost when they tried to return.

Passing motorcyclists noticed their parked car on two successive days and summoned the police who in turn contacted Bloomington area cavers. The Bloomington cavers found the students who incredibly did not appear too concerned about their plight.

Analysis: Inexperience was the primary cause of this accident; the victims did not tell anyone of their whereabouts and they did not have spare sources of light. It is fortunate that they did not suffer a serious accident because descending or climbing a rope hand-over-hand is one of the most dangerous mistakes made by inexperienced cavers.

Source: Shofstall, Don. (1973) "Accidents do Happen." **Petroglyph**. Vol. 10, No. 1, pp. 6-7.

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West Virginia, Hellhole Cave Monday, 16 April 1973

Besides the 155-foot entrance pit, Hellhole has several other vertical drops. Steve Byers (15) fell 15 to 30 feet at one of the drops in the back of the cave. His leg was broken in three places, so a litter was obtained from the climbing shop at Mouth of Seneca. At the entrance drop, two ropes were rigged for the litter and a third rope

was rigged for ascending. Because of the numerous ledges, the litter became stuck several times and Sam Pitthan had to descend to the litter to free it. The rescue took about 8 hours.

Analysis: The accident reports gave no reason for the fall, but a belay should have prevented the accident.

Pitthan believes that much of the difficulty in getting the victim to the surface could have been prevented if the litter had not been used.

Sources: Report by Sam Pitthan

Atkinson, Paul. (1974) "Hellhole Rescue Clarification." **NSS News**. Vol. 32, No. 11, pp. 225-226.

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West Virginia, Organ Cave Saturday, 21 April 1973

A group of seven cavers, ranging in age from 17 to 28, were returning from a 14-hour trip into the Lower Lipps section of Organ Cave. Dick Nigon (about 25) made a 7-foot drop from the Stadium Room to the floor of the Rimstone Passage. Nigon broke his toe, apparently on this drop, but did not mention it to his companions. The nearest entrance, still three hours away, was reached without further incident.

Analysis: An alternative route requiring only a 4-foot drop, was overlooked by some members of the group.

As a result of this incident, first aid supplies and fresh carbide have now been stocked in this remote section of Organ Cave and at the Field House.

Source: Stevens, Paul. (1973) "Cave Accident Report," **D.C. Speleograph**. June issue.

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British Columbia, Canada, Yorkshire Pot Saturday, 5 May 1973

After digging snow out of the entrance, Dave Bray, Warren Blair, Doug Curry, and Al Schaffer entered Yorkshire Pot at 3:00 p.m. and began descending on fixed ropes left by an earlier expedition. All four men had some previous mountaineering experience, and three had been to the cave before, although none were experienced cavers or were members of any caving group.

The second pitch is about 170 feet down and 300 feet into the cave. Three of the men safely rappelled the 55-foot drop. By then the last man, Schaffer, was using a flashlight since his two main light sources had gone out. The rope, which had been used only as a lifeline for ladder climbers by the previous group, was looped around a sloping rock projection. In lifting the rope to start his rappel, Schaffer accidentally loosened it so that it started to slip off the anchor. He reached up and replaced the rope, but when he resumed rappelling, the rope again slipped off. This time Schaffer fell about 50 feet and suffered a back injury consisting of compacted fractures of three vertebrae. The accident occurred at 5:30 p.m.

An hour later two of the men started looking for another way out of the cave. Bray found the bypass around the pit. This passage is located about 30 feet from the bottom of the pit. While leaving, Bray took a fall of about 10 feet; however he and Curry were out of the cave by 11:00 p.m. Curry walked 8 miles through deep snow to the nearest road and returned by 11:00 a.m. with word that a rescue was underway. Help with a Stoke's litter arrived about 24 hours after the fall. The Calgary Mountain Rescue Team, a mine rescue team, and Alberta cavers removed

the victim from the cave by 2:30 the next morning. Schaffer was evacuated by helicopter at 5:00 a.m.

Analysis: Contrary to the beliefs of those involved, this accident was not "one of those freak things". Accidents similar to this have occurred in mountaineering. Specifically, on Shiprock in New Mexico, the last man down readjusted the position of the rappel rope, only to have the rope give way as soon as he started to rappel.

The cavers placed too much faith in a rope which had been left in the cave by others. Bray had been informed that the ropes in the cave had been used only in belaying ladder climbers. Possibly because of insufficient light, Schaffer failed to recognize an unsafe anchor. More experience in vertical caving and closer attention to the details of rigging the rope would have prevented this accident.

Sources: Thompson, Peter. (1973) "Editorial". **The Canadian Caver**. Vol. 5, No. 1, p. 2.

Shawcross, Mike and others. (1973) "Rescue, Yorkshire Pot". **The Canadian Caver**. Vol. 5, No. 2, pp. 46-53.

