



AAC Publications

Hit By Falling Ice Near Base Of Climb

Utah, Wasatch Range, Provo Canyon

Around 10:30 a.m. on January 12, a group of three climbers arrived at the base of the Stairway to Heaven (WI5) in Provo Canyon. The first pitch of this long climb is about 190 feet long, with a ledge system that bisects the pitch a bit less than halfway up. This ledge can be accessed without lead climbing by hiking uphill to climber's right and then traversing the ledge system. A couple of bolted anchors adorn this ledge, as well as the opportunity to build anchors with ice screws. The ice below is called the Apron (WI3) and is a popular top-rope venue. On a busy weekend, the Apron may accommodate up to a dozen ropes on lines from 30 feet to about 80 feet.

The Apron is located atop a rocky and snowy gully that gains approximately 300 feet at an average angle of 35–40 degrees. Particularly large or severe icefall or rockfall occasionally enters the upper reaches of this gully, but avalanches are rare due to the low elevation and limited snow accumulation. The Apron itself is also subject to icefall, typically from the climbing parties that accumulate there or from the upper pitches of Stairway to Heaven.

On this day, Persons 1 and 3 waited below the Apron while Person 2 hiked up to the ledge and traversed across to set up a top-rope. Persons 1 and 3 were located away from the base of the ice, so they would be unlikely to be hit by climber-generated icefall from parties on the Apron. Person 2 had just finished rigging a top-rope when a large chunk of ice (witnesses estimate approximately 12 inches in diameter) fell from above Person 2. The ice fell unimpeded for more than 150 feet and struck Person 1 on the top of the head.

Person 1 was wearing a helmet but was immediately rendered unresponsive from the impact and fell over backward. Rigid and still unconscious, the individual began to slide head-first on their back down the approach gully, narrowly missing vegetation and larger rocks. Person 3 and I (who was teaching nearby) gave chase as Person 1 slid down the gully. Person 3 nearly reached Person 1 and then leapt face-first downhill in an effort to stop Person 1, in a manner that can only be described as heroic. Person 3 wrapped their arms around Person 1's legs and both slid downhill together for a few more feet. At that point, I had advanced downhill and was able to fully stop both of them by supporting Person 1's shoulders. Person 1 had slid approximately 150 feet downhill before being stopped.

Within moments, Person 1 regained responsiveness. Other climbers came to help, including Person 2, who had rappelled, and North Fork Fire Rescue and Utah County Sheriff Search and Rescue arrived on scene within approximately 20 minutes. They assumed medical care of Person 1 and executed a semi-technical litter evacuation down the approach gully. Person 1 suffered a concussion and whiplash but no other injuries.

ANALYSIS

Falling ice is quite common at the Apron, as there are often parties with beginners who may not be skilled at avoiding displacement of ice while climbing. However, this icefall is relatively predictable and benign, mitigated by appropriate positioning of the belayer and other party members.

Natural icefall and occasional rockfall are less predictable. The fifth pitch of Stairway to Heaven, about 350 feet above the Apron, is a pillar that begins as a hanging dagger. If the temperature warms

above freezing, the lower-angle ice flows of the first three pitches of Stairway to Heaven (including the Apron) may remain climbable, but the fifth pitch may suddenly fall off, showering the whole area with large chunks of ice. Consequently, before choosing to climb here, the wary climber checks conditions (there is a weather station at the trailhead), the forecast for the elevation of the upper climb, and the visual appearance of the fifth-pitch pillar to determine if there's a likelihood the fifth pitch might collapse.

On the day of this accident, the temperature at the trailhead did not rise above freezing, with moderate wind and some snowfall at the Apron in the early to midmorning.

It is not unusual for parties to top-rope on the Apron when there are climbers above on the higher pitches of Stairway of Heaven. Nonetheless, this increases the overhead hazard, as icefall may be generated from climbers well above the Apron. (Parties rappelling may also dislodge rocks or ice blocks, particularly when pulling ropes; multi-pitch parties should consider walking off to climber's right from the base of pitch two.) In this case, it appears the icefall may have come from a party on the upper part of pitch two on Stairway or the lower part of pitch three. Stairway to Heaven is characterized by expansive ledges separating relatively vertical pitches of ice. Often, the ledges are snow-covered and are of sufficient size that icefall will stop at the ledge below. However, in early season or lean snow years, there may be insufficient snow on the ledges for this to be reliable.

Given Person 1's conservative positioning in a relatively protected area, away from the base of the route, it is difficult to ascribe the icefall impact to much other than inherent risk and bad luck. From an outside perspective, their positioning seemed appropriate. It's likely this accident only could have been prevented if parties elected not to climb the Apron with others above or if multi-pitch parties elected not to begin the upper pitches with parties already established on the Apron below. (Source: Derek DeBruin.)

Images



Stairway to Heaven in Provo Canyon. The Apron area (circled) is at the base of the five-pitch climb.

Article Details

Author	Derek DeBruin
Publication	ANAM
Volume	12
Issue	74
Page	
Copyright Date	2021
Article Type	Accident reports