

February 2010, Part 2

# NSS News



## *American Caving Accidents 2007-2008*

**American Caving Accidents**

2007-2008

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**Front Cover**

**Matt Covington's lead climb into virgin passage in Lechuguilla Cave. moments before the accident. Photograph Copyright © 2008, Peter Bosted.**

**Back Cover**

**Top: Matt Covington at the top of the Liberty Bell pitch during the self rescue. Photograph Copyright © 2008, Shawn Thomas**

**Lower: X-ray of Matt Covington's arm after pin and screw placements. Staples show in lower Xray. Photograph Copyright © 2008, Matt Covington.**

# Caver Input and American Caving Accident Incidents

Ray Keeler

Welcome to another issue of *American Caving Accidents*. The intent of the publication is to inform, educate and promote safe caving. A primary, contributing portion of this publication is with caver input. After all, those people reading this now, are part of the most organized caver communications network in North America. To this group, I would like to offer two concepts and request your activism and input.

First, several of the incidents reported in this issue were summarized based on public news media accounts when no caver input was available. Later, when the cavers involved either sent in reports or were contacted for additional information, the summaries were substantially corrected to more accurately reflect the events that took place. Please, submit incident information. The online form can be found at <http://www.caves.org/pub/aca/acaform.html>. It is not enough to assume someone else will take care of reporting the accident or incident. Your perspective is important.

Also included in this category, would be sending an email to [aca@caves.org](mailto:aca@caves.org) with information you have heard. I usually write back asking to whom contact should be made for additional data. The Cave Rescue Forum on *CaveChat* on the NSS web page is also an excellent media for better understanding the events.

*CaveChat* is at <http://www.forums.caves.org/>

Second, please do not be embarrassed about writing up and sending in your own incident report. We all make mistakes and we all learn about this activity called caving. Some cavers have told me about incidents that would be very useful to relay to the general community, but were unenthused about actually sitting down and writing about the event.

I have found that in taking the time to put these events onto paper (or into the computer), I learn so much more about the sequences of events, the causes, and things that could have been done to better the outcome.

## An Overview of the 2007 and 2008 Incidents

*American Caving Accidents (ACA)* is the journal of record for caving accidents and safety incidents in North America. This issue contains reports for incidents that occurred in 2007 and 2008. Following the custom of previous issues, the reports have been separated into two general categories: regular caving and cave diving, and then further classified by result or outcome and by causes and contributing factors. The cave diving incidents are grouped separately, and an overview is presented at the end of this section.

Since 1994, we have used the category "difficulty on rope" to encompass such problems as becoming stuck at the lip of a pit, clothing or hair caught in the rappel device, jammed rappel safety, or simply becoming unable to ascend or descend. Our intent is to better describe these situations, which might otherwise be lumped under "stuck", "trapped and/or stranded", or perhaps "equipment problem".

In reporting the number of incidents versus NSS membership totals, only caving incidents involving fatalities, injury, or aid were included. The reader should also be aware that the members of the National Speleological Society constitute only a portion of the population of active cavers. Further, not all incidents are reported to ACA. Therefore, these numbers should not be considered reliable indicators of accident rates for caving or used to draw conclusions about the relative degree of risk or danger involved in caving.

Caving-Related Incidents are grouped separately from Caving Incidents based on two primary criteria. First, if the incident location was reported as a cave when in actuality it is not a cave, then the incident is reported as caving-related. Examples are mines and rock shelters. Second, if the person did not intentionally enter the cave or go to see the cave, then it is a caving-related incident. For example, if the person was working near an entrance and something happened to cause an incident, then it is Caving Related. There are two of these in this issue.

### NSS Membership and Number of Incidents

Year	Members	Incidents
1986	6741	45
1987	7203	48
1988	7873	49
1989	8514	51
1990	9028	55
1991	9777	54
1992	10492	60
1993	11164	64
1994	11460	57
1995	11836	44
1996	11140	43
1997	11470	43
1998	11685	32
1999	12098	44
2000	11773	40
2001	11967	34
2002	12261	31
2003	12264	35
2004	12020	23
2005	11658	26
2006	11664	36
2007	11552	26
2008	11651	22

Only incidents resulting in aid, injury, or fatality are included. Membership figures include all classes of membership.

However, if the person intentionally went to look at the cave entrance and the person fell in, then this is a Caving Incident.

## Incident Results

### Cell Phones

Two incidents in 2007 and 2008 involving cell phone calls from 1000 feet underground (Longhorn Quarry, TX, caving related) or the bottom of an open air pit (Brewers Pit, NM) provided substantially different outcomes than if the cell phone calls had not connected. It has been common knowledge that cell phones do not work underground. However, in the Longhorn Quarry incident, the youths, while lost in the quarry's maze, stumbled on a place where they were able to make a connection and call out for help. One possibility for this is that, being a quarry, wiring for lights and communication may have been placed and the youths came upon one of these locations.

The Brewers Pit incident is truly amazing. The three young men did not tell anyone where they were going or when they would be back. Their vehicle was parked on a dirt backroad in the El Malpais wilderness, some 30 miles from anywhere, and the pit was over a mile from the car. To further complicate a search effort, if the vehicle had been found without the cell phone connection, there are dozens of cave and pit entrances within a one mile radius of the vehicle. After losing their only ascender in a crevice the men were able to call for help while standing on the breakdown pile at the bottom of the pit. The call basically saved their lives.

### Fatalities

On average, there are three or four fatal, non-cave diving accidents in North America each year. When incidents involving untrained and inadequately equipped spelunkers<sup>1</sup> are excluded, the average drops to one or two fatal accidents per year.

There were five reported non diving fatalities in 2007 and 2008, and four caving-related fatalities. Only two of these involved cavers with experience.

The fatalities included someone swimming into a low air space until there was no air space (Deadman's Cave), a tourist being killed by rockfall while on a tourist trail in Rio Camuy, Puerto Rico, a tourist on an underground tubing trip drowning in a cave in Belize, a medical emergency in Fort Stanton Cave, and a pot hunter whose in-cave trench collapsed on him in Kentucky.

The caving related incidents include a farmer who was killed when he fell into a pit while clearing weeds on his farm in Vera Cruz, Mexico. Also, a man living in No Name Tunnel in Colorado died of unknown causes, and a woman who had been drinking drowned while swimming in Wayne's World in Florida. A diver in a submerged mine died of a medical issue.

There were five cave diving fatalities in 2007 and six fatalities in 2008. All were in Florida.

Including the caving related incidents, these total up to 20 deaths over the two-year period, which is not a good way for caves to be mentioned in the news media.

### Injury and Aid

Incidents in this category resulted in injury to one or more people, who then required help from others to exit the cave besides the group's members. While many of these incidents involved rescue call-outs and outside assistance, others were resolved by the cavers themselves without calling for rescue.

Caver fall incidents (16) were the primary cause of injury and aid rescues in 2007 and 2008. No deaths resulted in the falls. At least three falls resulted in the caver becoming trapped and requiring extrication.

With the thousands of trips each year and the wet and sometimes slippery conditions, it is inevitable that slips and falls will happen. Ten trips are in this category, including Simmons-Mingo Cave, Coon Cave, Fitton Cave, Pryor Spring Cave, Sharps Cave, Anderson Spring Cave, Organ Cave, Cueva El Gran Plano, Falls Cliff Cave, and Lava River Cave. The four day Cueva El Gran Plano rescue drew international attention.

However, some of the falls in 2007 and 2008 were due to very poor decisions. A spelunker fell while hand-over-handing down a rope in Turtle Graveyard Cave when his dry-rotted rope broke. Other incidents occurred when the person fell while holding a flashlight in their hand, contributing to that person being unable to react adequately to the situation.

Further poor decisions including not wearing helmets increased the injury and aid statistics with the two unnamed cave incidents in Iowa on the same day.

The other injury and aid incident of note was the ice cave collapse in Washington near Snoqualmie Pass, where two teenagers went into the walking-sized entrance and the ice cave collapsed on them about 20 feet in.

### Aid, No Injury

Most incidents in this category are rescues of individuals that cavers often refer to as "spelunkers", those who are typically poorly equipped and inexperienced, and are often stranded when they break or lose their flashlights, run out of batteries, descend pits hand-over-hand, or get lost. Sometimes, however, even experienced and properly equipped cavers fall ill and need assistance, or are trapped by rock-fall or flooded passage.

There were 16 aid with no injury trips in 2007 and 2008. Two of these were due to off-season ice plugs discovered while doing

<sup>1</sup> In the US, "cavers" generally consider "spelunkers" to be people who have no real knowledge or understanding of caves and caving safety, but who decide to enter a cave anyway, usually without proper equipment.

through trips in the Fossil Mountain Ice Cave to Wind Cave traverse. The rest were an assortment of groups that were lost, stranded with inadequate equipment, difficulty on rope, exhaustion, or trapped in tight passage. The distribution between cavers and spelunkers was about even with eight caver and seven spelunker incidents.

#### **Injury, No Aid**

These incidents resulted in injuries ranging from scrapes and bruises to sprained ankles and broken legs. In each case, the victim was able to exit the cave with minimal assistance from members of the caving party. Nine incidents are in this group, four incidents from rock-fall and four incidents from caver fall. The ninth incident came from someone injuring their knee in Wayne's Cave.

The self rescue in Lechuguilla due to the climbing protection blowing out was a significant effort by the team.

#### **No Consequence**

These incidents are typically of the "near miss" category. They are included so that the reader will be aware of the many things that can go wrong on a caving trip. Examples include carabiners or maillon links coming unscrewed while on rope, rock-fall incidents and passage collapses not resulting in injury or requiring aid, and individuals or groups who become lost or stranded, but who are eventually able to find their way out or resolve their difficulties without assistance.

There were three reports in 2007 and 2008. These included difficulty on rope in Indian Rock Cave, rigging blowing out in Ain't Barbwire Cave, and discovering old dynamite in Crystal Cave.

## **Incident Types**

#### **Acetelyne-related**

No burns, explosions, or other acetylene-related incidents were reported for 2007-08. It may be that the wide availability of affordable, high-quality electric headlamps has largely displaced carbide lights in U.S. caving.

#### **Bad Air**

None of the caving accidents and incidents reported in this issue involved bad air. However, bad air may have been a contributing factor to the Deadman's Cave drowning.

To learn more about the dangers and signs of bad air in caves, see Bill Mixon's article in the April 2000 ACA, and Bill Elliott's article in the December, 1997 ACA.

#### **Caver Fall**

Falls remain the leading type of safety incident or accident in caving, accounting for a large proportion of reported injuries and rescues. Twenty two of the reported incidents for 2007 and 2008 involved falls. The falls included both cavers and spelunkers. Many of the incidents could have been prevented by the use of a belay. Cavers should consider using a belay whenever the exposure of a climb or traverse is greater than a body length, and a belay should always be used when climbing or descending a cable ladder.

Cavers also fall on occasion while moving through "horizontal" passages, accounting for a number of accidents reported in this issue. Cavers can reduce the risk of falls by wearing sturdy boots

with lug soles and maintaining "three points of contact" while moving through uneven terrain.

#### **Difficulty on Rope or Ladder**

This category includes cavers who become stranded on rope and require assistance, or who experience significant difficulties and require assistance to complete their ascent or descent. The Indian Rock Cave and Malloy's Waterfall Cave incidents are included here. In the Coon Cave incident, a slip while rappelling caused the person pass out and fall, thus is listed in caver fall.

Cavers involved in these incidents are often relatively inexperienced and sometimes unfamiliar with their gear. Others may be experienced cavers who are simply out of practice or out of shape. Some incidents occur when cavers are unable to deal with situations such as crossing the lip of a pit with weight on the rope below, crossing an undercut or overhanging lip, changing from rappel to ascent and vice versa, or climbing a cable ladder.

Competent cavers must master their systems and know how their equipment works. With practice, skilled cavers can perform a change-over in less than 60 seconds. Spend time practicing; it could save your life.

#### **Drowning**

Drowning incidents are infrequent in "dry caving," but have occurred when cavers became trapped by flooding or when they attempted to free-dive through sumped passages. One caver drowned while trying to find a water blockage in Deadman's Cave. A second person drowned during a high adventure tourist trip in Belize.

#### **Equipment Problem**

This catch-all category includes rigging failures, slipping ascenders, light failure, rope failure, and misuse or lack of equipment. There were six reported incidents of this type for 2007 and 2008. In the Turtle Graveyard incident, the person was hand-over-handing down a dry-rotted vanilla tow rope when it broke. The Pryor Spring incident resulted in knot pulling through a rappel ring.

#### **Exhaustion**

Exhaustion is a contributing factor in a wide variety of incidents in 2006. Cavers became exhausted while climbing on rope, trying to correct problems on rope, and on long trips. Exhaustion affects the decision-making process and often leads to incidents that are reported in other categories. The Airman's Cave incident was a combination of exhaustion and becoming lost.

#### **Flooding**

The lesson taught by flood entraps is simple: pay attention to the weather conditions. Check the forecast for the caving area, and be alert for the possibility of flooding. If the cave is known to flood and you do not have a clear forecast, go somewhere else. Also, know what the weather has been for the last several days. Some caves may experience flooding several days after a storm event. It is just not worth the risk of entrapment, rescue, media attention, closed caves, injury, or death. For more on the dangers of water caves, see George Dasher's editorial in the June 2003 ACA.

The previously unreported incident in Endless Cave names flooding as the contributing factor to being stranded.

## **Hypothermia**

Hypothermia is usually a secondary result in the reported incidents, occurring subsequent to cavers becoming injured, stranded, or trapped in a cave. There were two incidents in 2007 and 2008 involving hypothermia. One of the side effects of the Simmons-Mingo incident was that the cavers had been in the cave for such a long period, leading to early hypothermia. One of the unnamed cave incidents in Iowa reported that the patient had a temperature of 85 degrees as a result of being stuck. While this number is in question due to the lack of other symptoms, remember: hypothermia can kill you all by itself.

Hypothermia also impairs your thinking and judgment, making potentially deadly mistakes more likely.

## **Illness**

There were no reported incidents of histoplasmosis infections, or other infections due to caving in 2007 or 2008. There were also no reported incidents where illness was a contributing factor to another kind of incident.

## **Lost**

Most of these incidents involve untrained and ill-equipped cavers, spelunkers, or novices with little experience. Many escalate to the "stranded" category when batteries run out or flashlights get broken. When found, lost cavers often require treatment for hypothermia, sometimes including hospitalization.

Cavers or spelunkers were lost in Simmons-Mingo Cave, Camps Gulf Cave, Sharps Cave, Airman's Cave, Harrison Salt Peter Cave, Bowden Cave, and Byers Cave. Also, several youths were lost in Longhorn Quarry. Of the cases listed above, three involved cavers. The other four incidents were spelunkers.

## **Medical Issue**

Medical issues are events that happen during the caving trip. These include heart attacks, nausea, over heating during a trip, or crawling and injuring your knee.

The fatality in Fort Stanton is in this category. In caving related incidents, the fatality in the flooded mine #2 incident in Newfoundland, Canada is also here. The autopsy showed the man had cancer that became a medical issue during the dive. Medical issues are included with Illness in the statistics.

## **Rock-fall**

Rock-fall incidents accounted for several serious accidents and incidents during the reporting period, resulting in injuries and rescues as well as one case of entrapment. The most notable

rock-fall incidents were those in which cavers were pinned or trapped in caves.

Four rock-fall incidents involved cavers, two incidents involved spelunkers. The seventh rock-fall incident was a tourist on an improved trail in Rio Camuy Cave in Puerto Rico which resulted in a fatality.

Greenhorn Cave, XTC Cave, Sarlacc Cave, and Lechuguilla Cave all involved cavers touching or disturbing rocks. The ice cave collapse trapping two teenagers is listed here. The pot hunter who had an excavation trench collapse on him is also in this category.

## **Stuck**

Getting stuck is usually not much of a problem for experienced cavers. Most of us have been stuck in a tight passage at some point, and have learned that a calm head and careful movement can usually remedy the situation. Sometimes, however, extracting a stuck caver from a tight passage or crevice can be extremely difficult.

As in 2006, a short fall caused all of the incidents in 2007 and 2008 involving someone getting stuck. These included Falls Cliff Cave, Devil's Den Cave, and an unnamed cave in Iowa.

## **Trapped or Stranded**

This category is used to describe incidents in which the caver or cavers were prevented from exiting the cave by rock-fall, light failure, lack of equipment, equipment failure, or other causes. In many of the reported incidents, "spelunkers" became stranded due to inexperience, inadequate equipment and/or poor judgment. In two cases, unexpected ice plugs were encountered by teams doing through trips in the fossil Mountain Ice Cave-Wind Cave system.

Inadequate equipment for the incidents in Dunham Cave, Rainbow Falls Cave, Brewers Pit, and Hognose Cave (caving-related incident) led to persons becoming trapped or stranded. The caver in Breathing Hole Cave was trapped by going down through tight passage and not being able to get back out.

## **Other**

This catch-all category includes sinkhole collapse, cuts by sharp rocks, dislocated shoulders, twisted ankles and other joint injuries, animal attacks, and other incidents not covered above, including drug labs, explosives, or bodies found in caves. The discovery of old dynamite in Crystal Cave is catalogued here.

