

Fründenhütte refuge, Kandersteg (BE), June 6 2010 - Avalanche triggered by third party.¹

Around midday, nine young people became victims of an accident as they were descending from the Fründenhütte refuge. A downhill skier higher up the mountain released a loose snow avalanche. Both the skier and two of the nine persons descending from the refuge were overwhelmed by the sliding snow masses. The avalanche snow swept one man in the group over steep precipices about 200 metres down the mountainside. He died before being reached by rescuers.

Sequence of events and rescue mission

On Sunday June 6, the traditional spring ski race was taking place for the 67th time on the Fründengletscher glacier. Around midday in the Fründenhütte refuge Participant A came across the group of nine English speakers who were to be involved later in the avalanche accident. He spoke with them and said goodbye as they departed from the refuge. About 10 to 15 minutes afterwards, he likewise set off for the valley. He intended to ski down the final snow-covered slope below the refuge as usual and then, just before the passage across the rock face, to continue his descent on foot. After putting on his skis, he looked around to make certain that nobody was below him on the mountain. He did not see anyone and assumed that the group was already further down and had reached the passage. He therefore began his downhill run (Fig. 1). After making a few turns he was caught from behind by a small, wet, loosely packed snow avalanche. He fell to the side and was carried by the snow masses over a ledge. He continued to slide down the mountain for a further 30 m or so before he was able to arrest his fall with his skis a few metres above a scarp. He did not suffer any injuries.

Just before bringing his slide to an end, he caught sight of the group again. Having removed his skis, he saw that a woman belonging to the group, who was making the descent in fourth place, had evidently been caught by the sliding snow masses. She was lying on the downslope path a little further down the mountain, which was made safe with rebars and steel cable fastened to the rock as a handrail. Her clothing and backpack had become entangled in the rebars and prevented her from falling further. Participant A was familiar with this place and quickly made his way to assist the motionless woman; he saw that she was seriously injured. He immediately administered first-aid. He

instructed one of the men in the group to hike back up to the refuge straight away and sound the alarm. Not until then was it noticed that the man who had been descending with the group in fifth place was missing. He must have been overwhelmed by the snow masses on the unsecured section of the refuge trail and swept over several high ledges.

The accident occurred between 11.50 am and noon. At 12.15 pm the first rescue helicopter sighted the missing person while approaching the accident site. He was lying motionless, but was not buried, around 200 m below the place where he was swept away on the edge of the Mittelschnyda lateral moraine. The doctor in the helicopter therefore decided to go immediately to the aid of the seriously injured woman first. Once first-aid had been administered, the patient was flown to the University Hospital of Berne accompanied by a doctor. The body of the young man belonging to the group, who sustained fatal injuries when falling to the Mittelschnyda moraine, was recovered by another helicopter crew and flown to Frutigen.

Weather and avalanche situation

Early June was cool and, at lower altitudes, rainy. Around 10 to 20 cm of snow is estimated to have fallen above approximately 2500 m. From June 4 the weather was dominated by a high-pressure system, and the zero-degree level climbed to approximately 4000 m as early as June 5. On the day of the accident it was sunny in the morning and the temperatures were mild. For this reason, the snow-pack is unlikely to have frozen significantly at this altitude during the night. During the day, cloud built up from the southwest. At the time of the accident, however, visibility was good and the terrain was accordingly discernible.

Avalanche bulletin

The most recent avalanche bulletin had been issued on May 31 (valid until June 4). In view of the snow that was falling at the end of May and beginning of June, it warned of heightened avalanche danger and indicated that moist avalanches and snowslides could be expected as a consequence of solar radiation and rising temperatures. The new fallen snow, it reported, could slide on the old snow-pack. This danger had to be expected on the first one or two sunny, warm days in particular.

An avalanche bulletin was not issued on the day of the accident. On this day, already the third day

1. Extract from: Etter, H., Stucki, T., Techel, F., Zweifel, B. 2012: *Schnee und Lawinen in den Schweizer Alpen. Hydrologisches Jahr 2009/10*. Davos, WSL-Intitut für Schnee- und Lawinenforschung SLF, 81 S., Seiten 77 – 79, Translation: TTN Translation Network

with mostly warm and sunny weather, the heightened danger of dry avalanches, wet loose snow avalanches and wet snow slides was estimated to have passed.

Additional notes

On June 7 the competent examining magistrate ins-

trusted the SLF to inspect the accident site with a view to gathering evidence for a possible expert opinion. The inspection took place on June 8 and formed the basis of an expert opinion produced thereafter by an SLF employee. Among other things, the report pointed out that heightened avalanche danger did not prevail on the day of the accident.



