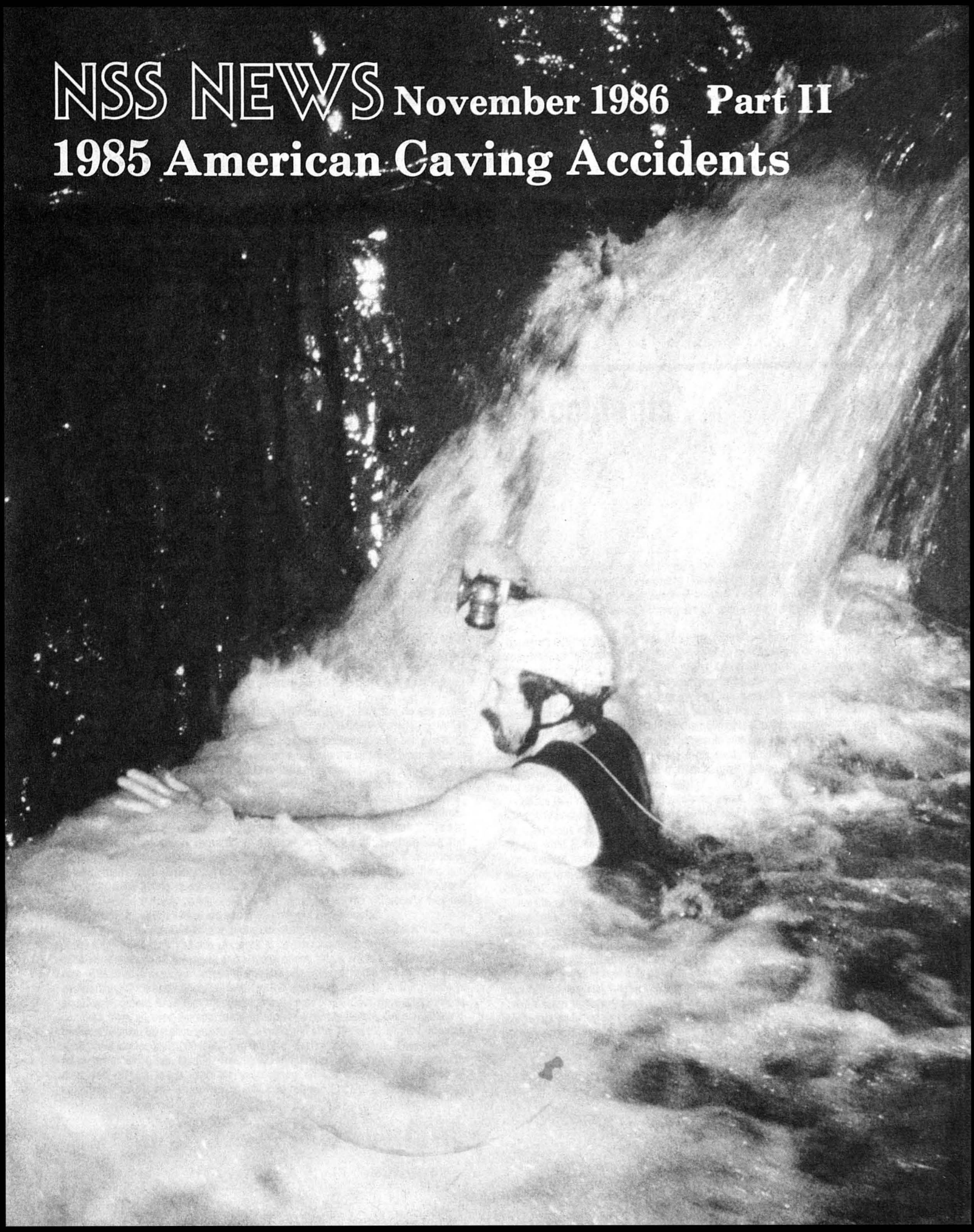
NSS NEWS November 1986 Part II

1985 American Caving Accidents



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Rio Atima, Honduras by Steve Knutson

American Caving Accidents

CAVE EXPLORING AND THE RIGHT TO DIE

In the hazardous endeavors of man there is a basic conflict. On the one hand there is the desire by some to "risk it all" and, on the other, the committment of society to rescue or recover one of its own. The risk-takers would like to be totally free of obligation yet society feels a duty to rescue one in trouble, no matter how foolish the predicament—and therein lies the conflict.

Both aspects seem to have rationality. The risk-takers are presumably expressing a basic humanity, a basic instinct if you will—the urge to explore, to push the frontier, to expand the physical limits of our species. Where would humanity be if we had never taken a risk? And it appears that this urge to explore is not something that can simply be turned off.

Rescue or recovery is equally supportable. It is possibly instinctive; in any case, as those who have participated in a rescue might attest, it is very satisfying. What more noble deed to commit than to rescue one's own? Bodies must be brought back for both legal and moral reasons—proper burial, etc. So the result in some cases is society going to great effort and risk to fulfill this need.

Yet there always arise situations where society tries to limit the risk-taking. There are areas where such is regulated and, usually because of liability problems, there are property owners who prohibit risk-taking on their property. Sometimes the regulation is not accepted and litigation results. Years ago the Park Service at Mt. Rainier National Park required an application listing your qualifications and experience and an equipment inspection before a climb was allowed. If experience or equipment were deficient, you were disallowed. Later, a suit was filed and resulted in the lifting of such restrictions—if you wanted to endanger yourself through inexperience or faulty equipment, it was your right. Yet society was not absolved of the obligation to aid you if you did get into trouble.

But what if society tries to drop its rescue obligation? In the 50's the North Face of the Eiger in Switzerland was declared to be too hazardous by the Swiss Guides (who were charged with rescue) and anyone attempting a climb would be on their own—the Guides would not rescue them. This was brought to the test in 1957 when two Italians, Corti and Longhi, attempted the first Italian ascent. A storm blew in and it was obvious to all that they would need help. The Guides were steadfast, so climbers from all over Europe came to assist—French, Dutch, German, Italian, Polish. They hauled rescue gear to the summit and after the storm abated, lowered a man on a steel cable 1,000 feet down the face; Corti was hauled up. They could not reach the other Italian, Longhi. Tied by his climbing rope to a piton, he eventually died, fell off his ledge, and for years hung on the face for all to see, an embarrassment to the Swiss Guides who had refused to help.

No matter how rational the local regulation of risk-taking, society at large can be expected to attempt rescue or recovery. Besides the legal aspects, the news media simply would demand it. Thus, when you hear of caves where "rescue would be impossible," don't believe it—it may prove unfeasible, but society would surely attempt it.

In caving circles one might hear the view that the non-organizational caver, the casual knotted-rope and flashlight type, should be regulated but not the "real" cavers—we high-tech, organizational types. Our explorations are meaningful and important! But is this fair? The nerd who goes into a cave and falls down the first pit he sees may be experiencing as great and meaningful an exploratory thrill as someone breaking a depth record with state of the art expertise. It's really all a fantasy trip and pretty meaningless when compared to the mainstream of human endeavor. So where does this leave the people who consider it their "right" to take risks?...—Those who say that they are not responsible if a rescuer is hurt or an expenditure made rescuing them from difficulty? Out on a psychological limb. In most cases such freedom does not exist.

I believe that risk-taking should be considered a human right, as long as it does not directly endanger others. I further believe that rescuers should have the right to refuse to rescue in especially hazardous situations. Neither belief addresses reality. Perhaps what is needed is a "Hazardous Preoccupations" law. Under such one might declare society exempt from obligation and then proceed with any insane risk-taking one desired. There still might be volunteer rescue but no one would be obligated. Don't expect such a law.

There is a fine compromise in the circles of some risky preoccupations in that the participants organize their own rescue groups, thus exempting society at large. Cavers have done this in the U.S. in recent years and very successfully in some areas. Yet even in-group volunteers must be considered to be "society" and the same conflict will arise over especially foolish undertakings.

The conclusion, it seems to me, must be that a responsible person will take into account that any risk-taking has the potential to endanger someone else. There doesn't seem to be any way around this unfortunate fact...Unless, perhaps, one could manage to isolate one's self from society, as in solo caving where no one knew where you had gone...

ACA—1985 INTRODUCTION

Last issue I was afraid the great number of reports and fatalities for that year indicated some sort of undesirable trend. Apparently that is not so; the total number of reports for 1985, while high (61), is less than 1984. There is only one cave fatality but, as I look through the reports, it is obvious that there are several other incidents that easily could have been fatalities: a 100 foot plus out of control rappel, a man spending 57 hours in a flooded cave wearing only shorts and tennis shoes (and not able to relax the whole time), three persons swept through water-filled caves, and a man falling free down a 30 foot pit unaware.

There were of course many scuba cave fatalities but the CDS and NACD have such good training programs and certification that their people are seldom in trouble.

This year I started a new classification system. The old one was really a classification of the rescue (or necessity for one); now an additional lowercase letter will describe the principal cause of the incident. This was suggested by Ian Ellis.

If we look at the crude breakdown of accident types it is apparent that, relatively speaking, there were a lot of cavers falling, a lot of rockfalls, equipment failures and lost cavers. There were relatively few physiological problems—hypothermia, illness and exhaustion.

Seriousness of Incident/Type of Rescue

AA—Fatality
A—Injury and Evacuation
B—Evacuation Only
C—Injury Only
D—No Injury or Evacuation
F—Scuba Fatality
FD—Scuba Incident

Type of Incident
c—Caver Fall
e—Equipment Failure
f—Flooding
h—Hypothermia
i—Illness
l—Lost Way
r—Rockfall
x—Exhaustion
o—Other

For 1985 we have:

A - 5
B - 11
C - 9
D - 24
F - 9
AA - 2

c - 16
e - 8
f - 4
h - 1
i - 2
l - 6
r - 10
x - 1
o - 0

As before, the analyses are not necessarily complete, but will hopefully provide views to think about. Safety is a state of mind. Read these accounts, think about them and use your head.