## Caving Accident and Incident Statistics 1986–2008

### Result of Incident

<b>Result</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>00</b>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>	<b>07</b>	<b>08</b>
Fatality	4	3	4	1	4	6	5	5	1	2	1	4	4	4	2	5	2	6	3	0	4	1	4
Injury and Aid	10	15	11	16	18	16	17	22	19	17	16	22	14	14	20	11	15	9	7	8	15	9	9
Aid, no Injury	21	15	20	20	23	20	28	33	26	17	16	13	12	18	15	13	8	14	12	8	12	9	7
Injury, no Aid	10	15	14	14	10	12	10	4	11	8	10	4	2	8	3	5	6	6	0	10	4	7	2
No Consequence	19	16	12	21	9	12	16	3	20	12	11	4	8	3	1	2	4	5	1	0	1	0	3
Total	64	64	61	72	64	66	76	67	77	56	54	47	40	47	41	36	35	40	23	26	35	25	25

#### Incidents

Involving Fatality, 45 48 49 51 55 54 60 64 57 44 43 43 32 44 40 34 31 35 22 26 34 226 22  
Injury, or Aid

### Incident Type

<b>Type</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>00</b>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>	<b>07</b>	<b>08</b>	
Caver Fall	25	14	20	19	22	22	22	19	20	15	21	27	15	20	17	13	20	14	5	10	12	11	11	
Trapped/Stranded	-	-	-	-	-	-	-	-	1	13	18	18	13	9	17	14	9	10	15	6	5	7	4	3
Difficulty on Rope	-	-	-	-	-	-	-	-	11	4	6	5	1	4	3	1	5	5	1	2	2	1	2	
Rock-fall	12	17	7	11	11	12	16	11	12	10	5	5	2	4	2	3	3	5	3	7	4	4	3	
Lost	8	5	3	9	4	3	4	5	12	7	4	5	3	3	3	1	1	5	4	2	3	4	2	
Flooding	1	3	3	4	2	2	1	3	1	4	5	2	1	4	1	1	0	6	1	0	1	0	0	
Hypothermia	1	2	0	5	0	2	4	0	3	6	6	2	2	2	3	1	1	3	0	1	2	1	2	
Illness	0	0	2	3	2	1	0	3	3	0	1	1	8	0	2	2	2	1	2	2	0	0	1	
Exhaustion	0	1	1	3	0	2	4	2	4	1	4	1	1	2	3	1	2	1	0	0	2	0	1	
Drowning	1	2	0	2	2	2	2	0	0	0	1	0	0	1	0	1	0	3	1	0	1	1	1	
Stuck	3	1	0	1	1	3	5	5	2	1	2	0	1	5	3	5	0	1	6	3	2	0	2	
Bad Air	3	2	1	1	1	2	1	1	2	2	1	0	1	0	1	0	0	0	0	0	0	0	0	
Acetylene-related	3	0	1	1	0	0	0	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Equipment	14	17	20	20	23	21	20	11	11	4	4	2	1	0	0	3	2	0	0	0	4	4	2	
Other	3	4	8	6	8	4	5	4	6	6	3	2	3	2	3	3	2	1	1	1	0	2		
<b>Caving-related Incidents</b>	-	-	-	-	-	-	2	1	0	2	0	1	1	5	2	11	2	9	4	19	9	8	4	6

### Cave Diving Incidents

<b>Result</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>00</b>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>	<b>07</b>	<b>08</b>
Fatality	7	5	9	4	8	2	5	6	8	6	2	2	0	5	7	9	3	5	6	2	1	5	6
Injury and Aid	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0
Aid, no Injury	1	0	0	0	0	1	1	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0
Injury, no Aid	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
No Consequence	1	2	1	1	0	5	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total Diving Incidents	9	7	10	5	8	8	7	6	9	7	2	2	1	7	8	9	4	5	7	4	2	5	7

## 2007 Reported Caving Accidents and Incidents

26 caving incidents reported

Date	Cave	Location	Result	Incident Type
January 6	Fountain Cave	Virginia	injury, no aid	caver fall
February 10	Greenhorn Cave	California	injury, no aid	rock-fall
March 13	Turtle Graveyard Cave	Tennessee	injury and aid	caver fall, inadequate equipment, equipment failure
March 22	Dunham Cave	Alabama	aid, no injury	stranded, inadequate equipment, equipment failure
March 25	XTC Cave	New York	injury, no aid	rock-fall
April 21	Simmons-Mingo Cave	West Virginia	injury and aid	lost, hypothermia
April 28	Small Mouth Cave	Indiana	injury and aid	caver fall
April 30	Deadman's Cave	Texas	fatality	drowning
May 15	Sinks of Gandy	West Virginia	injury, no aid	caver fall
May 26	Fossil Mountain Ice Cave-Wind Cave	Wyoming	aid, no injury	stranded, ice plug
May 26	Sarlacc Cave	West Virginia	injury, no aid	rock-fall
July 9	Camps Gulf Cave	Tennessee	aid, no injury	lost
July 14	Coon Cave	Indiana	injury and aid	caver fall
July 26	Breathing Hole Cave	Indiana	aid, no injury	trapped, tight passage
August 3	Fitton Cave	Arkansas	injury and aid	caver fall
August 11	Pryor Springs Cave	Tennessee	injury and aid	caver fall, equipment failure
August 14	Sharps Cave	West Virginia	aid, no injury	lost
September 1	Sharps Cave	West Virginia	injury and aid	caver fall
September 23	Rumbling Falls Cave	Tennessee	aid, no injury	difficulty on rope
September 25	Anderson Spring Cave	Georgia	injury and aid	caver fall
September 28	Jewel Cave	South Dakota	injury, no aid	caver fall
October 7	Rusty's Cave	Georgia	aid, no injury	stranded, inadequate equipment
October 13	Airman's Cave	Texas	aid, no injury	lost
November	Organ Cave	West Virginia	injury and aid	caver fall
November 6	Lechuguilla Cave	New Mexico	injury, no aid	rock-fall
December 27	Harrison Salt Peter Cave	Tennessee	aid, no injury	lost

## 2008 Reported Caving Accidents and Incidents

25 caving incidents reported

Date	Cave	Location	Result	Incident Type
January 5	Rio Camuy Cave	Puerto Rico	fatality	rock-fall
January 22	Cueva El Gran Plano	Puebla, Mexico	injury and aid	caver fall
March 9	Indian Rock Cave	Alabama	no consequence	difficulty on rope
March 20	Rainbow Falls Cave	Tennessee	aid, no injury	stranded, inadequate equipment
March 30	Malloy's Waterfall Cave	Georgia	aid, no injury	difficulty on rope
April 9	unnamed cave	Tennessee	aid, no injury	caver fall
May 15	Crystal Cave	California	no consequence	other, dynamite
May 24	Brewers Pit	New Mexico	aid, no injury	stranded inadequate equipment
May 30	Lava River Cave	Oregon	injury and aid	caver fall
June 30	Falls Cliff Cave	Vermont	injury and aid	caver fall
July 14	Fulford Cave	Colorado	injury and aid	caver fall
July 18	Devil's Den Cave	Missouri	injury and aid	caver fall, stuck
July 18	unnamed cave	Iowa	injury and aid	caver fall, stuck
July 18	unnamed cave	Iowa	injury and aid	caver fall
July 21	Parachute Cave	Tennessee	injury and aid	caver fall
July 24	Fossil Mountain Ice Cave-Wind	Wyoming	aid, no injury	stranded, ice plug

Cave				
July 27	Bowden Cave	West Virginia	aid, no injury	lost
July 27	Lechuguilla Cave	New Mexico	injury, no aid	caver fall
August 13	Wayne's Cave	Tennessee	injury, no aid	other, medical
August 21	unnamed ice cave near Snoqualmie Pass	Washington	injury and aid	rock-fall (ice cave collapse)
August 31	Ain't Barbwire Cave	Arizona	no consequence	caver fall
September 27	unnamed cave	Belize	fatality	drowning
October 18	Fort Stanton Cave	New Mexico	fatality	illness
December 1	unnamed cave near Pembroke	Kentucky	fatality	rock-fall (dig collapse)
December 8	Byers Cave	Alabama	aid, no injury	lost

## 2007 Reported Cave Diving Accidents and Incidents

5 incidents reported

Date	Cave	Location	Result	Incident Type
February 14	Allen Mill Pond Spring	Florida	fatality	drowning, mapping solo, out of air
February 19	Catfish Hole	Florida	fatality	drowning, out of air
March 5	Jackson Blue Spring	Florida	fatality	drowning, stuck, exceeded training
March 16	Madison Blue Spring	Florida	fatality	drowning, medical issue
July 14	The Crack, Withlacoochee River	Florida	fatality	drowning, medical issue

## 2008 Reported Cave Diving Accidents and Incidents

7 incidents reported

Date	Cave	Location	Result	Incident Type
February 1	Forty Fathom Grotto	Florida	fatality	drowning
March 11	Devil's Ear	Florida	fatality	drowning, equipment failure, operator error
June 9	Jackson Blue Spring	Florida	fatality	drowning, illness
July	Sistema Najanon,	Quintana Roo, Mexico	no consequence	other, equipment issues
September 19	Jackson Blue Spring	Florida	fatality	drowning, equipment failure
November 12	Wayne's World (School Sink)	Florida	2 fatalities	drowning, multiple issues
November 15	Forty Fathom Grotto	Florida	fatality	drowning

## 2007 Reported Caving Related Incidents

4 incidents reported

Date	Cave	Location	Result	Incident Type
February 5	flooded mine #2	Newfoundland, Canada	fatality	drowning, medical issue
February 8	Hognose Cave	Utah	aid, no injury	stranded, not actually a cave
May 11	Longhorn Quarry	Texas	aid, no injury	lost, inadequate equipment
June 11	unnamed sea cave near Own Point	British Columbia, Canada	aid, no injury	trapped / stranded

## 2008 Reported Caving Related Incidents

6 incidents reported

Date	Cave	Location	Result	Incident Type
January 28	unnamed cave near Chuckey	Tennessee	aid, no injury	dog trapped
March 28	unnamed cave	Vera Cruz, Mexico	fatality	fall
March 31	No Name Tunnel	Colorado	fatality	illness
April 7	unnamed cave near El Paso	Texas	injury and aid	car accident
August 2	Wayne's World (School Sink)	Florida	fatality	drowning, swimming
November 12	unnamed cave near Carlsbad	New Mexico	injury and aid	vehicle fell into cave

## Acknowledgments

As always, we are all indebted to the people who have contributed reports for this issue. Their willingness to share their experiences makes ACA a valuable resource for all cavers. Several notable correspondents have contributed a substantial portion of the material for these reports. They include: George Dasher, Jeff Bozanic, Mark Minton, Bill Putnam, and Pat Seiser. Many valuable comments, proof reading, corrections, and suggestions were provided by reviewers Bonny Armstrong, George Dasher, John LaMar Cole, and Forrest Wilson.

Many dive related comments were provided by Forrest Wilson.

## Acronyms and Explanations

2-meter SAR radio	Search-And-Rescue radios in the 155 megahertz to 170 megahertz range
104s	104 cubic foot capacity Scuba tanks
ACL and MCL	Ligaments in the knee
ATM	atmosphere
CF	cubic feet
cookie	A cookie is a non-directional marker, used to confirm that the diver actually came from that route. It is like leaving breadcrumbs.
CPR	Cardio Pulmonary Resuscitation
EAN	Enriched Air Nitrox. It is air with oxygen added. It reduces decompression, but in excess can cause oxygen toxicity.
FD	Fire Department
FSW	feet salt water. Depth in feet for salt water
IC	Incident Command
KED	spine-immobilization device wrapped around the patient's torso and back of head
MA	Mechanical Advantage. Used in technical rope-hauling systems
MRA	Mountain Rescue Association
MSW	meters salt water. Depth in meters for salt water
PSI	Pounds per Square Inch
Puka	Ceiling collapse in a lava tube forming an entrance
SAR	Search and Rescue
SKED	Plastic rescue stretcher wrapped around the patient used to transport over rough terrain
Stokes Litter	Aluminum or hard-plastic rescue stretcher used to transport patients over rough terrain
Tees	In cave diving, when a passage bifurcates
Z-rig	A rescue haul technique that allows rescuers to raise a patient

# Previously Unreported Caving Accident and Incident Reports

## 24 June 2006 Trout Cave, West Virginia caver fall, injury, aid

On June 24<sup>th</sup>, 2006, 12 scouts (aged 8 to 12 years old) and two trip leaders were visiting Trout Cave. They were all wearing helmets with headlamps. In the maze-like area off of the Register Room, one of the boys fell while climbing down through either the breakdown or at a small drop off, and gashed his chin open on a rock. Mike Hutchinson was nearby in the cave and went to help when he heard crying. The scout leaders bandaged the boy's face as best as possible, but could not remember the correct route to the entrance. Mike's group escorted them back to the entrance and down the bluff with little trouble.

Mike Hutchinson, *Incident Report*, 13 May 2007

Comments: The boy was taken to the hospital in Harrisonburg, VA for stitches.

## 9 September 2006 Endless Cave, New Mexico stranded, aid, no injury

Brian Alger and William Tucker started into the cave at 10 AM on their last trip to complete the survey of the Eastern Maze. Tammy Tucker remained on the surface to watch the weather, even though there were no clouds in the sky. The route into the Eastern Maze is small, and is followed by the even smaller P-Trap, a low, tight belly crawl. The survey went smoothly, and required a "clean gear" change of clothes to protect the cave.

About 4 PM, Tammy noticed large clouds in the distance, which moved closer and some large drops fell. High winds and heavy rain followed. Like most desert storms, it was over in a half an hour, so Tammy headed to the Endless Entrance. She found a strong flow of water heading into the cave and after wading in a short distance, she discovered all of the water was flowing down into the P-Trap. It was now sumped.

Brian and William surveyed in dry, up-trending passages most of the day. After a brief meal at 6 PM, they went to survey the last passage where it was dripping heavily from everywhere. They returned to the where they had changed into clean suits and found that the room was now under several inches of water. When they returned to the P-Trap, they found it sumped. The line near the edge of the water showed the water was down about an inch from its high point, so they moved to a dry area and started to wait at 8 PM.

On the surface, Tammy called and left messages with a regular member of the survey trips, then called Lubbock Area Grotto members. At 9 PM, she called Jim Goodbar, of the BLM, who told her it would only be a matter of time before the cavers returned. Jim Goodbar and Ray Nance drove out to the cave.

The water continued to go down at a rate of one to two inches per hour. Voice contact was made at midnight. Brian has a smaller frame, so at 3 AM, with about three inches of airspace, he was pulled through. However, when William made the attempt he had more difficulty. When the entrance-side caver went into the water, the water level went up and both cavers retreated. Webbing was tossed through the constriction, and William was pulled through with one eye and part of his mouth under water.

Tammy Tucker, Lubbock Area Grotto Trip Report: 20060908, "*Endless Cave – Topside at Endless Maze.*" 9 September 2006  
Brian K. Alger, Lubbock Area Grotto Trip Report: 20060909, "*Endless Cave – Eastern Maze Part 4.*" 9 September 2006  
William Tucker, Lubbock Area Grotto Trip Report: 20060910, "*Last Trip to Endless Eastern Maze.*" 9 September 2006

Comments: Waiting for the sump to go down was the correct method to get out. The cavers had grown chilled while waiting for several hours and were completely wet. While uncomfortable and anxious to get out, letting the water level drop even further would have allowed a safer retreat.

## 10 September 2006 Naj Tunich Cave, Guatemala caver fall, injury, aid

A research team had received an archeology permit to the vertical Naj Tunich. Included were Alan Cobb, Hazel Barton, Brandon Kowalis, Dawn and Benjamin von Cramon, Paul Burger, and seven production personnel from the Lone Wolf Documentary Group. About 420 feet down a 600-foot deep pit series with rope drops of 70, 270, 15, 20 and 15 feet, Alan dislocated his shoulder while going down a steep crawlway headfirst. The shoulder immediately popped back in and Alan made it back up to the bottom of the lower 15-foot drop on his own. The cavers slung the arm as a precaution, and Alan informed those present that he had chronic problem with dislocations. Hazel re-rigged the lower 15 and 20-foot pitches to make the ascent easier for Alan and the injured caver successfully climbed these. The team then rigged a traverse line and helped him negotiate an awkward traverse into a chamber below the upper 15-foot rope. Given the straight forward level of difficulty in ascending out of the cave (all of the climbs were already rigged) and that Alan was moving fine, two cavers left to push the bottom of the cave and look for Mayan artifacts (the reason for the permit).

For some reason, at the upper 15-foot pitch, Alan decided to climb a shorter, 10-foot crevice, even though he had his vertical gear on. During this climb Alan twisted and dislocated his knee. Hazel free climbed above him, did a change over for him, and lowered Alan back down the rope. Alan's knee was relocated but the caver went into shock.

Alan was made more comfortable and they waited together for two hours for the push team to return. The team was able to get the caver to the top of the next 15-foot pitch and to the bottom of

the 270-foot pitch. Hazel and Brandon climbed the last two pitches and exited the cave (a one-mile traverse) to call for help. The people at the local hotel did not pick up, but a call to cavers in the U.S. at 2 AM was successful. The cavers in the U.S. were able to reach the hotel management, who alerted the rest of the team. Brandon and John Climaco (a mountaineer with training in crevasse rescue) returned to the cave with food and a thermarest and John went down to Alan who was able to sleep comfortably.

Due to the dangerous nature of the road to the cave (banditos), the Guatemalan Special Forces were called to lead the convoy and deal with any gunfights.

The team did not have enough equipment for a counterbalance and the pit configuration limited the options. However, John Climaco's knowledge of mountaineering rescue techniques, along with the help of Brandon and Benjamin, allowed them to rig a safe haul system in a timely manner. The camera crew was critically important in providing muscle and hauling food,

water, and other supplies. They put down their equipment to help which during a down time, the cavers used to film bits. Alan was out at 1 PM after being underground for 21 hours.

Benjamin von Cramon, *Incident Report*, 15 October 2006  
 Hazel Barton (via Bill Putnam), *Incident Report*, 26 June 2007  
 Hazel Barton, *CaveChat*, 13 June 2007

**Comments:** This is an excellent effort in a rough situation, especially with the thinking outside the box to ask for surface support. Even though a comment is needed about splitting up the team after the initial injury, the team did not know of Alan's chronic dislocation problems before the incident. Had they known beforehand about the preexisting issues, they would have not allowed Alan down the pit series in such a remote area.

Any injured caver, no matter how good his spirits, has a potential for further injury, and this is a classic example.

## 2007 Caving Accident and Incident Reports

### 6 January **Fountain Cave, Virginia caver fall, injury, no aid**

During a DC Grotto photo-training trip, Ed Devine (50) slipped and fell, suffering minor internal bruising on his ribs. The former commercial cave trail is constructed of stone steps and trails of packed earth. Several hours into the trip, Ed was standing just off of the trail conversing with two other cavers, with his arms loaded with equipment when he casually stepped to the side and into a six-foot deep hole. Ed had been experimenting with new photo and video gear and was carrying several packs and two camcorders in his hands when he fell. He reflexively protected the gear, and fell 4 four feet, landing hard against a ledge on his upper ribs below the armpit. After assessment that there was no serious injury, the team continued the trip, but he experienced pain when coughing or laughing.

Ed Devine, *Incident Report*, 21 January 2007

**Comments:** Ed attributes this incident to inattentiveness and complacency while strolling through an easy cave. Additionally, he was distracted by photographic issues and the social aspects of a large, festive crowd. Easy caves can be dangerous too.

