(Editor's Note: Of the 12 actual climbing accidents reported from Joshua Tree, a third involved head injury and inadequate protection. There were three injuries received as a result of falls while bouldering alone. As in gymnastics, "spotting" is recommended for boulderers.)

FALL ON ROCK, INADEQUATE PROTECTION

California, Somewhere in San Diego County

On November 27, 1988, Mike and I went back to one of our obscure, local and nonzooed out climbing areas that we've put in a trail to and have been systematically ticking off the first ascents. (Trails are necessary in these areas due to rattlesnakes that are a threat to us and our kids.) We began putting up "Masterpeice" (5.12) six months before the accident. I got two bolts in on the first day when we reached the crux, three meters past the second bolt, with a very marginal small RP one meter below my feet, which pulled out as I went about a meter higher. That prompted some scary 5.10+ downclimbing. We came back a month later and put in the third bolt 16 meters up, took a short fall and still couldn't unlock the secret. Mike began losing interest in being a "belay slave"— I've been down that road before—so I returned a month later alone when I knew I could make those moves that I revisualized daily and dreampt of almost every night. I set up a bomb-proof belay and rope soloed with a 85 jumar and prussik via the "Barnett system." I looked the moves over again from the last bolt's free stance and carefully and precisely made the two meter crux to the thin rest ledge about five meters from the bolt. The rest was easy 5.5 and 5.6, and is up a crack system—no more bolts required. This resurged Mike's interest and he returned on November 27 to repeat it. But I hadn't been climbing at my maximum for the last three months due to work problems, among other things. As a result, I took an eight meter fall in the crux and hit a flake at the end of the fall with my left foot, which caused a stabbing pain when in certain positions. After a short rest, I went back up and again "mentaled out" the crux, repeated the fall, broke off the flake and further injured the same ankle. Mike kept suggesting we go back down, but I wanted to climb badly. So I led a couple more and couldn't do a third—all the climbs were 40 meters long-and I had a long limp out on a sprained ankle.

A week and a half off work on crutches gave me plenty of time to think. I won't lead when I'm not totally one with myself and the mountain. We went back on December 29 and I put in one last bolt 1.5 meters above the third bolt from the last, and hardest, free stance available (we only climb in "classic" style) to further protect the 5.12 crux for myself and future ascents. Then I committed myself to the crux and was up it in seconds—it's good to be back. (Source: Martin Veillon—33)

Analysis

Avoid long and/or risky runout when the moves are at my limits. (Source: Martin Veillon)

FALL ON ROCK, RAPPEL ANCHOR AND BELAY INADEQUATE

California, Joshua Tree National Monument

On December 3, 1988, Boy Scout Troop #156 was conducting rappel training/practice on the north side wall of the Indian Cove Campground Amphitheater. One

anchor point was used for two rappelling ropes. The ropes were looped over and partly around a large, three meter in diameter rock outcropping, with one rope being placed over the top of the other. The top of the rock had a large groove cut across it in which the ropes rested. From this point to the ground was a distance of about ten to 12 meters.

Kelly Hernandez, an instructor, set up the rope system and stayed at the top of the

site to check/assist the safety of those descending.

About three hours had gone by when Mike Hughes and Mike Tumminia (14) began to rappel down the rock face. Tumminia's rope (at the anchor point around the rock) was on top of Hughes' rope. They descended about ten meters, Hughes on the left and Tumminia on the right. Tumminia pushed away from the rock face in an attempt to do a short, free rappel. When he did this, the looped part of his rope being used as the anchor slipped/flipped off.

Mike fell approximately five meters to the ground, landed on his feet, and fell backwards. He was stabilized and transported by his father to the Hi-Desert Medical Center in the town of Joshua Tree, where he was diagnosed as having a fractured pelvis and compression fractures of two vertebrae. (Source: From a report by Mike

Brinkmeyer, Ranger, Joshua Tree National Monument)

Analysis

Anchors need to be checked continually, both by guides/leaders and clients, during training sessions or at rappel points where a number of climbers/clients are gathered. It also seems that no belay was being used in this situation. Belaying rappellers is common practice, especially in training sessions like this. (Source: J. Williamson)

FALL ON ROCK, INADEQUATE PROTECTION— CARABINER GATE CAME OPEN

Colorado, Eldorado Springs

On April 3, 1988, a male climber (27) fell while attempting a difficult move and tried to grab a sling on the last protection piece while falling. Last protection piece was a bolt, and the carabiner sat snugly against the rock causing it to stay somewhat horizontal. When falling, the leader grabbed the sling; it was resting on the gate which was oriented up and the sling opened the gate. The leader fell five to ten meters, striking his head on the way down. The victim had no significant blood loss or internal head injury. Lacerations received no sutures. (Source: Eldorado Canyon State Park)

Analysis

Use of two carabiners when clipping into a "cramped" bolt and not placing fixed bolts in such a way that the carabiner won't hang free would be a solution for this situation. (Source: Eldorado State Park)

FALL ON ROCK, PROTECTION PULLED OUT

Colorado, Rocky Mountain National Park

On June 1, 1988, about 1400, during a technical climbing patrol, two climbing rangers were attempting a new route on Checkerboard Rock, a small crag on Lumpy