I wish to thank all those who sent in reports or info. This publication depends on you. It also depends on Mike Dyas who looks for accidents during work on his caving column for the **NSS News**. Thanks, Mike! Thanks also to Lynne and Mike Sims for computer typesetting and staff work.

Send reports or information to:

American Caving Accidents
505 Roosevelt Street
Oregon City, OR 97045
503-655-6609

MAJOR REPORTS:

Type	Cave	State	Date
F	Cape Kinau Cave	Hawaii	2-23-84
Dc	Miller's Cave	Kentucky	January 85
Bl	Bowden Cave	West Virginia	2-24
F	Godswell Sink Hole	Jamaica	3-9
F	Radium Springs	Georgia	March
Cc	Systema Purification	Mexico	3-19
Cc	Tiger Cave	Belize	3-20
Ac	Tumbling Rock Cave	Alabama	3-23
Be	Haddox Pit	Alabama	3-24
Bl	Anderson Cave	Alabama	March
Cc	Up and Down Cave	Kentucky	4-6
Ac	Stillhouse (Falls) Cave	Alabama	5-4
Ac	Deep Creek Canyon	Colorado	6-8
De	Bird Horror Hole	Alabama	6-8
Dc	Rogue River Natural Bridge	Oregon	6-23
FDi	Madison Blue Spring	Florida	Summer
Bf	Donaldson/Bronson Cave	Indiana	7-1
F	Little River Cave	Florida	9-22
F	Spring Run Cave	Florida	10-3
F	Ebro Blue Springs	Florida	10-3
Bc	WV's Cave	West Virginia	10-19
AAr	Fuller Cave	West Virginia	11-28
F	Ponce de Leon Springs	Florida	12-29

MINOR REPORTS

Type	Cave	State	Date
D	Lookout Mtn. Caverns	Tennessee	12-9-84
Dl	Mammoth Cave System	Kentucky	8-84
Bx	Lon Odell Memorial Cave	Missouri	Winter, 85
De	Un-named Pit	Tennessee	2-6
De	Dante's Descent	Arizona	2-24
Dr	Mushroom Cave	Missouri	3-9
Df	Mill Creek Cave	Tennessee	March
Df	Sotano San Agustin	Mexico	April
Dl	Cueva de Rio Talgua	Honduras	4-14
Dc	Buckner's Cave	Indiana	4-27
Cc	Un-named Ice Cave	California	May
Dr	Wayne's Lost Cave	Indiana	5-11
Ac	Norman Cave	West Virginia	May
Bl	Cave near San Antonio	Texas	June
Bo	Indian Grave Point Cave	Tennessee	6-11
Dr	Vinegar Ridge Cave	Kentucky	June
De	Hall's Pit	Kentucky	6-28
De	Soldier's Cave	California	Summer
Dr	Devil's Hole	Missouri	7-7
Cc	Thornhill Cave	Kentucky	7-20
Dr	Bad Medicine Cave	Wyoming	7-29
Bl	Avondale Cave	Alabama	August
Ci	Rimstone River	Missouri	8-3
Do	Mueller Pit	Missouri	8-4
Dr	Fulford Cave	Colorado	8-11
Df	Mosby Cave	Missouri	8-17
FDh	Simmons-Mingo	West Virginia	8-24
De	Airman's Cave	Texas	9-6
Bl	Polygamy's End Cave	Utah	9-7
Cr	Kingston Saltpeter Cave	Georgia	9-13
C	Sullivan's Cave	Indiana	September
Bc	Thunder River Cave	Arizona	September
AAr	Shelter Cave	Nebraska	September
FDe	Tyson Spring Cave	Minnesota	9-15
Drc	Cricket Cave	West Virginia	9-21
Cc	Leigh Cave	New Jersey	Fall
Br	Streamway Cave	California	10-8
Dr	Rockshelter Pit	Alabama	10-12
Dc	Newcastle Murder Hole	Virginia	10-13
Dc	Acme Quarry Cave	West Virginia	10-20
Cc	Organ Cave	West Virginia	10-25
Cr	Parks Ranch Cave	New Mexico	11-2

PREVIOUSLY UNREPORTED

F:Cape Kinau Cave, Hawaii **February 23, 1984**

At 7:45 a.m. on February 23 a group of divers met at Ed Robinson's diveboat on Maui Island, Hawaii. These were tourists, hiring Robinson and Sue, his assistant, for a day's diving. The group included John Baird, Tom Colan, Masao Nakan and Preston Penny (37). They were all apparently open-water certified, but not trained in cave diving.

They discussed possibilities and decided to do a cave on Cape Kinau for a first dive. Robinson had previously toured this cave with clients. One light per diver was issued and a video movie of the dive would be made by Robinson. Sue would be safety diver and follow the group.

The cave, as described by other divers familiar with it and by the survivors, consisted of a single trunk passage with entrances at both ends, and three side chambers: the Small Chamber, Turtle Chamber, and Deep Chamber. Depths were apparently up to 90 - 100 feet in the Deep Chamber. One end of the trunk was big enough for six divers to swim abreast. A "tight" spot led then to the main trunk with a "very narrow" place between that and the Deep Chamber. The floor was very silty. There was a small Middle Exit, with sunlight visible only when directly below it. The three chambers came in order beyond the Middle Exit, and all on the same side of the main passage.

All the divers were using 80 cubic foot cylinders filled to 3,000 psi. Robinson would lead, filming, with Sue at the rear. At the Middle Exit an air check would be performed — if any had less than 1,500 psi, he would return to the boat. This check was done and all proceeded.

At the Deep Chamber, Colan saw that he was down to 600 psi and reported to Robinson, wanting to exit. Baird saw this, and that he was also down to 600 psi and that visibility was deteriorating. Robinson led these two out the third entrance. On the way, Colan's sonic alarm went off and he had to share air with Robinson. At the surface, only Baird had air left, 100 psi.

Meanwhile in the Deep Chamber, visibility had gone to near zero — one could see only the glow of lights from other divers. Sue signalled for them to exit the room. Nakan did so, with difficulty at the restriction and Penny apparently had to be pushed through. Sue emerged in a cloud of silt.

Nakan and Sue then exited via the Middle Exit. When Robinson noticed a diver was missing, he took an extra cylinder and returned with Penny a few minutes later. Efforts to revive Penny were unsuccessful.

Reference: Joe Prosser "Hawaiian Cave Drowning" **Underwater Speleology 12**(6), Oct. 1985, p 4.

Analysis: The victim was found on the bottom, with a camera in one hand and a light in the other, his gear in place but no air in his cylinder. He was in a portion of the cave with good visibility.

Prosser points out the many deficiencies in the party: no formal cave-dive training, no specific emergency-escape planning, a too-elaborate plan for their air supply or their ability to coordinate, lack of guide line, lack of two-thirds air supply to exit on, etc. At their mid-exit air check at least half the group were at or beyond the accepted limits for safe cave diving. As Prosser says, "This was an accident waiting to happen — it was most fortunate that the entire team did not perish."

One should be especially cautious about undertaking a hazardous adventure with people you don't know — it might even be safer to do it alone.

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1985 REPORTS

Def:Miller's Cave, Kentucky **January 1985**

In January a group four cavers was surveying in Miller's Cave, Rockcastle County, Kentucky. After surveying in a wet crawl, searching for a misplaced pack and prussiking back up to the main level, they proceeded along the Pitfall Trail. This has numerous narrow pits in the floor, up to 40 feet deep. As Lorie Breeck (23) approached a difficult traverse she went to make a three foot step across a pit. She apparently didn't step far enough and fell backwards into the pit for about eight feet, landing on her back at the edge of a second, similar drop.

Her companions went to her aid and found that she had suffered only a badly bruised hip. Her cave pack had partly cushioned her fall. She was able to leave under her own power.

References:

1) Ed. "Minor Accident in Miller's Cave" **Kentucky Caver 19**(1), February 1985.
2) Gary O'Dell **Personal Communication** April 14, 1985.

Analysis: It is commendable that the group was together — too often parties get spread out as they exit. This accident wasn't serious but shows the need for increased awareness and concentration while exiting a cave. When tired you are more likely to have an accident.

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BI:Bowden Cave, West Virginia **February 24, 1985**

On Sunday, February 24, Scott Stanzel and Lou Martino entered Bowden Cave, West Virginia. A 70 degree day outside had brought flooding from snow melt to the local streams and they soon found similar conditions underground. They passed upstream through 300 feet of passage six feet high by three feet wide with a three foot depth of raging water. Beyond, they spent time warming up, then took another two and a half hours searching for the second of three entrances to the cave. Though they had been in the cave before, their knowledge of it was apparently gained from a book on West VIrginia caves and they thus were unaware that their second entrance had collapsed the year before.

Meanwhile, their van, parked at the entrance, had been noticed and at one p.m. three cavers form the Parkersburg Grotto entered the cave to check out the situation. At the narrow stream passage they found a camera and guessed that the van cavers were beyond; the stream was now five feet deep. They exited and went around to the cave's third entrance which would afford access to the area where Stanzel and Martino presumably were.

After several nasty crossings of the flooded Bickle Run, they entered the third entrance and proceeded to the second-largest room where they encountered Stanzel and Martino, getting ready to attempt the stream passage. They were led out in good order, but after retracing the Bickle Run crossings one rescuer had to be treated for hypothermia.