### 10 February **Greenhorn Cave, California rock-fall, injury, no aid**

Michelle Nilles, Randi Poer, Matt Covington, Will Heltsley, Elaine Garvey, Kevin Branscum, Genevieve Mattar, and Celeste Yang entered Greenhorn, a granite talus cave for a grotto trip. Kevin and Genevieve left the cave early, and the rest continued to the upper end of the lower section of the cave. In a canyon perhaps 10 feet wide, with large chock stones 20 feet above, the

group set up a photograph with Will as a model and Celeste operating a flash behind him.

Celeste crawled up a ~2000 pound boulder that was next to the rock on which the flash was perched. The boulder was 4 by 1 by 2.5 feet in size. Once her full weight was transferred to the boulder, it dislodged with her hanging onto the side. As the boulder fell, it pushed Celeste slightly backwards into free-fall.

Celeste and the boulder fell from about 5 feet above where the chock stones formed the upper level of the canyon. Below was a break in the chock stones that formed a triangular hole about 4 feet across. Celeste and the boulder fell toward this hole, and Celeste was pushed backwards into one of the corners.

The boulder bounced onto the front of Celeste's hips, driving her tailbone into the rocks forming the sides of the hole, before her pelvis settled neatly into the corner. The boulder was stopped from crushing her pelvis by the acute angle of the sides of the hole. From where Will was standing, it was not clear that Celeste hadn't been chopped in half. He quickly climbed 15 feet to the top of one of the boulders where she was lodged.

The boulder was wedged in the hole in front of Celeste, who was still 20 feet above the canyon floor. Her first thought was that she could feel her legs and they were not in tremendous pain. Her next thought was to get as far away from this thing as possible, so she braced herself on the rocks that formed the sides of the hole and began wriggling up to get on top of the chock stones. A second later, the boulder dislodged and fell the rest of the way to the floor, where it shattered into several pieces, some of which traveled a long way from the point of impact.

Celeste stemmed across the hole for three or four minutes, until she could trust her legs not to shake, then moved to a flat chock stone to rest a little longer and get some food and water. Her tailbone was badly bruised, but she could walk and crawl her way out of the cave.

Celeste Yang, Will Heltsley, *Incident Report*, undated

Comments: Celeste was incredibly lucky. If the hole hadn't been exactly the right shape, if the sides of the hole had not been sloped enough for her to hold onto, if someone had been below her when the boulder fell, or even close enough to be hit by a shard, it could have been a very different story. The accident could only have been prevented by Celeste recognizing that the boulder had the potential to be unstable, but neither Will, Matt, nor Celeste recalled it looking unsafe.

### 13 March

#### Turtle Graveyard Cave, Tennessee caver fall, inadequate equipment, injury, aid

At 10:15 PM, Christopher Pique (27) and three friends, including his brother, began their caving trip into Turtle Graveyard Cave. They had two flashlights and two chemical lights. Christopher was the second person down and was hand-over-handing down an old rope with no helmet, no vertical gear, and no belay, when their one-inch-diameter, laid, dry-rotted rope broke. He fell between 30 and 50 feet, striking a ledge. He then fell another 30 feet, striking the back of his head, and drifted in and out of consciousness.

Christopher's friends went for help, and the Paulette Volunteer FD, Maynardville FD, and Knoxville Volunteer Rescue Squad responded. A vertical raise was implemented and Christopher was flown to the hospital at 1:30 AM. The other spelunker was assisted out of the cave by the rescue teams.

Danny Britton, *Tag-Net*, "Union County Cave Rescue." 17 March 2007

Charles, *CaveChat*, 5 June 2007

unattributed, *VolunteerTV.com*, "Man Rescued After Cave Fall." 14 March 2007

News Sentinel staff, *Knoxville News Sentinel*, "Caver rescued, hospitalized after fall." 14 March 2007

Comments: Reports differ on how many were on the trip. At least one other person was in the cave when the rope broke and there was someone still on the surface to go for help. Charles (on the rescue team) was told "they used the rope to pull cars, they use it for everything". Please, treat your ropes with respect. Your life hangs on the rope's integrity.

### 22 March

#### Dunham Cave, Alabama stranded, inadequate equipment, aid, no injury

At 12:30 PM, Justin Lovett entered the cave, solo, with a single, three-cell flashlight. He was wearing jeans and a t-shirt and had no helmet or other equipment. After exploring for a couple of hours his flashlight died. Justin sat down to wait.

Justin was visiting his grandmother, but his mother called authorities when he did not return. Fortunately, Justin had mentioned he planned to go to Dunham Cave. The Huntsville Cave Rescue Unit, Marshall County Rescue, and Chattanooga/Hamilton County Cave and Cliff Team responded. Teams were sent in after finding a still cold coke can at the entrance. Justin was found about 4000 feet in, cold, uninjured, and sitting on a rock. After a brief medical check, he was able to

make the 45-minute exit trip to the entrance, arriving at 8:40 PM.

Bill Putnam, personal notes, undated

Ellis Eskew, *WHNT-TV, Huntsville News*, "Missing Hazel Green Boy Found Alive in Cave" 22 March 2007

Sharon Faulkner, *NSS News*, March 2007

Comments: Among the other obvious mistakes made, Justin did two things right: he told someone where he was going and when his only light died, he sat down and waited. These two things probably resulted in avoiding a much worse outcome.

### 25 March

#### XTC Cave, New York rock-fall, injury, no aid

Clint Matter, Mike Telladira, and Bob Dion were exploring the recently discovered XTC Cave. The cave contains many loose rocks, chock stones, and is also cold and wet. After exploring, they started out with Bob in the lead. Bob was coming out of a long pinch crawl with Mike starting into the crawl, and Clint behind them near the top of the waterfall, when a large rock-fall occurred near Clint. Bob heard the very loud rock-fall, and Mike yelled to Bob something about Clint being "trapped". Bob turned around and was yelling to Mike to find out what happened, but the noise of the waterfall made communication difficult. Mike continued crawling into the pinch when his pack slipped down a crack. He was told to leave it and keep moving back towards Bob on the entrance side of the collapse. As Mike got to the end of the crawlway, Bob could see Clint's light behind Mike (good), then Mike became stuck (bad). Mike backed up and became stuck again. He was able to back up a second time, calm down, turn over, hand Bob his light, and get through the last squeeze. Clint was able to move enough rocks at the far side of the crawlway to squeeze through to the entrance side of the collapse. When Clint crawled up to the other two, he said he was "fine", but the rock-fall had crushed his hand.

Clint was later taken to the hospital by Larry Boto, where he needed surgery, stitches, and a cast.

Bob Dion email to Chuck Porter, forwarded to Bill Putnam, 13 June 2007

John Dunham, *Northeastern Caver*, "XTC Cave." June 2007

Comments: The cavers had problems communicating as the waterfall was very loud. Also on the way out, but prior to Clint's injury, Clint knocked a "good-sized" rock off, hitting Mike in the face but causing no injury. Watch for and garden loose rocks when there is the potential for rock-fall.

### 21 April

#### Simmons-Mingo Cave, West Virginia lost, hypothermia, injury, aid

On Saturday, five people including Dan Sampson (25), Skye Fisher (20), Keri Krall (21), Jason Ross (30), and Heidi McWilliams (20) decided to do a through trip from the Zarathustra Entrance to the Historic Entrance of Simmons-Mingo Cave. Dan and Skye had been in the cave the year before, but had turned around before completing the through trip. The party expected the trip to last about 10 hours and was

properly equipped with helmets, coveralls for some, packs, and polypro. The trip was going reasonably well despite a fall by Keri, where she injured her ribs and a knee while going through a corkscrew passage. About 10 hours in, they reached a large room where all of the passages looped back to the same place. They made several short forays out of the room, but were unsuccessful.

Authorities were called by a local landowner when it was noticed that their vehicle was still parked outside. A three-person hasty team of Lieutenant Kelly Bostian and two others from the Shavers Fork Fire Rescue entered the cave at 11:15 PM. After a couple of hours the three of them turned around, following protocol of reestablishing communications.

After about 32 hours, Skye and Jason decided to make a strong push for the entrance, but got lost. They were able to return to the other three after eight hours.

One hundred twenty volunteers from five states, along with the Red Cross, Salvation Army and State Police arrived to help search. After several failed attempts, the cavers were located at 11:30 AM on Monday. Food, water, and warm clothes were given. It took four hours to get them to the entrance. They had been underground 50 hours. Keri was flown to Ruby Memorial Hospital, where she was kept over night. The other four were treated at the scene and released.

Generaro C. Armas, *Associated Press*, "Five rescued after 2 days in cave", 25 April 2007

Bill Putnam, personal notes

Ted Czech, *The York Daily Record*, "A real lost weekend." 25 April 2007

Comments: They were found about 1500 feet from the Historic Entrance. About ten minutes after the lost cavers had a "we're done for" conversation, they heard rescuers calling Skye's name.

### **28 April Small Mouth Cave, Indiana caver fall, injury, aid**

Garrett Jones (21), Bruce McDougal (27), and James McDougal (21) went spelunking in a southern Indiana cave. Around midnight and about one-quarter mile in, Garrett fell 15 feet from a ledge, reportedly while trying to rappel down a pit, where he injured his ankle.

Emergency personnel were called about 4 AM and several dozen law enforcement and firefighters responded. After reaching Garrett they warmed him and began the journey out. Communications with the surface was through five runners passing messages between the entrance to the patient.

The three spelunkers did not have the landowner's permission and, upon reaching the surface, all three were arrested for criminal trespass, vandalism (spray paint), and removing formations from the cave.

Melissa Gagliardi, *Courier Journal*, "3 charged after Indiana cave rescue." 29 April 2007

unattributed, *South Bend Tribune*, "Conservation officers rescue injured man from cave in southern Indiana." 29 April 2007

unattributed, *WAVE 3 TV Louisville*, "Officers rescue injured man, two friends from cave; all three arrested." 30 April 2007

Comments: Garrett refused further medical treatment. All three were held in the Harrison County Jail.

### **30 April Deadman's Cave, Texas fatality, drowning, bad air**

At 2 PM, Thomas Summers III (44), the manager and partner of Cave Without a Name (a tourist cave) and Brent Holbrook, were on a troubleshooting mission in Deadman's Cave, a flooded cave on Summers' property. Deadman's Cave is the resurgence of Cave Without a Name.

Recent rains had raised the water table, blocking access to the outer reaches of the cave. This is an area where advanced cavers like to explore and Thomas and Brent were attempting to remove any blockage that might be reducing the outflow. About 300 feet into the cave, with Thomas swimming in the lead, the passage ceiling lowered to just a few inches of airspace. They were not wearing helmets. Brent decided to go no further. He then heard "a sputtering sound" and received no response to his shouts. He went for help.

More than 90 searchers arrived to help. Rescue crews used pumps to lower the water level. About 9 PM, cave divers Jean Krejca and Linda Palit were able to retrieve Thomas' body without the need for breathing apparatus.

Jean Krijca, *Incident Report*, undated,  
Zeke MacCormack, *San Antonio Express-News*, "Kendall County cave drowning victim was tourist site's manager." 2 May 2007

Zeke MacCormack, *San Antonio Express-News*, "Cave Without a Name' closed after fatal accident." 1 May 2007

Vincent T. Davis, *San Antonio Express-News*, "Tourist cave worker found dead after failing to return from inside." 1 May 2007

Geary Schindel, personal communication, 23 July 2009

Comments: Thomas was swimming in low airspace. The coroner's report showed he had died from drowning. Jean Krejca, after talking with Brent, considers bad air may be a complicating factor in the low air-space passage. This possibly caused disorientation. Thomas' labored breathing was followed by sputtering, but was not followed by splashing or a struggle. Others believe that Thomas pushed the low airspace passage and did not stop when there was no air space.

### **15 May Sinks of Gandy, West Virginia caver fall, injury, no aid**

Marilyn (about 53) was touring the cave with the West Virginia Geological and Economic Survey (WVGES) and science students from John Marshall High School. There were six adults, plus several WVGES trip leaders in the 29 person group, who were traveling from the Upstream Entrance to the Downstream Entrance. About halfway through the cave, Marilyn slipped on a sand bar and fell on her leg. She had a helmet-mounted light, but was wearing tennis shoes. The area

where she fell was not difficult. After sitting for awhile to regain her composure, she discovered there was no way she could put any weight on her foot.

The rest of the class continued the tour through the cave. Ken Ashton left to call for help, while Pat John and three adults carried Marilyn out the Upstream Entrance. They then carried her to the top of the hill where an ambulance took her to the hospital. The ankle was broken seriously broken, and required two surgeries, including a plate with eight screws. Recovery took all summer.

Pat Johns, *Incident Report*, 20 December 2007

Comments: Tennis shoes do not provide traction comparable to good boots.

### **26 May**

#### **Fossil Mountain Ice Cave-Wind Cave, Wyoming stranded, aid, no injury**

Joseph Keyes (21), a professional cave guide, was leading a group of five; (Branden Itotani (23), Caitlin Sitton (19), Trisha Itotani (25), Taylor Sorenson (23) and Taylor's friend (23)) in a through trip from Ice Cave to Wind Cave. The trip involves a 40-foot ice rappel into a big room and normally takes 4 to 8 hours to complete. After the rappel, they continued the trip until almost reaching the other entrance. There, they were blocked by an ice-plug blocking the entire passage. They chipped away at the ice with a knife for 22 hours, but were unable to determine if their efforts would be successful. They "were in quite a fix" and decided to spend the night in the cave.

The next morning, two cavers were doing the through trip in the opposite direction and arrived at the opposite side of the ice plug. These two cavers were equipped with ice axes and the two teams were able to chip away from both sides and allow the trapped team to escape.

Meanwhile, Teton County SAR had been called for the overdue party. As the SAR members were gathering, two of the six stranded cavers arrived at the trail head to apologize and say all were OK.

RondoSteve, TetonAT.com, "Six Spend Night in Wind/Ice Cave." 28 May 2007

Joe Keyes, TetonAT.com blog entry, 8 Nov 2007

Joseph Keyes, *Incident Report*, "2007 darby (sic) ice cave incident." 12 June 2009

Comments: The group had a report-in time and missed it. Joe had not heard of the ice plug prior to the trip.

### **26 May**

#### **Sarlacc Cave, West Virginia rock-fall, injury, no aid**

Harry Fair, George Dasher, Lucas Bowman (22), Sara Hicks, and Pat Bingham were ridgewalking when they found a good-looking sink with a tight entrance and a large, vertical fin of a rock stuck in the entrance. George, Harry, and Lucas all jumped (in turn) on the fin and it did not move. George tried to squeeze into the entrance, but it was too small (or he was too big) and Lucas had to pull him from the entrance. Lucas was then able to

squeeze into the cave, followed by Harry. Sarah passed their helmets to them and they explored the small cave, which went a short way and became too tight.

Harry exited the cave first and in doing so, he kicked a large, waterlogged log that was evidently holding up the vertical rock. The rock fell on Lucas, hitting his helmet and ankle, and badly scratching his arm. Shouts from Pat on the surface initially brought no response, but finally Harry called up that they were OK. They were able to crawl to the surface where they determined that the cuts were not deep enough to go to the hospital. They named the cave after the sand monster in *Return of the Jedi* that tries to eat Luke Skywalker.

George Dasher, email to Bill Putnam, "ACA", 24 June 2007

Comments: Virgin entrance gardening from the inside should be done with great caution. To the group's credit they all checked the dangerous looking fin of rock and determined it was stable prior to entering. They were also very lucky they passed Harry and Lucas' helmets in. The action may have saved Lucas' life.

### **9 July**

#### **Camps Gulf Cave, Tennessee lost, aid, no injury**

Two cavers went on a trip to Camps Gulf Cave and became lost. They had proper lights and equipment. Van Buren County rescuers located them and escorted them out of the cave. They had been in the second room for about seven hours.

Bill Putnam, *Incident Report*, 11 July, 2007

Comments: There is currently little other information available about this incident. Did the team have a surface watch and an expected time out? Caver input would have helped make this incident clearer.

### **14 July**

#### **Coon Cave, Indiana caver fall, injury, aid**

At 1:30 PM, Laurie Jarrett (31), Tom Jarrett, and Laurie's two stepsons went to Coon Cave. Laurie rappelled the 40-foot deep pit second, slipped on some moss, and was suddenly suspended with the rope around her left bicep. She passed out and fell, cutting the left side of her head on a rock. Tom sent his two sons for help and rappelled down to be with Laurie. She was passing in and out of consciousness.

The Van Buren Fire Department, Monroe County Emergency Management, and an "independent cave rescue group" assisted. Two from the Van Buren Fire Department rappelled in, placed Laura on a backboard with Tom's help, and then in a litter for the haul. She reached the surface at 5:32 PM.

Sarah Goddard, *Reporter-Times* "up from a hard fall." 18 July 2007.

Marcela Creps, *Reporter-Times*, "Martinsville woman rescued from cave." 15 July 2007

Comments: It is not known if she was wearing a helmet. It is also not known if she became detached from the rope. After receiving seven stitches, Laurie was released but later checked

into the hospital because she was experiencing pains on her left side.

### **26 July**

#### **Breathing Hole Cave, Indiana trapped, aid, no injury**

Adam Craig (32), Craig Deiner (45), Dave Everton (46), and Jay Kress (42) entered Breathing Hole Cave at 11:45 AM. The group passed through the series of tight passages and climbdowns, with the last one being the tightest. After touring and photographing the cave they started their exit. Dave climbed up first but Adam was unable to follow. After several attempts with help, Adam retreated to the small room below.

Dave and Jay went to the surface to get hammers, and to call Ty Spatta in the event his micro-shaving equipment would be needed. Jay returned with food, water, and warm clothing but had to make a 20-minute drive to get the hammers. Rocks were chipped away, but Adam was still unable to negotiate the squeeze. Ty arrived with the micro-shaving. The micro-shaving effort was successful and Adam was able reach the surface at 9 PM and return to the 2007 Convention Campground (missing the big rainstorm).

Adam Craig, *Incident Report, 8 August 2007*

Comments: There is a saying that "You can always get out of what you got into," except for one constant axiom, gravity works. The team did exactly what was needed to achieve a safe exit and Ty Spatta had constructed the necessary rescue equipment to remove the obstacle. Ty also added a nice touch, he brought pizza.

