



AAC Publications

Fall on Rock - Rope Soloing

North Carolina, Crowder Mountain State Park, Middle Finger Wall

Mark Byers (53), an experienced climber, died as a result of a fall while roped solo climbing on the evening of March 11. Byers was leading the route Balcony (5.5). Witnesses mistakenly reported that he had reached the top of the climb and that one of his anchors pulled, causing him to fall. The witnesses reported he fell about 60 feet, striking his head against the rock several times. His rope prevented him from hitting the ground, leaving him on a ledge 10 to 15 feet up. He was not breathing and did not have a pulse when paramedics reached him.

ANALYSIS

In an attempt to shed some light on the event, Bradley Woolf, Robert Hutchins, and I met with park staff to examine the scene. The park had collected some of Mark's belongings, including his harness (cut by rescuers), his Soloist self-belay device (still secured to the belay loop), his chest sling (cut by rescuers), and the section of rope that was trailing from his harness. Rescuers cut his rope to extract him. Tellingly, there was an overhand knot proximal to the cut end of the rope. This suggests that Mark's Soloist did not engage during his fall and that the backup knot is what prevented him from falling to the ground.

We accompanied park staff to the climb and found no signs of broken gear at the base. Looking up, we could clearly see an intact anchor at the first-pitch belay ledge for the Balcony (about 50 feet up) and a rope tied there and extending up the cliff to an unseen high piece of gear. From the unseen gear the rope descended to a point about 15 feet above the base (some distance below the belay anchor). At the cliff top there was no sign of damage to the existing bolt anchors, and there was no sign that Mark had in fact even reached the top.

Bradley and I rappelled to inspect Mark's high piece. Approximately 40 feet from the lip we found an intact number 7 stopper clipped into the rope with a sling. This is the piece that held Mark's fall.

We rappelled down to the anchor we had seen from the ground. It consisted of two 0.5 Camalots and a pink Tricam equalized with a cordelette. There was a red Tricam hanging from the anchor, but not a part of it. We agreed that this was a directional or an early piece of gear placed as Mark led out from his belay anchor. This placement likely failed due to a lateral pull from the rope as Mark fell, but had little bearing on the distance he fell. Above the red Tricam we found a sling girth-hitched around a rock feature. This sling was still clipped into the rope. From here the rope was clipped into the previously described high gear. Above the highest piece the route steepens and pulls through a bulge. We found fresh chalk here, but no sign of broken rock.

After our site visit, our group felt very confident the accident was not a product of gear failure but rather the result of an inverted fall that caused the Soloist self-belay device to fail to engage. It is highly likely that while pulling the bulge Mark fell into an inverted body orientation. It is also possible that falling with the rope behind his leg could have inverted Mark. Either way, falling upside-down can cause the Soloist device to fail to engage, a possibility the former manufacturer warned users about.

Rescuers report that Mark's airway was compromised by a chest sling he was wearing and that this was likely the proximal cause of death. Pictures that Mark took during a prior ascent show a red sling

configured such that the tie-in point was in the center of his chest (secured with locking carabiner). This effectively creates an X across the front of the chest, which could ride up in the event of a fall and impact the victim's airway.

In summary, site evidence and the knot in the rope suggest that Mark took a leader fall while climbing through the steepest part of the route. This fall was not arrested by the Soloist, probably because of his body orientation. Once the fall was stopped by the backup knot, Mark's chest rig rode up on his torso to the point where it impacted his airway. Perhaps due to his injuries, Mark was unable to right himself and take weight off the chest sling. (Source: Eddie Medina, Carolina Climbers Coalition.)

[Editor's note: The Soloist belay device is no longer manufactured. Climbers who still use this device must be aware that it is only designed to catch a leader falling in a relatively upright position. Consider appropriate backups.]

Images



Soloist self-belay device.

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