# Accident Analysis – 1986

**DIVING INCIDENTS 1986**

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| AA | Morrison Springs, Florida | 2·1 |
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| B | Fishrock Cave, Hawaii | Spring |
| AA | Caye Caulker Caverns. Belize | 6-2 |
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**AA Kihei Lava Caw, Hawaii Winter 1986**

In a second hand report, two divers were exploring lava tube caves In shallow water near Kihei, Maul In the Hawaiian Islands. One signaled low on air and went for the surface. When the partner (NAME REMOVED) failed to follow. The diver at the surface went for help. The body was recovered some hours later in the lava cave at a depth of 25 feet. There was no air left in the tank. No guideline, no extra light, no air rule and no survival. (Jeff Bozanic, "Maul lava Tube Fatality," Underwater Speleology, 13{4) p 6.

**AA Morrison Springs, Florida 2-1-86**

On Saturday, February 1, three young men camped at Morrison Spring, Ponce de Leon, Florida, for some diving. In the early evening they did a dive and later, nearly midnight, (NAME REMOVED) and (NAME REMOVED) dove again. They had single 72's, single valves and had a rental underwater flashlight each.

The next morning the diver who had gone to bed Instead of diving, awoke to find the others missing. Their bodies were found at 8:30a.m., one at the 60 and one at the 90 foot level.

References: 1) Editor, "Double Drowning at Morrison Spring," Underwater Speleology, 13(2), 2-24-86. 2) John Burge, "Follow-up report -Morrison Spring Drowning," Ibid, 13(3), 4-17-86, p 6. 3) Jennie Hess, "2 Georgia divers find death In Florida cave,·' The Atlanta Journal/Constitution, 9-14-86, p 41A.

Analysis: Due to high river levels outside the spring, visibility in the spring was five to ten feet: this extended down to 40 feet. At the mouth of the cave leading off, visibility was good but even in daytime, no light penetrates here. It is again pointed out by cave-qualified divers that all the "rules" were violated: no guide lines, no redundancy of lights, no air management planning, no compass, no light at the entrance, etc. But it must be said that these "rules" are really only known to cave-certified divers. Perhaps signs listing these rules and posted at popular springs In Florida would reduce the fatality rate somewhat.

**AA Peacock Springs, Florida 3-29-86**

On Saturday, March 29, a group of four entered Peacock Springs in Suwannee County, Florida. Besides standard SCUBA gear they were equipped only with reef gloves, snorkels, single dive light each and no guide line. On the scene ware some trained cave divers who offered advice, to no avail. The group had no cave diving training and no knowledge of the cave. They began their dive; the cave divers kept track of the situation.

Apparently [as reconstructed by cave divers doing the body recovery) the group entered the traditional cavern area and explored for a while. Reaching the western end they saw the orange warning sign and began to move toward the "slit" looking for clear water far photography. There, two descended while photographing the rest. One of these two, (NAME REMOVED), apparently became bored and left the group. It is speculated that he followed the main passage guideline as far as the white warning sign. This led to poor visibility so he started for the entrance. At the east tunnel has exited to get help. The cave divers were still there and began a search almost immediately, while authorities were being alerted. At first they geared up for a resuscitation but as time went by it became a body search. The victim was found after some 25 minutes of searching.

Reference: Joe Prosser, 'Accident Report -Peacock Springs,· Underwater Speleology 13(3), 4-17-86, pp 5-6.

Analysis: The group Ignored advice: they were told that training was required and available. They believed they didn't need it since they weren't going in very far and only a few times each year. Unfortunately, the victim couldn't resist the "urge to explore" which has already killed many poorly prepared divers and will continue to do so.

**B Fishrock cave, Hawaii Spring 1986**

At 2 p.m. a cave dive began involving a group of ten divers at Fishrock cave In the Hawaiian Islands. At 2:06 they were at the mouth of the deep entrance (there are two entrances) to the cave at a depth of 80 feet (24 meters). One diver, (VICTIM NAME REMOVED) was certified only ten months before and was apprehensive about the dive. It had been agreed between her and the (DIVEMASTER NAME REMOVED) that she might tum back at the cave entrance. She signaled that she was OK. Her "eyes Indicated no abnormal signs of stress."

Fifty fest into the cave they exchanged "'OK" signals and (DIVEMASTER NAME REMOVED) started up the Chimney. A 15 foot ascent in a narrow tube. At this point (VICTIM NAME REMOVED) began reacting strangely; she remembered feeling that she was not moving at all, as If In a dream. At 2:14. Eight minutes into the dive, (DIVEMASTER NAME REMOVED) could see that "she was severely stressed." She tried holding her close to comfort her, maintaining eye contact. She was taking huge breaths and there was no longer a seal between her lips and the regulator. She struggled, dislodging (DIVEMASTER NAME REMOVED)'s regulator: her mask floated off and her regulator fell from her mouth. Her eyes rolled up in her head and she arched her back.