### **3 August**

#### **Fitton Cave, Arkansas caver fall, injury, aid**

Bill Frantz (63) was a member of an eight-person group (ages 22 to 63) that were issued a permit to explore. They entered just before noon from the Beauty Entrance, traversed the Crystal Passage to the Roundhouse Room, and returned to the T-Room. Seven and a half hours into the trip they were negotiating the "21 Jumps" section, where multiple levels of sinuous channels intersect each other. Traveling through the area at a level above the stream requires frequent stepping and jumping across the stream. The route can also be completed by climbing down and up some of the wider areas. For an undetermined reason, Bill did not complete one jump and, as he fell, he rotated back with his head and shoulder hitting the back wall 6 feet below. Bill fell about 12 feet, was momentarily confused and thrashing. Will Heltsley reached Bill first and immediately immobilized his head to prevent further spinal injury.

With the help of others, Bill was relieved of his cave pack, camera gear, and helmet. Then a careful log roll was performed so that Bill was on his back and off his painful shoulder. Insulating clothing, cave packs, and a space blanket were applied to provide warmth. Because of the possibility of spinal injury, he was left flat until a neurological screening, spinal injury assessment, and injury and orientation checks were completed. All were negative and Bill was allowed to sit up. He suffered a

dislocated collar bone, bruised ribs, and a tender spot on the back of his head. A tightly fitting fleece was used to immobilize and secure Bill's arm to his chest while the vitals-log was started. The decision was made to go out the easier, though colder, Wet Entrance, which was located about 1500 feet from the accident site. Team members were sent out of the cave to begin a callout. John Tinsley and Jonah Schachner stayed with Bill. Matt Covington and Will Heltsley, escorted three other lightly clad team members out, then ate, gathered equipment, and went back in.

The Park's SAR team was mobilized by Chuck Bidding, the Park's Cave Specialist, and consisted of park staff and EMS personnel, local first responders, and the Middle Ozark Lower Earth Society (MOLES).

The self rescue began when Matt and Will returned. The route is upstream and includes waist-to-chest-deep pools, four short climbs, a crawlway, and an entrance climb. Bill was assisted while negotiating the pools by having his seat harness held. The climbs were rigged for safety and Bill was aided. Part of the self-rescue team were ferrying gear to the entrance when they met the first callout team. Bill reached the entrance at 5 AM and was able to complete the hike to camp under his own power.

unattributed, *National Park Service Morning Report, "Injured Caver Rescued From Fitton Cave."* 14 August 2007

Bill Frantz, *Incident Report, 4 December 2007*

Comments: Bill is an NCRC instructor and others on the team have NCRC training. Contributing factors to the fall may have been fatigue, the natural tendency to follow others, a low ceiling, and mud on the jump-off point. Also calling the section "21 Jumps" may have encouraged the party members to jump the crossings while knowing that jumping in-cave is typically discouraged.

### **11 August**

#### **Pryor Springs Cave, Tennessee caver fall, injury, aid**

Rick Gattone (43) and Chad Dubisson (30) went to Pryor Spring Cave to do a pull-down trip from the Upper Entrance to the Spring Entrance. The route requires three rappels, descending pits of 31, 43 and 56 feet before connecting to the horizontal passage leading to the spring.

The first pit is a 31-foot drop located just inside the upper entrance. The pit is equipped with a permanent rappel anchor consisting of two bolts connected by chains to an aluminum rappel ring. Rick and Chad threaded their 9mm rope through the ring and tied a barrel knot in the end, then they attached a light-weight cord so they could pull down the rope after descending. In this manner, they planned to descend each pit. Chad had done the trip several times before using 11mm rope and the "knot block" method without incident, but this was Rick's first trip using the method.

Rick went first. When he was about 10 feet down, the knot suddenly pulled through the rappel ring and Rick fell to the bottom of the pit. He suffered a fractured ankle, severely fractured pelvis, and several fractured vertebrae.

The Chattanooga Hamilton County rescue was called. They found Rick conscious, but in severe pain lying in the stream at the bottom of the pit. His blood pressure was dangerously low and continued to fall as he bled internally. Medic Andy Voss started an IV and worked to stabilize Rick while rescuers rigged the pit and packaged Rick for evacuation. Rick was hauled from the pit and up the steep slope to the waiting ambulance, and to a nearby helicopter landing zone where he was flown to Erlanger Hospital in Chattanooga. The whole rescue took less than two hours and even so, Rick's systolic blood pressure was down to 60.

Bill Putnam, *Incident Report*, 11 August 2007

Karen Zatkulak, [www.newschannel9.com](http://www.newschannel9.com), "Man Rescued from Cave – See the video," 15 August 2007

Comments: Always have a second person check the rigging. One way to avoid a pull-through when using the "knot block" method is to tie a carabineer into the knot. Had the accident occurred at the second pit, Rick would have been stranded and Chad would have been unable to get down the pit or out of the cave. A rescue would not have been initiated until the cavers were reported overdue that evening. Captain Buddy Lane said "... this is the worst cave rescue we've had where the person has survived."

### **14 August Sharps Cave, West Virginia lost, aid, no injury**

Three women cavers entered Sharps cave at noon, expecting to be out by 3:30 PM to meet back up with their group. When they did not return by 10 PM, those on the surface called the emergency services. Shaver's Fork Fire Rescue responded and entered the cave at 11:38 PM with extraction and aid equipment. They located the lost cavers and returned to the surface at 1:00 AM.

unattributed, *newsobserver.com*, "Lost – and found" 16 August 2007

Comments: It is not known where the cavers were located in the cave. This incident had a good outcome due to the surface watch acting properly.

### **1 September Sharps Cave, West Virginia caver fall, injury, aid**

A 54-year-old male caver fell about 300 yards from the entrance and broke his hip. EMS and the OTR site were called at 6:15 PM. Fire department personnel and 13 cavers responded. The patient was out of the cave at 9:30 PM.

Scott Davis, *CaveChat*, "Sharps Fall?" 4 September 2007

Comments: Not much information has been distributed on this rescue.

### **23 September Rumbling Falls Cave, Tennessee difficulty on rope, aid, no injury**

Ralph Powers, John M., Brian, and Cassie Conners, and "Cave Rat" went on an enjoyable trip to the Rumble Room. After viewing the Rumble Room they started their trip out, completing the Rumble Room's 201-foot ascent and the Waterfall pitch. As they approached the bottom of the entrance pit, they noted the first of a group of four spelunkers (one named Alan) was descending with no helmets and using the cavers' rope. The four spelunkers had brought their own rope, but it was short.

After a discussion, Alan attached his ascending system (non standard) to the cavers' rope and started back up. It was poorly adjusted for him; too long in some places and too short in others. After 20 feet, he realized that he would become tired before reaching the top. Alan was able to make a change over and rappelled back down. Ralph was carrying additional gear and was able to create a frog system for Alan. Three of the caving team climbed to the surface, then Alan, followed by John and Ralph.

Ralph Powers, *CaveChat*, "Trip Report: Rumbling Rescue." 25 September 2007

Comments: Additionally, for his ascent, Alan had wrapped the bottom of the caver's rope around a 75-pound stalactite to provide tension his ascent. This would cause abrasion to the rope

### **25 September Anderson Spring Cave, Georgia caver fall, injury, aid**

Three people, including the patient (26), were 1500 feet inside Anderson Spring Cave where the man was climbing. He was using a rock as a climbing aid when the rock came loose and fell, breaking his leg. The cave is on private land so one of the individuals with the patient, went to the property owner's house to call for help. The Walker County Fire and Rescue responded at 4:15 PM, packaged the patient, and had him en route to the hospital in just over two hours.

Larry Brooks, *Walker County Messenger*, "Rescue personnel extricate injured man after caving accident", 26 September 2007

Comments: No names were available. Check your handholds and footholds before using them.

### **28 September Jewel Cave, South Dakota caver fall, injury, no aid**

Rene Ohms and Ole Heyer entered Jewel Cave at 1:45 PM to download airflow data from an anemometer located near Hurricane Corner approximately 10 minutes from the entrance. At 2:15 PM, on the way out of the cave, Rene slipped as she was stepping down, causing her to miss the rock intended for her right foot. She fell about two feet and landed on her left knee, breaking the kneecap,. Rene was able to exit the cave under her own power by favoring the leg. X-rays confirmed the break.

Rene Ohms, *Incident Report*, 12 December 2007

Comments: The manganese-coated trail was slippery from heavy use. Rene was wearing knee pads, which probably prevented the injury from being worse. Had this incident been deeper in the cave, it could have been much more serious and required assistance.

**7 October**  
**Rusty's Cave, Georgia**  
**stranded, inadequate equipment, aid, no injury**

Alan Leedy and "Tallgirl" went to Rusty's Cave to take some photos. As they were leaving, a lone man arrived with an OSHA type safety harness, a figure 8, and using a utility rope from Lowe's to lower himself down the pit. He had no ascending gear or helmet. After determining the man was unable to get out on his own, Alan attached the man to his half-round and frogged out of the 30-foot entrance pit with the man hanging below. The pit had been rigged such that, even with the person hanging from his harness, the lip was manageable and the extraction was successful.

Alan Leedy, *CaveChat*, "rescue at rusty's (sic)", 10 October 2007

Comments: While successful, concern was expressed about being able to complete a change over while having so much weight hanging below. This requires both strength and current proficiency with one's vertical system. The rescued man said he was part of the NSS but displayed none of the safe caving practices used by NSS cavers.

**13 October**  
**Airman's Cave, Texas**  
**lost, aid, no injury**

Two women and one man from the University of Texas decided to explore to the back of the cave at 11 AM. They established a return time of midnight. Airman's Cave is 12,000 feet long with many long crawlways and some belly crawls that are quite tight. There is a mazy area in the middle, and a round trip of experienced cavers takes about 12 hours. At 5:30 AM, a friend notified authorities that the group had not returned.

Rescue teams and local cavers responded. Both a hasty team and a push team to the back of the cave returned without finding the group. They did find a cell phone and several bottles of water. Personnel began to stage water, food, and medical equipment at key points and laid a phone line. A caver with extensive knowledge of the cave knew of probable locations where the group could be lost, entered with one other rescuer and began a thorough search. This team located the lost party.

Before 5 PM the three were located in the "Poetry Passage" area of the maze in the middle of the cave. They were off of the main route and 2½ to 3 hours from the entrance. They were uninjured and, after receiving water and food, they were escorted out of the cave. They had been underground for more than 30 hours.

DJ Walker, *Incident Report*, 14 October 2007  
unattributed, *The Blotter*, "Rescuers find missing students at Airman's Cave." 14 October 2007

Cavechat.org, "Cave rescue under way at Airman's Cave, Texas." 14-15 October 2007

unattributed, *CNN.com*, "Texas explorers emerge from Airman's Cave.", 14 October 2007

Comments: Exhaustion and getting off trail in the maze contributed to the group's inability to complete the trip. The group made a good decision to establish a surface watch. If the surface watch had not waited 5½ hours to notify authorities, the explorers would have faired much better. Be sure your surface watch understands the full extent of their responsibilities.

**November**  
**Organ Cave, West Virginia**  
**caver fall, injury, aid**

While on a paid, wild caving trip, a man (whose name is not known) in his early fifties stepped straight down and ripped the muscles from his left kneecap. The group in the upper level of the cave near the Sand Room, over 2400 feet from the commercial tour. There was no twisting of the knee when the incident occurred.

A team member was sent to the commercial entrance for help. The cave owner (Janie Morgan), another cave guide, and two volunteer customers responded with additional aid equipment, including a backboard and the bottom parts of crutches. After warming the patient in a tent, his legs were splinted with the crutches and duct tape and he was placed on the backboard and the extraction began. Five people completed the haul to the commercial tour, where local firemen finished the rescue.

The injury required immediate surgery.

Janie Morgan (via George Dasher), *Incident Report*, 3 December 2008

Comments: The trip leader had a first-aid kit that was used. The accident could have happened anywhere but occurred in a cave.

**6 November**  
**Lechuguilla Cave, New Mexico**  
**rock-fall, injury, no aid**

Michel Renda (from France), John Lyles, and Daniel Chailloux (from France) were on a 12 member exploration trip to the Western Borehole led by John Lyles and Peter Bosted. On the fourth day of a seven-day trip they started surveying some "previously enjoyed" passage. Two stations into the survey, a block next to the station weighing 60 to 70 pounds fell, pinning Michel's head to the floor. He sustained a broken molar and a bump on the head. Michel was able to continue the survey and later that day, the team discovered Emerald City with over 1000 feet of well decorated borehole.

John Lyles and Peter Bosted, "Lechuguilla Cave Expedition Report November 2 – November 8, 2007." undated

Comments: Had Michel not been wearing a helmet, the outcome of this incident could have been substantially different. Be careful of those rocks, especially in passages that are not heavily traveled.

**27 December**  
**Harrison Salt Peter Cave, Tennessee**  
**lost, aid, no injury**

Tonya Davis (19) and Jeremy Leverette (20), left their child with a baby sitter and joined Brad Pierce (28) to go spelunking. They were poorly equipped and had not planned for the excursion. They were carrying only three small flashlights and had no helmets.

When the couple did not return, the babysitter called some friends, who located the group's car near the entrance. The friends went into the cave 200 to 300 yards, calling for the missing group, but stopped when they would have had to crawl. They pointed their lights into the crawl and continued to call out. After receiving no response, the would-be rescuers returned to the entrance and called authorities at 11:30 PM. The sheriff's office, Bedford County Emergency Medical Service (BCEMS), and the Volunteer Fire Services responded. Joanna Valesquez

and Brian Bruce of BCEMS found the group in about 10 minutes, about 1500 feet in, on the entrance side of the Hell Hole Junction. The three denied they were lost and exited the cave at 1:30 AM.

Michael Clements, *Incident Report*, 28 December 2007

David Melson, *Times-Gazette* (Shelbyville, Tennessee), "Safe escape from cave." 28 December 2007

Comments: They said they were just exploring and had lost track of time. However, they were expected back in an hour but had been gone an additional seven hours (not all underground). Fortunately their flashlights were still working.

## 2008 Caving Accident and Incident Reports

### 5 January

#### Rio Camuy Cave, Puerto Rico rock-fall, fatality

While walking on a standard visitor tour, a woman from California was hit by falling rocks. The woman died from her injuries. The cave tours were closed to the public and re-opened on February 15, 2008.

Gwenn, [www.puertoricodaytrips.com/2007/12/02/rio-camuy-caves-park/](http://www.puertoricodaytrips.com/2007/12/02/rio-camuy-caves-park/), 8 February 2008

Comments: It was the first fatality to occur on the public tours portion of the park.

### 22 January

#### Cueva El Gran Plano, Puebla, Mexico caver fall, injury, aid

Arthur Meauxsoone (21), and Geraldine, Gael and Stephan Girard were part of a six-person, French and Belgian exploration and mapping expedition. Arthur was on an expected 20-hour mapping trip at the -400 meter level when he fell. The five meter fall broke one foot and injured his knee on the other leg. Arthur and his team self rescued up to between -200 to -250 meters. They had traveled for more than 30 hours before Arthur crawled into a sleeping bag to rest.

Teams from Espeleo Rescate Mexico (ERM) arrived and at one point had 22 members in three teams rigging. A doctor was with Arthur. The rescue was slowed by some tight meanders, where they took Arthur out of the stretcher and passed him by hand. Another obstacle was an 80-meter, unstable pit, where a long tyrolian was required. They were able to complete the rescue effort on the fourth day.

Richard Grebeude (in French), translated by Yvonne Droms, email, “[Texascaver] RE: more news about cave accident in exico (sic)” 23 January 2008

Richard Grebeude (in French), translated by Yvonne Droms, email, “[Texascaver] RE: Update Friday 25/1000hrs” 25 January 2008

Bill Mixon, email, “RE: ACA.” 21 May 2008

Dario Lopez, Associated Press, “Mexican team completes successful rescue of injured French cave explorer.” 26 January 2008

Comments: The cause of the fall is not available. The cavers were fined 500 pesos each because they were mapping the cave on tourist visas, not science visas.

### 9 March

#### Indian Rock Cave, Alabama difficulty on rope, no consequence

Julie Fee (39) was one of a 15-member grotto vertical trip. The 61-foot drop is normally dry, but was wet due to heavy rains during previous days. The cavers became soaked on the ascents. Julie started up one climb with Mike Manke providing bottom

tension on the rope. About 10 feet off the floor, Julie called down that she was having problems climbing. Mike noted that her right foot chicken-loop had detached from her croll. She was unable do a change over because her rappel rack was in her husband’s pack, he had already ascended, and she was unfamiliar with the procedure.

Julie received instructions on how to down climb and when she descended to within reach, Dave McCrea replaced the tri-link with a spare oval link and reattached the chicken loop. Julie completed the climb with bottom tension.

Mike Manke, *Incident Report*, 5 March 2009

Comments: This incident stresses the importance of always wearing both ascending and descending equipment when on rope. The caver needed to be more familiar with the components in her system. She was unfamiliar with several vertical self-rescue techniques for common gear issues. In addition, the climb was complicated due to the waterfall. The *Incident Report* noted that a more thorough safety check should have been performed before letting her get on rope.

### 20 March

#### Rainbow Falls Cave, Tennessee stranded, inadequate equipment, aid, no injury

Youth minister Garry Blakesley (24), his brother Dustin Blakesley (17), Jake Layman (17), and Chris Smith (20) decided to go to the bottom of the cave. They left at 10 PM and expected to return about 6 AM. A permit had not been obtained from the Park Service. The cave is vertical and wet. Only Garry had been to any cave before, and that cave was dry and in another state. Their equipment included four hardware-store-grade nylon ropes, a single industrial-style class II harness and connecting links, and a single handled ascender. They wore blue jeans and cotton shirts. Each had a single hardware store headlamp, and no one in the group wore a helmet.

They hand-over-handed down the 12-foot climbdown, then successfully repeated the procedure on the 50-foot, near-vertical and damp pitch and, the 25-foot deep, very-wet pitch. They continued along the stream for several hundred feet to the sump and then started their exit. At the wet, 25-foot high pitch, they discovered they were unable to ascend safely and retreated back into the cave to a drier area 500 feet from the entrance. They huddled together for warmth and waited for rescue.

