

hidden by clouds, while the rescue team is focused on El Cap. A safe return depends on self-sufficiency. (Sources: Lincoln Else and John Dill, NPS Rangers, Yosemite National Park)

FALL ON ICE—ICE FOOTHOLD CAME OFF, ICE TOOLS CAME OUT, WEATHER Colorado, Rocky Mountain National Park, Hidden Falls

On January 10, Steven Crane (57) was leading Main Falls Center I WI 4 (one pitch, 80 feet) when he fell about 30 feet. He had placed three ice screws prior to the fall. As he moved further on the upper column, he was sprayed by water coming off the right side of the falls. According to local sources, it had been a wetter than normal year at Hidden Falls.

Crane was wearing prescription glasses, which became all wet and fogged. He said that he eventually had no vision at all and began climbing by feel. The belayer said that Crane was within reaching distance of the top and approximately ten feet above his last screw when he stopped to place a final screw. As he was attempting to place the screw, he lost his left crampon placement when a piece of ice supporting the left foot popped off. His left tool placement then failed and he barn-doored out. Unable to recover, he then lost his right tool placement and fell upside down. His right crampon temporarily hung up and caused him a minor ankle injury prior to coming out.

He yelled while falling and never lost consciousness. He impacted the right side of his back against vertical ice of the upper column and came to a stop above the sloping ledge area. The belayer lowered him to the base of the route and began medical and rescue procedures with the aid of the other two ice climbers. Park personnel and volunteers responded to complete the rescue.

Analysis

Objective hazards are an integral part of ice climbing. Some hazards, such as breakage of ice holds and dislodging of loose ice, are routinely expected. Other hazards, such as the open spray of water at the top of a normally dry route, may be more of a surprise. The assessment of objective hazards and changing conditions is generally much more serious for an ice climbing leader than for a sport rock climb leader, hence the longer time that it generally takes for one to develop good lead ice climbing skills. Visual inspection of an ice route may or may not reveal all of the possible hazards. When the lead ice climber in this incident recognized that the water spray was becoming an obvious hazard, he had two choices: he could either lower off from his last placement after supplementing it with an additional ice screw (and then retrieve his gear on top-rope), or he could lead through the hazard. There is no right or wrong choice, but there are always possible negative consequences to either choice. Had he decided to lower off, his highest anchor may have failed before he could have supplemented it. The negative consequence of leading through was unfortunately the incident that

occurred here. He made a reasonable choice and failed, but he may have just as easily succeeded had the ice supporting his left crampon not broken off. This is both the beauty and the ugliness inherent to ice climbing.

There were possible mitigating measures he could have chosen once he realized that his vision was impaired and he stopped to place an ice screw. First, when placing an ice screw, the leader should make absolutely sure that s/he has the best possible stance and tool placements. In this case, he was on the stance for some time before the ice failed, so the stance is not the most significant issue. Second, if a lead ice climber is making a placement due to some compromised situation, such as the fogged glasses, there are some things which can help with completing the placement. Possibilities that experienced ice climbers have employed upon finding themselves in a similar situation have been to: 1) keep a “panic piece” 17cm ice screw, well sharpened and silicone-oiled, closest to reach on the climber’s rack (some climbers even have a piece just held on with Velcro that they can rip off the front of their rack); 2) catch a loop of rope over the top of a securely-planted ice ax as a temporary belay whereas the belayer could tighten up on the leader and allow for the placement of protection; 3) attach an ice tool to the harness of the leader with a fifi hook or carabiner to allow the leader to place protection; or 4) place a temporary fast piece of protection such as a spectre to allow the placement of a better piece. (Source: From a report submitted by Jim Detterline and Rich Perch, Park Rangers in Rocky Mountain National Park, and personal communication with local climbers)

FALL ON ROCK, CLIMBING ALONE AND UNROPED, NO HARD HAT, EXCEEDING ABILITIES

Colorado, Eldorado Canyon State Park, Redgarden Wall

On May 23, a male (22) was free-soloing the route Smoke and Mirrors, rated 5.10a, high on Redgarden Wall in Eldorado Canyon when several climbers witnessed his fall. He hit a ledge 40 feet down then fell another 60 feet before being wedged behind a flake on a small ledge several hundred feet above the ground. Another climber, who happened to be a paramedic, made his way to the victim quickly and called 911. The victim was marginally conscious with a head injury and had no feeling or movement below his waist. RMRG units arrived with medical kits and stabilized him with intravenous fluids, pain medication, and splinting. He was packaged and placed in a litter mid-wall. He required a 500-foot vertical evacuation to a gully, where a 800-foot scree evacuation to the valley floor was performed. He was then evacuated across South Boulder Creek via a Tyrolean traverse to a ground ambulance. The ambulance transported him down the canyon to an awaiting air ambulance, which flew him to the ER.

Analysis

If the fall had not been witnessed, the climber would have been virtually invisible. It is unknown whether his plans had been shared with anyone else. He was