References:

1) Gary Ferrell "Rescue at Bowden Cave" **The Parkersburg Subterranean Flier 2**(4), April 1985.
2) Scott Loane "Elkins Cavers Rescue Pair Trapped in Bowden Cave by High Waters" News clipping, no source, date.
3) Scott Stanzel "Rescue from Bowden" **The Parkersburg Subterranean Flier 2**(5), May 1985, p 3-4.

Analysis: This kind of thing is a great adventure but try not to forget that your actions may cost the lives of rescuers.

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F:Godswell Sink Hole, Jamaica **March 9, 1985**

On March 9 three divers from the Jamaica Sub-Aqua Club went to Godswell Sink Hole in the Clarendon area of Jamaica. The divers were Donna Ho Lung, Silvain Gutknecht and Keith Campbell.

At the sinkhole a rope ladder is attached to a tree, giving access to a ledge at water level, 80 feet below. They planned to descend to the bottom of the sinkhole (-185 feet?), start up after ten minutes, decompress three minutes at 20 feet and ten minutes at ten feet.

They started at 12:48 p.m. with 80 foot visibility and proceeded past a pile of trees at 120 feet. At the bottom (-160 feet) a passage was seen extending downward into a room 30 feet in diameter. The water was very clear. Gutknecht and Ho Lung entered this lower chamber (-170 feet). This quickly became silted, dropping the visibility to zero causing complete disorientation. Gutknecht began circling the room with one hand on the wall and the other on the silted floor, to try to find the outlet. Ho Lung held onto his shoulder.

When he contacted tree limbs, Gutknecht recalled these being at the entrance, so he went in this direction. He felt Ho Lung's hand slip down to his leg. It became hard to breathe through his regulator — he was running out of air.

Gutknecht swam faster, losing contact with Ho Lung; suddenly he saw a grey light. He inflated (with carbon dioxide) his buoyancy compensation and headed for the surface.

Campbell meanwhile had not descended as far since he had only a 60 cubic foot tank. He watched as the whole bottom of the sink became silted. He went to the edge of the silt and flashed his light. Gutknecht went by but not Ho Lung. When his air was low, he followed Gutknecht.

Jamaica had no deep water body recovery team so NSS-CDS and NCRC were called and a team was flown from Florida. The body was found on March 13 at -160 feet with no air in her tanks. She was outside the lower room tunnel at a place where the ceiling of the sink angled to the floor, blocked by a tree root.

Reference: Henry Nicholson "Search and Recovery Operation — Jamaica" **Underwater Speleology 12**(2) p 6-7.

Analysis: Nicholson offers the following:

1) They failed to stick to their plan — when the crystal clear room was seen, they were lured on into a silted situation.

2) No guide line was used.

3) The one-third air supply rule was not used.

4) They were too deep — sport divers shouldn't go over -100 feet without deep water training.

5) They had no cave-dive training.

6) No adequate lights — Ho Lung might have seen Campbell's light if it had been brighter.

7) Ho Lung apparently didn't know how to use the extra air in her buoyancy-compensator via the oral inflator.

8) Proper swimming technique to avoid silting — head down, feet up, was possibly not used.

9) An alternate air source with octopus regulator was not used.

Perhaps there should be a concerted effort by NACD/NSS-CDS to provide cave-dive education at dive shops. All divers have to get their tanks filled.

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F: Radium Springs Cave, Georgia **March 1985**

In March two divers entered Radium Springs in Dougherty County, Georgia. These were Clifford Meadows (24) and Bryant Leggett. They had explored for a while when Meadows motioned to Leggett that he wanted to surface. They were apparently following a permanently fixed line when Leggett stopped "to correct problems he was having with his air tank." Shortly after, he continued out to find Meadows absent. Meadows' body was found "in a small underwater room."

Reference: Ed. "Georgian drowns in cave" **Altanta Journal** March 27, 1985.

******

Cc: Systema Purificacion, Mexico **March 19, 1985**

In March of 1985 a group was on a week-long camp at Isopod River in the Purificacion system in the highlands southwest of Monterrey, Mexico.

On March 19, after several days in the cave, a group of three went to the Nile River to photograph after a surveying shift. Jim Pisarowicz (34) was positioning himself to provide a desired flash angle when he slipped. He caught himself with his gloved right hand on sharp eroded flowstone. A spine of this flowstone penetrated the glove, then broke, leaving a piece lodged in the hand.

The fragment proved to be in very deep — it could not be removed at the accident scene by use of Swiss army knives or at camp where tweezers and needles were available. For the next two days the wound was bathed in hot water every couple of hours and antiseptic was forced into it; tetracycline was taken orally. Pisarowicz left the cave on the 22nd under his own power with his equipment divided among his companions.

Back in Texas the fragment had to be removed surgically. The accident also severed a sensory nerve and Pisarowicz has no feeling in parts of this right hand thumb and palm.

References:

1) Jim Pisarowicz **Personal Communication** July 26, 1985.

2) Dave Bunnell "A Week Underground" **The Explorer [So. California Grotto]** May 1985, p 60.

Analysis: Just because one is "only" taking photos and not doing serious exploration doesn't mean one doesn't have to be aware. This seemingly simple accident proved very disabling and costly.

Accidents to hands and feet are potentially crippling due to the concentration of nerves and tendons. Amateur surgery should be avoided and competent aid sought quickly.

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Tiger Cave, Belize, Central America **March 20, 1985**

On March 20 a group of three cavers was in Tiger Cave in the Toledo District of Belize in Central America. About a mile into the cave they came to a nine foot high, overhung up-climb. This had been rigged with a piece of rope with foot loops tied every two feet.

Two of the group ascended, unbelayed, without difficulty, but when Doug Stecko (31) reached the top loop, he lost his balance and fell back, landing on his head and shoulder. The other two returned immediately and found the victim conscious but "somewhat incoherent" and unable to stand. Packs and clothing were placed on Stecko to keep him warm. This group was part of a large Miami Valley Grotto (NSS) expedition so one companion left for help. Fifteen minutes later Stecko was able to walk and left the cave under his own power. He still has a 50 per cent hearing loss in his left ear.

Reference: Doug Stecko **Accident Report** March 26, 1985, 1 page.

Analysis: Stecko reports that their "excitement as they approached virgin cave probably encouraged inadequate safety precautions." The group saw that the loops were tied too far apart before they started climbing, but the first man up didn't bother to re-tie them. I think this accident points up the flaw in the use of cable ladders, or as in this case, a rope ladder, for vertical work: When one is in a hurry, a belay is easy to put off, mentally. If a drop is rigged with a rope and one prusiks, you are tied to the rope, whether in a hurry or not. Yet, if there is only one drop in a long stretch of cave, it is tempting to use ladders so that vertical gear need not be hauled a long distance for a single use.

In the process of hurrying to the victim, one companion descended the rope ladder so hurriedly that he received a large cut on one leg and a bad bruise on one arm. A rescuer almost became a victim.

In a remote setting such as this, one should use greater precaution than usual. Even a nine foot drop is serious if it is overhung so that it would be difficult to land on one's feet in case of a fall.

******

Ac: Tumbling Rock Cave, Alabama **March 23, 1985**

On Saturday, March 23, a group of eleven was caving in Tumbling Rock Cave, Alabama. At about 3:30 p.m. Amy Wilson (11) stepped between breakdown, fell over and twisted her ankle. An NSS Board of Governors meeting was in progress when a call on this cave came in — there was no problem in raising a large crew. Four and a half hours later the victim had been evacuated.

References:

1) Cheyenne Sweatman **Accident Report** April 7, 1985, 8 pages.

2) Carl Craig "Rescue at Tumbling Rock" **Huntsville Grotto Newsletter 27**(9), September 1985, p 15.

Analysis: There were four adults with the victim plus seven other juveniles, ages 13 to 17. It is hard to see why they could not at least attempt a self-rescue.

******

Be: Haddox Pit, Alabama **March 24, 1985**

At around 3:30 p.m. two cavers entered Haddox Pit on King Drake Mountain in Alabama. They descended the first 80-foot drop and looked around a bit, then tried to exit. Donna Knoke (21) was unable to climb out with the knot rig available and so her companion went for help.

The call went to HMCRS and at 6:30 p.m. they called cavers to assist. A caver descended and rigged a Jumar set-up which the victim used to ascend successfully.

References:

1) Don Francis "Haddox Pit Again?" **Huntsville Grotto Newsletter** April 1985, p 31.

2) Ed. "Rescued from Pit" **The Huntsville Times** March 25, 1985.

Analysis: Descending a pit without knowing if you can get out again — perhaps her companion talked her into it. In either case, very irresponsible.

******

Bl: Anderson [Lake Purdy] Cave, Alabama **March 1985**

At about 2:30 p.m. one Monday afternoon in late March five cavers aged 14 to 20, entered Anderson Cave near Lake Purdy in Alabama. After exploring for some time, they became lost. Two of the group became separated from the others. Finally those two found a mud-sculpted dragon that, as a landmark, told them where the entrance lay. At 7:45 p.m. the two emerged and alerted authorities of their companions' predicament. The others, ages 14, 17, and 18, were found and guided from the cave, emerging at 3:30 a.m. Tuesday.

Reference: Several news clippings reprinted in **Birmingham Grotto Newsletter** May 1985, p 4-5.

Analysis: Saved by a mud-snoid! No one outside had any idea where they had gone.