Garry’s wife called authorities at 7:30 AM, reporting the overdue party. Great Smoky Mountain National Park personnel checked other cave entrances before finding a pack from the group outside the Rainbow Falls Entrance. The Knoxville Rescue Squad’s Cave/Vertical Team entered at 11 AM, quickly rigged and negotiated the climb down and the two vertical drops. The spelunkers were found cold but uninjured. They were given proper clothing and equipment, including polypro, cave suits, hoods, helmets, harnesses, and lights. After re-warming with blankets and food, the spelunkers were hauled up the two vertical drops with separate 4:1 MAs. With assistance, they were out of the cave and at the trailhead by 8:10 PM.

David Brace, *Incident Report, 3 April 2008*

unattributed, National Park Service, *National Park Service Morning Report*, "Great Smoky Mountains National Park-Four Entrapped Men Rescued From Cave", 24 March 2008

Jack Thomison, *Tag-Net*, "Rescue at Rainbow Cave." 25 March 2008

Associated Press, *Tulsa World* ([www.tulsaworld.com](http://www.tulsaworld.com)), "UPDATED: missing cavers from Owasso found safe, 'cold and wet'." 21 March 2008

Joel Davis, *The Daily Times*, "Knoxville Volunteer Emergency Rescue Squad pull four from Rainbow Falls Cave." 21 March 2008

Comments: Of all of the incorrect things that were done before and during this trip, two critical decisions were completed correctly. First, the group told someone where they were going and when they would be back. Second, when they discovered they could not safely ascend the pits, they retreated to a safer area and waited for rescue. Other than those items, they were very lucky.

The rescue team did an excellent job of locating and evacuating the spelunkers.

### 30 March

#### Malloy's Waterfall Cave, Georgia difficulty on rope, aid, no injury

During the Florida Cave Crawl, a group of 19, including teenagers, went to Malloy's Waterfall Cave and split into two groups to explore. After about three hours of exploring, the groups headed for the 50-foot-high entrance pit, where some members from each group climbed out. In the second group, after completing their exploration, an unnamed teenager in Boy Scout Troup 173 had trouble negotiating the entrance pit. The teenager's father ran back to the parking lot to enlist assistance.

Scoutmaster Jeff Vorpagel and members from Boy Scout Troup 173 gathered equipment and went back to the cave. Jeff went down to the teen. The boy's father helped with setting up a 3:1 MA haul system, including safety prussiks, and worked with two Scouts, Robert Fox (13) and Chance Vorpagel (15). Cavers on the trip actively monitored the rescue-in-progress. With the efforts of the boy's father, Robert and Chance, the haul was completed. When the scout reached the surface, he ran off to find something to eat. The Scouts disassembled the haul system while Jeff and two cavers ascended.

Kathryn Storey, *Incident Report-unpublished*, 7 May 2008

Wendy Shirah, Bill Putnam, *CaveChat*, "Scouts rescue young caver in Florida." 3 April 2008

Kit Bradshaw, *Jupiter Courier News*, "Jupiter Scouts, leader rescue young caver in Georgia." 2 April 2008

unattributed, *Jupiter Courier News*, "Be Prepared" Jupiter Scout talks about cave rescue." 3 April 2008

Comments: Articles in the news media used words like: delirious, hysterical, "in shock" and "everyone had left". None of these were true. Information from *CaveChat* and an incident report paint a much different perspective. The teen, though tired, was not in an emergency situation. He had also had problems the previous day. No one had left the area as reported. To Scoutmaster Jeff Vorpagel's credit, he carried and properly

set up the rescue equipment, and the scouts and father knew how to use it.

### 9 April

#### unnamed cave, Tennessee caver fall, aid, no injury

Richey Steins was out with his friends riding bikes when he decided to explore the cave. He was able to negotiate a fence and soon fell 25 to 30 feet down the entrance. The Johnson City and Washington County emergency workers were called and were able to pull him to safety uninjured.

Darius Radzius, WHJL-TV-News Channel 11, "Tri-Cities Teen Rescued After Falling 25 Feet Into a Cave." 10 April 2008

Comments: Richey was grounded for a month. His mother had warned him several times about the cave.

### 15 May

#### Crystal Cave, California no consequence, other, dynamite

A Sequoia and Kings Canyon National Park Cave Specialist discovered what appeared to be unexploded dynamite while doing planning for a new lighting system in the cave. The visitors and employees were evacuated from the area, and the chief regional blaster was notified. The chief regional blaster and the cave specialist assessed the situation and found three drill holes that may have contained unexploded charges. The Civilian Conservation Corps (CCC) opened the cave for tourists in the 1930s and created the trails using small explosives. The explosives may have contained nitroglycerin, which becomes unstable over time.

The explosives group removed the wires from the three holes and set off seven small charges to ignite the explosives. They were unsuccessful. The explosives were later removed from the drill holes.

unattributed, *National Park Service Morning Report*, "Abandoned explosives found in Crystal Cave." 19 May 2008

Susie Pakoua Vang, *The Fresno Bee*, "Cave where explosives found reopened today." 22 May 2008

Comments: Although the discovery of explosives in caves is very rare, if something is found that is suspected of being an explosive, leave the materials alone and notify the proper authorities. Sweating, explosive-appearing minerals can be particularly deadly, as it is the very unstable nitroglycerin that is sweating

### 24 May

#### Brewers Pit, New Mexico stranded, aid, inadequate equipment, no injury

Three men, all in their twenties, looked on Google Maps and noted a large, open-air pit in the El Malpais National Monument. They recorded the puka's coordinates in a remote part of the lava fields, and made the hike using a GPS receiver. After locating the entrance and rappelling the 50-foot-drop with no helmets or rope pad, they explored the cave until their flashlight (singular)

began to dim. While preparing to ascend up the rope, their only ascender was dropped into a crevice and was irretrievable. They were trapped.

Amazingly, their cell phone had one-bar in the open-air pit and they were able to reach rescue authorities and provide the coordinates of the entrance. Park law enforcement located the vehicle and the Albuquerque Mountain Rescue Council (AMRC, an MRA team) was called. The three spelunkers were located at 4 AM after searchers hiked for several hours. AMRC noted that the sheath on the spelunker's unprotected rope had been cut on the sharp basalt during their rappels. AMRC rappelled in, provided equipment, and the three were evacuated.

Bob Baker, Tom Russo, AMRC, "Mission Log for mission 080602," 24 May 2008

Ray Keeler personal notes, unpublished, 24-25 May 2008

**Comments:** The subjects had not told anyone about their specific trip plans, only that they intended to be away the whole weekend. Without the cell phone contact and the entrance location coordinates, they would have been in serious trouble, as there are scores of cave entrances within walking distance and no place to start looking other than the vehicle. Dropping their ascender down a crevice may have saved one of their lives, as the rope's mantle was cut just from the three rappels.

### **30 May** **Lava River Cave, Oregon** **caver fall, injury, aid**

Sue Caldwell (42) was on a field trip with a group of McKay Creek Elementary students, teachers, and chaperones. About one half mile into the cave, Caldwell fell and "heard something crack" in her leg. She was unable to walk, so SAR was notified for extraction, and the Sunriver Fire medics were called for medical support. The seven SAR personnel used a wheeled litter for the extraction in the large lava tube.

unattributed, KTVZ.com , "Teacher's aide falls, suffers leg injury." 30 May 2008

**Comments:** The rescue was completed by 12:40 PM. It is not known what was the cause of the fall, but the fall occurred in reasonably easy, walking passage.

### **30 June** **Falls Cliff Cave, Vermont** **caver fall, trapped, injury, aid**

Eight students and three staff of Kroka Expeditions, an outdoor adventure school, had been exploring Falls Cliff Cave. On the trip out of the cave, an unnamed 16-year-old girl was climbing a homemade rope etrier and fell 10 to 15 feet. She had been trying to maneuver into a tight turn at the top of the drop and did not have a belay. Even though her fall was cushioned by the group leaders below, there was a questionable loss of consciousness as she could not remember the fall. She also had moderate lower back pain and mild neck pain so, because of the potential for spinal injuries, the leaders chose to call for help.

One leader with the other students left to get help and blankets. The injured girl's wet clothes were removed and she was wrapped in the dry blankets.

There were communication difficulties in notifying EMS and describing the cave's location. Two fire departments began the search at opposite ends of the mountain and a group leader was spotted running down a logging road. He led them to the entrance, where the rescuers realized the difficulties involved and requested assistance.

The NCRC telephone network was activated and the first cavers arrived in an hour, bringing a cache of cave rescue equipment. The stream going into the cave entrance was diverted and a phone line was established to the patient's location.

Further patient assessment found her lower back pain emanating from a large bruise on her flank, not from the lower spine area. Her neck pain had gone away. With warming, the patient was in good spirits. The 15-foot drop had a tight, sharp turn at the top and, with the updated assessment, it was determined flexibility and mobility out-weighed spinal immobilization. A 3:1 MA haul and belay were established. The patient agreed to help by negotiating the tight turn while wearing a cervical collar. After the turn, the patient was packaged in a half-SKED and passed to the surface. The effort took six hours from the time of the fall and the patient was out by 1 AM.

Steve Hazelton, *Incident Report*, "Falls Cliff Cave Rescue Report." 22 July 2008

Patrick McArdle, *Times Argus-Rutland Herald*, "Trapped teen rescued from Vermont cave." 2 July 2008

**Comments:** A belay on the climb would have avoided this entire incident. Every use of cable ladder, rope ladder, or etrier should be belayed.

### **14 July** **Fulford Cave, Colorado** **caver fall, injury, aid**

A 13 year-old girl was "hiking" in Fulford Cave near the main entrance when she fell. She was under the supervision of instructors from the Colorado Climbing School when the fall occurred. She injured her knees.

The Vail Mountain Rescue and Greater Eagle Fire Protection District collaborated on the rescue.

Dawn Witlin, *Vail Daily*, "Girl injured while hiking Fulford Cave." 8 February 2008

**Comments:** It is not apparent whether the girl was in the cave when the accident occurred.

### **18 July** **Devil's Den Cave, Missouri** **caver fall, injury, aid**

Bianca Calloway (17) was on her first caving trip as part of a church youth group. About 2 PM, she slipped and became wedged between triangle-shaped rocks in the Satan's Maze section near the back of the cave. Friends tried to pull her out but failed. After others failed in freeing her, Park rangers were

called, who were unsuccessful as well. The Washington County SAR Team arrived and was able to free her about 7:30 AM, using ropes, pulleys, and airbags for anchors. Her injuries were not life-threatening.

Associated Press, *Arkansas Online*, "Teen trapped in cave overnight is rescued." 22 July 2008

Bob Caudle & Charles Huggins, *The Morning News*, [www.nwaonline.net](http://www.nwaonline.net), "Rescuers Free Girl From Cave." 19 July 2008

Ernie Coffman, *CaveChat*, "Here's an up-to-date rescue in Arkansas." 19 July 2008

Comments: Devil's Den receives large groups of ill-equipped spelunkers, many of which do not even carry their own light.

### **18 July unnamed cave, Iowa caver fall, injury, aid**

Austin (16) was on a trip with Camp Wyoming, a church youth group, in an unnamed cave near Maquoketa Caves State Park's tourist cave, Dance Hall Cave. He was "wearing spelunking equipment" and had been in the cave before. About 11 AM and 200 feet into the cave, Austin slipped in the Steel Gate Passage, a V-shaped passage with a 90-degree turn. As he fell he twisted and was unable to free himself, even with the help of others. It appeared his knees were hyper extended.

Group members tried to help but unsuccessfully, so rescue help was called and the Maquoketa Fire Department responded. The rescue workers started arriving after an hour and began working frantically to keep Austin warm, reporting that his temperature had dropped to 85 degrees. They did not have any cave communications equipment (phones or cave radios), so they set up a vocal relay to the surface.

Rescuers used hand chisels to chip away the rock. When those tools did not work, they called in an extricating team from Rock Island with compressed air chisels. These workers "chopped off stalactites because the outcropping of rock was biting into the young man's chest." They were successful after four hours, and he was assisted in exiting the cave.

Sheri Melvoid, *Quad-City Times*, "2 teenagers rescued from Maquoketa Caves." 18 July 2008

Eileen Mozinski, *TH Online*, [www.thonline.com](http://www.thonline.com), "Trapped teenager pulled from cave." 19 July 2008

Comments: The accounts of this rescue vary substantially on injuries sustained. An 85-degree body temperature is not a minor injury and yet the youth was able to walk from the cave.

### **18 July unnamed cave, Iowa caver fall, injury, aid**

While the rescue above was underway at Maquoketa Caves State Park, an 18 year old woman "fell 20 to 25 feet in another part of the caves" in the park, near the Natural Bridge. This second incident occurred after the rescue personnel had been working to free Austin for about two hours. Rescue squad members strapped the woman to a back board, and hauled her out of the

cave and about a quarter-of-a-mile to a waiting ambulance. A report on her condition was not available.

Sheri Melvoid, *Quad-City Times*, "2 teenagers rescued from Maquoketa Caves." 18 July 2008

Comments: Additional information is not available for this incident.

### **21 July Parachute Cave, Tennessee caver fall, injury, aid**

On Monday evening, just after 10:00 PM, three men went to Parachute Cave. One of the men fell about 15 to 20 feet and struck his head. Reports suggest that the man was climbing down the entrance drop when he fell, and that he did not have adequate equipment. The injured man was placed on a backboard and rescued by the fire department's high-angle rescue team, and taken to an area hospital in critical condition.

Bill Putnam, *CaveChat*, "Parachute Cave, TN – Accident and Rescue, July 21, 2008." 28 July 2008

unattributed, *WTLV NewsChannel5.com*, "Caver Falls 20 Feet, Lands On His Head." 22 July 2008

unattributed, *WSMV.com*, "Cave Explorer Hurt In Bellevue." 22 July 2008

Comments: Belay your climbs. This person was not using correct caving equipment, yet the news reports kept using the word "caver". In this case, the term spelunker would have been more appropriate. One report had him going to the hospital in critical condition, while another report said he was "expected to be all right".

### **24 July Fossil Mountain Ice Cave-Wind Cave, Wyoming stranded, aid, no injury**

Beau Baldoek (24), Brian Carpenter (22), and Jake Shell (23) were doing a pull down trip from Fossil Mountain Ice Cave to Wind Cave. About 200 feet beyond the 80-foot-high second pitch they encountered an unexpected ice plug and became stranded.

A report of an overdue party was called into authorities and the Teton SAR responded. When the Teton SAR reached the party, they rigged a rope and provided jumars and a safety belay. Each of the three cavers ascended under their own power.

Doug Meyer, *Incident Report*, 2 May 2009  
Ray Keeler, telephone interview notes, 2 May 2009

Comments: The SAR team reported that there had not been an ice plug in this location of the cave in several years, although a similar rescue had occurred just one year before due to an ice plug in another location in the cave. How could this incident been prevented? Checking with others familiar with the cave would have helped the group to know if a through trip had been completed this season. Also, leaving the ropes rigged and retrieving them after the trip's completion could have achieved the same result if the group had ascending gear.

**27 July**  
**Bowden Cave, West Virginia**  
**lost, aid, no injury**

Chuck Hilpert (47), David Ruth (41), Bob Sabilla (46), and Anthony Sabilla (18) entered the cave at 11AM for a “beginner trip”. Chuck and David are experienced cavers, but Bob and Anthony were beginners and were wearing cotton, and did not bring extra food and water. Chuck left a note with his son, who has had NCRC training, that said who was on the trip and when they were expected to be out. The note also included names of cavers who should be called if needed. After a short trip into the Bear Heaven section to get the new cavers used to tight places, Bob showed some concerns about the tighter parts of the cave. The plan was to make a trip into the Groundhog Entrance (Back Entrance) on an expected three-hour trip.

They went past the Harry Traverse in good shape, but when they arrived at the Bedding Plane Crawl, Bob decided he was not up for 100 yards of crawling. It was decided that Bob would wait there for the return of the other three, who were expected to be back before 2 PM. If Bob got cold, he would go and wait outside. Chuck, Dave, and Anthony completed the traverse to the collapse, but on the return trip, in the Bedding Plane Crawl, Chuck made a turn towards the Bear Heaven section. They decided to check out that area for awhile. Then, back at the Bedding Plane Crawl, they took another wrong turn. The 20-minute-long crawl had become more than 5 hours. Chuck was completely lost and they decided wait for help. Anthony said, “What happened to the Joe-Pro Cavers that I came in here with?” They moved away from the water and air movement to a comfortable location, and began the long wait.

Bob grew cold and tired of waiting in the cave and went out on his own. At about 6 PM, Bob called Chuck’s wife. Cavers were contacted, who responded. Bob also called 911 about 8 PM and had to flag down a passing motorist to ask his location to give to the dispatcher.

Several cavers and local firemen arrived and multiple search teams were organized. The group was found at 1 AM and exited the cave without injury.

Chuck Hilpert, *Incident Report, “Bowden Aca (sic) report.”* 22 May 2009

Brian Masney, email (unpublished), “WV caving incident.” 14 September 2008

Brian Masney, email (unpublished), “WV caving incident.” 22 May 22, 2009

Comments: Chuck had been in the cave many times before, but still became lost. To help avoid getting lost, it is very helpful to turn around regularly to see what the cave looks like coming from the other direction.

**27 July**  
**Lechuguilla Cave, New Mexico**  
**caver fall, injury, no aid**

Matt Covington, Peter Bosted, Andy and Bonny Armstrong, Mark Andrich, and Shawn Thomas were on a six-person, week-long exploration camp trip to push leads and climbs in the Southwest region of the cave. On the first day of exploration,

after camping at the Big Sky camp, Matt, Peter, and Bonny went to the northeast part of the Chandelier Maze. After getting turned around a couple of times in the maze, they found and ascended a 90-foot-long static rope to a small ledge. This was the end of the previous year’s exploration. Peter put Matt on belay and Matt free climbed a 20 foot “horizontal” passage that was then rigged for the others. After 180 feet of heavily decorated walking passage, they arrived at a good lead up a 60 degree slope with a 10-to-15-foot overhung section at the bottom.

From the 20-degree slope floor, Matt reached up, placed a solid tricam, and stepped up into an etrier with Bonny providing a belay. Matt tried several times to place additional protection into the numerous holes and cracks in the gypsum, but was unable to find a suitable placement. In Matt’s words, they “seemed to have dirt in them”. Peter offered to spot from the bottom, but the offer was declined. A second piece of protection was placed and after loading, seemed to hold. Since he was only about 5 feet off the ground, Matt decided to unclip the belay from the first anchor and begin the belay from the second anchor.