(DIVEMASTER NAME REMOVED) was able to get to (VICTIM NAME REMOVED)'s regulator and get it in her mouth: she pried (VICTIM NAME REMOVED)'s fingers from it.

Another diver was now back at the top of the chimney, above them. This led to a large horizontal passage and a shallow entrance, 240 feet away. The way behind them was blocked by the main part of their party. So the diver above and (DIVEMASTER NAME REMOVED) got (VICTIM NAME REMOVED) out the back, shallow entrance to the cave. As they did so, they could see foam coming from the victim's lips and nostrils and in outside light they could see that she was blue in the face. They estimate four to six minutes to get her to the surface.

(VICTIM NAME REMOVED) had not been breathing for an estimated six minutes; her head was back, jaw clenched. (DIVEMASTER NAME REMOVED) gave three quick breaths, mouth to nose. And the victim's jaw relaxed. EAR was then given mouth to mouth. Another diver took over while one went for the boat.

At 2:15 the boat arrived and (VICTIM NAME REMOVED) was taken aboard. She was given "cardiac compression" Initially but was found to have a very slow pulse so this was stopped; she was placed in a "recovery position" and vomited copiously. She was badly cyanosed. With dark blue lips. Cheeks, ears and nose, so a regulator was connected to an oxygen cylinder (Bendeez adaptor) and oxygen was administered. Since she wouldn't accept the regulator in her mouth, she was commanded to "breathe in," then "breathe out" and the oxygen vented in her face on each Inhalation. She soon accepted the regulator in her mouth but would still only breathe on command.

The rest of the diving party arrived. Two with their air depleted. The boat started back, traveling slowly. The victim was still blue, with a very slow, weak pulse and was vomiting and coughing

fluid. She was given 25 minutes on pure oxygen, five minutes off, and then another twelve minutes.

At 3:24 the boat arrived at the beach and she was transferred by ambulance to a hospital, being given more oxygen in route. She was now lucid, though still appeared to be cyanosed, with pale skin, a pulse of 88. At 4:09 she arrived at the hospital with a pulse of 75 and better color.

Reference: "Drowning and successful resuscitation at Fishrock cave," Univ. Of Hawaii Report, In Underwater Speleology, 13(4), 6-25-86, p 4-5.

Analysis: According to the hospital report, this was a "remarkable survival" and hinged on a number of coincidental factors:

1) Blood has an increased ability to carry oxygen under pressure. Thus at the time of the Incident, the victim had been deep, allowing her blood to have accepted much more oxygen than If the dive had been reversed -going In the shallow entrance first Instead of the deep end.

2) The victim's companion and dive leader, (DIVEMASTER NAME REMOVED), rendered skillful and determined aid in the form of five exhausting minutes of EAR, given when the victim reached the surface, despite the "dead" appearance of the victim.

3) The boat was well-equipped with oxygen. During her trip to the hospital she was given almost three hours of oxygen administration. They attribute to this the avoidance of serious cerebral damage.

What caused this Incident Is not discussed. It may be some sort of seizure, or a case of claustrophobia.

**AA Caya Caulker Caverns, Belize 6-2-86**

On Monday, June 2, a group of five set out to explore the great cave off the leeward coast of Caya Caulker. The entrance is a 15 foot diameter pit with a couple of constrictions that drops 80 feet Into a huge room, 2200 feet long by 1800 fast wide by 25 to 80 feet high. This is crisscrossed by dive lines from previous explorations.

(VICTIM #1 NAME REMOVED) and (VICTIM #2 NAME REMOVED) entered first with the rest turning back short of the room. Two went back in after a while and encountered (VICTIM #2 NAME REMOVED) In the passage leading out but In a state of panic. When he became unconscious they were able to bring him out. Attempts at resuscitation filled. (VICTIM #1 NAME REMOVED) was never found.

References:

1) George Veni, “Concerning Caya Caulker Deaths,” Underwater Speleology 13(5), 9-15-86, p 5.

2) “Caya Caulker Caverns claim two SCUBA Divers,” Belize Reporter, 6-8-86 (In Underwater Speleology, 13(5), p 5). 3} Frank Bountlng, “letter concerning double drowning In Belize,” Underwater Speleology 13(5), 9-15-86, p 6.

**AA Devll’s Ear Spring, Florida August 12, 1986**

On August 12 three divers, (VICTIM #1 NAME REMOVED), (VICTIM #2 NAME REMOVED), (VICTIM #2 NAME REMOVED) were apparently attempting to dive the connection between the Ear and the Eye at Ginnie Springs Caves in Florida. They had no cave dive training, no guide line. Only one tiny light each, and no air reserve plan. They apparently had made at least one previous dive the same day on the same air fill. They failed to appear at the Eye, or back at the Ear.

