

Five). While standing on a TCU (#0 or #1), it popped from the crack. He also pulled the stopper below the TCU. He fell about 20 feet, landing on a ledge in a sitting position. The impact caused severe pain in his lower thoracic/upper lumbar spine. He did not lose consciousness, and was able to lower himself the further 20 feet to Camp V. The other two members of his party waited for about two hours before they determined that Chabot was unable to ascend or descend due to the severe pain in his back. His companions, Todd McDougal and Steve House, decided to continue up the route and once on top, descend and obtain help. Chabot spent the remainder of the day on the Camp V ledge system. McDougal and House were able to report the accident at 2040. They reported that Chabot's condition was extremely stable, his pulse and respirations were in normal limits, and he would be able to spend the night without seriously compromising his injuries.

An I.C. overhead team was established and plans made for the following day. Due to extremely good weather conditions and the availability of the Park Contract Helicopter (H-51), it was decided to conduct all initial operations via air. This allowed most personnel involved a good night's sleep without the requirement of hiking a ground team in from Tamarack Flat Campground.

Operations began at 0700 on October 13. Rangers were lowered to Chabot. They stabilized him, then raised him 900 vertical feet to the top, where he was then flown to the valley and transported to Yosemite Medical Clinic. He had sustained a compression fracture of his L-1 vertebrae, and various fractured bones in his left hand.

Analysis

I interviewed Stephen House regarding the skill levels of all three climbers. He advised me that all three members of the party had between four and eleven years of climbing experience individually. All three are guides with the American Alpine Institute, and climbing/guiding concession at Cascades. All had experience with wall climbing before, although this was Chabot's first Grade VI climb. When asked why they chose to climb to the top to obtain help rather than yelling for help, House advised me the thought never occurred to them. He was unaware that their cries would travel to the ground clearly enough to be heard. As most of their experience was in a remote wilderness environment, they were not used to the concept of merely shouting for help. (Source: Michael LaLone, Ranger, Yosemite National Park)

PROTECTION PULLED OUT, FALL ON ROCK, INADEQUATE SELF-BELAY (SLACK IN ROPE)

California, Yosemite Valley, El Capitan

On Tuesday, October 13, 1992, Mark Ousley (32) began a roped solo ascent of the Shield (VI 5.9 A3). That day he climbed another party's fixed lines to Heart Ledge and then climbed the pitch to Mammoth Terrace, where he spent the night. He was belaying himself with the Solo Aid device (made by Rock Exotica). This device, intended primarily for aid climbing, requires that the rope be manually pulled through it.

Wednesday morning he started up the eleventh pitch of the Shield, a mostly low-angle, easy free pitch with a steeper 5.9 section near its top. Just below the 5.9 section Ousley gave himself ten to 15 feet of slack, so that he would not have to readjust the rope until he was past the hard moves. He also placed two secure Friends and distributed the load between them with a sling. He moved up a few feet and placed a #0.5 Lowe Tri-Cam

in a piton pocket and yanked on it a couple of times, to set it. The piece looked marginal but he felt it would catch and hold if it shifted.

Although he had intended to continue free-climbing, the next moves looked harder than he wanted to do, so he decided to pull himself up on the Tri-Cam and then go free again. He looked down and saw that the two Friends were only about four feet below him; despite the low angle wall below, he felt his protection was adequate, so he put his weight on the Tri-Cam. As he did so, it pulled out. The fall should have been a short one, but he had neglected to reduce the slack in his rope before making the aid move; he fell about 25 feet, striking a small ledge with his left foot just before he stopped.

He knew immediately that his foot was injured. He removed his shoe and saw that the foot was severely deformed and bleeding—almost certainly he had an open fracture or dislocation. He could lie down where he was, so he did so and raised his leg to slow the bleeding.

Two climbers on the Salathe route witnessed the fall. They rappelled two pitches to Heart Ledge and climbed to Ousley. The three of them managed to splint his leg with an ace bandage and a piton hammer and lower him to Mammoth Terrace (about 35 feet). Meanwhile the NPS was notified by climbers at the base of the wall. Ranger Kelly McCloskey rappelled to Mammoth Terrace from the park helicopter, dressed and splinted Ousley's leg, and short hauled him to the Valley floor under the helicopter. At the medical clinic he was found to have suffered a severe, open, subtalar dislocation with some probable small fractures. Repairing it will require at least three operations, but he is expected to regain almost all function.

