

earlier. The survival blanket he had taken along probably saved his life since the temperatures that night were below freezing (with wind chill). The total cost of this rescue, including dropping rescuers on top by helicopter—\$16,000. (Source: Reed Thorne, Captain—Technical Rescue, Sedona Fire Department)

(Editor's Note: These two incidents were costly—both to a rescuer and the taxpayers. The Sedona Fire Department has been quite busy with climbing rescues in the past few years.)

FALLING ROCK, FALL ON ROCK, CLIMBING UNROPED, NO HARD HATS

Arizona, Oak Creek Canyon Overlook

On June 13, 1988, Doug Berry (20) was using standard chimney procedure to ascend a small spire which had separated from the main face. The spire was composed of columnar jointed basalt typical of tertiary flows at the Oak Creek Overlook area and was about 4.5 meters high. Steve Smeeth (23) was spotting him in typical fashion, but unusual for a chimney. Neither had any equipment or rope with them. Berry had running shoes on while Smeeth had climbing shoes. At a point near the top, Berry apparently applied enough side pressure to push the spire over. In the ensuing rock fall Doug sustained head injuries, lacerations, and bruises. Smeeth was hit on the head with a large rock also. Both sustained concussions. The resulting rescue took over six hours to orchestrate. (Source: Reed Thorne, Captain—Technical Rescue, Sedona Fire Department)

Analysis

While no one could predict that the spire would indeed fall over, by looking at its relationship to the wall, it would have at least been considered. Separated spires from basalt are generally a result of the failure of subsequent strata beneath more so than a product of erosion. They are extremely unstable formations. Both would have been only minimally injured, if at all, if they had been wearing helmets. (Source: Reed Thorne, Captain—Technical Rescue, Sedona Fire Department)

FALLING ICE, STANDING DIRECTLY BELOW ICE CLIMBER

California, Lee Vining Canyon

On January 24, 1988, Bill Isherwood (46) and Bill McConachie (36) hiked with two companions to the ice climbing area in Lee Vining Canyon. McConachie proceeded to lead the first pitch of the middle ice fall while Isherwood belayed from a semi-protected spot to the right of the climb. Upon playing out to near the end of the 50 meter climbing rope, McConachie asked if he could get another three or four meters of rope in order to reach a better belay spot. Isherwood proceeded to move out of the protected belay position and up steep snow to the base of the high angle ice to provide the maximum rope for the leader. (McConachie reports that on hearing that rope was not readily available, he responded not to bother, but that response was not heard below.)

McConachie, in the process of placing an ice screw; dislodged some ice. The largest block, estimated at about 9 kilograms, fell, striking Isherwood directly on his helmet. The blow stunned Isherwood, causing temporary paralysis. Isherwood found

himself knocked down the steep soft snow about 1.5 meters, with no feeling in his arms or legs. Fortunately, McConachie had already placed and clipped the rope through an anchor so the rope's tug on McConachie did not pull him off.

Nearby companions and other climbers came to Isherwood's assistance, taking over the belay and trying to make him comfortable. About that time, feeling began returning with a tingling sensation. Immediately upon being able to move, Isherwood moved with minor assistance back to the more protected spot. There he rested for several hours before walking out under his own power. X-rays taken the next day revealed fractures of the spinous processes of cervical vertebrae 5 and 6, requiring immobilization of the neck for a period of eight weeks. (Source: Bill Isherwood)

Analysis

We were aware of the potential for falling ice during the climbing, hence our use of helmets and identification of a protected belay stance. The block which struck me was the largest all day, although the path I was standing in was subject to a spray of lesser ice chips much of the day. I saw the block coming and ducked in toward the slope trying to avoid its full force and hide under my helmet—I succeeded in the second of these. Once again, thank goodness for the protection the helmet gave. I guess if you climb enough years, one of those falling projectiles is going to bounce your way.

It is common to ask a second to try to give that extra margin of rope to reach the optimum belay spot. In general, the belayer provides plenty of warning about the approaching end of the rope, but the best place to stop often seems to be just a few feet further. We need to weigh such requests against the conditions the belayer may be exposed to.

McConachie reported that on the following weekend an un-helmeted climber stood, belaying for over an hour in the same area as I was when struck. McConachie warned the climber of the obvious hazards and related my misfortune. The climber remained unmoved and unscathed. (Source: Bill Isherwood)

FALL ON ROCK, INADEQUATE PROTECTION

California, Joshua Tree National Monument

On February 13, 1988, Jeff Smith (23) took a ten meter fall while attempting to climb "The Blob" (5.7). An improperly placed piece of protection failed to arrest his fall and Smith sustained a closed left femur fracture. Subject was rescued by nine members of the Joshua Tree Search and Rescue Team and then air evacuated. (Source: Tom Patterson, Ranger, Joshua Tree National Monument)

FALL ON ROCK, PROTECTION PULLED OUT, NO HARD HAT

California, Joshua Tree National Monument

On February 15, 1988, Brad Wade (28) took a seven to eight meter leader fall while climbing "Enos Mills Glacier" (5.10) on the Lost Horse Wall and sustained serious head trauma. He was rescued by seven members of the Joshua Tree Search and Rescue Team.