

Analysis

The snowpack on Mount Shasta was around 70 percent of normal and very warm spring conditions caused a rapid melting. Rock fall usually becomes more prevalent in July and August as the Avalanche Gulch route is surrounded on three sides by higher terrain of loose rocks. This route is notorious for rockfall as the snow melts, and early season and early morning climbs are *usually* safer.

Although climbing helmets are not designed for front or side impacts, this helmet probably made a huge difference in the extent of Artalejo's head injury.

Wilderness rescues often take several hours to days to complete. In this case, the party had to wait six hours in a very exposed and dangerous area before they were evacuated. (Source: Eric White, Matt Hill—USFS Climbing Rangers, Michael Massari—SWS)

FALLING ROCK—CRUSHED HAND

California, Yosemite Valley, El Capitan, Sea of Dreams

My name is Robert. I am a 24 year old Austrian. On April 12, I started soloing the Sea of Dreams on El Capitan. The climbing was excellent—demanding but not dangerous. The hauling was very hard and the nights were uncomfortable due to runoff from melting snow on the summit, but I had full storm gear so it was okay.

On the fifth day, at 3:30 pm, I was halfway through pitch 14, called “Don’t skate, mate.” I put a sling over a rounded horn and top-stepped in my etrier to place a nut straight up in a crack below a small roof/block-like feature. It is shown as “expanding” in the *SuperTopos* guidebook. I tested the nut, and it was okay.

However, I had to go slightly sideways, which might pull the nut out and then the sling off the horn. This would expose me to a long fall, so I placed a small cam (the size of a blue TCU) and climbed back down in my aiders to test it. I held onto the horn in case the cam popped (it was not sitting perfectly) so that I would not fall onto my daisy sling. I gave the cam a hard bounce, and suddenly there was a loud noise and I saw the small roof (a block of backpack size) breaking off.

The block fell slightly to my left. I know I should have jumped to the right in order to get my hands away from the horn, but things were happening too fast. As a reflex, I held on to the horn and the block hit my left hand. Still standing in my aiders, I realized the injury was severe. The left ring finger was smashed—it was bleeding quite heavily, there was no feeling in it, and it was attached to the hand only by some pieces of skin. The middle finger was injured too, and the whole hand was useless. Luckily, there was very little pain (the nerves were cut off).

I decided to make my way down the wall as fast as possible and to leave all of my gear up there. In the first moments, I did not know if I would be able to rescue myself. Rappelling one-handed is not easy, and I might suddenly feel very weak or do something stupid because I was injured. Also it might be too late in the day for a self-rescue or even a rescue by YOSAR, so I shouted for

help. Only climbers on Zenyatta Mondatta shouted back, but luckily the self-rescue worked out well. There were fixed lines on the Sea of Dreams from Big Sur Ledge (top of pitch 14) all the way to the ground, with backup ropes rigged along side them; the ropes were in good condition although they looked like they had been hanging up there for more than a century.

I managed to reach the fixed ropes by means of a small pendulum at the “expanding anchor” (top of pitch 13) shown on the Super-Topo. I rappelled down, holding the injured hand above my head in order to diminish the bleeding. Passing knots in the ropes and doing traversing rappels was quite difficult with one hand. I tried to be extremely careful not to lose any critical gear. As I went down “full speed ahead” the GriGri got burning hot and smelled bad; this made me go more slowly and safely. I began checking everything twice, and at one point I discovered that I had clipped in the GriGri the wrong way. Double checking during an emergency is extremely important because, in all the hurry and pain, one tends to cut down on security checks and concentration. Although it’s hard to tell—and it would have been much more difficult—I think I might have done a self-rescue without the fixed ropes.

I reached the ground about two hours after the accident. Unfortunately nobody was at the base who might have helped me, so I ran down to the road at El Cap Meadows. Three tourists drove me to the Yosemite Medical Clinic, and I guess I ruined the seat of their car with my blood.