FIGURE 1 – The area in which the accident occurred to the southeast of Oeschinensee with the Fründengletscher at the top of the picture, showing the Fründenhütte refuge (F) and the accident site. The red broken line traces the skier's downhill route and the blue broken line the approximate fracture of the avalanche that preceded the accident; the blue arrow indicates the direction of the plummeting snow masses. The red circle marks the place where the two victims belonging to the group were situated when they were swept along by the loose snow avalanche. The place where the body of the fatally injured man was found is well below the picture frame (photo: SLF/J. Schweizer).

Remarks

- There is no doubt that the skier waited until there were no longer any persons situated in the fall line of his downhill run. He was thus taking a customary precaution. The time he allowed to elapse, however, was evidently insufficient. The group of nine hikers must have been making ge-

nerally slower progress than anticipated by the skier. There is an essential lesson to be learned here, especially by inexperienced hikers.

- At the time the present report was issued, it is not known whether the examination was to be suspended or a legal action brought.

Avalanche data

| | | | |
|----------------------------|-----------|--------------------------|---------------------------|
| Avalanche | | | |
| Map No. | 1248 | Min. fracture depth [cm] | – |
| Length [m] | 300 | Mean fracture depth [cm] | – |
| Width [m] | 10 | Min. fracture depth [cm] | 10 |
| Terrain | | | |
| Aspect | N | Slope angle on map [°] | 35 |
| Altitude | 2520 | Type of terrain | Bowl |
| Release information | | | |
| Release type | person | Safety distances | – |
| No. of triggering persons | 1 | Activity | Skiing/hiking/walking |
| No. of involved persons | 3 | Tracks | Untracked slope |
| Involved person | | Type of burial | Duration of burial |
| 1 st person | fatal | not buried | – |
| 2 nd person | injured | not buried | – |
| 3 rd person | uninjured | not buried | – |

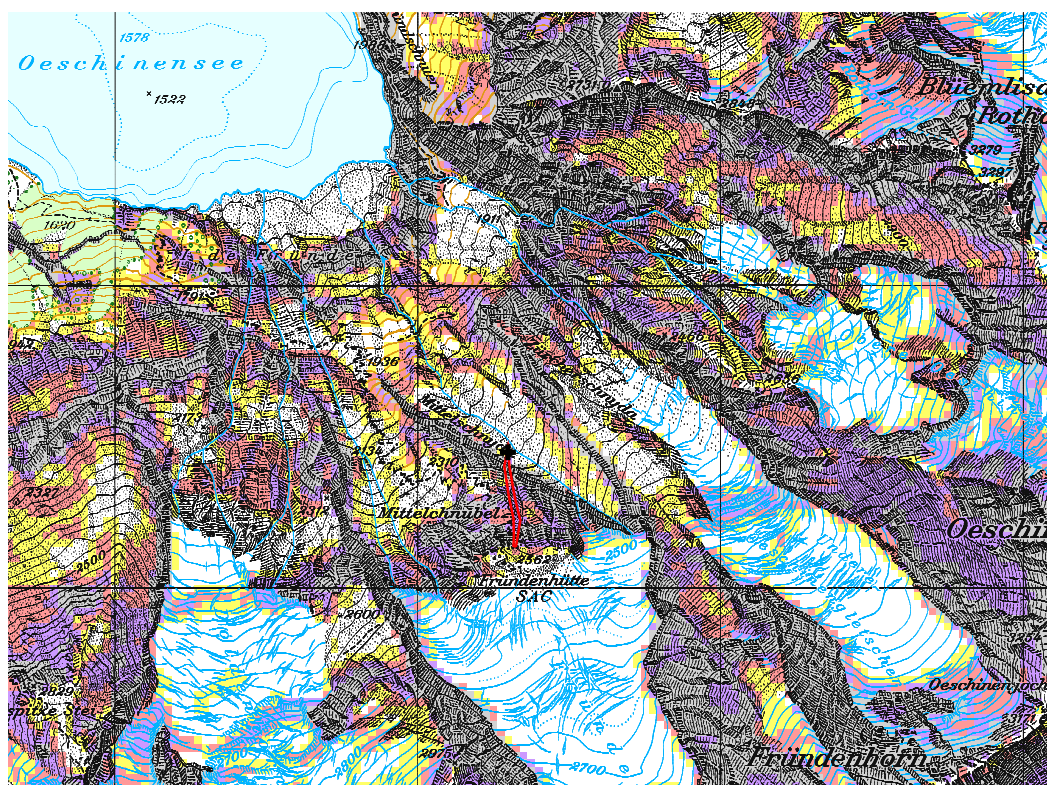


FIGURE 2 – Map section of accident site (1:25,000, national map sheet 1248) showing the outline of the avalanche (red) and the place where the victim was found. Map reproduced with permission from swisstopo (JA100118/JD100040).