While leaving his right foot in the first etrier, Matt then placed his left foot in the second anchor’s etrier. At 5:15 PM, without warning, the second piece suddenly blew out and Matt fell backwards to the ground, landing in a sitting position with one foot in each etrier. It was obvious from the unnatural angle of Matt’s left forearm, and a small amount of blood, that he had suffered a compound fracture. Bonny and Peter feared the worst when Matt momentarily passed out. When he came to, he was able to pull the arm out straight in an attempt to set the bones to a less painful position. This caused a second loss of consciousness. When Matt regained consciousness, Bonny and Peter completed a primary survey and found no other broken bones or evidence of internal injury. Matt took four 200mg tablets of Ibuprofen to help prevent swelling

They made a splint of Bonny’s Swaygo cave pack, wrapping it completely around the arm from the wrist to elbow, then wrapped the pack with a sticky ace bandage and used a sling to hold it up. They decided to leave all of the lead climbing gear and head for the surface to receive medical help as soon as possible.

Peter put Matt on belay to rappel down to the narrow ledge above the 90-foot fixed rope with Bonny waiting to receive Matt. They repeated the sequence on the 90-foot rappel. This pitch was free hanging for 50 feet and too fast for Matt’s rack, so Peter lowered Matt with a dynamic rope. They packed up all food, water, and dynamic ropes on hand and slowly made it back to the Tinsel Town Trail after scouting for obstacles. Matt was spotted and belayed on exposed and steep places, but basically made it on his own down to the main trail.

After leaving notes at points entering and leaving the Chandelier Ballroom, Bonny went to the Big Sky camp (30 minutes farther into the cave) to gather bivy gear for the trip out, and freeze dried meals for the whole team, stove, and two pads. She left another note for the other team at camp. Meanwhile Matt and Peter started out, making great progress, but Matt had trouble avoiding bumping his injured arm in the crawly maze. This was remedied by trying a pair of Peter’s silk long underwear around

Matt to help hold his arm close to his chest. At 9:50 PM, on her way out, Bonny made contact with the second team who were surveying near the main trail. They retrieved their vertical gear and caught up with Peter's team as Matt was ascending out of the Le barge Borehole under his own power. He also completed the Little White Bastard pitch on his own with little help.

The six had a meal at the EF Junction. At 3:15 AM, Peter and Shawn went to the surface to notify the Carlsbad Caverns National Park personnel that a rescue was in progress and the team was moving well. Matt made most of the rest of the trip out on his own with assistance at spots and one haul near the beginning of the Rift. At Boulder Falls, the team decided on using a climbing counter balance haul with belays for each climber. However, the team did not have a proper prussic-minding pulley and the pulley available was deemed untrustworthy for this. Everyone had been up almost 24 hours at this point, so each move had to be confirmed for safety from each position on the haul. Even so, with loading, the haul line became tangled with the belay lines. They were eventually untangled and Matt continued to the surface under his own power.

Matt was taken to Carlsbad by arriving surface rescue personnel for surgery on his arm.

Andy Armstrong, "Lechuguilla Cave Expedition Report July 26-August 2, 2008." 12 September 2008

Stan Allison, email-unpublished, "ACA report" 12 September 2008

Matt Covington, email-unpublished, "Re: ACA report" 12 September 2008

Comments: Matt's fall was a direct result of the failure of gear placement. The rock blew out around the piece. Matt identified three things that could have been done differently. He denied a spot from Peter, he had each foot in separate etriers, and he unclipped from a good piece and committed solely to a dubious one. Correcting any of these may have lessened the impact.

This was an excellent self rescue.

### **13 August Wayne's Cave, Tennessee injury, no aid**

Brenda Shultheis (44), Johnny Shultheis (24), Josh Shultheis (18), and John Shultheis (44) and Tim McCain (44) decided to do the famous "to camp 4 and back" trip. Wayne's Cave has a 1,250-foot-long crawl that is known to have claimed many cavers' knees. The group was making good progress 300 feet into the crawl when Brenda's pack, which was attached to her ankle, caught on a rock while her leg was in a weird position. When she lifted her leg to move forward, Brenda heard a loud pop and felt a horrible pain in her knee.

She tried crawling further for a short bit but realized this was a poor decision. With help from John and Tim, she was able to reverse the crawl and make it up some short climbs. Follow-up medical evaluation showed a slight tear in the ACL and MCL requiring physical therapy.

Brenda Shultheis *CaveChat*, "Wayne's cave (sic) self rescue!" 25 August 2008

Comments: Though easier on the arms in long crawls, pulling a pack attached to one's ankle has its risks.

### **21 August unnamed ice cave, near Snoqualmie Pass Washington ice cave collapse, injury, aid**

Alec Corbett (17) and Alessandro Gelmini (14) were hiking on Denny Creek with a group that included their mothers and younger sisters. The group came upon an ice cave with a stream coming out of it. At 1:15 PM, Alec and Alessandro went into the ice cave about 15 feet in walking passage when a church group came up and started taking pictures. Most of the cave then collapsed with a deafening crash. Everyone converged on the collapse to help, but Alec and Alessandro were buried under 6 to 15 feet of ice and snow, but some of the ice blocks were five feet in diameter. They tried to use sticks to dig but there was no way to cut through the ice.

Joni Corbett (Alec's mother) called 911 and was able to provide accurate enough directions for a rescue helicopter to locate Snoqualmie Pass, the nearest flat spot for a landing zone. SAR crews hiked to the incident site with tools including chain saws. They attacked the ice through the afternoon in a steady rain, cutting up the ice into one foot cubes for moving.

About three hours after the collapse, they made contact with Alessandro and were able to cut him out about an hour later. A Blackhawk helicopter was brought in to fly him out. Alessandro had been able to breath through small spaces between the ice blocks. Alec Corbett was pulled free by 6:45 PM. Both boys had broken backs. Alessandro's other injuries included a broken cheek bone, nose bone, ankle and bone chips in his foot. Both were in serious condition and air lifted via a helicopter short haul.

Peyton Whitely, *Seattle Times*, "2 teens rescued from ice cave." 22 August 2008

Brad Wong, *Seattle PI*, "Lot of skill, bit of luck saved boys." 23 August 2008

unattributed, [www.mynorthwest.com](http://www.mynorthwest.com), "Both Seattle boys from ice cave have broken backs." 22 August 2008

Comments: Both boys recovered. While making the 911 call, Joni tried to climb into the just collapsed cave and had to be talked out of it by the dispatcher. Others in the group started climbing onto the ice collapse looking for ways in, and had to be strongly told to get off before causing another collapse.

The SAR team's initial intent for the chain saw was to cut trees for a landing zone. Cutting away the ice was a better use.

### **31 August Ain't Barbwire Cave, Arizona caver fall, no consequence**

Graham Schindel (19), Vince Bronson, Christina Jan, Larry Zimmer, Edd Poon, and Robert Goforth were on a trip to the back of the cave. The trip was during the monsoon season in Arizona, and there was some apprehension about rain since there are several stream crawls and some places where the forest litter

is wedged in the ceiling. After four hours, the team reached a 12-feet-deep, slightly overhung pit near the back of the cave. The rope was rigged on a stout-looking rock, and Graham started the short rappel first, backing over the edge. Just as his picture was being taken, Graham disappeared over the edge along with the rope. The stout rock had snapped off, and Graham had fallen onto the jagged rocks below.

The five other members had a collective "sick feeling" as Robert quickly went to the lip and looked over at Graham below. Graham had fallen backwards about 10 feet. He was wearing a helmet and had a long cave pack that may have helped protect him from the fall. Graham got up, said he was "OK," and threw the rope up for re-rigging to several rocks and the trip continued.

*Robert Goforth, Incident Report (unpublished), "Ain't Barbed Wire," 18 August 2009*

Comments: Robert noted that they were hurried and distracted because of the rain outside. In addition, the drop seemed so inconsequential that they did not pay enough attention to double checking the anchor and having a proper backup. Check your rigging and check other people's rigging.

### **27 or 28 September unnamed cave, Belize fatality, drowning**

Linda Linan (52) and her husband Eduardo were on a Carnival cruise when they decided to go on an adventure trip tubing through a cave in Belize. It was advertised as a lazy float down the river on a dark-cave tubing excursion. In one part of the cave, the strong current headed straight into a wall pushing more and more tubers in from behind. The guide started yelling "Turn right, turn right." Linda and Eduardo hit the cave wall and flipped over. Eduardo was pulled from the river by another tourist. When Linda was found, a nurse and a policeman performed CPR but they were unsuccessful. Carnival Cruise Lines has suspended further cave tubing trips and is investigating what happened.

unattributed, [www.WFTV.com/news](http://www.WFTV.com/news), "Woman Says She Warned Cruise Line 2 Years Before tubing Passenger Died!" 30 September 2008

Comments: After the initial article was published, a reader came forward with a similar story from two years earlier regarding a Carnival Cruise dark-cave tubing tour. With almost 100 tourists there were just two cave guides. The rushing water knocked her from her tube and she had to be pulled to safety by the other tourists.

### **18 October Fort Stanton Cave, New Mexico fatality, heart attack**

During the Fort Stanton Study Group's week-long October Expedition, Mike Bilbo, Joe Koby, and Jeff Jackson led an orientation trip for members of the El Paso Archeological Society (EPAS). Eleven were on the expected three-hour trip, including Tom Gulczynski (57). They went to 20 Steps with several rest and interpretive stops along the way. After a 20-minute talk, they went through the 600-foot-long Crystal Crawl

and onto the Inscription Site for another short talk. After looking at the formations, they started their return trip. Mike sent Joe out of the cave to report in that the group would miss their exit time but everything was OK. About 200 feet from the entrance side of the Crystal Crawl, at 4:45 PM, Tom told Jeff that he felt tired and they stopped the crawl. Then Tom laid down on his left side, passed out, and started heavy, labored breathing. Jeff and another person unbuckled Tom's helmet, took off his pack, and removed anything restrictive to Tom's breathing. Then they could not detect breathing and the faint pulse disappeared.

Mike sent Jeff to notify expedition members on the surface of the emergency and that they were initiating CPR. Mike pulled a micro-shield out of his cave pack, then realized he had not told Jeff to call for paramedics. He put Christian Bilbo in charge and headed out. At the top of 20 Steps he ran into Sam Bono's team, including Jennifer Boyette and Carol Lucero. Jennifer and Carol went to the incident site, where Jennifer took over IC and CPR. Sam went to the surface to alert others via radio. Mike then met another team of Jennifer Foote and Ron Lipinski, who went to the rescue site where Foote alternated CPR with Boyette and EPAS members. Ron became the cave-to-surface communications runner and took an updated patient status to the surface. Mike then led the remaining EPAS members out of the cave.

At 5:20 PM, as the EPAS group was leaving, they met Jeff with the paramedics coming in. A litter team followed. The CPR had continued for almost an hour when the paramedic called for a stop. The body was packaged and reached the surface at 8 PM.

*Mike Bilbo, Incident Report-unpublished, "FSC Fatality Report" 25 October 2008*

Comments: Tom was found to have had a heart attack. The Fort Stanton expeditions are well attended with multiple projects being completed, at multiple surface sites in the area. When Sam Bono radioed the call out they all responded immediately.

### **1 December unnamed cave near Pembroke, Kentucky fatality, cave dig collapse**

Devin William Peters (42) and another man were digging for Native American artifacts in an unnamed, western Kentucky cave when the walls of their excavation trench collapsed, covering Devin. The two had been working in the trench and the area for several years. The second man was above ground and called for help at 4 PM. Devin was found in the excavation trench, 8 feet below the floor of the cave, buried under 4 feet of dirt, about four hours after the collapse. His body was extracted 90 minutes later.

*Alan Reed, Kentucky New Era, "Arrowhead hunter dies in dig collapse", 2 December 2008*

Comments: Despite the abhorrence amongst cavers about this activity, something can be learned from this incident. Shore up your digs.

**8 December**  
**Byers Cave, Alabama**  
**lost, aid, no injury**

Two unnamed men decided to go to Fox Mountain to find a cave. Each had one flashlight, but no helmet or other equipment. At 2 AM, December 9<sup>th</sup>, the wife of one of the two spelunkers called her neighbor, Steven Driver, asking for help to find them. Steven checked two popular nearby caves (both vertical), but found no ropes at the entrances and did not go in.

He then checked Byers Cave and found them at the bottom, away from the waterfall. They were lost and cold, but otherwise uninjured so he gave them some energy bars and showed them the way out. It took Steven about 7½ hours to locate and assist the spelunkers.

Steven Driver, *CaveChat*, "lost but found in byers (sic)" 12 December 2008

Comments: Further comments from Steven show this is a repeatedly occurring scenario.

### Common Caving Mistakes and Consequences

1. Primary light failed; did not carry backup lights, or backup lights inadequate – stranded.
2. No map, no guide, and poor route-finding skills – lost.
3. Wore inadequate or inappropriate clothing for conditions – hypothermia.
4. Did not bring extra clothing – hypothermia.
5. Moving but not paying attention – caver fall.
6. Free-climbing more than a body-length without belay – caver fall.
7. Traversing above drop without belay or safety line – caver fall.
8. Ignored rainy weather forecast; entered water cave – flood entrapment or drowning.
9. Careless movement in tight passage or crevice – stuck.
10. Entered bat cave or passage without precautions – histoplasmosis.
11. Solo caving and something went wrong – stranded.
12. Did not tell anyone of plans – delayed rescue by hours or days.
13. Did not clear loose rocks from lip – struck by falling rock.
14. Climbing or descending rope hand-over-hand – lost grip and fell.
15. Climbing cable ladder without belay – fell off.
16. Lost control of rappel; no bottom belay or rappel safety – fell to the bottom.
17. Out of shape or unfamiliar with climbing system – stranded on rope.
18. Did not know how to change from rappel to climb or from climb to rappel – stranded on rope.
19. Hair or clothing stuck in rappel device; did not know how to recover – stranded on rope.
20. Rappelling without wearing climbing system – stranded in pit or on rope.
21. Attempted pull-down trip without map or guide – stranded.
22. Sharing vertical gear; lost equipment passing it up or down the pit – stranded.
23. Did not tie a knot in the end of the rope – rappelled off the end and fell.
24. Moving around lip of pit without being belayed or being on rope – fell into pit.
25. Did not check attachment of rappel device to harness – became detached from rappel device and fell.

## Previously Unreported Cave Diving Accident and Incident Reports

**March 1993**

### **unnamed sinkhole, near Merida Mexico fatality, MX oxygen toxicity**

A full cave and nitrox<sup>®</sup> instructor suffered an oxygen convulsion during a deep air dive in a sinkhole in Mexico and drowned. His partner, who experienced CNS toxicity warning signs during the dive, and a safety diver survived. The two later recovered the body.

The team had planned a 20-minute air dive in excess of 230 fsw (71 msw) the depth of the saltwater halocline in a cavernous open-water sinkhole near Merida on the Yucatan Peninsula. Because of the difficulty in obtaining helium mixes in Mexico, the team decided to conduct the dive on air, followed by oxygen for decompression. Both were experienced deep divers. A weighted descent line was rigged for navigation and for staging oxygen and extra air cylinders. The safety diver was to descend with the team to 220 fsw, ascend to a shallower depth, and wait for the dive team.

After a long, slow descent past the halocline, the team tied into the descent line to explore the well at a leisurely pace. Informed sources estimated their maximum depth to be close to 300 fsw (92 msw) (A PO2 in excess of 2.0 atm-e.d.). The surviving partner experienced a tingling in his lower lip and turned back to call the dive, only to see the diver headed back as well. When he reached the line, he sensed that the diver was in trouble. The diver grabbed the line and began a hurried hand-over-hand ascent. The partner reached the diver, gained control, and they began to ascend together. The diver continued to pull on the line creating slack and getting himself tangled. His partner cut him free. The diver then darted upward, got tangled again, and apparently convulsed. By the time his partner reached him the diver's regulator was out of his mouth. At that point they were still deeper than 230 fsw (71 msw). After repeated attempts to force the regulator back into the diver's mouth with no success, the surviving partner realized the diver "was gone" and left the body entangled in the line, and ascended to complete his decompression. Following decompression, the partner and safety diver were able to pull up the line and recover the body.

Jeff Bozanic, incident summary, June 2009, reprinted with permission

Comments: This incident was listed without summary in the 1993 American Caving Accidents and is being re-listed with the summary.

### **September 1993 Wakulla County, Florida fatality, drowning**

A very experienced 24-year-old cave diver lost consciousness and drowned while negotiating a restriction on the way back to the team's decompression stages, following a deep mix

exploration push to a depth of about 220 fsw/66 msw with a planned bottom time of 120 minutes.

The inbound leg of the dive which was the latest in a series of progressive pushes intended to connect several major sinks, had gone as scheduled. The team of three reached the end of the line in good time and added about 800 feet of line (7800 feet back at a depth of about 220 fsw/66 msw) when the diver "unexpectedly" called the dive. The team turned for home. Upon reaching their staging area, the lead diver turned to see the diver tangled in the line struggling with his stage. The third diver freed him and they continued, although the diver appeared shaken.

As the diver negotiated the "short cut" restriction at about 200 fsw/ 61 msw and 2000 feet back, his scooter prop caught and ate the line, halting his forward motion and pinning him between the floor and the ceiling just as his stage bottle ran out of gas. He flashed an "Out-of-Gas" signal to the lead diver, who responded with his long hose. Thinking the diver was out of gas (he actually had 1000 psi in his 104s and 1000 psi in his other stage), the lead diver passed him a stage bottle. The diver gave back the long hose and jettisoned his old stage. At this point the cave silted up, and the lead diver lost visual contact.

From the rear, the third diver saw his teammate wedged in the restriction and initiated touch contact as the cave silted out. The third diver squeezed his leg to indicate "Go" and the diver kicked. He backed off then squeezed again with no response. He tried to pry him free and at some point realized the diver was dead. The third diver unclipped his scooter and stage bottles and was able to squeeze around the unconscious diver in the cloud of silt. He then made physical contact with the lead diver.

Silted out and under the time constraints of their gas supply, the remaining two divers linked up and motored back to the safety of the decompression bottles. The two had about six hours of decompression remaining.

The incident generated serious discussion in the cave community regarding the role of a dive team and how much push is too much. Reportedly the diver couldn't sleep the night before, had ill feelings about the dive, and exhibited anxiety. He told at least one person that this was the last of these dives he would do. It was reported that the diver was "off" that day and that he may have chosen to go ahead so as not to miss the "big" dive and lose status.