******

Cc: Up and Down Cave, Kentucky **April 6, 1985**

On April 6, three cavers were exploring in Up and Down Cave, Rockcastle County, Kentucky. To get to the bottom of a pit the group descended an adjacent

70-foot, narrow chimney. Two of the group got down quickly and went off to check out leads, out of voice communication with the third. The latter, Christine Gerace, was descending this chimney and in a place where she had to traverse over a place too narrow to get through. She slipped and became wedged at the chest, breaking three ribs. Her breathing was greatly restricted and was growing increasingly difficult. There were no footholds or handholds within reach. She shouted to no avail. Finally she was able to throw her pack strap over a projection and pull herself up. Unable to convince her companions that she was injured, and in a state of shock, she continued to cave for awhile before the group left the cave.

Reference: Gary O'Dell **Personal Communication** undated.

Analysis: As O'Dell stresses, a party is much less safe if it does not stay together. This is especially true if the last person is left behind and at especially hazardous points, like a drop or breakdown area. This victim could easily have been a fatality.

Surely one of the most important rules in group caving is: Keep track of the person behind you.

******

Ac: Stillhouse [Falls] Cave, AL **May 4, 1985**

On May 4 a group of five college students were visiting fellow student John Graham at his home near Stevenson, Alabama. About a quarter-mile from the house is a large horseshoe-shaped sink with walls up to fifty feet high. A stream cascades over the high side and flows into Stillhouse Cave. The cave is an easy walk down one side of the sink. The site is very scenic and popular with locals. None of the students were cavers nor had any caving equipment.

At about 5:15 p.m. the group was scattered about the vicinity of the falls when one, Curtis Mills (early twenties), said he was going to the bathroom and walked down the sink and into the cave. A few minutes later, John Graham, standing at the cave entrance, hear a "big slap." He called to Mills but there was no reply.

The cave has a walk-in entrance fifteen by ten feet high; a short way in it turns to the right and drops over a thirty foot free-fall pit. The outside light was growing dim at this time of day and the pit could not be seen. The floor is a relatively smooth streambed, free of obstacles. Graham entered and called again — still no answer. Though at first he though it might be a joke, he couldn't find Mills so he told the rest of the group and he and a companion ran back to the house and got a flashlight. The light showed Mills at the bottom of the pit, inert, in the spray of the waterfall. Graham ran back to the house and called the Stevenson Police.

This produced several ambulances, several law-enforcement agencies, the Scottsboro Fire Department, and the Sand Mountain Rescue Team. The first paramedic reached Mills at 7:10 p.m. He was unconscious and severely hypothermic. He was quickly evacuated, loaded in a helicopter and flown twenty minutes to a hospital in Huntsville (reached at 9:02 p.m.). He was found to have suffered a skull fracture and injured hand and his body temperature had slipped to 80 degrees F. He recovered.

References:

1) Carl Craig **Huntsville Grotto Newsletter 27**(8) August 1985 p 63.
2) Carl Craig **Personal Communications** March 7, 1986 3 pp.

Analysis: After being treated for hypothermia Mills was in neurological intensive care for ten days. He was hospitalized for another 11 days and spent the summer undergoing speech and physical therapy. After six months he was still not 100½. He remembered nothing of the accident. He apparently stepped over the drop totally unaware of it. He is lucky to have survived.

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Ac: Cave in Deep Creek Canyon, Colorado **June 8, 1985**

On Saturday, June 8, six cavers were checking leads in a cliff in Jackass Canyon (Lower Deep Creek Canyon) in western Colorado. They were preparing to check a couple of holes midway down a 211-foot cliff, directly across from Twenty Pound Tick Cave. It was hot and windy and their approach had been long and difficult. One caver traversed around to the bottom to get water and act as a spotter in helping line up the rappel.

A 300-foot 11-mm regular PMI was rigged, anchored to a juniper tree, and thrown over the edge. A spotter 400 feet away along the top of the cliff could see it had hung up on a ledge 134 feet down. They had a coil of manila rope with a grappling hook attached to facilitate reaching the leads.

The first rappeller found the rope to be too far to one side of the nearest lead to attempt entry, so continued down and communicated to the top. All would descend but one, who would reposition the rope. Two more descended, one experiencing control problems on the fast rope, having to put the rope around his body to get enough friction on his carabiner/brake bar setup. Those below thought he was just fooling around.

Deb Glaser (32) came next, at about 3:30 p.m. on a double carabiner/brake bar rig. She proceeded under control at first but one third of the way down, where the drop went free, she yelled and accelerated. Essentially in free-fall, she struck her behind on a ledge 60 feet further down, then went another 80 feet to the slope at the bottom. She landed on her left foot, then over onto her back, her feet upslope.

Only her husband Roy Glaser was near, the others having gone to the stream for water. He ran over and found her trying to de-rig from the rope — "Get this thing off me!" She had a four by eight inch hole in her left shin where ends of broken bone and ripped muscle could be seen. A lot of blood was on her coveralls and the ground around. The others arrived a minute later. Her "eyelids, fingernails and lips were grey-colored." She had already moved around a bit so they did not fear spinal damage. As they moved her out of the sun she nearly fainted. One went for water, another back to the trucks to call in a helicopter and another wrapped a pack strap around her lower thigh to slow the bleeding.

After half an hour the victim complained of pain and was given the six aspirin tablets available. At 5:45 EMT's with a stretcher, medical supplies and a radio arrived. The patient was now in extreme pain. At 6 p.m. the Flight-for-Life helicopter from Denver arrived and hovered while two nurses got out and started IV's and oxygen for the victim. The chopper found a place to land one-half mile away. The victim, after first aid, was carried there in a Stokes litter. At 8:15 she was on her way to the hospital.

The victim underwent three rounds of surgery and was expected to make a 95 percent recovery in a year's time.

References:

1) Roy Glaser "Accident Report: Deep Creek Canyon" **Rocky Mountain Caving** Summer 1985, pp 31-33.
2) Debbie Glaser **Personal Communication** March 27, 1986.

Analysis: Roy Glaser cites himself for failing to give a bottom belay. Debbie Glaser names "ignorance and a failure to react to the situation correctly." She found PMI regular to "behave differently from the alpine-type ropes" she had rappelled on for the previous two years. She knew what to do but "panicked and went into shock instead."

When one rappels, they are, by the nature of the activity, on their own. One cannot expect all ropes to have similar friction in a given rappel device and one cannot expect bottom belays since this usually exposes the belayer to rockfall. If the rappel is rigged at an anchor back from the edge, one should get on and test the friction before going over. If friction is insufficient, stop immediately into the rappel and devise more friction. A rappeller should know that the friction decreases as the weight of the rope decreases, and be prepared for this. I would expect 11mm PMI regular to be slow in a double carbiner brake bar setup, but perhaps the rope was new.

It may be that Glaser's judgement was impaired by dehydration from the hot hike but she denies this, saying she drank all her water before rappelling.

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De: Bird Horror Hole, Alabama **June 8, 1985**

On June 8, a group of eight experienced cavers was in Bird Horror Hole, Jackson County, Alabama for a push trip. They came to a virgin waterfall drop and rigged it. Tina Shirk descended and found the rope to be too short. She tried to change over and ascend but "somehow her rack jammed into an ascender and could not be moved." Communication was impossible but after a time a second rope was rigged and a companion descended. He apparently got her switched over to his rope and down to the bottom. The rest descended but Shirk was suffering a bit from hypothermia so she was escorted out.

Reference: Glenn Lemasters "Bird Horror Hole — The History and Exploration". **CIG Newsletter** February 1986, p 28.

Analysis: It is great to experience a virgin pit but one should be well practiced in the vertical arts. The first person down a pit should always expect the unexpected.

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Dc: Natural Bridge of the Rogue River, Oregon **June 23, 1985**

On June 23, two girls were sitting at the edge of the Blowhole, on the Natural Bridge of the Rogue River north of Medford, Oregon. The Natural Bridge, a tourist attraction, is where the upper Rogue River enters a lava cave for some 225 feet. Even in the summer this cave is completely filled with raging water. The Blowhole is an opening from the surface into the flow of the underground river. It is flat all around the hole, which is some eight feet across, and the water level is only a couple of feet below the edge.

The girls, 12 and 19 years of age, were dangling their feet in the frothing water and remarking how similar it looked to an oversized washing machine, when the 12

year old suddenly fell in. Her companion made a grab for her but fell in also. They were immediately washed into the cave and maintained contact for a moment, then were separated. The older one soon shot out into a still pool about thirty feet away where part of the river emerges and the main bridge ends. The twelve year old came out one-eighth mile downstream in a gorge but was retrieved alive, apparently by tourists. These were the first persons ever to pass through the cave alive.

Reference: Norm Grennell, Resource Assistant, Prospect Ranger District, Rogue River National Forest **Personal Communication** October 1985.

Analysis: One must have great respect for churning, heavily flowing water. The survival of these two is a remarkable coincidence.

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FD: Madison Blue Spring, Florida **Summer 1985**

Three divers were diving in Madison Blue Spring one evening. One was suffering from a cold but had taken decongestants to clear his ears. Just inside, the primary light source of this diver failed. About 600 feet in, that diver's second light began to dim, so a partner loaned his second source and all continued. At 1200 feet they turned back. They then spread out so that they were not inter-visible.

At a necessary descent, the diver with a cold couldn't equalize pressure in his ears so continued in extreme pain. He spotted a dome and, unknown to the others, left the line and ascended the 15 feet to the ceiling hoping the air pressure change would help. He had been the middle man, but before he was ready to continue, the last diver, the reel man, swam past. The sick diver was thus left without a line and with a light too dim to signal with. Fortunately his ears had cleared and he was able to catch up. Surprisingly, he survived the dive.

Reference: Randy Bohrer "Cutting Corners" **Underwater Speleology 12**(6) October 16, 1985, p 5.

