



AAC Publications

Danger Zones: Mt. Hood

THOUGH THE EXACT number is unknown, the U.S. Forest Service estimates that at least 10,000 people attempt to climb Mt. Hood annually. Just an hour and a half from the Portland area's 2.4 million residents and easily visible from downtown, Mt. Hood has an alluring mystique. You can drive to 6,000 feet, and the 11,249-foot summit looks close and easy to reach.

But as the Forest Service warns on its Mt. Hood webpage, "There are no hiking trails to the summit." And like any large, glaciated mountain, Hood presents objective mountaineering risks. As a result, many Mt. Hood accidents and rescues have been described in the pages of *Accidents in North American Climbing*.

We searched the last 40 years of our database to identify accidents and near misses on Mt. Hood and pinpoint their causes. We also consulted with guides and search and rescue volunteers on the mountain. While the record contained in *Accidents* is far from complete (not all accidents that occur are reported, and not all reported accidents are included in the book), our survey is a representative sample of the situations climbers are likely to encounter on Mt. Hood and on similar peaks with easy to moderately difficult snow and ice climbs.

Well over half the incidents on Mt. Hood took place on the popular South Side route (a.k.a. Palmer Glacier or Hogsback route) and its variations. Most of these accidents were above the Hogsback and the bergschrund, particularly in or near the chutes that penetrate the rime-covered rocks below the summit. The South Side is also the most common descent route from Hood's summit, and about three-quarters of all South Side accidents happened on the way down. The Leuthold Couloir, above the Reid Glacier on the west side of Mt. Hood, and the Cooper Spur on the northeast also saw higher concentrations of incidents than other routes.

Though there are accidents on Mt. Hood throughout the year, half of the ones in our data were in May or June, which are two of the most popular months to attempt the mountain. Hood's peak season is late winter through late spring, when most crevasses are filled or well bridged and rockfall danger is significantly less than later in summer.

What follows is our analysis of incidents in the archives and recommendations for safer travel on Mt. Hood and similar environments.

FALLS ON SNOW AND ICE

By a significant margin, most accidents on Mt. Hood involved climbers falling on snow or ice. Many parties were not properly equipped for travel on such terrain. Among those that were, a number did not possess the skill to use their equipment or had it "safely" stowed away in a pack where it could not help them.

Injuries occurred not only during actual falls, but also when climbers slid into rocks, crevasses, or fumaroles, the crevasse-like holes opened in Hood's upper snow slopes by hot volcanic gases (see more on fumaroles below).

Self-Arrest

Climbers on Mt. Hood, particularly those climbing solo or unroped, should be skilled in self-arrest techniques and climb in conditions where a self-arrest is likely to work. The inability to stop can mean a slide of hundreds of feet.

Our reports make it clear that ski poles and hiking sticks are no substitute for a mountaineering ice axe, even on Mt. Hood's easiest route. After one 300-foot fall, in June 2012, an injured climber was asked why he carried a trekking pole instead of an axe. "I travel light" was the response.

Sometimes, even with correct equipment and technique, self-arrest is not possible due to surface snow conditions. An incident in January 1994 illustrated this when a climber resting by Crater Rock on the South Side slipped on ice that had formed after warm days and cold winter nights. One of his climbing partners attempted to grab him and then fell himself. Neither was able to self-arrest on the icy surface, and the two slid more than 1,000 feet.

It's important to know when climbing conditions are unfavorable for self-arrest and alternative risk mitigation (such as belayed, protected climbing) may be prudent. The Northwest Avalanche Center and the U.S. Forest Service's Mt. Hood office and webpage are good sources of conditions information.

Crampons

Loose or ill-fitting crampons have caused a number of accidents. Proper mountaineering boots should be worn, and the crampons must be fitted to the specific boots before one's ascent. Ensure that crampons with bails are used only with boots that have sufficient heel or toe welts to hold the bails securely.

Crampon points should be kept sharp. In March 2001, a climber slipped while descending the Pearly Gates chute on the South Side and fell hundreds of feet down the Hogsback. The climber's crampons had been rented from an outdoor shop and were found to have extremely dull points, likely contributing to the fall.

Care must be taken to mitigate the impact of warm snow balling up underneath crampons, making them more prone to slipping. In three accidents (one fatal), balled-up crampons were suspected in climber falls. "Anti-bot" snow plates on crampons help a lot, and climbers should take care to knock snow off their crampons frequently, especially during descents. If the snow can't be adequately cleared from crampons, consider adding a belay to protect against falls.