Jeff Bozanic, incident summary, June 2009, reprinted with permission.

Comments: You should not dive if you do not feel right about the dive.

### **September 1993 Little River, Florida fatality, drowning**

A novice cave diver ran out of gas and drowned on a solo dive in the Little River Cave System. The diver was found with no air in either of his independent 104 tanks about 1300 feet back in the cave on the mainline. Though the individual frequently made solo dives, he was not diving with a "buddy bottle."

The diver was known to use "creative" gas management rules outside of the basic tenets of cave diving. On at least one occasion, he had explained the gas management strategy he utilized to a group of cave students. Basically the diver reserved sufficient gas to exit from known points in the cave using the outflow in the system. The problem is that liberalized gas management rules such as this leave no margin for error or the unexpected, compared to the golden "rule of thirds" or better (i.e. use no more than 1/3 of your gas for penetration and exit on the remaining two thirds).

Members of the recovery team speculate that the diver ventured into an unfamiliar part of the cave and got lost in the low silty tunnels and "tees." Having silted out the area, the diver spent precious time searching for the main line connection and likely missed the tee on the way back. Eventually he found his way to the line but it was too late. A long-time Aqua Corps subscriber, he had renewed his subscription only a week before.

Jeff Bozanic, incident summary, June 2009, reprinted with permission.

Comments: None.

### **April 1994 Big Boil Blue Hole Cave System, Abaco, Bahamas three fatalities, drowning**

Three "untrained" open water divers ran out of gas and drowned in the Big Boil Blue Hole Cave System. None of the divers were cavern or cave certified.

It was reported that the three divers entered the low, silty Big Boil cave with only two guide lines. Two of the divers carried single 72 cf tanks. The third carried a single 80 cf tank.

The team leader who reportedly had "dived Big Boil many times before," made the dive without a depth gauge, BC, knife or redundant second stage. The team apparently made about 150 foot/46 meters penetration to a depth of 75 f/23 m.

Two of the bodies were recovered on the mainline at what is believed to have been their point of maximum penetration. One of the divers was tangled in the line. The body of the team leader was located after an extensive search, in a restricted side passage approximately 150 feet/46 meters off the mainline.

Bozanic, incident summary, June 2009, reprinted with permission. Information from submission by Al Pertner.

Comments: No amount of open water training prepares a diver for cave diving.

### **May 1994 Blue Hole, Grand Bahamas two fatalities, drowning**

Two very experienced divers (who were not cave certified) got lost in a popular Blue Hole during a live-aboard dive trip, ran out of gas, and drowned. Neither diver was running a line or carrying multiple lights.

One of the divers was found within 100 feet/30m of the cavern zone in about 90 feet (/28 m). The second body was recovered by a cave recovery team the next day at about 400 feet (122meters) from the cave entrance in about 120 feet (37 m) of water. Both were wearing single 80 cf tanks. It is not known if the bodies were separated by the tidal flow in the system, or if the team had been separated during the dive.

The cavern zone at the site is often dived by recreational divers from a live-aboard boat. A partner of one of the deceased who was on the dive boat believed that the two "had no intention of making a cave dive," and in fact, had left line reels on the boat. One of the divers was going shell collecting. The other was apparently planning to shoot video. The partner believes that the two became intrigued and ventured out of the cavern zone and into the cave system. Ironically, the two were considered the most experienced divers on the live-aboard trip. One of the divers was a former commercial and military diver, was open circuit mix trained, and had worked as a dive master with a technical diving operation. The other was a dive store owner, a 20-year instructor and was in the process of completing a cave course.

Jeff Bozanic, incident summary, June 2009, reprinted with permission.

Comments: None.

### **April 1995 Mayan Cenote, Mexico two fatalities, drowning**

Two experienced cave divers (ages 45 and 38) ran out of air and died after missing a turn while trying to exit a cave dive in Mexico. The two were among a group of seven cave divers who had broken into three teams for a 45-minute dive on air at depths no greater than 60 f/ 18 m. The pair was on the third team to enter the cave. Besides making an incorrect turn while trying to exit, the divers failed to use safety reels to mark a jump and apparently missed or disregarded a series of line markers pointing the direction to the exit.

On their way into the cave, all three teams used a main tunnel known as B. They passed in sequence through a T-turn, where the divers expected a jump. However, instead the cave came to a T, with three line markers marking the correct direction to turn while returning to go to the exit. A member of the second team repositioned one of the markers to make it more visible.

The third team into the cave called their dive earliest as planned, since the first two teams were stronger swimmers and wanted to penetrate further. The two divers then headed back, but turned in the wrong direction at the T, apparently missing all three line markers at the spot. Their mistake led them 300 f/91 m to the end of B tunnel, where another route leads to the A tunnel. The divers headed into the A tunnel, which also led to an exit, crossing a visual gap without setting up a safety reel to mark their path.

The divers then made a series of errors and apparently missed several indicators that should have told them that they were following a different path than the one they had entered by. The divers made it to the end of the line marking the start of the A tunnel, about 30 feet from an exit. Rather than exiting, the team headed back into the A tunnel, passing as many as 14 line markers pointing back toward the entrance they'd just left. The divers then swam past the unmarked jump which might have led them back to the other dive teams.

When the third team did not return from the dive, the other five divers notified local authorities and asked for help. Later that day, the divers returned to the cave and recovered the bodies of the two divers. Their moves were reconstructed by the other members of the team, one of whom had entered the A tunnel after completing his dive in an attempt to find the missing divers. He noticed silt at the entrance, indicating that the missing team had recently been there, but because of low air had to turn back before going far enough into the tunnel to find them. One of the divers had made between 75 and 100 cave dives; the other had some 150 cave dives.

A cave diving instructor with the group commented that the series of errors apparently made were inexplicable given the level of experience between the two divers.

Jeff Bozanic, incident summary, June 2009, reprinted with permission.

Comments: None.

## 2007 Cave Diving Accident and Incident Reports

**14 February**

### **Allen Mill Pond Spring, Florida fatality, drowning, out of air**

Ron Simmons (53) had been mapping Allen Mill Pond Spring during the last several years. He had done this primarily through solo trips and had accumulated 2524 feet of survey. The cave is very small, silty, and contains two maze-like conduits. The survey showed that the cave is 46 feet deep in the back, but most of the cave is at the 30-foot level. The cave requires side-mount tanks for exploration. Ron's log book showed 43 previous dives in the cave.

When Ron failed to return from an exploration dive, Wes Skiles called local law enforcement to check for a vehicle, but none was found. On February 15<sup>th</sup>, Wes and Jill Heinerth located Ron's vehicle by a nearby spring vent in a wooded area, and called the Lafayette County Sheriff's Office. Rescue and recovery personnel began to arrive within one half hour. At 3:55 PM, Mark Long began a recon dive. Mark returned in just under one hour after penetrating 650 feet. He did not find Ron.

After review of the map (work-in-progress) and Ron's notes, it was determined that Mark had gone into a different tunnel of the maze than Ron's expected dive for the day. At 5:06 PM, Mark began a second dive to mark the route for a follow-up diver. At 5:48 PM, Mark returned to the surface with Ron's body. Ron was found about 300 feet from the entrance and in a swimming position. Ron had a regulator in his mouth with a second regulator trailing. Both tanks were found empty and the survey slate showed 238 feet of new survey on the trip. Ron's equipment showed he had been no deeper than 28 feet below the surface.

Jill Heinerth and Gerald Murphy, *Incident Report*, 18 February 2007

Karen Voyles, *Gainesville Sun*, "Man dead after Suwannee River cave diving." 16 February 2006

Comments: Ron was an extraordinary, prolific explorer who created some of the most detailed and descriptive underwater cave maps. He was a highly talented craftsman who built much of his own diving equipment and critical safety equipment for dry cavers (for example, the Simmons Roller). His gear was highly-specialized and found to be as organized and tidy as his survey work. Even in the face of being unable to reach the surface, it appears as though he worked to survive until the very last moment.

**19 February**

### **Catfish Hole, Florida fatality, drowning, out of air**

Bobby Rother (19) and two friends were cavern diving when they became separated. They were diving in an area where an overhead obstruction does not allow direct access to the surface. Levy County Sheriff's Office was called, and Bobby's body was found by rescue divers in the Catfish Hole area of Manatee

Springs. Authorities would not comment on how the victim had become trapped below the surface. His tanks were out of air.

Alice Wallace, *Gainesville Sun*, "Scuba diver dies at springs in Chiefland." 20 February 2007

Comments: Little additional information has been gathered on this fatality.

**5 March**

### **Jackson Blue Spring, Florida fatality, drowning, stuck, exceeded training**

Harry Milliser (48) was an open water diver with 20 years of experience. His dive partner, Gordon Smith (58), had completed his basic cave-diving certification. Harry became stuck in a narrow part of a side passage, and Gordon went to the surface for help.

Edd Sorenson, an experienced cave diver, arrived 12 minutes after the 911 call was made with hopes of saving Harry. He was in the water three minutes later and used a motorized scooter to reach Harry as quickly as possible. After 600 to 700 feet of clear water, Edd encountered a cloud of thick silk. He went down a side passage on the left and found Milliser's body at a 96-foot depth, four minutes into the search. Harry had drowned after abandoning his dive gear and trying to swim out of the cave. His tanks still contained air.

David Angier, *Panama City News Herald*, "Panic led to diver's death." 7 March 2007

Kate McCardell, *Jackson County Floridan*, "Man who died cave diving was Marianna resident." 7 March 2007

Kate McCardell, *Jackson County Floridan* via *WMBB News 13*, "Diver Identified." 6 March 2007

Comments: After being unable to free his dive gear, it appears that Milliser's panic contributed to his death when he abandoned his dive gear with air still in the tanks.

**16 March**

### **Madison Blue Spring, Florida fatality, drowning, illness, possible heart attack**

Dean Barnhart was leading a two-person dive team at Madison Blue Spring. As the team was exiting through Potter's Delight, Dean appeared to have some kind of trouble at the stage room. His buddy attempted to assist and obtain a response but was unsuccessful. He returned to the surface to alert authorities.

A recovery team assembled, the buddy was interviewed, and a recovery plan was created. Ken Clizbe entered at Martz Sink to retrieve the body. Meanwhile, Bonnie Stelzenmuller installed a line from the main basin to the gold line. This allowed them to exit via the main basin and provide assistance as needed.

The cause of the incident was speculated to be a heart attack. There was sufficient air in Dean's tanks for a proper exit. The gas mixture was verified independently to be correct. The recovery team filled their tanks from the same source which had

recently had its gas tested. Additional information is not available.

Ken Hill, *Cave Diver's Forum*, "Madison Blue Fatality." 17 March 2007

Ken Clizbe and Bonnie Steizenmuller, *Cave Diver's Forum*, "Madison Blue Fatality." 19 March 2007

Comments: Limited information has been distributed about the cause of death.

### 14 July

#### The Crack, Withlacoochee River, Florida fatality, drowning, illness

An unnamed woman (28), Tim Halbach, and Wayne Kinard were on their second dive of the day. Their plan was to follow the main line until they had used 1/3 of their air and then return. Tanks were filled with 24/25 trimix due to the depth of the dive.

During the return trip's ascent at approximately 145 feet, Tim signaled to Wayne that the victim was having a problem. Her hands were clenched, her arms shaking violently, and her regulator was out of her mouth. Both Tim and Wayne worked together to try and replace the regulator and get her out of the cave. This was delayed due to the required 12 to 15 minute decompression requirements. As soon as possible, Tim exited and called 911. Approximately 30 minutes had elapsed since the start of the difficulties.

Wayne Kinard, *Incident Report*, "The Crack." 19 July 2006

Comments: All three team members held proper certifications and were properly equipped. The victim had completed 40 plus cave dives in the last year. Her equipment was in very good condition.

## 2008 Cave Diving Accident and Incident Reports

### 1 February

#### Forty Fathom Grotto, Florida fatality, drowning

Rebecca Harden (54) was part of a scuba group with an instructor. As the group was ascending, the divers would stop at various levels. At one of the stages, the instructor noted that Rebecca was no longer with the group. He saw bubbles and descended, and brought her to the surface. They performed CPR on Rebecca until the Marion County Fire Rescue arrived. They were unsuccessful in the resuscitation efforts.

Luther Monroe, *CDNN - www.cdn.info*, "Scuba diving accidents kills woman at 40 Fathom Grotto." 1 February 2008

Austin Miller, *Star Banner - www.ocala.com* "Diver dies in 40 Fathom Grotto incident." 1 February 2008

Comments: None.

### 11 March

#### Devil's Ear, Florida fatality, drowning, exceeded experience

Mark Fyvie (35) was on a solo rebreather dive in the Devil's Ear portion of Ginnie Springs, starting in around noon. The rebreather allowed him to stay underwater longer than if he had been using scuba. The dive plan was extreme. He planned to go to the end of the line on the rebreather, remove it, and continue with the side mounted scuba tanks through some tight constrictions, lay more line, and survey.

When he failed to return by 9 PM, Cory Mearns began searching and after 1½ hours, Mark's body was located, 3800 feet into the system. His body was removed from the cave the following day due to safety concerns for the recovery team.

It appears Mark had completed the survey portion of the dive plan, as his body was found with an empty reel and survey data in his log book. The evidence supports the fact that he used

more gas than he should have after dropping the rebreather, and his computer showed he had spent about an hour on Scuba after leaving the rebreather. When he returned to the rebreather, he was followed by silt that deteriorated visibility. The unattended rebreather had not been secured correctly and the loop flooded.

Mark had a safety bottle only 50 feet away that had not been used. He also had three 80 cf tanks staged in the system, which contained plenty of air to get back to the entrance.

Lamar Hines, *Incident Report*, "Fatality at Devil's Ear." 18 March 2008

Luther Monroe, *CDNN - www.cdn.info*, "Rebreather accident kills Swiss diver at Ginnie Springs." 11 March 2008

Lise Fisher, *www.gainsville.com*, "Swiss man dies while caving." 12 March 2008

Comments: There are additional questions as to what caused the fatality. Mark, though experienced, may have pushed the envelope too far.

### 9 June

#### Jackson Blue Springs, Florida fatality, medical issue, drowning

Joel Mitchell Tubbs (41) and his partner registered with the sheriff's office for the night dive. They entered the water, signaled that they were "okay," and began their dive. After a short distance, the lead diver turned to check her partner, and found Joel's underwater scooter sinking to the bottom and that Joel had risen to the cave ceiling. When she reached him, he was unresponsive, so she immediately pulled him to the surface. CPR was attempted but was unsuccessful.

unattributed, *Dothan Eagle, AL*, "Alabama cave diver dies at Blue Spring near Marianna." 18 June 2008

unattributed, *WTYVNews4.com*, "Cave Diver Dies at Blue Springs." 9 June 2008

Comments: This is assumed to be a medical issue that led to the drowning.

### Late July

#### Sistema Naharon, Quintana Roo, Mexico multiple issues, no injury, no aid

Hans and Patrick went to retrieve in-cave equipment after teaching a full cave-diving class. Their plan was to traverse from Cenote Cristal (Cenote Naharon) down the Death Arrow jump, pick up the spool, and swim back. As they were heading towards the Mayan Blue, Hans went to "drop" a "cookie" and dropped his safety spool. As he reached for his safety, he lost buoyancy and started to descend. He then reached for the inflator, but was unable to avoid crashing into the floor. They reached the spool and retrieved it 80 minutes into the dive. Twenty minutes into the return trip, Hans saw a flash of light from Patrick, 15 meters away. As he approached, he saw Patrick struggling to access a bailout regulator, the exhale breathing hose of which had become detached from the rebreather canister. At Patrick's request, Hans reattached the hose. This was a catastrophic loop failure and they still had a 60-minute, upstream swim to exit the cave.

Patrick cleaned up his hose routing and attempted to put it back on the loop. He found out quickly that it was not going to work. Hans offered some 32% EAN which was later accepted.

As they went to retrieve the cookie, Hans passed the tank to Patrick, but when he reached for it, the mouth piece came off the regulator. He caught it before it could fall far and replaced it.

Then, as Patrick was swimming off and Hans was working with Patrick's "too short" side-mount bungies, Hans' rebreather became caught in the ceiling. He jerked his head down and suddenly realized his head was very heavy. A large rock had come loose from the ceiling and was forcing him to the floor. Hans was able to roll to the right before impact with the ground.

Hans, [www.quietdiver.com](http://www.quietdiver.com), "8000 Feet, One Spool and One Total Loop Failure." undated

Comments: Hans and Patrick had been cave diving in Mexico for the previous seven months without incident. Then, all of this happened on one trip. They held a thorough evaluation after the dive and made both equipment and planning adjustments.

### 19 September

#### Jackson Blue Springs, Florida fatality, drowning

Richard Mork (39) and Dan Weyant began the dive in Jackson Blue Springs at 1:04 PM. The plan was to scooter to about 3300 feet, and leave a safety bottle. They would then swim to 3900 feet, jump over to DeLoches Delight, and complete the circuit or until either had used one-third of their air. Richard's scooter had mechanical issues just 100 feet into the dive, so they decided to swim. Sixty minutes into the dive and about 2000 feet, in an area called the Rabbit Hole, Dan noticed Richard was acting "erratic." Richard bolted past Dan towards the entrance.

In a few seconds, Richard stopped swimming about 5 feet from the third "T". When Dan got to Richard, his regulator was out of

his mouth and Richard was jerking and his loop was floating above his head. Dan used a secondary regulator and tried to force air into Richard's lungs to resuscitate Richard for 15 minutes, but was unsuccessful.

Dan's gas reserve was becoming critical so he swam out and notified authorities. During the exit, Dan had to stop himself and get his breathing under control, as he was using well over 200 feet per minute. Edd Sorenson, a Florida safety director for the International Underwater Cave Rescue and Recovery, went in to recover his friend's body.

Dan Weyant, *Incident Report*, untitled, 19 September 2008

Kate McCardell, *Jackson County Floridian*, "Cave diver dies at Jackson Blue." 20 September 2008

Anthony Anamelechi, *Tallahassee Democrat*, "Texas man dies while cave diving at Blue Springs Park." 23 September 2008

Comments: Forrest Wilson: The current thought on this incident is that Richard's sensors were too old at 18 months, when 12 is the maximum.