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Mexico, cave near Cuernavaca May 1973

"Vampire bats in a cave near Cuernavaca are supposed to have bitten a man to death." (**Current Titles in Speleology**)

Analysis: The information is too incomplete for proper analysis, but it is hard to imagine vampire bats attacking a man unless he was asleep, injured, or drunk. In spite of many warnings about accidentally cornering a poisonous snake or large mammal in a cave, this is the only instance of an animal injuring a caver which has ever been reported in **American Caving Accidents**.

Source: Anon. **Bristol Evening Post**. (12 May 1973) (Quoted in **Current Titles in Speleology, 1973, Part 1**, reference 73.241).

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Tennessee, Rouse Cave (John T. Bible Cave) Saturday, 26 May 1973

Roger Gaithright (21) and Victor (Lynn) Lutz (19), an experienced vertical caver, entered the wet, sinuous Rouse Cave early Saturday afternoon. They went downstream to the Green Lake, crossed it, and found the passage beyond nearly siphoned. As they were returning, the two men noticed the water was suddenly rising about a foot per minute. While scrambling for higher ground, Lutz fell from the mud bank and drowned. Gaithright lost his light but was able to climb a ledge above the water. He was found the next day by cavers who had noticed that he was missing.

Analysis: "The mistake the boys made was entering a wet cave in a rainy period. The cave drains a very large area and has no human exit. ...Weather had been intermittently clear and stormy, sometimes changing several times a day." (Dunaway)

Sources: Report by S.M. Dunaway, Jr.
Newspaper clipping.

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Kentucky, Jingle Hole Monday, 18 June 1973

The Blue Grass Grotto placed a register consisting of a large plastic screw-top jar containing paper and pencils in Jingle Hole. A small amount of calcium carbide was placed in the register in an attempt to keep the paper dry.

Dave Kelley (23) and Bob Arnott (about 30), both of South Carolina, rappelled into the pit, and Arnott opened the register. Acetylene gas from the carbide in the register instantly ignited, and Arnott received first-degree burns over the right side of his face. Both cavers left the pit immediately. Medical attention was not required.

Analysis: The gas seems to have built up in the three months since the last previous trip to the cave. Carbide has been used as a dehumidifier in other cave registers but evidently not enough gas was produced to cause an explosion when ignited. Acetylene gas explosions from carbide have also occurred in Dynamited Cave, Washington, in 1969 and Climax Cave, Georgia, in 1972.

"The value of putting carbide in a register seems questionable. If no gas is produced, then moisture must not have been present inside the register in the first place. If gas is produced, a potentially dangerous situation is set up unless great care is taken in opening the register." (Bishop)

Source: Bishop, Catherine. (1973). "Accident in Jingle Hole." **The Kentucky Caver**. Vol. VII, No. 4, p. 64.

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Arizona, Dante's Descent Saturday, 23 June 1973

NSS members Gary Williams (23) and Tim Rowe (20) stopped by Dante's Descent for a look. On an impulse Rowe decided to drop the 256-foot free-fall drop using 125 feet of Goldline and 150 feet of Perlon rope tied together. Williams did not drop the pit.

At about 4:00 p.m. while Rowe was ascending, the Perlon rope was cut by the sharp basalt rock. Rowe fell about 60 feet, landing feet first. He suffered a compression fracture of the spine, broken vertebrae, a dislocated right ankle and a broken nose. After determining that the victim was conscious, Williams drove five miles to town. He could not contact a mountaineering or cave rescue group so he called the sheriff's office.

An ex-paramedic was lowered into the pit by a tow truck winch, and he placed Rowe in a Stokes litter. Two hours later a helicopter hoisted them both out.

Analysis: The rope had been laid over an edge which in the past has cut at least two ropes. The rope was not padded at the critical edge (20 feet down). Greater care in selecting the rigging point and use of rope pads would probably have prevented the accident.

Sources: Report by Richard Frith
Anon. (1973) "Accident at Dante's." **Cave Crawler's Gazette.**
Anon. (1973) "Accident in Dante's Descent." **NSS News**. Vol. 31, No. 8, p. 133.

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Alabama, Neversink Pit Saturday, 30 June 1973

Over 45 people had gathered at the bottom of the 160-foot deep Neversink Pit for the wedding of M. O. Smith and S. A. Bolt. Bill Torode was rigging a seventh rope but had not informed the people below that he was lowering another rope. It piled up on a ledge just below the lip of the pit. With the addition of more rope to

the pile, about 150 feet of rope fell to a ledge about 40 feet from the bottom. As the rope hit the ledge, it dislodged a rock approximately 4 to 5 inches in diameter. The falling rope struck Steve Gelfius (about 24) on his hard hat. Gelfius instinctively reached for his head only to have the rock strike his hand and hard hat. Gelfius's hand was soaked in the waterfall and then bandaged. He complained of a headache but was able to climb out of the pit without difficulty.