The bodies were found at separate points in the traverse, one just past the tight restriction near the Eye, the second on the far side of the room past the restriction and the third in the Devil’s Dungeon. Two had 3 D-cell Dacor lights and the other a micro Tekna light-all these were still burning. Silting had apparently obscured their way.

References:

1) Editor “Triple Drowning at Devil’s Eye,” Underwater Speleology 13(5), 9-15·86, p4.

2) “Drownings haunt Florida’s underwater caves,” The Atlanta Journal and Constitution. 8·24·86.

Analysis: They violated the “No Light” rule (as well as all cave diving rules} at the Ginnie Springs Resort, forbidding cave diving, and were In fact caught with lights by the caretaker; they had to wait until no one was present to make their fatal dive.

**AA Morrison Spring, Florida 8-33-86**

In the evening of August 30, a group of divers was at Morrison Spring in Walton County, Florida. At about 7:15p.m several participated In a training night dive; each had a single light and attached to each person’s gear was a cyalume; two colors Identified student and instructor. At the end of this session, four decided to do a dive into the lower cavern. No guideline was used; each had a single light, single tank, and single cyalume.

After a short period in the lower cave, two indicated “low on air” to the other two, and headed up. For a while they couldn’t find the way, but surfaced safely.

The other two, (VICTIM #1 NAME REMOVED), and (VICTIM #2 NAME REMOVED) signaled, as the other two left (8:40 p.m.), that they would stay a while. (VICTIM #1 NAME REMOVED) was PADI rescue certified but had no cave training; (VICTIM #2 NAME REMOVED) had been certified open water just that day.

(VICTIM #1 NAME REMOVED) had started with 1200 psi, (VICTIM #2 NAME REMOVED) with 1700, and they had agreed to turn back at 500.

Other divers entered immediately after the two survivors surfaced. It had been five to ten minutes since (VICTIM #1 NAME REMOVED) and (VICTIM #2 NAME REMOVED) were last seen. (VICTIM #2 NAME REMOVED) was found against the ceiling and (VICTIM #1 NAME REMOVED) on the floor of the lower cavern. Both masks were on; both regulators were out of their mouths. No lights were on. The cyalumes were too dim to provide meaningful Illumination. It was a dark night -the entrance could not be seen.

Both were evacuated; at the surface they were given CPR until EMS arrived. They were pronounced dead after arrival at a hospital.

Reference: John Burge. “Double Drowning at Morrison Spring,” Underwater Speleology, 13(5) 9-15-86, p 3.

Analysis: Burge says they only violated: The light rule, the line rule, the air rule, the training rule, and good judgement.

**AA Royal Springs Cave, Florida 10.8.86**

At around 5 p.m. (VICTIM #1 NAME REMOVED) entered Royal Springs Cave in Suwannee County, Florida. He had no cave dive training. Two companions in open water alerted authorities. A sign at the cave entrance warns against entry with cave training. The cave has no flow and is extremely silty. (VICTIM #1 NAME REMOVED) became lost and eventually ran out of air. It is speculated that he was within 15 feet of the entrance when he first became lost. His body was found In 40 foot depth on Sunday morning.

Reference: George Petrena. “Man Drowns,” Branford News, 1D-9-86; In Underwater Speleology, 13(6), p 4.

**De Crab Creak Cave, Florida Winter 1986**

Two divers were exploring in a water-filled cave at Crab Creek on the Chasshowitzka River in Florida late in 1986. They had reached their turnaround point and were heading out. They were now experiencing zero visibility. They had laid two lines In the course of two dives. As they headed out, they came to the end of the first line, 50 feet from the entrance where it had been

attached; ten fast of it was “flapping in the current.” Fortunately they could remember where they were in the main room. The diver with a single tank attached his line to continue out when the current caught the other (double sidemount tanks), breaking off the outcrop he was holding. He was now separated from his companion, could not see his light, and had no line, all in zero visibility. He did know the shape of the room and so oriented himself to the flow of particulates in his limited view and proceeded to the top of the room where he encountered, as expected, the end of the first guideline. Both exited safely.

Reference: Stan Hankins. “How to Assume Yourself Into a Statistic,” Underwater Speleology, 14{2), 3-20-87, p 9.

Analysis: Hankins figures two major errors:

1) They assumed the guideline of their first dive, a month before, would still be there and took a short cut to the end of that dive penetration to start their second dive.

2) They did not account for the poor visibility that should have been expected in exiting a tight, complex, silty virgin cave. But neither panicked and both survived.