same scenario – the inability of the climber to clip the third bolt. Climbers familiar with this route place a #2 C3 cam to protect the move after clipping the second bolt. (Source: Aram Attarian)

STRANDED, RAPPEL ERROR – ROPE TOO SHORT North Carolina, Hanging Rock State Park, Moore's Wall

On November 5, a male climber (28) with limited experience and unfamiliarity with the Sentinel Buttress area of Moore's Wall rappelled to the end of his rope after missing the second rappel station. He noticed that he was short on rope approximately 75 feet from the base of the cliff. He did, however, have a belay rope attached, but it was too short as well.

Park personnel received call for assistance via a cell phone by a friend of the climber at the base of the cliff. The climber was instructed to reach behind himself to pull the last five feet of rope in front of him and to tie himself off while the rescue squad could get to his location and assess the situation. The climber was able to stand on a small ledge during the incident.

Rescuers lowered a rope; he clipped in, and was lowered to the base of the cliff. It took approximately three and a half hours to complete the rescue.

Analysis

All climbers should be prepared and able to initiate a self-rescue in situations like this. Familiarization with the climbing area is also a practical way to prevent incidents like this from occurring. (Source: Sam Koch – Hanging Rock State Park, and Aram Attarian)

FALL ON ROCK – NO KNOT ON END OF ROPE North Carolina, Rumbling Bald

On December 18, my climbing partner, Adam (33), and I (34) were climbing Walk This Way (5.11b) located in the Hanging Chain area of Rumbling Bald. Neither of us had done this climb before. Our plan was for Adam to lead the route, lower, pull the rope, and then I would lead the route and clean it as I lowered. We had a copy of the older version of Lambert & Shull's Selected Climbs in North Carolina in which the route was labeled as 100 feet, and therefore, we believed our 70-meter rope (230 feet) to be adequate to lower on.

I belayed Adam with a Grigri. While lowering, about ten to 15 feet above the base of the climb, the end of the rope fed through the Grigri and Adam began to free fall. The base of the climb was a 70-degree boulder-strewn slope. He travelled a total of 30-40 feet, may have turned and glanced off an oven-sized rock or two before coming to rest in a relatively soft area of leaves and dirt. His injuries were primarily abrasions, bruises, and a deep laceration on his thumb. After assessment and some first aid, he was able to walk out and drive home. Later, reading the newest version of Selected Climbs... I found the route labeled as 150 feet (a critical change).

Analysis

I learned to climb and use equipment from friends and climbing partners and knew the importance of tying a knot in the end of the rope to close the system. Adam and I got into the habit of climbing single pitch routes with an adequate rope length and no knot tied at the end of the rope. No matter the circumstance, a closed system should always be employed. Reviewing the latest version of the guidebook, and not putting undue trust in any guidebook, is also an important lesson learned. (Source: Daryl MacInnes)

FALL ON ROCK, INADEQUATE PROTECTION, NO HARD HAT Oregon, Rocky Butte

On May 14, while leading a fifth class route, Christian Steiner (27) fell approximately 50 feet, sustaining a fatal head injury. It is believed that he climbed well above his last protection placement before he lost his grip and fell. (Source: Jeff Scheetz, Portland Mountain Rescue)

FALL ON SNOW – FALLING ICE SHEET KNOCKED CLIMBER OFF, CLIMBING UNROPED

Oregon, Mount Hood, Southside

On June 9, Meredith Jacques (30) was ascending the Southside Route with 11 others. They were at the 10,000-foot level near the summit rocks when a "sliding sheet of ice" knocked her from her stance, resulting in a fall of about 300 feet. She sustained head, neck, and back injuries, but was in fair condition. **Analysis**

Falling ice near the summit on Mount Hood is a frequent objective hazard whose risk can be minimized by timing. Earlier hours usually offer colder temperatures, which add some diurnal stability to hanging ice. (Source: Jeff Scheetz, Portland Mountain Rescue)

FALL ON ROCK – RAPPEL ERROR Oregon, Beacon Rock State Park

On July 24, Nathan Turner (30) was on the second rappel of Jill's Thrill at Beacon Rock. But he had threaded the single rope through a fixed anchor with both ends of the rope over the ledge. This left the rope ends not visible. He then mistakenly centered the rope on the manufacturer's warning marking – six meters from the end. The uneven rope went un-noticed, as part of it was hung up out of view on a lower ledge. Without stopper knots and no belay backup device, Turner rappelled about 15 feet before his belay device passed the short end of the rope resulting in a 100-foot fatal free fall. (Source: Ieff Scheetz.