Analysis: Gelfius's helmet was smashed on the right side. He could have been killed had he not been wearing the helmet.

A contributing factor in the accident was the poor communications caused by the large number of people in the pit. Nevertheless, Torode should have told the cavers at the bottom what he was doing so they could move out of the danger area.

Source: Report by Steve Hudson

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Indiana, Bronson Cave Saturday, 21 July 1973

Samuel L. Jamieson, Jr. (21) and William (Draper) Grooms (18) were attempting to explore Bronson Cave in Spring Mill State Park in a two-man rubber raft. As the raft was swept into the cave by the swift current, Grooms realized the danger and escaped by getting off and climbing an overhanging ledge by the entrance. Jamieson could not get off the raft in time.

The state police and Indiana cavers, led by Dick Powell, assembled outside to wait until the water receded. They were not able to enter the cave until Monday morning because of the flood conditions. Those who finally did enter wore wet suits, life jackets, and weight belts and rode in rubber rafts. By 10:28 a.m. they had established voice contact with the victim who was in his raft about 400 feet from the entrance.

Analysis: The water in the cave was definitely too high and swift for safe exploration due to 7 inches of rain which had fallen the previous night.

Jamieson had enough composure to conserve his flashlight and tie his raft to a wall protuberance. He was in good enough mental and physical condition to help get the rescue raft back out against the current.

Sources: Shofstall, Don. (1973) "Near Tragedy in Bronson Cave, Indiana." **NSS News**. Vol. 31, p. 164.
Jamieson, Samuel, Jr. and Jamieson, Samuel. (1974) "The Drama at Bronson's Cave." **Guideposts**. July issue, pp. 12-15.
Various newspaper clippings.

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New York, Skull Cave Sunday, 19 August 1973

Three Connecticut cavers, Jeoff Brandner (25), John Twardy (22), and William Robinson (25), entered Skull Cave at about 11:00 a.m. Entry involves descending a 20-foot drop and then a 30-foot drop, both of which can be climbed with a belay.

Five New York cavers, led by John Mylroie, met the Connecticut group at the bottom of the entrance drop at 6:45 p.m. The New York cavers ascended first and had left the area by 8:00 p.m. The Connecticut group had more difficulty getting out. With the help of his companions, Brandner got out by 11:00 p.m. He called the State Police, and eleven troopers rescued the other two cavers by 2:30 a.m,

Analysis: "At no time during the 30 minutes the two groups were swapping tales at the bottom of the 30-foot drop did the Connecticut group suggest that they were overly fatigued, unfamiliar with the drop, or in any way in need of assistance. They **seemed** expertly equipped, with wetsuits, slings, Gibbs ascenders and other ordinary cave gear. However, after looking back at the incident, the New York group remembered that the Connecticut party had rigged both drops with ¾-inch manila rope—hardly the "in thing" in vertical caving these days, not to mention the difficulty in getting a ¾-inch rope into a Gibbs ascender. ...

"Fortunately, there were no injuries, and perhaps it was good sense on the part of the Connecticut group not to force the issue beyond their abilities but to call in the state police despite the possible bad publicity. A little less pride on the part of the Connecticut group and a little less haste on the part of the New York group would have avoided the situation entirely." (John Mylroie)

Sources: Report by John Mylroie
The Knickerbocker News-Union Star (20 August 1973).
New Britain Herald (Connecticut) (20 August 1973).
Mylroie, John. (1973) "Troopers Rescue 2 Trapped in Metroland Cave." **The Northeastern Caver**. p. 95.

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California, unidentified sinkhole August 1973

Jimmie Hoyt, a Southern California prospector, was attempting to remove metal ingots from the bottom of a water-filled collapse sinkhole. The ingots, which were in a bag made from a canvas sheet, were being raised by a winch. The canvas ripped and dropped the ingots on Hoyt who was diving below. Hoyt drowned, apparently after losing his face mask.

Analysis: Evidently the diver was working alone and was not familiar with cave diving techniques or equipment.

Source: Cate, Bill. (1973) "California Cave Diving Accident." **NSS News**. Vol. 31, No. 12, p. 217.

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Kentucky, Coach Cave Saturday, 1 September 1973

Sara Corrie (58) had just completed a long, low crawl in Coach Cave and was starting a 20-foot descent when her foot slipped on the slick rock. Although she received a sharp blow to her elbow and dislocated her shoulder, she was able to climb back up into the crawlway. Soon afterwards she was unable to crawl because of shock. First aid was administered to Mrs. Corrie. She was pulled through most of the 2500 feet of crawlways on a low cart made especially for hauling ropes and other caving gear.

