



AAC Publications

Rappel Failure – Inadequate Anchor

Arizona, Tonto National Forest, Coon Bluff Recreation Area

In January, Arizona State University student Katelyn Conrad died after falling 125 to 150 feet to the ground while rappelling. Conrad, who had some climbing experience, and two other women were part of a group practicing rappelling techniques. The three women set up their rappel at the top of the cliff, and two of the women successfully completed single-strand rappels down the cliff face. When Conrad weighted the rope to begin her own rappel, the rope pulled free of the anchor and she fell to the ground, sustaining fatal injuries. (Sources: News stories and online reports from eyewitnesses.)

ANALYSIS

Based on eyewitness accounts, it is believed the accident was the result of a failed “biner block” rappel setup. The biner block is commonly used by canyoneers making long rappels, so they can use a single full-strength rope and then retrieve the rope by pulling on a much lighter cord. At the anchor, the rappel rope is tied to a carabiner that blocks the smaller rope from pulling through the anchor.

When Conrad fell during her rappel, the full rope came down with her. The anchor (a sling around a large block with a “rapide,” a.k.a. quick-link, rappel ring) did not fail. A locked carabiner, used in the biner block setup, was found adjacent to the anchor.

In this instance, the climbers appear to have either (A) tied a clove hitch to the blocking carabiner that was poorly tied and/or poorly positioned such that it slipped and allowed the rope to pull through, or else (B, more likely) accidentally tied a Munter hitch instead of a clove hitch. The hitch held long enough for the first two women to rappel and then shifted under Conrad’s weight and released. There was no backup.

Although the biner block (and the related Reepschnur anchor set-up) are useful techniques for certain situations, they should not be used in normal climbing or rappelling, where a standard double-rope rappel is preferred. Learning or practicing these specialty techniques should always be done under expert supervision. (Source: The Editors, with information from eyewitness accounts.)

Images



A "biner brake" rappel anchor is most commonly used by canyoneers in order to rappel a single rope, which then can be retrieved by pulling a thin cord. The main rappel rope should be backed up to the anchor until the final person descends. Great care must be taken to tie the blocking knot correctly and ensure the carabiner cannot pull through the anchor.

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