Analysis: Bohrer gives the obvious tips: "Don't cut corners on health, lights and party coherence." The sick diver was in special danger — he hadn't dived the cave before and would have had a hard time finding the way if he hadn't caught right up. It was night and no light showed from the entrance. Both companions thought everything was OK and wouldn't have missed him until too late. He had a dim light and no line.

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Bf: Donaldson/Bronson Cave, Indiana **July 1, 1985**

On Monday morning July 1, Michael Hall (25) and Roman Lazowski (24) approached Bronson Cave in Spring Hill Park near Bloomington, Indiana. It had rained steadily all night Sunday and was still raining as the two entered Bronson Cave, a stream inlet. Lazowski had been in the cave on previous occasions. They were dressed in shorts and tennis shoes and each carried a flashlight — their intention was to traverse underground to the Donaldson Cave entrance, which was the outlet for the stream entering Bronson Cave.

About halfway through they saw their first serious rapids, waist deep, which they "rode" for a few minutes. They came to a "humongous" rapids, where they tried to turn back but were prevented by the force of the flow.

They proceeded downstream but immediately lost control; Lazowski was swept downstream but grabbed a ledge and called back to Hall. Hall jumped into the water but was swept past Lazowski, "his flashlight ... sticking up out of the water ... his body went under." Hall was battered against the walls. Fortunately they were only 300 feet from the Donaldson entrance at that point and, 30 seconds later, Hall came washing out into daylight. He grabbed a railing and pulled himself out of the water. After finding his shorts which had been torn off by the force of the flow, he sought help. At a hospital he was treated for bruises, cuts and a chipped elbow.

Thinking his companion had drowned, Lazowski decided to stay put in the 54 degree cave. A few feet above the water he found a crevice with a six inch ledge. He had had survival training when a Marine and was determined to survive. On his ledge he had to constantly turn from side to side. Every once in a while he would move about but never found a stable position; he was always using something — elbows, knees, head — to hold himself in position. He yelled from time to time and was afraid to sleep — he might fall into the water or miss a rescuer. But he didn't give up. Time passed ...

Meanwhile rescuers assembled — crews of cavers and numerous emergency service personnel. Because of Hall's emergence, they knew Lazowski was near the Donaldson entrance to the system. Yet the high water discouraged entry and intermittant rain kept the levels up. A canine unit was used to search downstream from the entrance in case Lazowski had washed out unnoticed.

A party of wetsuited rescuers entered Bronson but could proceed only 600 to 800 feet before being stopped by the water flow. Early Tuesday another party entered Donaldons but could go only about 100 feet upstream, before being stopped by the current, at a place where the ceiling dropped almost to water level.

Tuesday night teams attempted to dig into Donaldson from an adjacent cave, to no avail. Another effort managed to drill into the passage from above.

Early on Wednesday rescuers in Donaldson were at the low ceiling when a light shown through brought a shout from Lazowski. The body recovery had turned back into a rescue! Lazowski was told to remain calm, conserve his energy and wait — the water was still too high. Voice contact was maintained using a bullhorn.

At around 5 p.m. Steve Collins was able to make it up through the low spot and get to Lazowski. Collins was on the other side of the stream from the victim and had to wait for a rope to be brought up. He then threw one end to Lazowski who wearily tied it to a rock on his side. As Lazowski was brought across the stream, the piton on the near side gave and both were swept away, Collins caught by the attachment on the far side, the victim by rescuers downstream.

Lazowski was fitted with a wetsuit top and helmet and hauled to the top of the crevice above the stream and passed via a tyrolean traverse to the entrance (8 p.m.). He was hospitalized for several days for hypothermia and dehydration but otherwise suffered only cuts and bruises. He had been trapped for 55 hours.

References:

1) Judith Egerton "Cave floodwaters in Indiana thwart search for missing man" **Louisville Courier-Journal** July 3, 1985, p 1.
2) Judith Egerton "Rescue teams pull Hoosier from Cave" **ibid.** July 4, 1985 p 1.
3) Judith Egerton "Man trapped in cave conquered panic just before rescue" **ibid.** July 5, 1985, p 1.
4) William Sedivy "Enlightening" **The Indianapolis Star** July 5, 1985, p 1.
5) Mark Nichols and Kitty Unthank "Caver rescued after 55 hours" **The Indianapolis Star** July 4, 1985, p 1.
6) Steve Collins "An account of Donaldson's Cave Rescue" **CIG Newsletter [Central Indiana Grotto]** August 1985, pp 110-113.
7) AP "Will to live saved ex-Marine in cave" **Indianapolis News** July 4, 1985, p 23.
8) George Dasher "Rocking Chair" **The West Virginia Caver 3**(4) August 1985, p 10.
9) Ed. "Rescuers speak with man in cave" **Indianapolis News** July 3, 1985.

Analysis: Let no one mistake the message here — Lazowski lived because he was determined to do so. With no food or water in a constantly hypothermiating situation for 55 hours and being chilled by his trip into the cave, there seems to be no physiological reason not to succumb to hypothermia. Yet he lived. Survival is not just a matter of knowing what to do, but also in being determined to do it — to persevere.

According to newsclippings, Lazowski kept his mind occupied, kept thinking 'I can't let this cave beat me." He began hallucinating and carried on a conversation with an imaginary companion, discussing the attributes of the New York and Indiana NBA draft choices. His leg "fell asleep" once and he banged on it for some time before regaining feeling. He was afraid to sleep but became very tired and must have dozed — when he did he would "wake himself and just scream — 'Help, I'm still here!'." But he never gave up.

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F: Little River Springs, Florida **September 22, 1985**

In late September two groups of divers were at Little River Springs in Florida. One was a NSS-certified group, the other, poorly equipped, was not. The NSSer's tried to warn the open-water trained group about cave diving but with little success.

The NSS group had done its dive and was decompressing when the four others entered. After a while the four surfaced and three decided to go in a second time. At "Table Rock" they realized they were low on air-gauge readings; between 400 and 900 psi. They reportedly headed out "every man for himself." At the end of the permanent line one swam up into a dome area instead of turning right to go out of the cave.

One NSS diver was still in compression in ten feet of water when he observed "an enormous silt cloud" preceding the retreating divers. One surfaced with no air, the other with 50 psi. It wasn't clear in the silt that only two had exited, but the victim party knew and one went right back in with the fourth man's tank and soon came back out with the body of the third diver.

References:

1) Ed. "Little River Drowning" **Underwater Speleology 12**(6), October 16, 1985, p 10.
2) Don Landis "Little River Drowning: an eye-witness account" **ibid. 13**(1) January 8, 1986, p 4.

Analysis: The victim group was not equipped for cave diving. They had only one light per man, didn't run a continuous guideline and didn't plan their air supply properly. Worse, they laughed at warnings.

In areas like Florida, perhaps it would be possible to make cave training part of a diver's overall certification? Landis suggests "the no-light rule for open-water divers acts as a natural deterrent, preventing penetration into a cave beyond one's ability and training."

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F: Spring Run [Patters Spring] Cave, Florida **October 3, 1985**

At 1:30 p.m. on Thursday, October 3, George Matthews (22) and John Horton entered the underwater cave at Spring Run in Washington County, Florida. Matthews was certified open water and had logged eleven dives; his companion had no experience or formal training. Neither had experience or training in cave diving. They had only one low power light and 80 cubic foot tank with no second stage regulators, each.

They penetrated 300 feet and to 80 feet in depth in very silty conditions without a guideline. They turned back, Horton signaling to Matthews to lead out. Matthews was quickly lost from sight. Horton swam "frantically" toward the entrance, frequently running into walls. He found a fixed line and followed it to a "T" junction from which the light of the entrance can be seen. He surfaced with only 500 psi in his tank.

Matthews body was located on Friday at 12:45, 249 feet in and 70 feet down, on the third recovery attempt.

References:

1) Derek Kinner "Man drowns in cave" newsclipping from Panama City, Florida newspaper.
2) Wayne McKinnon "Accident Report" unpublished, 6 pages, undated.

Analysis: Inexperienced, untrained divers, poorly equipped, extending themselves much too far.

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F: Ebro Blue Springs, Florida **October 3, 1985**

At around noon on Thursday, October 3, George Alvin Matthews (22) and a friend (22) went diving in Ebro Springs in Florida. Both had become open-water certified two months previously. They were wearing single tanks, with single regulators and had only one light each. Neither had received any cave diving training.

After 10 or 15 minutes, they were on their way out and got separated. Matthews apparently became disoriented and drowned when his air ran out. The body was later recovered by two divers from the Sheriff's rescue team from Washington County, Florida. A TV video report showed the rescue divers to be improperly cave-equipped and the victim to be equipped with snorkel, weight belt, and fins that were not taped.

Reference: John Crea "Ebro Springs Drowning" **Underwater Speleology** October 16, 1985, p 3.

Analysis: Those outside the caving community will seek adventure with poor equipment and know-how, both in air and water-filled caves. Unfortunately their mistakes cost lives and access. The Sheriff involved here spoke of closing the spring by blasting.

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Bc: W. V.'s Cave, West Virginia **October 19, 1985**

On October 19, three cavers were in W. V.'s Cave in West Virginia. They were in a large room about 350 feet below and 2,000 feet horizontally from the entrance, to check a lead at the upper end of the room where water cascades into breakdown. The room is entered via an ascent up a steep, hard, slick mud slope where footholds had been cut several years earlier.

The lead didn't go so they headed back. Mike Dyas (42) was the first going down the mud slope, "in a partially sitting position, feeling for the footsteps and intending to slowly 'crab walk' down." Just after starting, however, he lost his footing and slid rapidly down, feet first, for 100 feet. At that point the slope becomes nearly vertical, dropping a final twenty feet into a room, and Dyas was able to stop by hitting a bulge in the wall that formed the ceiling over the mud slope. He absorbed most of the force with his legs but he rebounded to the right, catching himself on the right wall with that hand, injuring his wrist.