Analysis: Sara Corrie had been down this crawl and into this part of the cave several times and was well aware of its nature. The accident occurred because of momentary carelessness while descending slick rock.

Source: Report by Sara Corrie

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Georgia, Case Cave Friday, 21 September 1973

"On 21 September 1973, a group of 28 students from Covenant College, about half of them novices, entered Case Cave. At 10:30 p.m. one of the experienced cavers was helping Barbara Wolff (18), a novice, down a steep, wet, slippery clay bank in the Moon Room when he lost his anchoring. Both slid 40 feet down, hit a rock wall on the opposite side, then dropped into a waist-deep stream. The other party members constructed a make-shift stretcher and wrapped the girl who was believed to have suffered a broken leg. While several members were sent to get a rescue squad, she was transported about one mile to the entrance where a 60-foot ladder prevented farther movement. While waiting for help, Barbara went into shock, and stopped breathing but was sustained by mouth-to-mouth resuscitation until the Dade County Rescue Squad arrived with oxygen. She was pulled out in a litter by the team at about 2:00 a.m. and rushed to a Chattanooga hospital. She sustained minor back injuries and a badly bruised knee." (Elliot)

Analysis: "Because the Rescue Squad was being called up, party members should have left Barbara in the Moon Room instead of moving her without adequate equipment. Also her sopping wet clothes should have been replaced with dryer pieces from other members.

"The accident would probably not have occurred had a rope been used to help descend the steep, slippery slope." (Elliot)

Sources: Report by Elizabeth Elliot
LeVan, Mike. (1973) "Covenant Coed Suffers Injuries in Fall While Exploring Case Cave." **Chattanooga News-Free Press**. 22 September 1973. p.5

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Missouri, "Lost Linda" Cave Tuesday, 2 October 1973

When a 25-year old woman disappeared, the Taney County sheriff's bloodhounds tracked her to the mouth of a cave. A search by the woman's younger brother failed to locate her in the cave. After six experienced cavers led by Dave Neff were called in, but also could not find the woman, the search area was expanded to another nearby pit.

Fred Grabau chimneyed down the pit and soon found the missing woman a short distance from the bottom. Because she was chilled and had injured her arm, she was unable to climb the 50-foot cable ladder and had to be hauled out by the rescuers.

Analysis: Solo caving, especially by inexperienced persons, can be very hazardous. "Fortunately the cavers had decided to look into the pit, for the injured woman had crawled about 50 feet from the bottom of the first drop at which point she had fallen down a second drop of about 8 feet. In her injured and chilled condition it is highly unlikely she would have been able to return to a point where she could have been heard from the surface." (Neff)

Source: Neff, David L. (1973) "Cave Rescue at "Lost Linda" Cave." **NSS News**. Vol. 31, p. 201.

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Indiana, Brinegar's Cave Tuesday, 9 October 1973

Three novices became lost in Brinegar's Cave, although two of them had been in the cave previously. They became lost while trying to retrace their way out of the cave, and were rescued three days later.

Analysis: Inexperience.

Source: Shofstall, Don. (1973) "More Cave Rescues." **NSS News**. Vol. 31, p. 215.

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Indiana, Shaft Cave Saturday, 13 October 1973

Two groups of cavers from the Windy City Grotto dropped the 76-foot pit of Shaft Cave. Below this is a 20-foot, tight, vertical crevice. Joe Wolf (30), who weighs 240 pounds, became stuck while climbing up the crevice. With considerable help from David Larson, he was able to climb out of the crack and into the bottom of the main pit. Because he had lost the strength in his arms, he was not able to ascend the rope.

Ed Pekin, an experienced vertical caver, started climbing out the main pit using bowline-backed ascender knots. About 50 feet off the floor, the top ascender knot became untied and Pekin flipped over, held only by his foot slings. With assistance from cavers above, Pekin was able to right himself, retie the knot, and proceed out.

Wolf was then pulled out by 8 people on top.

Analysis: Wolff had recently lost considerable weight and was becoming reactive in caving. He had practiced vertical techniques outside before attempting the pit. Fatigue, caused by becoming stuck in the lower section of the cave, contributed to his inability to climb the rope.

Pekin's incident was due principally to his haste in tying the knot in order to get out fast and start the rescue of Wolf.

Source: Shofstall, Don. (1973) "More Cave Rescues." **NSS News**. Vol. 31, p. 215.

