

National Speleological Society – Cave Diving Section
Accident Analysis Committee Report

Cave Diving Fatality
Jackson Blue Spring
Mariana, Florida
26 May 2023

Summary

On May 26, 2023 two divers entered the water at Jackson Blue Spring located near the town of Marianna in the Florida Panhandle. Diver 1 (Victim) was a 38-year-old male equipped with a Sidewinder CCR and two open-circuit bail-out cylinders. Diver 2 was a female equipped with open-circuit SCUBA in a sidemount configuration. Both divers were trained and experienced cave divers and both were fully equipped for the planned dive. Based upon an interview of Diver 2 conducted by the Jackson County Sheriff's Office who responded to the incident, she was in the lead position, and they followed the main line for approximately 750 ft penetration. The team then jumped to a narrow side tunnel with the intent of conducting a circuit back to the main line. A section of this passage was described as resembling "a sideways teardrop" with the guideline run into the narrow part of the passage. Diver 2 successfully navigated this passage and after passing through, turned to find Diver 1 stuck and stirring up silt trying to free himself. Diver 2 attempted to assist the victim who began to panic and grabbed for Diver 2's regulator. Unable to assist, after several attempts, Diver 2 continued the circuit back to the mainline, exited the system, and immediately called Cave Adventurers Dive Shop requesting help. This call resulted in an immediate response by experienced cave rescue/recovery divers and activated EMS prompting the response of the Jackson County Sheriff's Office and Fire and Rescue personnel. The victim was brought to the surface by the recovery dive team 124 minutes after the victim and his buddy began their dive. The victim was pronounced deceased on scene.

The victim wore two Shearwater dive computers which showed that he bailed out to one of his open-circuit cylinders 23 minutes into the dive. At 40 minutes he switched to his second bailout and five minutes later he went back on the loop. At 49 minutes neither computer records any movement or gas consumption. The rescue divers reached him at 90 minutes and he was brought to the surface two hours and four minutes after the start of the dive.

Following the recovery, the victim's CCR was examined on scene and determined it contained water in the loop. A positive pressure test was conducted with no deficiencies noted. A negative pressure test could not be conducted due to water in the loop. The unit appeared to be properly assembled and in working order. Both of the victim's computers were examined which yielded the above-described dive profile information. One of his bailout cylinders was effectively empty whereas his second bailout was still largely full.

An autopsy was conducted which was largely unremarkable except that the victim was deemed to be obese at 6'0" weighing 312 lbs and likely led to him being unable to negotiate the passageway. The Medical Examiner's Report also noted the victim had a 90% blockage in one coronary artery. The toxicology report detected amounts of THC and Alprazolam, a Benzodiazepine commonly known by the brand name Xanax which is usually prescribed for anxiety disorder. Concentrations of these two compounds in the victim indicate possible use the night before the dive, which according to friends of the victim was not uncommon.

Analysis

The victim getting wedged into a tight, silty side passage appears to be the event that led to this tragedy. After getting stuck, the victim initially showed signs of panic but apparently regained his composure when bailed out to one of his open circuit cylinders. The reason behind this bailout may be as a result of the victim unable to obtain an adequate amount of gas from his CCR while being stuck, preventing the counterlungs from fully functioning while wedged between his body and the cave ceiling. Another possibility is he got water into the loop while trying to free himself, necessitating a bailout onto open-circuit. He depleted his first bailout cylinder causing him to switch to his second bailout which he used for only a short time before a seemingly conscious decision to go back on the loop. It is unknown why he went back on the loop. Based on Diver 2's statement, Diver 1 panicked upon getting stuck and stirred up silt while trying to free himself and going after her regulator further exasperating the situation. He apparently regained his composure at some point when he took definitive steps at self-rescue by switching to his first bailout and then switching to his second bailout when the first cylinder was depleted. The use of marijuana and Alprazolam sometime before the dive may have been a contributing factor.