I was flown to a major hospital in Modesto. This caused some discussion because the injury was not life-threatening, and normally the helicopter only flies in such cases. But there are certain time limits within which an injury like this one can be treated correctly, and the doctors decided that the finger might be saved if I was flown out. In Modesto the doctors found that the bones in the finger were broken heavily. The circulation and nerves were cut off as well. There was no way to save the finger. It had to be amputated at the first joint (this means two-thirds are gone).

It took several months of treatment until I could use the hand again, but I never saw this accident as something that changed my life in a bad way. I feel as happy as before, even though it is harder to climb with only nine fingers, I climb better than ever. The accident did not stop me from climbing big walls either—I came back to Yosemite later and soloed Zenyatta Mondatta and other routes.

Analysis

I had been climbing for ten years, including several dozen North Walls in the Alps and previous big walls in Yosemite. I had led many pitches on aid, up to NW A4 or harder. I am as careful as possible and I test every non-bomber placement, and until this accident I had taken only one short fall on aid. Was it bad judgment or did bad luck just finally catch up to me? I don’t know. Loose rock and flakes can be avoided for the most part, but sometimes one can not check how loose the rock is. For example, the crack on Sea of Dreams did not expand or make any noise when I tested the nut just before I placed the cam. The block itself looked quite solid—at least a lot more solid than some other

stuff I have seen while climbing. Risk, luck, and bad luck are pretty close together in climbing even if one is experienced. (Source: Robert Steiner)

NPS comments: This really was Robert's lucky day. If that backpack-sized block had bounced slightly to the right and hit his head, his helmet would have offered little or no protection. Regarding his effort to signal for help: people on the valley floor can usually hear climbers yelling (especially in good weather), flashing lights at night will usually get a response, and more and more climbers are carrying cell phones or family-band radios as a backup. But none of these options are guaranteed, so the ability and confidence to retreat on your own, injuries permitting, is the final line of defense. A cheater stick and a bolt kit may also be critical to a quick, safe descent. I'd put my money on Robert to get down on his own, but too many El Cap parties these days have neither the experience nor gear. (Source: John Dill, SAR Ranger, Yosemite National Park.)

PROTECTION CAME OUT—FALL ON ROCK, PLACED INADEQUATE PROTECTION, DARKNESS

California, Yosemite Valley, The Nose

On May 14, Brian Smudz and Yanchun Su climbed from the ground to Dolt Tower, without fixing any part of the route. They had planned on one relaxed day on the climb, and they took it on the 15th because of the long first day. They climbed to El Cap Tower and fixed to Boot Flake, but otherwise spent the day relaxing.

Smudz and Su found the climbing straight forward, and Brian freed to 5.11b. The ascent was fairly relaxed, and there were no problems between the two of them. They never had to wait for other parties and weren't pressured by parties below. They saw only two parties in all: one group passed them at El Cap Tower on Tues. and rapidly climbed out of sight. Another group was below them, but they either retreated or climbed more slowly than Smudz and Su, because they never caught up and weren't seen again.

On May 16, they climbed to Camp Four and bivvied there. On May 17, they climbed to Camp Five, fixed no pitches, and bivvied there. On May 18, they arrived at Camp Six at about 1300 and Brian started up the next pitch. About halfway up a thunderstorm moved through the Valley, with lightning near Sentinel. They got rain and hail, and a small waterfall formed above them. Brian retreated to Camp Six for an hour until the storm passed.

They had to decide whether to stay at Camp Six that night or push for the top. Earlier they had figured they'd stay there if they arrived late and were tired. There were no important psychological factors at work. They wanted to summit but would also be willing to bivvy there. By this time it was about 6:00 p.m. and they would be climbing most of it in the dark, but they decided to go on anyway. They had headlamps and had climbed in the dark in the past.

It took Brian about 20 minutes to jug back up to his high point, and by that time it was dark. The rain had mostly evaporated, and they continued by headlamp with no problems.