the first piece, clipped the rope to it with a four-inch quick-draw, and climbed another three feet or so to the small roof. At that point he decided he did not have the correct protection for the climbing above, so he backed down to the Camalot, intending to hang there while he hauled up the equipment he needed.

He clipped a short sling directly from his harness to the Camalot and leaned back on it. Sulich was not supporting any of Dular's weight with the belay line. Ten to fifteen seconds later, both pieces suddenly pulled out and Dular fell backward. His foot struck the rock pillar as he fell past it, tipping him over. He fell head first through a small tree at the base of the route and into the rocks below the belay ledge, stopping about 20 feet down the slope. The total fall distance was about 50 feet.

While Sulich kept Dular in place with the rope, Matkovich and some nearby climbers ran down to him. He was breathing but unconscious, and bleeding heavily from head wounds. One climber ran ahead 200 yards to his vehicle and drove two miles to the Arch Rock entrance station for help while the rest carried Dular to the road.

NPS rangers, the AMR ambulance, and the AirMed helicopter got Dular to Doctor's Hospital in Modesto two and a half hours after the accident. He remained unconscious, with serious head injuries, for several days, and finally succumbed on July 23.

Analysis

Dular had been climbing regularly for 10-15 years and led 5.12a; he had extensive experience in rock climbing and mountaineering, mostly on European limestone, but also including the Nose on El Capitan, a route on Half Dome, and several other Yosemite routes. Both of his partners were competent climbers. We have no explanation for the Camalot failure, unless a) Dular was satisfied with a marginal placement, or b) he inadvertently grabbed its trigger and released it. This is possible even with all of his weight on the device, though more likely if his weight were partially supported by his feet on the rock.

A properly placed camming device should not fail under the circumstances described by Sulich. While we have no direct evidence, the most likely explanation is that Dular made two inadequate placements. This is hard to understand, however, because he was competent, he seemed cautious and aware of the need for adequate protection, solid placements were available, and he could visually inspect each one.

Should Dular have placed his first protection below the top of the pillar? Climbers say that the placements there are poor and the climbing easy and secure, so they wait to place good protection above the pillar. However, the fact that the landing spot is well below the belay means that the first protection must guard against a serious ground-fall.

Dular was not wearing a helmet. It might not have saved his life, but certainly would have increased his chances. (Source: John Dill, NPS Ranger, Yosemite National Park)

FALL ON ROCK, EXCEEDING ABILITIES, PROTECTION PULLED OUT, INADEQUATE PROTECTION

California, Yosemite, Lembert Dome

I climbed a 5.9 variant of a 5.6 route. I went over the crux successfully, but ran out too far right on 5.6 slope. I place two nuts in marginal cracks. I got to the top of the ledge, then fell and rolled down. I broke a leg and foot.

Analysis

I broke rules. At the top, I put my mid-section over the ledge and reached for a small tree. I let footing leave rocks. The placements were marginal. Poor placement. I was out

of sight of belay. Belay saved my life, as did my helmet, because I hit my head enough to cause unconsciousness.

Lesson I learned: 1) Do NOT climb beyond experience level; 2) make all placements BOMB proof before proceeding; 3) do not remove hand or feet from rock, even if you know you "got it made." The climb ain't over until your butt is hooked in on top. (Source: Douglas Hoyt -48)

WEATHER, INADEQUATE EQUIPMENT California, Yosemite Valley, El Capitan

On Saturday, November 22, Tim Burnett (26) and Chris Abbott (45) arrived in the Valley for a climb of the Nose. At the Visitor Center the forecast was for clouds but no major storms in the next few days. They asked for an extended forecast, but the ranger helping them got called away and they decided not to wait. They fixed six pitches that day and started up their ropes around 1000 the next morning. They were equipped with waterproof bivy sacks, down sleeping bags, pads, Gortex parkas, waterproof overpants, fleece tops and bottoms, fleece hats, and insulated gloves.

By Monday evening, after two days of great weather, they were bivouacked on El Cap Tower with four pitches fixed above them. They got an early start Tuesday morning under partly cloudy skies, but lost a lot of time waiting for a party ahead of them. They stayed at Camp 5 that night after fixing most of the next pitch, and Abbott set up his bivy on a ledge about 20 feet above Burnett's. At about 1700 it started raining. The party above had pulled

well ahead, continued in the rain, and apparently topped out after dark.

Soon it was raining extremely hard and turning to sleet. Burnett was able to stay dry and warm, but Abbott was in a spot where the water drenched him; he was soaked and cold almost immediately. In his 24 years of climbing and mountaineering he had never been in such a storm. The wind shrieked and howled, and the rain pelting their bivy sacks was so loud they could barely communicate to each other.

Eventually Abbott became so miserable that he felt they would not be able to get themselves off the wall. He was sitting up in his bivy sack to avoid the water running down the wall, but was soaked anyway. Burnett suggested that Abbott come down to his more protected ledge, but Abbott declined, afraid that rappelling even 20 feet would be too difficult. Finally, about midnight, without discussing it with Burnett, he started flashing SOS signals with his light.

Burnett was able to stay fairly comfortable for the first part of the night, except that he had to occasionally push himself back up the down-sloping ledge, exposing himself to running water. As time went on, his bivy bag gradually filled and he had to place tennis

shoes behind his shoulders and butt to lift himself out of the puddle inside.

At about 0100 Abbott saw a car stop as he was flashing his light. Someone flashed back and the car left, headed toward the village. Forty five minutes later Abbott and Burnett heard a voice hailing them with a loud speaker, but they could not make out the words over the noise of the wind and rain. At one point Abbott thought he heard, "Get to Camp 4. Rescue will start up from the bottom in the morning." [He heard incorrectly.] Eventually the vehicle left.

The rain, snow, and wind continued all night, and they were still socked in at daybreak. They stayed sealed in their sacks for another hour and a half, then decided that no one could rescue them in the existing conditions. Abbott told Burnett that they had to make a run for it by rappelling. When Burnett heard that, "a light went on," and he realized that Abbott was right. They decided that the haul bag with the soaked down