His companions helped him down and one, a paramedic, examined him and believed the wrist to be dislocated. It was bound with strips of nylon torn from a pack. Since Dyas was not in shock and otherwise uninjured, they decided to proceed out.

The way out involved "a dozen or so dmarginally free-climbable, not-quite-vertical pitches, followed by a series of tight breakdown squeezes near the surface." Dyas had no use of this right arm but was able to get out under his own power with occasional boosts from his companions and belays or Texas ascent up the vertical places. They got out three to four hours after the accident. The wrist was found to have multiple fractures requiring a full arm cast for several weeks.

Reference: Mike Dyas "W. V.'s Cave, West Virginia" unpublished report, undated, 1 p.

Analysis: The group was fortunate to have an extra rope to use for belay on the way out. The cave stream was nearly dry so they could follow it out — a more direct route than otherwise. Dyas was lucky to have stopped his fall before the bottom, possibly avoiding worse injury.

Dyas attributes the slip to "simple carelessness and bad luck" rather than to fatigue or cold, though he admits to being "slightly damp and cold at the time." He believes he was "slightly off the 'trail' " when he started and missed the first of the footholds.

Hard mud banks offer no penetration to flailing hands or feet and must be respected when negotiated for any distance vertically. The cavers here might have used a handline but since they didn't, it is up ot them to exercise great care and exactitude in climbing the mud pitch. When you choose not to belay, you can't afford to fall. In any case my hat is always off to cavers who do a self-rescue; in this case an outside rescue would have been very difficult and drawn-out.

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AAr: Fullers Cave, West Virginia **November 28, 1985**

At around 3:45 p.m. on November 28, a group of seven cavers entered the Fullers Entrance of the Culverson Creek Cave, a 20.8 mile long system in Greenbrier County, West Virginia. In early November the eastern part of the State had received record rainfall causing extensive damage and flooding. Greenbrier County was north of the storm center but received heavy rain also. It had rained the day before. The group had intended to do Friar's Hole but because of high water had changed to a cave less likely to flood. None had been in Fullers previously.

The entrance passage is a five to eight foot wide canyon with a six to twelve inch deep stream flowing swiftly in over small, loose rock slabs. About fifty feet inside is a boulder five feet high, seven feet long, two feet wide at the top and four to five feet wide at the bottom, in the center of the passage with the stream flowing by on the left, looking in. thus the slope of the floor at that point was to the left. The route past the boulder was either walking in the stream to the left with the narrowest point being some two feet wide, or climbing over the lower slope of the rock where it neared the wall on the right. The left-hand route was thus a corridor between the vertical wall of the rock and the vertical wall of the cave.

At 3:50 p.m. three cavers passed this rock and three more were in the process — two on the left with Eric Tsakle (26) in the lead and one to the right. As Tsakle reached the center of the boulder, it suddenly tilted to the left. They tried to stop it and failed, leaving Tsakle pinned by his head in a standing position. "His left temporal area and shoulder were against the wall and his right cheekbone against the rock;" his feet were on the floor. His cap-type hard hat with chin strap was on his head but not in contact with either the rock or the wall. The boulder's in-cave edge and top hit the wall, stopping its movement with Tsakle's head in a five to six inch space, with greater space below.

One caver immediately left for help while four others futily tried to move the boulder. Then one supported Tsakle from below while three companions searched the entrance sink for something to serve as a lever. Some old truck parts failed in this regard so one caver was sent for a hydraulic auto jack; another went to call the Eastern Region Cave Rescue Network (at 4:10 p.m.).

Tsakle lost consciouness within thirty seconds of the rockfall and ceased moving after about one minute. At 3:59 John Evans, one of the victim's party, noted that Taskle's pulse was strong, he was unconscious and there was a trickle of blood from his left nostril.

At about 4:20 the hydraulic jack arrived and with this and crowbars they were able to move the boulder... Tsakle was carefully moved to the first dry spot, about twenty feet away, and CPR was begun. The Renick Rescue Squad arrived and a paramedic took over CPR at 4:29. Tsakle was evacuated by stretcher at 5:25 and reached a hospital by ambulance at 6:02. Enroute IV's were established and cardiac drugs administered, without success. He was pronounced dead at 6:05 p.m.

References:

1) Jerry Kyle "Caving Accident in Fullers Cave" undated, 3 pp.
2) AP "Boulder Kills Man Inside Cave" **The Inter-Mountain** (Elkins, WV) December 3, 1985.
3) George Dasher **Personal Communication** January 12, 1986, 2 pp.
4) John Evans "Accident at Fuller Cave" **NSS News** February 1986, p 40; also in

Massachusetts Caver 3(5) November-December 1985, p 3.
5) Bob Warshaw "Fatal Accident in Fullers Cave, WV" **Massachusetts Caver 3**(5) November-December 1985, p 4-5.

Analysis: Eric Tsakle was killed in one of those accidents over which one has little control — he was apparently in the wrong place at a particular instant of time. His companions, courageous in working under a now obviously unstable boulder, did everything they could; this had to be heartbreaking for them. Cave rescuers were very fast onto the scene, to no avail.

In the shining light of hindsight, there is perhaps something meaningful to note. To paraphrase John Evans, caves should never be regarded as stable and unchangable; the recent flooding would certainly leave its mark on a cave. New instabilities should be expected. The safer caver will be one who expects the unexpected. If it were in any way apparent that a boulder could move, and if so would move to the left, then the caver who chose to pass it on the right would be the safer caver. In this case, no caver noticed any instability.

The boulder in this case was very massive and probably no helmet would have saved Tsakle. A skull can be fractured by much less weight, however, and cavers should be encouraged to use helmets with strength in all directions — it could save your life.

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F: Ponce de Leon Springs, Florida **December 29, 1985**

On Sunday, December 29 a group of three divers entered Ponce de Leon Springs in Volusia County, Florida. Only two were able to squeeze past the gate, however, and the other had to turn back. The two did not return. They were found later by NSS-CDS divers some 150 feet past the gate.

Reference: Ed. "Double Drowning at Ponce de Leon Springs" **Underwater Speleology 13**(1), January 8, 1986, p 3.

Analysis: The divers reportedly had less than the bare minimum of equipment for even open-water diving.

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ADDITIONAL INCIDENTS:

De: Lookout Mountain Caverns, Tennessee **December 9, 1984**

Nine cavers entered the cave via a new elevator, getting off at the Lookout Mountain Caverns level at -420 feet. When they returned three hours later, they were informed by intercom that the elevator was out of order. The natural entrance had been sealed off by construction so a twenty minute wait was necessary for the elevator problems to be corrected. (Gary Soule, **Personal Communication** December 23, 1984).

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DI: Mammoth Cave System, Kentucky **August 1984**

Two cavers attempted the near-sump at the upstream end of Logsdon River in the Roppel Section of Mammoth. In the 30 foot wide passage the ceiling comes very close to the water surface as far as one can see. The cavers worked their way along to only one and a half inches of air space but could find no way to continue. One lost his way in the wide, featureless pool and exited the wrong way. He reached no air space, then a mud bank which told him which way to go. It was a close call indeed. They decided that such sump pushing was close enough to real cave diving to demand cave diving safety practices, such as a line to define their route. (Ed. "Low Air Space Adventures" **CKKC Newsletter** Spring-Summer 1985).

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Bx: Lon Odell Memorial Cave, Missouri **Winter, 1985**

A caver, exhausted from other struggles in the cave was unable to climb the fifty foot entrance pit cable ladder. She was pulled up with the belay rope tied around her waist. There were numerous delays due to the pain of the rope or when she became caught in the narrow cleft of the upper 25 feet of the drop. (Jon Beard, Trip Report, **Ozarks Underground** Winter, 1985).

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De: Unnamed Pit, Tennessee[?] **February 6, 1985**

A caver was climbing a free 160 foot pit using a Mitchell rig (high and low Jumars with a Gossett box). One hundred feet up his lower Jumar sling came untied. He was suspended from his other Jumar, whose sling was badly worn! Fortunately he had a third Jumar which he rapidly applied. The sling re-tied, he continued up.

Note that when you tie up a vertical rig, you should wet the knots and apply stress to "set" the knot. A knot properly set should not come untied. Some knots do not set well, however, and some sling rope is too stiff to allow setting. In this case one can fasten the loose ends to prevent untying. As this caver (Johnson) points out: always wear chicken loops, always inspect your gear before using it, and a Mitchell isn't really complete unless the ascenders are safetied to a seat harness. (Larry Johnson **Personal Communication** undated).

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De: Dante's Descent, Arizona **February 24, 1985**

On a trip to Dante's Descent, two ropes were used and two cavers ascended each. A pad protected an obvious abrasion point. When the ropes were hauled up one had a large hole in the sheath through which the core protruded. It had been noticed that this fray was occurring just below the pad. It is surmised the "bouncing" during ascent caused the pad to move up and down with the "bounce," thus exposing the rope to the abrasion point. Much apparently unavoidable rockfall was also experienced.

Two thoughts: Some abrasion points are best handled with a hammer; that is, take a hammer and dull a sharp edge. Second, it is perhaps most efficient to set up a rhythmic "bounce" as you ascend, but it is definitely a potentially dangerous thing to do. The "bounce" can be damped if you think about it and break your rhythm. (Barbara am Ende **Personal Communication** undated).

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Dr: Mushroom Cave, Missouri **March 9, 1985**

On a survey trip, Tim Harrison had a close call when a 300 pound boulder moved onto his foot. Fortunately no bones were broken. (**MSS Liaison** May, 1985).

