Rappel Error — Inadequate Knot Block

Colorado, Ouray, Camp Bird Road

On January 29, veteran climbers Tom Bohanon (65) and Wayne McIlwraith (74) experienced a rappelling accident while descending from Chockstone Chimney (WI3) in the Camp Bird Road area. Injuries were thankfully minor.

Bohanon and McIlwraith climbed Chockstone Chimney (WI3-4) in a single long pitch. They descended via rappel using a single 9.2mm by 70m rope paired with a 6mm static retrieval line of the same length. The anchor was webbing with a stainless-steel rappel ring and carabiner at the power point. The two ropes were joined by an overhand knot (a.k.a. offset overhand bend) jammed against the rappel ring and carabiner. This technique, known as a "knot block," prevents the rope from sliding through the rappel ring and carabiner in one direction but allows it to slide through in the other direction. This would facilitate a rappel of the single 9.2mm while allowing the team to retrieve the ropes.

The retrieval line was backed up by a figure 8 knot clipped to the anchor. Bohanon rappelled without incident, using a Grigri on the single 9.2mm. He stopped on the snow slope at the base of the climb (about ten feet above flat terrain). McIlwraith saw no movement in the jammed knot. After Bohanon reached the base, McIlwraith untied the backup and then duplicated the rappel on the single 9.2mm. Meanwhile, on the snow slope, Bohanon clipped the retrieval line to his harness with two feet of slack to act as a backup. He also held the single 9.2mm in a fireman's belay. McIlwraith rappelled uneventfully and passed Bohanon, who by necessity released the fireman's belay. When he was three feet above flat ground, the knot at the anchor popped through the power point and McIlwraith fell backward. He landed on his back upon a 20° snow slope. The retrieval line came tight on Bohanon's harness just as his partner's fall/slide ended. McIlwraith experienced a sore back and neck. His symptoms dissipated after a few days.

ANALYSIS

While the injuries were minor, the accident illustrates that the most experienced climbers, using tried and true methods, must be ever vigilant on a descent.

More than one accident last year involved the failure of a jammed knot, whether deliberate or unintentional (see page 24). Given the myriad types and sizes of carabiners, rings, links, hooks, and hangers at anchors, a single strategy won't address all situations. Fortunately, this team, with a collective century-plus of climbing experience, maintained a closed system throughout the descent, preempting a more serious accident.

In Bohanon's analysis, the accident might have been prevented by: 1. Using a traditional double rope rappel on matching dynamic ropes; 2. Using a larger stopper knot like a figure eight or double fisherman for the knot block; 3. Rappelling the uneven-diameter dynamic and static ropes together using an ATC-style device; 4. Tying tighter into the retrieval line. (Source: Tom Bohanon.)

Images

Example of an overhand rigged as a knot block at a rappel ring. Once down, the climbers would pull the thinner yellow rope.

Article Details

Author	Tom Bohanon
Publication	ANAM
Volume	12
Issue	75
Page	45
Copyright Date	2022
Article Type	Accident reports