popular alpine climbing routes. Unfortunately, it attracts many climbers who are not quite ready for its challenges. One must keep in mind that this is an alpine route, at altitude, where the rating may seem much more difficult than a similar 5.8 route on a small, low elevation cliff. Also, the route finding is demanding and inclement weather may complicate matters. It is interesting to note that in 1991, the Petit Grepon witnessed six technical climbing rescue incidents, second only to the 13 on Longs Peak, in Rocky Mountain National Park. (Source: Jim Detterline, Ranger, RMNP)

FALL ON SNOW, INADEQUATE EQUIPMENT—NO ICE AX Colorado, Rocky Mountain National Park, Longs Peak

On July 14, 1991, at 1530, Mark Horton (30) slipped while traversing the snowfield at the base of the Cable Route on the North Face of Longs Peak. Horton sustained a dislocated left shoulder and a five-inch abrasion to his left hip. His partners, Steve Eaton, Mike Peterson, and Gene Sparks, attended to him while another hiker, Dan Boyer, agreed to alert the park service. Due to Horton's severe pain and ability to walk only a short distance, the park service strike team decided to evacuate Horton by Flight for Life helicopter from the Boulderfield at 2005.

Analysis

During the summer months, the Cables Route has the reputation of an easy, popular rock climb. However, it is a mountaineering route, with significant snowfields both below and above the rock band. There have been accidents and fatalities on both snowfields. Like the Horton accident, many of these could have also been avoided if the climber had been carrying an ice ax and had been skilled in the technique of self-arrest. (Source: Jim Detterline, Ranger, RMNP)

FALL ON ROCK, FALLING ROCK, NO HARD HAT Colorado, Capital Peak

On July 27, 1991, Griff Smith (42) took a leader fall while climbing a difficult route on Capital Peak. His injuries were caused by rockfall generated by his fall. He sustained a compound fracture of the ankle and a lump on the head. (Source: Aspen Mountain Rescue, Inc.)

Analysis

Capital Peak is a good example of the kind of mountain on which climbers are well advised to wear helmets. (Source: Jed Williamson)

FALL ON SNOW, PLACED NO PROTECTION/BELAY, EXCEEDING ABILITIES

Colorado, Rocky Mountain National Park, Longs Peak

On August 2, 1991, at 0630, Judy Swales (41) and partner Randy Moss were climbing snow on Lamb's Slide on Longs Peak. As the pair got close to Broadway Ledge, Swales slipped on snow and fell, pulling Moss down with her. They tumbled 300 to 400 feet before Moss was able to self-arrest. Moss was unhurt but Swales sustained a fractured left wrist and sprained left ankle. Colorado Mountain School guides Jack Gorby and Steve Young, in the area, climbed up to Moss and Swales and lowered both individuals

to the base of Lamb's Slide. They then ran to Longs Peak trailhead and contacted the park service, who completed evacuation with a litter team and horseback evacuation.

Analysis

By August, the surface of Lamb's Slide is quite hard and somewhat icy. It is an especially good idea to belay beginning climbers when conditions are like this. However, it is extremely difficult to self-arrest in the event of a fall, as illustrated by this accident. A safer ascent strategy would have been to ascend the right side of Lamb's Slide using the rock wall for easily inserted protection while climbing tandem. This would minimize the chances of a long fall but allow fast, efficient ascent. The right side of Lamb's Slide is also the best protected area from rock fall, which is common on this feature. (Source: Jim Detterline, Ranger, RMNP)

FALL ON SNOW, CLIMBING UNROPED, FAILURE TO SELF-ARREST Colorado, Rocky Mountain National Park, Chaos Canyon

On August 16, 1991, Wolfgang Schoch and Thorstein Hoh (18) were climbing a 45-degree snowfield in Chaos Canyon, Rocky Mountain National Park. Hoh lost his footing and slid 150 to 200 feet, struck rock, and slid another 50 feet. Hoh suffered deep lacerations to the right posterior thigh and buttocks, and was unable to walk. Schoch hiked out to report the incident to park rangers, who responded with a four man technical climbing rescue team. The rescuers raised Hoh up 300 feet of technical terrain to the Continental Divide, where they were met by the air ambulance helicopter.

Analysis

Hoh, although equipped with an ice ax, was unskilled in the techniques of self-arrest. Without proficiency in this technique, even an uncontrolled slide on an easy to moderate angled slope may result in injury or death. In climbing with beginners on snow routes, it is important to belay them until they have gained sufficient experience and proficiency with the climbing and safety (including self-belay) techniques. (Source: Jim Detterline, Ranger, RMNP)

LIGHTNING, POOR POSITION

Colorado, Rocky Mountain National Park, Longs Peak

On August 24, 1991, at 1500, Tim Finnegan was struck by lightning while climbing the Teeter Tooter Pillar on Longs Peak. The lightning bolt struck above them, traveled down the crack system they were climbing, entered Finnegan's upper back and exited through his right foot. He sustained two burns the size of a silver dollar but did not lose consciousness. Partner Mike Gruber experienced some ground effect from the lightning strike but did not sustain injury. Finnegan and Gruber decided to avoid the Longs Peak summit by exiting the peak via the top of the North Couloir and down Keplinger's Couloir into Wild Basin.

At 2303, Finnegan and Gruber telephoned park dispatch from the Wild Basin Lodge outside of park boundaries. They requested a ride from park rangers back to their vehicle at Longs Peak parking lot. They were recontacted by a park ranger who realized that Finnegan should seek medical attention and receive a ride in an ambulance due to the unpredictable behaviorisms of lightning injuries. The ranger offered Finnegan and Gruber his services as an emergency medical technician, and an ambu-