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Kentucky, Sloan's Valley Cave Sunday, 14 October 1973

Linda Feldstein (20), Ken Macke (19), Paul Macke (13), Jamie Leonard (13), George and Geri Weinecke (in 30's), and a dog named Hector (9) entered the Minton Hollow entrance of Sloan's Valley Cave at 12:30 p.m. with intentions of exiting via another route. It was the first cave trip for Leonard and the Weineckes. 1.2 miles into the cave George Weinecke could not make it through a tight 20-foot vertical fissure, at which point he became angry and hysterical. Ken decided to take the others, who had gone through the squeeze, out the Screaming Willy entrance. He would later return to take George and Paul, who stayed behind, back out through Minton Hollow. On the way to Screaming Willy, an exhausted Mrs. Weinecke developed claustrophobia and hysteria. The group had been following a map and did not realize the Screaming Willy entrance was a 56-foot pit. The party refused to turn back so Ken Macke climbed the pit to get his rope and Jumars from the car, and the help of several other cavers.

Louis Simpson went after the two fellows who had been left behind 2 hours earlier. The people at the bottom of the shaft were given a hurried course in the use of Jumars. Leonard became frightened when his seat sling became untied 10 feet from the top. With the help of others and a fortunately-placed ledge, Leonard made it out alright. The two women, in spite of their fears, managed to climb out of the pit. The dog was hauled out by rope. The last person got out about 10:30 p.m.

Analysis: It is not advisable to lead beginners into large caves which are unfamiliar to the trip leader. The people involved here were placed in a situation for which they did not have proper training, experience, or psychological preparation. Several of the people, who were already frightened, had to learn vertical techniques

in order to get out of the cave.

With few experienced cavers on the trip, it was not wise to split the group when some members could not continue. The outcome of this incident was not serious because there were, fortunately, several very experienced cavers nearby but outside the cave.

Sources: Macke, Ken. (1973) "Screamin' Willy Mishap." **Electric Caver**. Vol. 9, No. 11, p. 88.

Simpson, Souis E. and Unger, Paul. (1973) "Rescue in Screaming Willy." **COG Squeaks**. Vol. 16, No. 12, pp. 107-108.

Stewart, Carol. (1973). "Slid Down Mud Hill...Having a Good Time." **Kentucky Post**. 16 October 1973. (reprinted in **Electric Caver** and **COG Squeaks**).

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Indiana, Buckner's Cave Saturday, 20 October 1973

Three flashlight cavers strayed from a larger group and were lost for 2 days. They were found by experienced local cavers.

Analysis: Inexperience.

Source: Shofstall, Don. (1973) "More Cave Rescues." **NSS News**. Vol. 31, p. 215.

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Indiana, cave near Bedford Sunday, 4 November 1973

While exploring a horizontal cave, five cavers were walking along a ledge about 10 feet above water line when the ledge terminated. One person was able to jump the 6-foot-wide canyon to a platform on the other side. Bill Trousdale (30) tried the same leap, landed on the lip, but slipped backwards into the canyon. He struck a rock with his left side and then landed in 2 feet of water. Trousdale sustained a broken rib and a badly bruised hip, but was able to get out of the cave with only occasional help from the other members of the caving party.

Analysis: "Don't go against the first rule of caving — DON'T JUMP." (Trousdale)

Source: Report by Bill Trousdale

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Pennsylvania, J-4 Cave Friday, 9 November 1973

"A group of ten people were in the cave when one slipped on a climb and fell about 5 feet. The accident resulted in a severely bruised leg and a broken arm. I could not determine the exact location of the accident, but it probably occurred in the vicinity of the step-across. The victim, with aid from the rest of the group, was able to get out of the cave. This was his first cave, and, as far as I could determine, no Nittany Grotto members were present." (Turner)

Analysis: Inexperience.

Source: Turner, Russ. (1974) "Cave Accident Report." **The Nittany Grotto News**. Vol. XXII, No. 1, p. 5.

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Kentucky, Sloan's Valley Cave Saturday, 10 November 1973

Five people, some of whom were members of the Cincinnati Mountaineering Club, entered the Minton Hollow entrance of Sloan's Valley Cave at 2:00 p.m. and arrived at the Screaming Willy Pit entrance at 8:00 p.m. Bruce Pierno, Alan Wernersbach, Bill Strachan, Midge Longeway, and Steve Weiter had to be assisted out of the cave by members of the Blue Grass Grotto. One man insisted on free climbing, but was forced to use a belay. He then fell and was caught.

Analysis: "There have been two rescues in the same pit entrance in one month. In both cases parties encountered the entrance from inside and tried to use it as a means of avoiding a long return trip. They were, of course, unprepared and unfit to use this type of entrance." (Simpson)

Source: Simpson, Louis E. (1973) "Screaming Willy Rescue (2nd in a Series)." **COG Squeaks**. Vol. 16, No. 12, p. 114.

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Missouri, Devil's Icebox Cave Sunday, 2 December 1973

After obtaining the necessary permits from officials of Rockbridge State Park, 19 cavers from the Chiluk-ki (at University of Missouri at St. Louis) and Chouteau Grottos began an expedition into Devil's Icebox Cave at 10:00 a.m. Robert Dean Strader (28) was the leader of the expedition since he was considered the most experienced member of the party and had been in the cave numerous times. It was necessary to canoe into the cave. Since only three canoes were available to the group, it was decided that one party of 12 would enter first, drop off 6 cavers and return for the remaining 7.