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Df: Mill Creek Cave, Tennessee **March 1985**

Two cavers entered Mill Creek Cave on an overcast day. Two hours later they returned to the entrance room to find the entrance sumped. They had a 19 hour wait for the flood to recede enough to allow them to exit. (**Speleonews** June 1985, p 59).

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Df: Sotano San Agustin, Oaxaca, Mexico **April 1985**

On a long day trip into Sotano San Agustin a group ran into flooding conditions while trying to exit. Three cavers of the group had to wait for nine and a half hours for the flood to recede before proceeding. The trip out was made through high water conditions. (Keith Goggin "News from Huautla" **Carbide Dump [Blue Ridge Grotto] 20**(2), May 1985, p 46).

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DI: Cueva de Rio Talgua, Department of Olancha, Honduras **April 14, 1985**

A group of Peace Corps volunteers decided to go caving after attending a wedding. The thirteen cavers had eight flashlights. They explored the cave for some time but when they exited, there were only twelve. They re-entered and found the missing caver asleep at the back of the cave. Alcohol may have had something to do with this. (Larry Cohen **Personal Communication** April 25, 1985).

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Dc: Buckner's Cave, Indiana **April 27, 1985**

A group including a number of 14 - 16 year olds were approaching the Volcano Room in Buckner's when four of the kids started to run up the ledge at the top of the Volcano. One failed to see a drop and ran off it, falling 6 to 8 feet and rolling down the gravel slope below. He was unhurt. (Jonathan Genmick "Caving With Pathfinders" **The Underground Movement 2**(3), April 1985).

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Cc: Un-named Ice Cave, California **May 1985**

While exploring a lava tube ice cave a caver declined to wear gloves "because they interfered with her grip." She slipped on the ice and sustained a serious gash on a hand. It was pointed out that a hand injury can be permanently crippling if nerves or tendons are severed. (Ed. "Disaster of the Month" **SFBC Newsletter** March, 1986).

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Dr: Wayne's Lost Cave, Indiana **May 11, 1985**

A group of five cavers was exploring in Wayne's Lost Cave near Bloomington, Indiana. In the RPI passage, one caver began a five foot climb over a breakdown slab; another caver, Jeff Woolever (30), began to traverse a narrow walking height crevice beneath this slab. Suddenly the upper caver dislodged a 200 to 250 pound rock which fell five feet, striking Woolever on the left thigh, knocking him to the wall. He was carried to a flat area and checked for injury. After a short recovery, he left the cave under his own power. (Dave Green "Accident Report" January 2, 1986, 2 pp.).

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Ac: Norman Cave, West Virginia **May 1985**

On the Sunday of Memorial Day weekend a group had just entered Norman Cave, Greenbrier County, West Virginia when a caver fell from the top of the Waterfall, injuring his elbow. He was assisted back out of the cave. (George Dasher "Rocking Chair" **The West Virginia Caver 3**(4) August 1985, p 10).

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Bl: Cave near San Antonio, Texas **June 1985**

Three kids found a cave about five miles north of San Antonio and, inspired by the movie "Goonies," headed in to find treasure. They were unable to get out and after one of their mothers alerted authorities, the kids were rescued by cavers. (Editorial **Texas Caver** August 1985).

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B: Indian Grave Point Cave, Tennessee **June 11, 1985**

On Tuesday, June 11, three cavers entered Indian Grave Point Cave in DeKalb County, Tennessee. Previous to this, one of the group, David Warner (19) had injured an arm. After caving for a while, the injured arm lost some of its function and Warner was unable to proceed over breakdown and up handlines. His companions found their way out and reported Warner's predicament to the Sheriff. Unfortunately they were unfamiliar with the cave and could not lead the authorities to Warner. Cavers were able to question the two and guess the appropriate part of the cave to search. Sure enough, Warner was found in the Schoolhouse Passage and assisted out of the cave. (DeKalb County Sheriff's Office, Smithville, TN, "Accident Report" undated).

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Dr: Vinegar Ridge Cave, Kentucky **June 1985**

While exiting after pushing a new lead, one caver was traversing a canyon floored with large breakdown when the floor decided to settle. The caver stayed on top of the descending pile and was unhurt. Later a caver was at the top of a pit, ascending and just going over the lip when a rock dislodged. This was not noticed by the climber, but it struck a companion who was at the bottom on the opposite side of the pit, adjusting her seat harness. She was hit on the top of the helmet (Joe Brown) and knocked down but not injured. (Carol Veseley **The Explorer [So. Calif. Grotto]** September 1985, p 107).

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De: Hall's Pit, Kentucky **June 28, 1985**

At a 25 foot pit the rope was rigged to a pillar of limestone about ten inches square and twenty inches high, three feet off the floor. The first caver to descend pulled on the rope, tied to this, with all his weight. It seemed secure. When he rigged in for rappel and leaned back over the edge of the drop, he paused and still it looked OK. When he took a step downward, the top of the pillar began to tip, a companion yelled "Stop!"; and the rigging point fell apart. The rappeller reacted instantly, throwing out his arms and catching himnself at the edge on his elbows. He scrambled to safety. (Jay Arnold "A Simple Little Caving Trip" **D. C. Speleograph** August 1985, p 11).

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De: Soldier's Cave, California **Summer 1985**

On a trip to Soldier's Cave two incidents occurred. First, a four D-cell battery pack became too hot to touch when the new cells leaked and shorted out. Battery fluid got on the caver's clothes and caused a burn. the second was on the ascent of the 70 foot pit when a homemade chest box popped open and in the process, abraded the webbing attached to an ascender completely through. The box was similar to a double Simmons roller — pull a quick release pin and the rollers are free and the slings or rope come out the front. in this case it appears the roller on the webbing side did not fit its slot and the edge of the webbing was able to work into the gap, abrading itself and pushing the pin out. Webbing is not a good item where abrasion is concerned, since it is woven (all strands come to the surface) and loses its strength quickly with abrasion. Better to use static kernmantle. (Carol Veseley "Soldier's Cave: Two close calls on our first grotto trip" **Better Caves and Sinkholes [Santa Barbara Underground Grotto]** Summer 1985 p 7-8).

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Dr: Devil's Hole, Missouri **July 7, 1985**

On July 7 two cavers were doing Devil's Hole in southwest Missouri. When rigged, the rope lay in a narrow fissure about 90 feet above the bottom. The more experienced caver ascended first and got off the rope onto a two foot wide ledge just above the narrow place to help the other if he needed it. His companion needed no help, however, and so was instructed to proceed up. When he got 25 feet higher he dislodged a football-sized rock. This was not noticed by the climber so no warning shout was made. The rock grazed the face of the caver on the ledge, hit the Jumar on his chest and landed partly on one foot before continuing down the pit. There was no injury. As Stock points out: 1) The caver on the ledge should have been attached to the rope, 2) The climber should have been more aware, and 3) When you are caving with someone you can't depend on, you might be safer caving alone. I would emphasize that when you have to climb above a companion who can't get out of your rockfall path, you simply cannot allow rocks to dislodge. If you see it will occur no matter what you do, then you must stop and warn him. (Mark Stock **"Personal Communication"** July 15, 1985).

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Cc: Thornhill Cave, Kentucky **July 20, 1985**

A group of five cavers was in Thornhill Cave with the objective of surveying when Paul Weierbach slipped in a particularly muddy spot, fell backward and landed on one hand, injuring his wrist. They decided it was broken so he was accompanied out of the cave. It was broken. (Fort Knox Grotto **Low Crawler** August 1985).

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Dr: Bad Medicine Cave, Wyoming **July 29, 1985**

While pushing an upstream boulder choke, a large rockfall occurred nearly crushing one caver. **(The Explorer [So. Calif. Grotto] September 1985, p 108].**

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Bl: Avondale Cave, Alabama **August 1985**

In August two teenagers were in Avondale Cave and became lost. They apparently were expected back and were reported overdue to authorities. Cavers arrived and soon located the boys who had been in the cave some five hours. (Ed. "Trip Reports" **Birmingham Grotto Newsletter** September, 1985).

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Ci: Rimstone River Cave, Missouri **August 3, 1985**

A group spent 16 hours in Rimstone River Cave, Perry County, Missouri on August 3. During the trip they discovered they had been in water just downstream of a decaying dead deer. For one caver, at least, this included a duckunder requiring getting one ear in the contaminated water. After arriving home, this caver found he had a scrape on the shin. The next morning it was badly infected. He also had an ear infection and "dermatomycosis," and was on antibiotics for five weeks. A companion on that trip had a similar infection of his left arm from the two small cuts on his left hand and was on antibiotics for four weeks. Shin infections are especially nasty since the bone is near the surface and circulation is poor. (Jack White **Egyptian Echo [Little Egypt Student Grotto]** Fall 1985).

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Do: Mueller Pit, Missouri **August 4, 1985**

On August 4 a group of cavers explored a pit (Mueller Pit?) near Apple Creek in Perry County, Missouri. The 82 foot pit proved to have only a short section of sluggish stream at the bottom—and very bad air. One caver descended and waited at the bottom of the drop for several minutes. He then walked down a slight slope to the stream and became so breathless "it was a struggle to get to the rope only twelve feet away." He had detached his vertical gear and yelled up to send down cable ladders since he was having trouble getting on rope. Before this could be done, however, he got on rope and started up, breathing very hard. He made it up. The air in the pit was still, with no odor and no accumulation of organic debris; the stream enters via a sump. (Stan Sides **Personal Communication** September 30, 1985; "Middle Mississippi Grotto" **MSS Liaison 25**(9) September 1985, p 57).