More than one injurious fall resulted from a climber catching a crampon point on hard snow, clothing, or other gear while walking. Great care must be taken when jumping over crevasses or other slots. In June 1989, two climbers in the same party suffered knee and leg injuries in jumps over the bergschrund (then only two feet wide) while descending the South Side. A more controlled climb (belayed, if needed) or end run around a crevasse is recommended over jumping.

Glissading

Though glissading can be a quick and fun way to descend moderate snow slopes, out-of-control or poorly planned glissades have led to several accidents on Mt. Hood. In a 1993 report, a novice climber with no ice axe glissaded over a large cliff below the Hogsback and tumbled a few hundred feet. In 1994, in the same general area, another climber lost control of a glissade and took a 700-foot slide onto the upper White River Glacier. Glissades should not be attempted unless the climber is equipped with an axe and knows how to self-arrest, the snow surface is not too icy, and the full glissade route is visible and free of obstacles.

On Hood and other snowy peaks, accidents caused by glissading with crampons are common, as

crampon points frequently snag hard snow or ice, causing lower- leg injuries and/or tumbling falls. An editor's note in our publication after one such incident in 1997 quoted longtime guide George Hurley: "There is no good reason for glissading with sharp spikes on our feet."

Roped Travel

Although roping up on steep snow might seem like a good way to prevent some of the accidents described above, Hood's South Side is commonly climbed unroped. More importantly, our incident reports demonstrate some flawed risk assessment and technique when roping up.

Pete Keane, director of Timberline Mountain Guides, one of two guide services authorized to operate on Mt. Hood, points out that many climbers apply the thinking and rope techniques suitable for glaciated climbs on the South Side route, which has few crevasses or crevasse-like hazards. "People are confusing falling into the mountain with falling off the mountain as the primary hazard," Keane says.

Accidents involving roped parties may involve climbers ascending or descending without belays or protection, making it quite possible for one sliding climber to pull off his or her teammates. In an incident in 2002, three roped teams of 10 climbers were pulled from the mountain when climbers in the highest roped team fell. The four members of the upper team were each separated by about 35 feet, and when they were unable to arrest, they clotheslined the teams below. Four climbers were critically injured and three were killed.

Roped travel without a belay may be necessary to guard against crevasse falls on Hood's more glaciated routes. But when climbers choose to rope up for the steeper terrain on the South Side, they should have a plan for creating running protection (usually pickets) and/or belays.

DANGER FROM ABOVE

Conical stratovolcanoes like Hood are composed of built-up lava, pumice, and ash, which means there are lots of loose rocks ready to fall down the mountain when seasonal or daily warming cycles melt the ice and rime anchoring the rocks. Falling ice is also a hazard, especially as winter loosens its grip on the mountain.

A number of our accident reports involved climbers struck by falling debris, directly causing injury or precipitating injurious or fatal falls. In other cases, rotten rock gave way underfoot. In 2004, for example, a late-season climber on the Hogsback dislodged a rock and fell onto an ice slope, sliding 200 feet and fracturing his leg.

Avalanche

Mt. Hood gets climbed (and skied) nearly year-round, and with heavy snowfall on the mountain, avalanches are a threat throughout the winter and spring. All three of the avalanche incidents documented in our pages were in spring or early summer: two in late May and one in late June, including two slides above the Reid Glacier in the same year.

In one case, heavy snow was saturated with rain that froze and then rapidly warmed on a hot, sunny day. In another, on West Crater Rim, a storm loaded fresh snow over an old crust, and rapid warming then released a slide that swept off climbers.

The third avalanche, above the Reid Glacier, was interesting in that the climbers weren't directly swept away by the snow. Instead, their rope was caught, pulling them off. As mentioned above, climbers should weigh the risks of falling versus other hazards when deciding whether to rope up; in some

cases the speed of un-roped climbing may expose one to less risk from avalanche, rockfall, and icefall.

Climbers should learn snow evaluation skills and inquire about avalanche conditions before heading out. (In the case of the West Crater Rim avalanche, a sign had been posted at the climbers' register at Timberline Lodge that read, "High Avalanche Hazard.") Avalanche transceivers for all members in a party are recommended in early season or anytime avalanche hazard is rated considerable or higher.

Though the Northwest Avalanche Center's regular forecasts (www.nwac.us) are limited to winter and spring, the center provides general summertime guidance and avalanche courses to help climbers evaluate snow conditions.