Strader and David Cook, Jr. (19) were returning to the entrance in the last canoe. No effort was made to keep the canoes together and at times they were up to 500 feet apart. Because of the curving passage, the canoes were out of visual and audible contact. At about 12:30 p.m. the occupants of the second canoe heard indistinguishable noises followed by silence. When they returned to investigate they recovered the overturned wooden canoe of Strader and Cook, the paddles, one helmet, and one glove. No one saw the canoe capsize.

"They returned into the cave hoping to find Strader and Cook. Soon they were met by the cavers already in the cave and decided to return to the entrance. In returning they met the first canoe with people coming back into the cave. Since there were now only two canoes and eleven cavers in the cave, it took until 3:30 p.m. to retrieve the cavers back to the entrance. The first group out reported the accident to the authorities and at 5:30 p.m. rescuers returned with the bodies of the two drowned victims.

"Death was attributed to drowning. Apparently the canoe capsized and due to the water temperature of 52 ° F, the amount of clothing, and the darkness, the two were unable to save themselves. The depth in the area of the accident varies from 3 to 12 feet, although the bottom is silt and soft mud. Robert Strader was a member of Chouteau Grotto and the NSS. He had been an active caver for 8 to 10 years and was also an expert canoeist and knew how to swim, although not exceptionally. David Cook had been caving several months and was a member of UMSL Grotto. His ability to swim was not known." (Kirk)

Analysis: It is impossible to say what caused the canoe to upset.

"Suggestions to the NSS Safety Committee on what should be done to avoid similar situations:

(1) Life preservers would have prevented the drownings. They may be

cumbersome at times but think of the consequences — please.

(2) The trip should not have been attempted as there were not enough boats available, i.e. avoid ferrying technique.

(3) Each canoe should keep visual and audible contact with canoe in front and one behind." (Kruesi)

"Concerning life jackets, no one ever used life jackets in the cave for the entire history of the cave. Much of the water passage is only inches deep and there are only three or four places deep enough to drown. It is very likely that no accident of this type will ever occur again in the cave in a place where it would not be possible to stand. However, since life jackets are now required, it is unlikely that an occurrence could be fatal.

"Other than life jackets, canoes may also be a problem. Canoes have long been used in Devil's Icebox without mishap. Generally however the people using the canoes owned the canoes and had experience with them. Strader was not a good canoeist and it is very likely that Cook had no canoeing experience. The ease with which a canoe can overturn in inexperienced and even experienced hands may be an important contributing factor. Rubber boats generally, on the other hand, are almost impossible to turn over." (Hargrove)

Sources: Report by Gene Hargrove.
Report by Carol Kruesi.
Kirk, Robert H., Jr. (1973) "Devil's Icebox Disaster." **MSS Liaison**.
Anon. (1973) "Two Students Drown in Park near Columbia." **St. Louis Globe Democrat**. 4 December 1973.
Baskin, Carol. (1973) "Deaths Called 'Freaky', Shallow Water Near." **Columbia Daily Tribune**. 3 December 1973.
Cassaway, Bob M. (1973) "Two Drown in Devil's Icebox Cave." **Columbia Daily Tribune**. 3 December 1973.
(The above four articles were reprinted in **Ozark Speleograph**. Vol. 41, No. 1.)
Anon. (1973) "County Youth, Companion Drown in Canoeing Accident in Cave." **St. Louis Post-Dispatch**. 4 December 1973.

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South Dakota, Brook's Cave Sunday, 16 December 1973

Brook's Cave is a three-dimensional maze typical of the caves of the Black Hills. Ross Fenner (17) and Randy Collins (15), each carrying one flashlight, entered the cave early Sunday afternoon and attempted to find the Compass Room. Collins had never been caving previously; Fenner had made five or six trips to Brook's Cave. Another boy did not go with them because he did not have a flashlight.

The boys did not return by evening, so their relatives started searching for them at 8:00 p.m. Later local rescue groups were called in, but little was done until members of the Paha Sapa Grotto were contacted at 1:50 a.m. Monday. Three members of the grotto were at the cave within 45 minutes, and they located the missing boys within another 20 minutes. The boys were not injured, but had merely been lost. Using a cable ladder rigged by the rescuers, the two boys were led to safety by 3:15 a.m.

