

be seen are those on the aid line, the Odyssey (to the east atop the prow that contains the climb Castaway). While the anchors on Boardwalk are much closer to the standard rappel route, they are obscured from view when finishing Hindu Kush. Lewis and Jones moved over to the Odyssey and set up their rappel through a pair of super-shut anchors, which allow the rope to be clipped directly into the shut rather than threaded through. Both climbers held an end of rope and dropped them to the ground. Jones placed himself on rappel while still on top of the cliff. Somehow in the process of lowering onto the anchors, the rope between the shuts and the climber clipped itself through the shuts, resulting in a bight of rope threaded through both shuts. Apparently Lewis was unaware of this happening. As Lewis eased his weight onto the anchors to get below them, the bight of rope slid through both anchors resulting in the accident. The investigation revealed that the gates of the super-shut anchors played a role in holding weight, as they were bent outward from the main axis of the equipment, suggesting that they were loaded by Lewis' body weight as he began to rappel.

An approaching storm may also have been a factor in the retreat chosen by the climbers.

A number of common practices could have been considered: 1) Attach to the anchors via a daisy chain or sling, down-climb to a point below the anchors, and then go on rappel; 2) before going on rappel attach an autoblock, prussik, or similar knot on the rope and attach to the harness, followed by placing a properly threaded rappel device above the pre-placed friction knot; 3) the climbers could have chosen to walk-off the climb, especially if incoming weather was a concern; 4) have your partner check the anchor and rappel setup before going on rappel. (Source: *Watauga Democrat*, July 6, 2005; Anthony Love, from a posting on carolinaclimbers.org on July 8; and Aram Attarian)

## **FALL ON ROCK, RAPPEL ERROR—RAPPELLING TOO FAST, INEXPERIENCE**

### **North Carolina, Great Smokey Mountain National Park**

Around 2:30 p.m. on July 25, Adam Holenberg (23) was rappelling from a cliff above Rainbow Falls in the Cherokee Orchard area when he fell approximately 30 feet, sustaining serious injuries. Holenberg had hiked three miles in to the falls, scrambled to the top, then solo rappelled down the face of the 80-foot-high cliff. He was using a very small (9 mm diameter) rope with an anchor and a figure-eight descending device. Witnesses said that he took very long bounds down the cliff, shock-loading the system, and that he was two-thirds of the way down the cliff when the rope severed and he fell about 30 feet to the boulder field at the bottom of the cliff. Bystanders called via cell phone for assistance.

Rangers arrived on scene by 5:00 p.m. Park medics stabilized Holenberg and the rescue team conducted a semi-technical rescue operation to remove him from the boulder field and get him down to the trail surface. He was then evacuated by wheeled litter to an ambulance at the trailhead, transferred to a medical helicopter, and flown to the UT Medical Center in Knoxville. Holenberg suffered a fractured femur, fractured vertebra in the lower back, and a fractured wrist.

### **Analysis**

The investigation revealed that the rope was military surplus Kevlar material and that there was a melted/frayed cut where it crossed over a sharp rock edge during Holenberg's rappel.

There is no indication that the victim was an experienced or even a novice climber. Each year we report on rappelling incidents such as this in hopes that the word will get out regarding proper technique for rappelling—even for those who only want to engage in this aspect of the sport of climbing. (Sources: Rick Brown, District Ranger, and Jed Williamson)

## **AVALANCHE—DID NOT READ PUBLISHED AVALANCHE WARNING, WEATHER, POOR POSITION, FAILURE TO FOLLOW INSTINCTS (ONE CLIMBER), CARRIED BEACONS—BUT NOT TURNED ON**

### **Oregon, North Sister**

We departed the Pole Creek Trailhead, 5,200 feet, at 1:00 a.m. on May 22 with the intent to climb North Sister via the Early Morning Couloir in a day. We arrived at 8,500 feet below the Northeast Face in four hours, five miles from the trailhead. We took a long 1½ hour break to evaluate the atmospheric conditions as we had experienced intermittent precipitation and variable cloud cover on the approach. The clouds showed no signs of building.

At 6:45 a.m. we departed and climbed the Northeast Ridge separating the Early Morning Couloir and the Villard Glacier routes gaining the North Ridge by 9:00 a.m. Of particular interest was the change in snow conditions; a good bucket step was typical on the east side. However, we found a solid but breakable crust on the west-facing slopes. We summited at 10:15 a.m. Conditions were still variable with the cloud cover decreasing and the ambient air temperature increasing.

The three viable descent options included the standard route on the southwest side of the mountain, our ascent route, or the Thayer Glacier Headwall route on the East Face of the mountain. Due to the time of day, the warming temperatures, and unfamiliarity with the snow conditions on the Southwest side of the mountain, we elected to descend the Thayer Glacier Headwall route. James Brewer and David Byrne had attempted the route the previous year and were familiar with the lower sections. Ad-