



Rappel Error - Rope Improperly Threaded through Rappel Device, No Knot on End of Rope

North Carolina, Hanging Rock State Park, Moore's Wall

On July 8, Eric Metcalf (19), Ian Rogers (19), Addison Guranious (25), and Mitchell Martishius (23) began bouldering around 11 a.m. They planned to finish the day by rappelling Sentinel Buttress, a prominent 200-foot feature near the central part of the cliff. Starting at the base, the four scrambled to the top of the cliff and walked to the observation tower on Moores Knob, where they placed a number of cell phone calls. From here their plan was to rappel from the top of Sentinel Buttress to a ledge called the Crow's Nest, approximately halfway down the feature. According to Addison, Mitchell was going to be the first to rappel. However, it was decided that Eric would descend first, since he was the most experienced and familiar with the terrain. Eric set up the rappel, and during the process Mitchell noted that one rope end hit the Crow's Nest rappel station below. He also noted that he and Eric had talked about tying a knot in the end of the rope, but did not remember Eric pulling up the rope to do this. Eric rappelled out of sight from the other three. According to group members, Eric used the "two bolts at the top with the chain," which was a "solid anchor" and that it "looked safe." After Eric started to rappel, Mitchell heard the rope zipping, then observed the end of the rope as it ran through the anchor. The three then heard a loud thud. Mitchell leaned over the ledge and saw Eric lying face down on the Crow's Nest Ledge below, heard him moan, then roll over twice. The second roll sent him over the edge. All three heard a second thud as Eric landed at the base of the Sentinel Buttress almost 200 feet below. All three made their way back to the Moores Knob observation tower to call 911. Ian descended to Eric. Addison and Mitchell hiked the Moores Wall Loop Trail to the campground, where they called 911 a second time. They waited there until picked up by a Hanging Rock State Park ranger. In the meantime, Ian reached Eric, checked his pulse, felt a heartbeat, and began chest compressions, heard a crunching sound, stopped briefly, and continued compressions for approximately 10 minutes, then checked for a pulse. He then attempted rescue breathing but had trouble getting the breaths in, commenting that Eric's lungs were full of blood. He stopped CPR and ran down the trail to meet responding state park rangers. Both rangers attempted CPR and were unsuccessful. Paramedics arrived, and use of a defibrillator indicated no heart activity. Eric was pronounced dead on the scene. (Source: Hanging Rock State Park.)

Analysis

The Sentinel Buttress rappel anchor is located close to where the Sentinel Buttress route (5.5) finishes. The anchor, consisting of two bolts with hangers, swaged cable, and quick-links, is located just below the edge of a large, flat ledge. It is relatively easy to reach to the anchor, clip in, and then step down onto a small stance beside the anchor. The rappel is normally done with a 60-meter rope. From this stance, one rappels approximately 30 meters (98.4 feet) to the Crow's Nest Ledge. This rappel starts as free-hanging, but quickly becomes less than vertical, eventually descending over large ledges. When rappelling with a short rope, one has to downclimb some low-angle, fourth-class terrain to reach Crow's Nest Ledge. Once reaching the Crow's Nest Ledge, the climber makes his way about 15 feet north toward Sentinel Chimney and the top of the first pitch of Sentinel Buttress. Here one finds a fixed anchor of static rope wrapped around a large boulder, with rappel rings. From here it is about 85 feet to the ground. Rescuers found a 50-meter rope attached to Eric's harness and lying completely on the ground when they arrived. Upon inspection, it was noted that a single bight of rope was threaded through the Black Diamond ATC Pro, which in turn was attached to a locking carabiner connected to the harness belay/rappel loop. The rope was measured from where the bight ran through the ATC. One side measured 95 feet, and the other 70 feet 6 inches. A figure-of-eight knot

was tied approximately 6 feet 6 inches from the end of the shorter section of rope. No knot was observed on the 95-foot length of rope. Based on this evidence and comments by Mitchell, it is determined that Eric rigged the rappel by running the 50-meter rope through the quick-links. He tied a figure-of-eight knot on one end of the rope, but did not place a blocking knot at the opposite end. When attaching the rappel rope to his harness, Eric neglected to thread both bights of rope through the ATC, as is required for a double-rope rappel. Instead, he placed a single bight of rope through his ATC and attached this to his harness. This proved to be a fatal mistake. In the 2012 addition of ANAM, the opening section "Know the Ropes" provides instruction for rappelling. To repeat some of this: Before descending, do a pre-rappel check by having you and your partner(s) check the anchor and check the ropes to be sure they reach their intended destination, are even, and have blocking knots on both ends. Check the rappel device to make sure it is set up and oriented correctly; check the carabiner gate (locked); and assess the need for a backup. Eric was the only experienced climber in the group, therefore everyone else deferred to him for decisions regarding the rappel. (Source: Aram Attarian.)

Images

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