Analysis: "The youths underestimated the complexity of the cave. They failed to observe landmarks and could not find their way out." (Stock)

"What caused their difficulty was the entrance into the Compass Room. It is a long slide that enters the passage near the ceiling. From the floor this passage is hidden from view by a projection of rock. Since several much larger, inviting holes lead downward, confusion can reign. ...Usually a larger party travels slower and

pauses long enough to look backwards. Closer attention to surroundings would have prevented the search." (Zerr)

Sources: Report by Mark Stock.
Report by Bruce Zerr.
Anon. (1973) "Cave Exploring Youths Rescued." **Rapid City Daily Journal**. 17 December 1973.
Anon. (1973) "Cave Rescue 'Some Kind of Record'." **Rapid City Daily Journal**. 19 December 1973.

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Alabama, Shelta Cave Saturday, 29 December 1973

Lynn M. Wayshner (20) and Theresa McCloud (21), both members of Sligo Grotto, were climbing the two 15-foot ladders out of Shelta Cave. Wayshner reached for a rung, not realizing she was already at the top, and on losing her balance, fell over backwards. She bounced off Theresa McCloud, who was at the landing at the top of the first ladder, and then landed on the jagged rocks and glass below. Wayshner received a severely sprained ankle and bruises on her legs and back. McCloud had a twisted neck and a bump on her head. After resting awhile, the women were helped up the ladder by Jim McCloud. A belay was used.

Analysis: A belay could have prevented the fall.

Source: Report by Lynn M. Wayshner

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Missouri, Bruce Cave Date unknown.

Larry and John Gitner became lost several thousand feet into Bruce Cave. About 30 hours after the Gitners had entered the cave, a search was started by a "Spelunkers Club" and Larry's fraternity brothers. After 12 hours of searching, the two fellows were found "alive but in poor health." They were given food and water, wrapped in blankets and carried out by stretcher. The evacuation took 6 more hours for a total time underground of 48 hours.

Analysis: Probably inexperience.

Source: Anon. (1973) "To the Rescue!" **The Unicorn of Theta Xi**. Fall issue, p. 11.

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Alabama, unidentified cave KEETON CAVE (AL446) Friday, Probably 1973

While Randy Fanning, a student at Florence State University, was exploring a cave with several friends, he slipped from a rope and fell into a 75-foot pit. He was rescued about 4 hours later by members of the Colbert County Rescue Squad.

Analysis: Probably inexperience and unfamiliarity with vertical techniques.

Source: Undated newspaper clipping entitled, "Fall Hurts Youth in Cave Probe." The clipping was reprinted in **Decatur Caver**. Vol. 2, No. 3, May-June 1973.

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Summary

This issue of **American Caving Accidents** contains the reports of 42 incidents involving 62 persons.

The summary tables have been divided into two parts. The first part gives statistics on the type of cave accidents. For each accident report there is one entry under situation, month, and day of the week. Classification of accidents by cause and contributory cause is open to a lot of subjective interpretation of the individual reports since often an accident occurred only after a combination of events had taken place.

The second part of the summary tables deals with the accident victims. In each category, there is one entry for each victim.

Suggestions for improvement or modification of the summary or any part of this report are welcome and should be addressed to the National Speleological Society, Safety and Techniques Committee, Cave Avenue, Huntsville, Alabama 35810.

ACCIDENTS

Situation	**1967-1973**	**1973**
General	81	25
Vertical	55	16
Diving	11	1
Immediate Cause		
Fall	47	11
Falling rock or object	15	3
Failure of equipment	11	3
Stumble	8	4
Exposure and/or exhaustion	9	1
Burns	5	1
Asphyxiation	3	0
Illness	5	3
Drowning	16	4
Animal attacks	1	1
Contributory Causes		
Climbing unroped	15	5
Caving alone	3	2
Exceeding abilities (inexperience)	53	13
Inadequate equipment	31	6
Worn equipment	4	1
Bad weather (incl. flooding)	8	2
Exposure and/or exhaustion	8	2
Loosing way	13	5
Light failure	11	6
Party too large	6	2
Party separated	5	0
Getting stuck	12	2
Hurry	2	1
Poor judgement	23	5

	1967-1973	1973
Month		
January	9	2
February	10	7
March	15	3
April	10	4
May	12	3
June	12	3
July	8	1
August	9	2
September	6	2
October	14	6
November	9	3
December	16	3
Unknown	5	3
Day of Week		
Monday	7	2
Tuesday	2	2
Wednesday	9	0
Thursday	4	1
Friday	14	4
Saturday	41	17
Sunday	41	10
Unknown	17	6
ACCIDENT VICTIMS		
Sex		
Male	168	47
Female	20	6
Unknown	12	9
Age of individuals		
"Boys"	5	1
Under 15	10	2
15-20	62	12
"Young or college age"	14	5
21-25	30	8
26-30	13	7
31-35	6	2
Over 35	7	1
Unknown	37	24
Affiliation with Caving Group		
Unaffiliated	86	29
Member of caving group	46	15
Unknown	45	18
Estimate of Experience		
None or little	94	26
Moderate	15	7
Experienced	30	12
Unknown	38	17

Appendix

Reports of Histoplasmosis in Caves

The reports in this appendix were not included in the summary.