Analysis

At the time of his accident, Ousley had nine or ten years of climbing experience, led 5.10 A3 or better, and had previously climbed six Grade VI routes on El Capitan, including a solo ascent of Tangerine Trip. Ousley feels that he was not being too hasty with his climbing but rather too confident (although the distinction may be a narrow one). He had not forgotten the slack in his rope when he checked his protection, but neglected to readjust it before weighting the marginal piece. He was experienced with the Solo Aid, having used it on two other Grade VIs and having had previous falls successfully arrested by it.

During his recovery Mike Ousley sent me additional information regarding his accident. I have transcribed it, with minor editing, below:

It is important to understand that, regardless of the system used, a much greater distinction exists between 'free' and 'aid' when roped-solo climbing than with the conventional two-person system. Because of the relatively slow and predictable movement of climbing on aid, belaying can be more easily managed by the soloing leader, especially considering the hands-free status that can be obtained at nearly every protection point along the pitch. Conversely, during free climbing, the leader moves much more quickly, one or both hands may be occupied through sections of the pitch, and slack may need to be taken in and let out. Simply put, it is much easier to solo climb at one's limit on aid than free.

When big-wall climbing, the leader may switch between aid and free in a single pitch, or may employ the so-called 'French-free' technique—using free-climbing gear for resting in or ascending difficult sections without the usual ensemble of aid-specific gear. So there exists a point where the big-wall leader is neither exclusively free climbing or aid climbing, but going French-free because the terrain may be judged too difficult to free climb or can be more expediently ascended using this technique.

As a soloist I believe I could have reduced or eliminated my injury in one of the following ways: (1) By not employing French-free technique and by treating the pitch, or at least the difficult section, as A1. (This is not always possible, depending on available protection.) (2) By equipping myself more for a free pitch, and not (or less) specifically for aid climbing. For example, wearing free-climbing footwear, carrying a chalk bag, choosing the most modern and lightweight equipment to protect the next pitch, considering all other ways to lighten the leader's load such as leaving hammer and pitons in haulbag, using nine or ten mm haul line, etc. (3) By selecting an aid-climbing route that contains the least amount of free climbing (and the easiest). (Source: Kerry Maxwell, Ranger, Yosemite National Park)

AVALANCHE, EUPHORIA FROM GOOD WEATHER AND PERFECT BACKCOUNTRY SKIING, NOT HEEDING INDICATIONS OF INSTABILITY, PARTY SEPARATED Colorado, San Juan Mountains

Four of us from New England were skiing powder gullies and open trees below peak 12,311 in the Sneffels Range in the San Juan Mountains of southwest Colorado. We had spent two nights in nearby Last Dollar hut where we met two skiers from Utah. February 25 began clear and cold as all six of us skinned up the ridge. The day warmed into perfect skiing weather by mid morning. With a blue sky and 30 to 40 cm of well-settled powder, conditions could not be better. We had completed two runs each by noon, in the relative safety of so-called Gully 1A. This was recommended by local skiers. Its pitch did not exceed 15 degrees.

On the first run, we skied one at a time and stayed near the trees. We were concerned about avalanches. A shovel shear test the day before indicated a weak layer at 50 cm. The avalanche forecast was MODERATE (three days earlier). However, our concern for avalanches lessened as the day progressed. In the afternoon the group had divided into pairs. Rob and I were standing in a safe location at the top of Gully No. 1A when we glimpsed Bob and Steve entering Gully No. 2 in search of new powder. We paused to discuss possible hazards.

We were staring at the headwall to the northeast just above Gully No. 2 when it fractured sequentially in three places, zippering across the entire wall. We yelled, "AVALANCHE!" but no one heard. We were shocked as we knew all four people below were exposed to the danger. We heard no calls from below. Time 1350. We discussed alternative search routes and decided to descend 1A and intersect the slide lower down. This was the slowest descent I have ever made... time seemed to stand still. Part way down we heard Sally calling and knew someone was safe.

We were all properly equipped with transceivers, shovels, and probe poles. All were experienced backcountry skiers. The proper steps for self-rescue raced through my mind as we descended. By the time we were within yelling distance, we learned only Steve Gordon (39) was missing. Bob had been able to ski out of the avalanche path. Sally and Dave had just completed their run and found themselves just on the edge of the run out zone.

By the time we reached the bottom, Bob had located Steve's "beep" and the group was digging. Steve was buried for less than 20 minutes under less than a meter of debris. However, excavating him was very difficult as his body and equipment were entangled with a tree. Attempts to resuscitate the victim with CPR were unsuccessful. The body was removed the next day by helicopter under directions of the San Miguel Sheriff's Department. Cause of death: asphyxiation and massive head trauma.