### 12 November

#### Wayne's World (School Sink), Florida two fatalities, drowning

Joe Christian Hartranft (52) and Yessic Cozay Spencer (42) began their dive heading towards the Short Cut Tunnel. It is believed that Yessic, who was leading, determined he had a gas problem either in, or after the Short Cut Tunnel beyond. The Short Cut Tunnel is only about 3 feet high and has both fresh water and saltwater, which causes visibility problems. It is also possible to lose the line, and this seems to be what happened as Joe headed for the Staircase Tunnel. It appears that Yessic was having trouble breathing. He deployed his own reel to go find Joe, but quickly realized he was low on air, clipped back in his partially deployed reel, and bolted for the entrance. In his haste, Yessic used the main gold line to "climb" out of the main cave towards the entrance. Yessic may also have had a buoyancy problem. A body-sized impact crater was found at the lowest point of Dog Tunnel, suggesting a massive silt cloud may have been created.

Joe deployed a spool and found a route from the Staircase Tunnel back to the gold line in a self-rescue effort. During the effort, he must have dropped his spool and could not find it due to silt. He deployed his second spool, which had only inches of the line left. Joe's breathing rate was probably high allowing less time to get out of the cave. Here he found several line traps where the line falls into an area too small for a diver to follow. This may have been caused by Yessic's "climb" out. Also, there were probably visibility issues with the silting. Once Joe's second spool was used, he was out of options. It appears Joe was "OK'ing" the line when he died.

Paul Heinrich and Brett Hemphill were the recovery divers. When they entered the cave they immediately saw Yessic's body. It was in the main cavern, 47 feet deep, by his O<sub>2</sub> bottle since he could not use his remaining breathing air. The isolator to his back-mounted, right-side back cylinder was closed. O<sub>2</sub> toxicity can lead to blindness and may have been why Yessic had tied himself into the line. They found one of Yessic's fins 20 feet beyond the body and the second fin 50 feet further at the

lowest part of the Dog Tunnel. The three-way arrow rack into the Dog Tunnel had been completely pulled away. Joe was found 160 feet farther in. His body had floated to the ceiling of the School Sink #2 dome.

Paul Heinerth, Brett Hemphill, *recovery report*, "Wayne's World Recovery." 12 November 2008

Jodie Tillman, *St. Petersburg Times*, "Missing cave divers' bodies found in sinkhole." 13 November 2008

Times Staff, *TampaBay.com*, "divers found dead in sinkhole identified." 13 November 2008

Comments: Preliminary information showed that the two men did not have the qualifications to dive in Wayne's World. Yessic may have been extremely stressed. During the recovery, Brett, found a 60-foot-long line trap section of the gold line. The line had moved into an impassible bedding plane. Also, without the silting problem, the recovery team found Joe's partially used spool.

### **15 November Forty Fathom, Florida fatality, drowning**

Sean Patrick Spiegel (25), Matthew Berry (22), Doug Masters (24), and Nicole Wilkerson (23) went out for dinner and cocktails on Friday evening from 8 PM to 9 PM. About 1:30 AM Saturday morning they decided to do a night dive. A fifth person remained on the surface for safety reasons. They

descended to 104 feet. The dive lasted about twenty minutes and at which point they decided to ascend. Matthew signaled his dive partners to go up but Sean signaled that he wanted to stay down six more minutes. At 70 feet, Matthew could not see Sean s, he and Doug went back down to 104 feet to look for him. In the report, Matthew said sometimes Sean would let go of the rope, but that never lasted more than five minutes. Without finding Sean, the remaining three returned to the surface and called authorities.

Recovery dive teams responded to the call and made multiple dives searching for Sean over the next two days. Low visibility hampered recovery efforts. Sean's body was recovered at 8:15 PM on Sunday, November 16<sup>th</sup> at a depth of 105 feet.

Austin L. Miller, *Gainesville Sun, Gainesville.com*, "Diver reported missing at Forty Fathom Grotto." 15 November 2008

Austin L. Miller, *Ocala.com*, "Body of diver recovered in Forty Fathom Grotto." 16 November 2008

Luther Monroe, *CDNN*, "Scuba Diver Drowned at Forty Fathom Grotto." 17 November 2008

Comments: The question of having cocktails and then diving only four hours later is of obvious concern. However, Sean's dive instructor said he was an exceptional, safety oriented student.

## 2007 Caving-related Accident and Incident Reports

### 5 February

#### unnamed, flooded iron ore mine, Newfoundland fatality,

Joseph Steffen (51) was part of a group of International cave divers brought in by Ocean Quest Adventure Resort and the Bell Island Heritage Society. Their purpose was to explore a collection of flooded iron ore mines. The diving expedition was organized to examine the integrity of the underwater mine shafts, identify any hazards, and assess the possibility of establishing an adventure tourism attraction. Steffen had difficulties while exiting mine #2. Other members of the dive team at the Bell Island site brought Steffen to the surface but could not revive him. He died because of an air embolism, although his depth was only to 50 feet. He was found on the ceiling above the main dive line, about 300 feet from the entrance.

Bern Szukalski, *NSS News*, "Underground Update." May 2007  
unattributed, *CBC News*, "Diver Dies on Bell Island Newfoundland." 5 February 2007

Dr. David Sawatzki, MD, untitled, 26 March 2007

Comments: The autopsy showed the arterial gas embolism. It also showed another mass on his lung and in his liver of which he probably did not know. The mass in his lung obstructed one of the airways in his lung. During the re-ascent the obstruction was bypassed and the lung ruptured.

### 8 February

#### Hognose Cave, Utah stranded, aid, no injury, not actually a cave

Two 16-year-old boys climbed up to the cave (actually an arch) after school. The arch is north of Ogden. It is a steep, four-point scramble to get up. Ropes are recommended to get down. Their cell phones did not have service, but homeowners in the area heard their calls for help. Rescue teams spent five hours getting them back down.

unattributed, *Salt Lake Tribune*, "Teens rescued after five hours trapped at mouth of cave." 9 February 2007

Dave Schultz, *CaveChat*, "Cave-related rescue in Utah", 14 February 2007

Comments: None.

### 11 May

#### Longhorn Quarry, Texas inadequate equipment, stranded

Around midnight, six youths decided to explore the quarry complex with a single flashlight. They gained access by squeezing under the metal door. Three of them, overcome by sanity, quickly turned back. The remaining three, ages between 17 and 21, continued to explore and became lost. About 3:30 AM, one of those inside the quarry established a cell-phone

signal and called one of those that had left. The youth on the outside decided to call authorities.

Rescue workers cut through the bars and tied together 250-foot rescue ropes "to serve as a life line". They searched the quarry for three hours before finding the missing three. They were huddled together about 1000 feet from the entrance. After being checked by EMS they were placed in handcuffs and charged with trespassing.

Brian Chasnoff, *San Antonio Express - News*, "Youths' cave exploration traps three; fire crews get them out." 12 May 2007

Brian Chasnoff, *San Antonio Express - News*, "Three youths rescued from cave." 12 May 2007

Katy Camp, *KOAI - News 4*, "Teens Arrested After Quarry Rescue." 12 May 2007

Comments: The list of poor decisions on this trip was extensive. The cell phone access to the surface was an interesting turn that helped considerably for the rescue efforts.

### 11 June

#### unnamed sea cave near Owen Point, British Columbia trapped / stranded, aid, no injury

Neil Peterson (63), Guy Peterson (22), Kelsey Peterson (20), Tim Kniffin (28), and Joe Ellis (24) were backpacking along the West Coast Trail with 50-pound backpacks on Vancouver Island. They had taken off the backpacks to cross a 3-to-5-foot wide surge channel when a 10-foot-high wave knocked four of the five into the channel and pushed them 50 feet into the "five-story" sea cave entrance. After bouncing off the increasingly higher walls, they were able to climb out of the 40-degree water onto driftwood. They scrambled up the driftwood to a perch about 30 feet above the water.

Joe Ellis had been high enough to be missed by the wave. He retrieved the remaining dry sleeping bags, food, and water, and tossed the items down to the trapped four. They told him of another entrance, but it was vertical. Ellis then headed for help. He found a rope at an unoccupied ranger cabin. Joe also encountered other hikers, and asked them to call for rescue.

At the sea cave, Joe tied loops in the rope and Guy and Kelsey climbed out. When Kniffin attempted the climb he slipped 3 feet from the top, and fell into the water. A few minutes later, shortly before 7 PM., a U.S. Coast Guard helicopter arrived from Port Angeles. The other hikers had completed the call.

Rescue swimmer John Linnborn was lowered with ropes and they were able to get Kniffin and the others to safety.

Brad Wong, *Seattle Post-Intelligencer*, "4 survive being swept into cave by rogue wave." 15 June 2007

Comments: Joe Ellis was told the rescue team was prepared to look for bodies in the water because it is so rare that people survive.

## 2008 Caving-related Accident and Incident Reports

**28 January**

### **unnamed cave, Chuckey, Tennessee dog trapped, aid, no injury**

Sailor, the coon dog (6) his master Travis Sturm, and a friend went into the woods on a coon hunt. The dog picked up the trail of a raccoon, followed it, and continued to follow the trail down a small cave entrance. Travis started digging to help get Sailor out of the 10-inch-high passage. Volunteers started showing up, including cavers from the ETCCO and Mountain Empire Grotto, to help during the next few days and the dig continued. Travis estimated he had been 100 feet into the cave and he knew Sailor was in there; when they would yell, they could hear Sailor bark from farther in. The dig continued, including chiseling and trying to open a second entrance.

On February 7<sup>th</sup>, Josh and Mark from ETTCO were able to negotiate an 8-inch-squeeze, a couple of other tight spots, and sharp turns, to a 25-foot pit where they found Sailor alive at the bottom. Josh rappelled the pit, put Sailor into a duffel bag, and ascended up the pit with the dog in the bag. Josh passed Sailor to Mark, who was able to help Sailor through the tight spots and to the entrance. Sailor was pulled up and handed to his owner. Sailor had been in the cave 11 days.

Stoney Sharp, *WBIR.com-Knoxville, TN*, "Coon dog stuck in Green County cave." 7 February 2008

Comments: Excellent work, cavers.

**28 March**

### **unnamed cave, Vera Cruz, Mexico fall, fatality**

Between 10 and 11 AM, an unnamed farmer was removing weeds from his land and marking the border when through carelessness, he fell into a pit where no one could help him. Residents nearby saw the fall and called authorities. Zongolica Proteccion Civil Espeleo notified Rescate Mexico (ERM) who arrived with seven members and were led to the pit. They rigged two ropes, did a dual rappel, noting unstable walls on the descent. A ledge was reached at -20 meters, a third member came down, and the second 10-meter-high pitch was rigged. The lifeless body was found at the bottom of this pitch. The body was packaged and rigging set for a haul from the surface to avoid rock-fall and to utilize the people on top.

Octavio Cruz Luna (in Spanish), translated by Mark Minton, *Espeleo Rescate Mexico*, "rescate en San Andres temascalapa, Ver/Marzo 2008." March 2008

Comments: A sad mistake made by someone just clearing his land. Please be careful around pits.

**31 March**

### **No Name Tunnel, Glenwood Springs, Colorado fatality, unknown**

Gary Petkus (57) was discovered dead in the small cave by three hikers-climbers in late March. It appears that Gary had been living in the cave near Cave of the Clouds for some time and that he had been dead for several weeks. Parts of the body had begun to mummify. Several homeless people live in the caves near Cave of the Clouds. There was no evidence of foul play and the cause of death has not been determined.

Dennis Webb, *Daily Sentinel.com*, "Man found dead in cave." 1 April 2008

Bill Scanlon, *Rocky Mountain News*, "hikers discover body inside cave. Man found near Glenwood Springs partly mummified." 2 April 2008

Phillip Yates, *Glenwood Springs Post Independent*, "Glenwood Springs authorities release dead man's name." 30 May 2008

Comments: Gary had been homeless in the Glenwood Springs area for the last 20 to 30 years.

**7 April**

### **unnamed cave, El Paso, Texas car accident, injury, aid**

Reyes Jaramillo Hernandez (67) was on the Transmountain Road near El Paso when his car caught on fire. Reyes' brother found the burned-out car but could not find his brother, and called police. Police began a search and found Reyes about 100 feet from the vehicle, down a cliff, and in a cave. Reyes had third degree burns on his hands and legs, and was taken to the University Medical Burn center in Lubbock, Texas in critical condition.

Investigators were unsure how the car caught on fire, if Reyes was alone, and how he got to the cave.

unattributed, *KVIA.com-El Paso, Las Cruses*, "UPDATE: Burned man rescued from cave identified." 13 April 2008

Comments: The cave is probably a rock shelter.

**2 August**

### **Wayne's World (School Sink), Florida fatality, drowning**

Linda Finer (45) and Sharon Allred (46) were looking for a place to hang out. They drove their golf cart around the locked gate and past a no trespassing sign. Both had been drinking. About 100 feet farther they reached Wayne's World, where Linda announced that she wanted to go swimming and jumped in. When she did not come back up, Sharon ran to get two friends to help. When they returned, Linda's body was floating along the east side of the sinkhole. They called 911 and tried CPR, but Linda could not be resuscitated.

Normaan Merchant, *St. Petersburg Times*, "Dip in Pasco sinkhole ends in drowning." 5 August 2008

Comments: None.

**12 November**  
**unnamed cave, near Carlsbad New Mexico**  
**cave collapse, injury, aid**

For Burnell Booker (41), it started as a normal work day doing road construction with his front-end loader on U.S. 62-180 west of Carlsbad. He was in his loader at a gravel pit about one mile from the highway when it became stuck. He called the office give his location and have them send some equipment to free the loader. Then, Burnell tried one more time to free the loader, but he had no way of knowing that his loader was stuck directly above an unknown cave. Burnell's last attempt to free the front end loader caused the ceiling of the cave's dome to collapse, taking Burnell and the loader with it.

The pit is 40 feet deep and in the shape of a bell with a floor up to 50 feet wide at the bottom. The loader wedged between the walls and stopped a few feet above the floor. Amazingly, Burnell was bruised and shaken but otherwise uninjured, and was able to climb down from the loader to the floor. He waited there with no way out.

The "rescue" construction workers arrived to where Burnell had telephoned being stuck. They found no loader, but they did find a 20-foot-wide hole and Burnell at the bottom. After being rescued, Burnell spent the night in the hospital for observation and then released. The construction company, the highway department, and BLM then started working on the problem of extracting the loader from the pit.

Stella Davis, Carlsbad Current-Argus, "Worker tells of plunge into sink hole." 13 November 2008

Stella Davis, Carlsbad Current-Argus, "Several issues of concern follow initial incident." 13 November 2008

George Veni, *email*: Re: New cave, 14 November 2008

Dave Belski, personnal comm. November 2008

Comments: Per George Veni, the pit was to be determined to be 40 feet deep (using a disto), versus the reported 80 feet. The pit is a suffosion feature and completely formed in alluvium.

Report accidents and incidents via the Internet at  
**[www.caves.org/pub/aca](http://www.caves.org/pub/aca)**

or mail reports and information to:

**American Caving Accidents  
National Speleological Society  
2813 Cave Avenue  
Huntsville, Alabama 35810-4431**

## The National Cave Rescue Commission

The National Cave Rescue Commission (NCRC) is a volunteer group developed to train cave rescue personnel throughout the United States. It is part of the National Speleological Society, located within the Department of the Administrative Vice-President.

The NCRC does not perform cave rescues. It organizes, develops, and provides training in cave rescue techniques, maintains lists of individuals trained in cave rescue, and can help locate rescue resources in times of need. Most NCRC-trained cavers do participate in rescues, but not as part of the NCRC. They work as members of their local rescue teams, civil defense units, or cave rescue groups.

The NCRC also works to:

- Maintain good working relationships with other rescue-oriented individuals, organizations, government agencies, and sources of specialized equipment and services (for example, the Air Force Rescue Coordination Center and the Center for Mine Safety and Health Administration).
- Maintain current files of potentially useful equipment (for example, underground communications equipment and cave-oriented medical kits) and services that can be obtained through the above sources.
- Acquire and maintain a limited supply of certain equipment, such as special rescue litters and vertical rescue gear, in key locations throughout the country.
- Increase the number and proficiency of cave rescuers across the United States by sponsoring training sessions and seminars, and by encouraging other caving, rescue, and EMS organizations to sponsor such educational programs.
- Encourage international cooperation by developing contacts with cave rescuers and rescue agencies in other countries, by pre-planning with these groups where US involvement is anticipated, and by inviting participation of cave rescuers from other countries in NCRC seminars.

### Organization

The NCRC is led by a Board of Regional Coordinators which includes a National Coordinator, Training Coordinator, Medical Coordinator, and Diving Coordinator (each of whom coordinates resources and activities at a national level), and Regional Coordinators for each of ten regions in the United States and its territories. Board members are nominated by cavers and cave rescue personnel, and are appointed by the NSS Board of Governors. The NCRC depends on many volunteers without

official positions whose special knowledge, talents, or contacts make the network more effective.

### Training

The NCRC sponsors a week-long Cave Rescue Operations and Management Seminar each year that is held in various locations around the United States. The seminar serves as a "boot camp" of cave rescue and provides three levels of training. Cave rescue is constantly evolving, and the most up-to-date techniques are presented each year. In addition to the annual national week-long seminar, the NCRC regions sponsor regional week-long seminars, regional modular seminars (taught over a series of weekends), courses in small-group and self-rescue techniques, and weekend cave rescue orientation courses.

NCRC seminars consist of extensive classroom and field work designed to maximize the learning experience. The seminars include lectures, demonstrations, and field exercises on underground environments, vertical rescue, mechanical advantage systems, extrication techniques, basic medical principles, communications, and the management of cave rescue operations. Emphasis is placed on practical skills and techniques, with realistic exercises in a variety of cave environments.

The seminars provide basic and advanced material for students who typically include cavers, emergency services personnel, and emergency managers. During the eight days of a seminar, students receive about 100 hours of instruction, and are on the move from early morning well into the evening. The NCRC uses and teaches the Incident Command System (ICS) used by fire departments, rescue squads, and other emergency agencies and services.

### Course Listings and Contact Information

Information on NCRC operation, activities, and training, including contact information for NCRC Coordinators, is published each year in the *NSS Members Manual*, and is also available on the NCRC website at [www.ncrc.info](http://www.ncrc.info). Upcoming seminars are announced on the web site and in the *NSS News*.

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### National Cave Rescue Commission Course Listing and Contact Information:

[www.caves.org/io/ncrc](http://www.caves.org/io/ncrc)