Florida, unidentified cave January 1973

A church group of 29, including 8 girls and only 1 adult, entered a limestone cave in Suwannee County. The cave became very dusty when the youths threw dirt at the bats in an attempt to make them fly. On 10 February 1973 an 18-year-old girl from this group was admitted to a hospital for severe respiratory distress which was later diagnosed as the lung disease, histoplasmosis. The main symptoms were cough, fever, shortness of breath on exertion, and chest congestion. In all, 23 of the 29 people (79%) became infected. Symptoms appeared as early as 6 days and as long as 44 days after exposure.

New Mexico, Crockett's Cave January 1973

Another case of histoplasmosis developed after Doug Rhodes (28) visited four caves in Lincoln County, New Mexico. Since Rhodes did lots of crawling through dust and bat guano in Crockett's Cave, he considers it the most probable source of the fungus. Diagnosis was delayed because full symptoms did not appear until March. Several of the other cavers on the same trip were also tested for the disease but had not contracted it. Rhodes had a history of allergies, which may have caused him to be more susceptible. This is the second case of histoplasmosis reported from this cave.

Guatemala, Cueva de Juan Flores early 1973

Three of the seven people who entered the cave came down with histoplasmosis.

Analysis: Histoplasmosis is the lung disease caused by the fungus **Histoplasma capsulatum**. If possible, one should avoid stirring up dust in guano caves since many have been found to contain the fungus. Dr. Warren C. Lewis has gathered reports of cavers contracting histoplasmosis from caves in many parts of the world. In North and Central America, **H. capsulatum** has been found in caves of at least seven states, Puerto Rico, Mexico, Guatemala, British Honduras, and Panama. Reddell states that 22 Mexican caves are known to contain the fungus, although there is only one verified case of a caver getting histoplasmosis from a Mexican cave. More details on histoplasmosis and the range of infected caves can be obtained from Dr. Lewis's highly recommended **NSS News** article.

Sources: Report by Doug Rhodes

Lewis, Warren C. (1974) "Histoplasmosis in Caves." **NSS News**. Vol. 32, No. 2, pp. 22-26.

Morbidity and Mortality Weekly Report. Vol. 22, No. 15, 14 April 1973. (reprinted in **Southwestern Caver**. Vol. XII, No. 1, p. 8.)

Halliday, William R. (1973) "Third Florida Spelean Histoplasmosis Epidemic." **NSS News**. Vol. 31, No. 8, pp. 136-137.

Beck, Barry F. (1974) "Some Additional Comments on Histoplasmosis and the Agua Buenas Caves, Puerto Rico." **NSS News**. Vol. 32, No.2, p. 31.
McEachern, Mike. (1974) "Another Histoplasmosis Cave." **AMCS Newsletter**. Vol. 4, No. 4, p. 141.
Reddell, James R. (1974) "Biological Hazards to Mexican Cave Exploration." **AMCS Newsletter**. Vol. 4, No.4, pp. 129-134.
Anon. (1973) "Eleven Teenagers Contract Rare Bat Disease [sic] while Exploring Cave During Outing." **Miami Herald**. 24 February 1973. (Reprinted in **The Brass Light**. No. 2, June 1974, p. 22.)

"Those who go beneath the surface do so at their peril..."

Oscar Wilde

NATIONAL SPELEOLOGICAL SOCIETY
Accident Report Form

Date of Accident: _____ Day of Week: _____ Time: _____

Cave: _____ State: _____

Reported by:
Name _____
Address _____
City _____ State _____ Zip _____

Name (s) of person (s) involved	Age	Sex	Experience	Affiliation	Injuries or Comments

Describe the accident as completely as possible on the back of this form or on a separate sheet. If possible obtain information from those involved. Use additional sheets if necessary. A report in the style of "American Caving Accidents" is ideal. The following checklist is suggested as a guide for information to be included:

( ) Events leading to accident. Location and conditions in cave.

The Accident

( ) Description of how it occurred.
( ) Nature of injuries sustained.
( ) Analysis of main cause.
( ) Contributory causes (physical condition of caver, weather, equipment, clothing, etc.)
( ) What might have been done to prevent the accident.

Rescue

( ) Actions following accident.
( ) Persons contacted for help. A flowchart may be helpful.
( ) Details of rescue procedures.

Further details were reported in:

( ) Newspapers ( ) Grotto newsletter ( ) Other

(Please enclose copies if possible.)

Please return completed report to the NSS as soon as possible after the accident.

Safety and Techniques Committee
National Speleological Society
Cave Avenue
Huntsville, Alabama 35810