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Dr: Fulford Cave, Colorado **August 11, 1985**

On Sunday, August 11, a group of cavers entered Fulford Cave in Colorado. At about 3 p.m. the entrance which had been dug open and timbered in 1892 by a miner, collapsed. Fortunately there is another entrance, requiring a 12 foot drop. This was rigged shortly after and the group exited without further incident. (Ed. "Fulford Cave Entrance Collapses" **Caving in the Rockies** Fall 1985).

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Df: Mosby Cave, Missouri **August 17, 1985**

A group of three cavers went to map in Mosby Cave, Clay County, Missouri during wet weather. The sinkhole entrance was entered but it was apparently obvious that the cave was flooding. The entrance "snapped shut" five minutes after they retreated. (**MSS Liaison 25**(12) December 1985, p 77).

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FDh: Simmons Mingo Cave, West Virginia **August 24, 1985**

A group of three divers, supported by three cavers, was in Simmons Mingo Cave, Randolf County, West Virginia. they entered via the relatively new Stan's Blowing Rock Entrance which leads down a 90 foot pit but fairly directly to the upstream sump of the Canadian River. At the turnaround point of the 15 minute dive, the diver with the line could not find a good tie-off and so cut the line without tieing it off. This was apparently induced by hypothermia — since the water was flowing back toward the start, the line followed the diver back. Also, stirred up silt put visibility to nothing so the diver had to hand-over-hand back. Twenty feet from the start he was so tangled in the dive line he had to be cut free by a companion. He had dropped his knife. When he emerged he was shaking from cold, though he had been wearing a 1/4-inch wet suit. (Ron Simmons "Upstream Dive in the Underground Dry Branch" **Ground Hog [Shenandoah Va. Grotto]** January 1986).

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De: Polygamy's End Cave, Utah **September 7, 1985**

Four cavers bottomed this cave as practice for a trip to Neff's Canyon. On the way out, one caver was on the first and longest drop when she noticed the strap for the foot Gibbs of her 3-Gibbs rope-walker setup was coming undone. The rig was new for that trip and was poorly adjusted; the knee ascender wasn't pulling up smoothly and the shoulder ascender was too loose, requiring the use of her arms to remain upright. At one point, while checking her foot Gibbs, she nearly went upside-down. Two were already up that drop and aided her ascent by pulling on the rope. The rig was adjusted and she proceeded out without serious problems. Rockfall was experienced on other drops. As she says, "Test your equipment before using it in a cave." (Jean Cassidy "Sweating, Shivering in Polygamy's End" **Wasatch Grotto News** Autumn 1985, p 20).

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Bl: Airman's Cave, Texas **September 6, 1985**

At about 4 p.m. on Saturday, September 6, Bart Hudson (25) and David Hopingardner (24) entered Airman's Cave on Barton Creek near Austin, Texas. They only planned on a short visit but became lost. When they hadn't returned that evening their wives notified the authorities who contacted Bill Russell, the mapper of the cave. They were found thirty feet from the entrance, still lost, about 2 a.m. Sunday. (Jay Jorden "Dispatches" **Habla la Abuela del Oztotl** Fall, 1985, p 5).

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Cr: Kingston Saltpeter Cave, Georgia **September 13, 1985**

While working on a breakdown blockage of a long-closed passage in Kingston Saltpeter Cave, Barton County, Georgia, Karl Sneed (13) suffered a smashed finger. He was able to leave this easy cave under his own power. (Joel Sneed **Personal Communication** undated).

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C: Sullivan's Cave, Indiana **September 1985**

A caver in a large novice group was apparently injured in some way and was escorted from the cave. (**Michiana Caver [N. Indiana Grotto]** November 1985, p 75).

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Bc: Thunder River Cave, Arizona **September 1985**

On Labor Day weekend a group of cavers was attempting to push upstream in thunder River Cave in the Grand Canyon. As they exited, they were taking photos. At a turbulent narrow chute where two streams come together, a caver was asked to pose straddling the whitewater. The caver slipped and immediately was sucked under. She appeared five seconds later, five feet downstream and was pulled out. A handline was rigged for the others. (Dave Bunnell **The Explorer [So. Calif. Grotto]** October 1985, p 129).

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AAr: Shelter Cave, Nebraska **September 1985**

In September five youths were camping in a shelter cave (that was reportedly man-made) near the Platte River south of Omaha. A slab of ceiling collapsed crushing Michael Wiles (12), Mark Wiles (18) and David Funkhauser (17). The collapse was attributed to seepage of groundwater, or the heat from a campfire the boys had used. (**Weekly World News** October 1, 1985).

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FDe: Tyson Spring Cave, Minnesota **September 15, 1985**

While on a trip to dive the first and second sumps a crew was in the first sump when a faulty bouyancy compensator (BC) inflated forcing a diver to the roof of the passage. Debris had lodged in the mechanism. Almost simultaneously one of his regulators began to free-flow (uncontrolled release of air). While getting the regulator under control, the mouthpiece slipped out of his mouth and replacement was difficult with the BC pushing into his face. (Steve Porter "Tyson Spring Cave Project" **Minnesota Speleology Monthly** January 1986).

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Drc: Cricket Cave, West Virginia **September 21, 1985**

September 21 saw a trip into Cricket that completed the survey of a cave from which "rescue ... would be virtually impossible." Thirteen cavers participated in the last three trips — four falls were taken, several cavers had a very hard time with the waterfall climb, one caver was pinned, three had ledges crumble under them in canyon traverses, there was one carbide explosion, but only one minor injury received medical attention ... Naturally. (Tom Spina "I remember Cricket" **The West Virginia Caver 3**(6) December 1985, p 3).

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Cc: Leigh Cave, New Jersey **Fall 1985**

A group of eight cavers entered Leigh Cave in New Jersey. Helen Fujii, the third person to go in was unfamiliar with the cave and, unaware, got over the edge of a pit just inside the entrance and slid to the bottom. She sustained bruises on one leg and a cut on her cheek which required a stitch to close. (Ron Latigano "Report on the Leigh Cave Accident" **Met Grotto News** Nov-Dec 1985, 35(6), p 23).

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Br: Streamway Cave, California **October 8, 1985**

A caver was attempting to descend through the breakdown floor of a canyon passagea, when a slab six feet by three by three suddenly slid onto him as he sat on another boulder. He managed to hold the slab with his legs while companions passed him rocks to use to jam the large slab in place. He was then able to crawl from beneath it. It had begun to compress his breathing when he stabilized it. (Mark Fritzke **Personal Communication** October 8, 1985).

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Dr: Rock Shelter Pit, Alabama **October 12, 1985**

A group of cavers descended Rock Shelter Pit on Lookout Mountain. Two ascended and were off rope. Another was getting ready to go and talking to a nearby companion when they heard rock sounds. The caver not on rope yelled rock and took a step backward when an 18 by 18 inch rock struck his forward foot causing a bad contusion to his large toe. An 18 by 30 inch rock hit next to the caver on rope, severing the excess rope. They continued without further incident. (Tom Mook "Incident at Rock Shleter Pit" unpublished report, October 31, 1985).

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Dc: Newcastle Murder Hole, Virginia **October 13, 1985**

On October 13, a group of five cavers entered Newcastle Murder Hole in Craig County, Virginia. At the Elevator Pit they ascended via the Nasal Passage. Dan Leghini, an experienced rock climber, went last. He did not appear and soon they heard the sound of a fall. They called with no response. They descended to find that

he had taken a 25 foot fall down the smooth tube to a chockstone above more drop. He had failed to answer because their question had been "Are you OK?", and he wasn't sure. He was uninjured and continued. (Alex Sproul "Trip Reports" **RASS Register** December 1985, p 3).

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Dc: Acme Quarry Cave, West Virginia **October 20, 1985**

A group of six cavers was in Acme Quarry Cave, Greenbrier County, West Virginia on October 20. Three waited at a climbdown while the others continued. At a descending, unmapped stream canyon, they proceeded to a 15 foot waterfall drop. It was unmapped beyond and since one of the three didn't want to see (scoop) it until he was prepared to map it, he and one other turned back, returning to the climb-down. The third caver, now alone, found a bypass to the drop and continued to where the canyon leveled out. He started back, saw a high lead and tried to climb up to it. He fell eight feet but was not hurt and "limped" back to the group. The mapper, while waiting had been heard to remark: "If we have to go after him, we'll map as we go!"

On the way out, another of the group suffered cramps from dehydration. A companion carried his camera box while he struggled out. (Bob Alderson **Carbide Dump [Blue Ridge Grotto] 20**(11) November 1985, p 78).

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Cc: Organ Cave, West Virginia **October 25, 1985**

Five cavers entered the Lipp's Entrance to Organ Cave, Greenbrier County, West Virginia at around 6 p.m. on Saturday, October 25, their second trip that day. Somewhere past the Maze, Danny Barber "lost his balance and fell approximately 20 feet," twisting a knee. They left the cave with no further incident. (Betty McCauley, Trip Report in **RASS Register** December 1985, p 4).

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Cr: Parks Ranch Cave, New Mexico **November 2, 1985**

On November 2, five cavers entered Parks Ranch Cave, Eddy County, New Mexico. This was to be an easy introductory trip for four of the group. At the "overunders" section, the leader, Dave Belski (48) was climbing above the rest. He reached up and "grabbed a large rock for a handhold." It moved so he held on to keep it from falling on those below. When it came loose it smashed his hand into the wall hard enough to badly cut two fingers. He was escorted from the cave and treated at a hospital emergency room — five or six stitches closed the cuts. (Dave Belski "Parks Ranch Cave" trip report in **Southwestern Cavers 11** December 1985.)

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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.

National Speleological Society
Cave Avenue
Huntsville, Alabama 35810