WEATHER AND NAVIGATION

In May 1986, despite poor weather and a bad forecast, a party of 20 headed up the South Side route. As the weather worsened, several members of the party turned back. By the time the trip leader convinced the rest of the group to retreat, winds were approaching 45 mph. In visibility below 10 feet, and after making a compass error, the remaining group built a snow cave in an effort to sit through the storm. With only a single shovel (which was eventually lost), the cave they dug couldn't accommodate the entire group, and they rotated inside throughout the night. The rescue took two days, and nine of the climbers died from exposure.

Christopher Van Tilburg, a doctor and longtime member of the Crag Rats rescue team on Mt. Hood's north side, observed that, "Hood is a monolith above a forest at 4,000 to 6,000 feet, with no other mountains around and in a maritime climate." Such tall, isolated peaks obstruct moist airflow, creating standing atmospheric waves that result in rapid formation of lenticular clouds and precipitation. The weather patterns here are different than those found in the Rockies and other U.S. ranges, so visiting climbers may not be aware of warning signs for foul weather.

It almost goes without saying that climbers should study the weather forecast, but conditions on Hood can change unexpectedly and rapidly. Climbers should not continue upward into a storm or low visibility, hoping the weather may improve. All climbers should pack appropriate clothing for changing weather and the possibility of having to bivy on the mountain.

Navigation on Descent

One consequence of poor weather is the increased South Side descent. In poor visibility, especially in a whiteout, climbers who simply head downhill along the fall line will angle to skier's right, away from the ascent route and Timberline Lodge, and toward the cliffs and canyons farther west. Traversing too far to the east between Crater Rock and Devil's Kitchen can lead people off-route into the White River Glacier.

In poor visibility, climbers should pause on the east side of Crater Rock, take a compass bearing of magnetic south (180°), and then follow this bearing across the slopes to reach the east side of the Palmer ski lift and the normal descent alongside the ski slopes. Portland Mountain Rescue has published a PDF (available online) with a diagram of this area (known as the "Mt. Hood Triangle"), along with instructions and GPS coordinates for the South Side descent. Similar information is available at the Forest Service's Mt. Hood climbing page.

OTHER ISSUES

One of the oldest incident reports in our data set (1976) features a case of pulmonary edema suffered at 8,900 feet by a student in a climbing class. Though Mt. Hood is toward the bottom end of elevations where acute mountain sickness generally occurs, altitude illnesses are not unknown on

Hood. Altitude-related symptoms may contribute to poor decision-making or stumbling.

Climbers should familiarize themselves with the signs and symptoms of altitude illness. If acute mountain sickness develops, descent is the best remedy.

Fumaroles

A unique hazard on Mt. Hood is crevasse-like fumaroles, especially the one in the Hot Rocks area, located in the run-out below the Old Chute (Mazama Chute). Not only is there risk of falling into the fumarole because of weakened snow bridges (skirt the area widely) or an uncontrolled slide, entering a fumarole also is dangerous because of poisonous gases. These gases pool at the bottom of the hole, potentially adding hypoxia to the list of a fall victim's problems.

Crowding

Mt. Hood's popularity can mean lines of climbers starting up the crux chutes of the South Side or waiting to descend. Patience is a virtue—rushing risks entanglement with other parties, as well as increased risk of knocking rock or ice onto other climbers. Even climbers who might not usually need a rope on Mt. Hood may consider belaying through these terrain traps when crowds threaten.

The volume of climber traffic and the availability of personal locator beacons and cell phones also increase the likelihood that climbers on popular routes will be able to summon help in an emergency. But don't become one of our statistics. Prepare well for a Mt. Hood climb with the skills and equipment required for such a peak—a mountain that may seem easy but can quickly become dangerous.

Joel Peach is a contributing editor of *Accidents in North American Climbing*. Thanks to Pearce Beissinger, Pete Keane, Tim Ozerkov, Jeff Scheetz, and Christopher Van Tilburg for their help with this article.

Images



The "Mt. Hood Triangle" is obvious from the air on the mountain's south aspect. Heading straight down the fall line from Crater Rock (A) leads climbers away from the proper descent route (B). Follow a magnetic south (180°) compass bearing from Crater Rock to stay on track.



Rescuing a climber from 100 feet down in a fumarole on Mt. Hood's South Side.



Mt. Hood's mystique draws thousands of climbers to attempt the mountain each year.



crowds are common in the summit chutes. Belay anchors or running protection can keep a roped party from “clotheslining” others in case of a fall.

Article Details

Author	Joel Peach
Publication	AAJ
Volume	11
Issue	71
Page	16
Copyright Date	2018
Article Type	Climbs and expeditions