

history

Beginnings of Snow and Avalanche Research and the SLF

Story by Christine Huovinen and Jürg Schweizer • Photos courtesy SLF

Ever since man first occupied the Alps, avalanches have posed a threat. For centuries, it was primarily the inhabitants of the mountains who were affected, together with their cattle and dwellings, but the gradual development of the tourist industry has since extended the risk of damage and, therefore, the interest in avalanche research.

Until the start of the 20th century, the avalanche problem was being addressed largely by individuals, often foresters. These observers described avalanches and categorized them according to their character. Some early works concerning avalanches and defensive structures were published. Promoters of ski tourism, railways companies and hydropower plant operators were making louder pleas for scientific methods to be adopted for avalanche research from the 1920s, and they supported the establishment of the Commission for Snow and Avalanche Research in 1931. It became the first central agency in Switzerland dedicated to researching avalanches systematically.



First Research Facility Built in '30s

The members of the Commission soon realized, however, that their interest in avalanches had to extend beyond the summer; they needed to observe the snow in the winter and learn about its structure and the evolution of microscopic snow crystals. For this purpose, they built a first laboratory out of snow in Davos in 1935. To avoid the risk of warm spells threatening not only the experiments, but also their accommodation, in the winter that followed they moved their laboratory, now a wooden shed, up to the Weissfluhjoch, in the middle of avalanche country, and established a study plot. The Commission continued to work there until 1942, when the Federal Government adopted a resolution to establish the Swiss Federal Institute for Snow and Avalanche Research. The timing, during the Second World War, mirrors the great significance attached to avalanche research by contemporary business leaders and politicians. Just one year later, in April 1943, the SLF celebrated the official opening of its new home on the Weissfluhjoch.



The first research laboratory was constructed from snow in 1935.

Development of New Measuring Instruments

Besides new premises, however, the scientific discipline of snow and avalanche research needed a methodology of its own and special measuring instruments. Scholars had been developing a variety of measuring instruments since research started in 1936, including a ram penetrometer, a shear test apparatus, and a device to determine the air permeability of snow. Some of these instruments are still being used today, but technical refinements have been introduced in the intervening period of course.



Cone penetrometer for measuring ram resistance.

SLF Becomes the International Center of Snow and Avalanche Research

In the early years, especially during the war, the avalanche researchers sought very little international contact, but a lively exchange began once hostilities ceased. Researchers from the Alpine countries and overseas turned to the Swiss as experts and undertook further studies at the SLF, and SLF employees travelled abroad to assist with local avalanche protection programs. The SLF was soon recognized as the center of snow and avalanche research and is still acknowledged as such today.

References

Die Schnee und Lawinenforschung in der Schweiz, master's degree thesis by historian Dania Achermann ❄️

Congratulations to the WSL Institute for Snow and Avalanche Research (SLF) on the occasion of their 75th Anniversary.



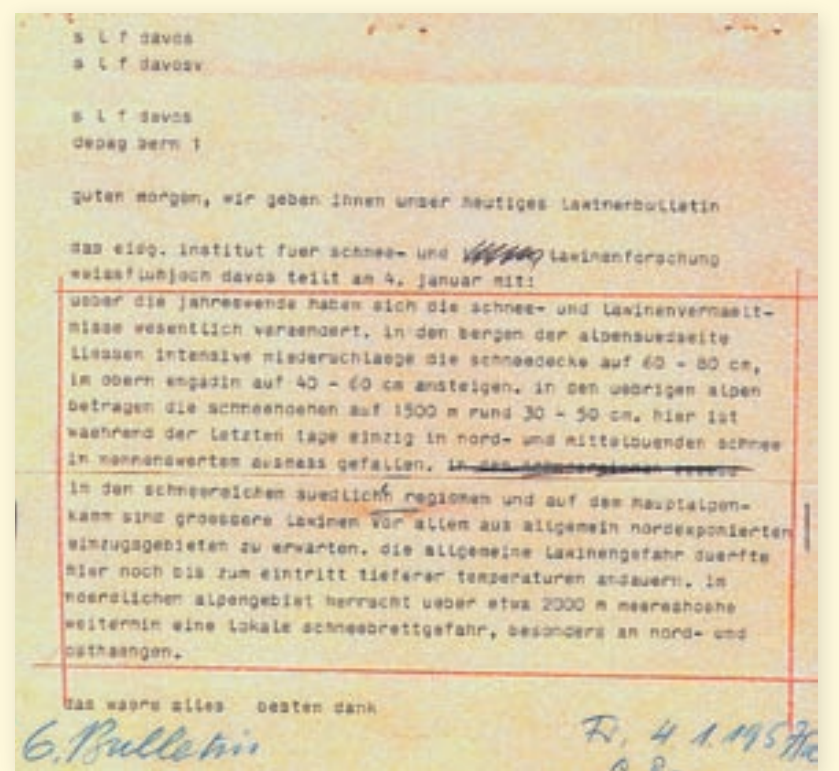
On December 13, 1916, Gran Poz in Austria was overwhelmed by tremendous snow masses, killing 270 of the 321 soldiers who were stationed there. Source: *History of the Military Mountain Guide* (German only), <http://www.heeresbergfuehrer.at>.

Origins of the Avalanche Bulletin

Story by Thomas Stucki and Christine Huovinen

When the Commission for Snow and Avalanche Research was founded in 1931, it was primarily dedicated to conducting systematic research on avalanches. The Swiss Ski Association first used the Commission's observations to publish information on the weekend snow conditions in the Swiss Alps in the winter of 1936/37 by way of press and radio reports.

The strategic military importance of the Swiss Alps in the Second World War raised the political significance of avalanche research. The experience of the First World War, during which around 60,000 soldiers are thought to have perished in avalanches, had not been forgotten. In addition, an avalanche above Lenk in 1939 buried an entire company of mountain troops. This accident reinforced the interest of military leaders in the Commission's work. At last, the Commission's call for personnel and financial support from the armed forces was given a sympathetic hearing. As the army's collaboration was stepped up, military units received avalanche training from employees of the Weissfluhjoch research station. In 1940, the military, working closely alongside the Commission, established an avalanche warning service with observation stations in various locations in Switzerland. Avalanche warnings for the armed forces were thus institutionalized.



Avalanche bulletin of January 4, 1957, sent to the Swiss news agency in Bern.

Military Avalanche Service Extends to Civilian Population

After the end of the war, the SLF Institute spawned by the Commission took over responsibility for avalanche warnings from the military on October 1, 1945 and established the civil avalanche warning service. In 1950, 20 observers were feeding information about the weather, snow and avalanche situation to the avalanche warning service. Each week, the SLF published an avalanche bulletin by radio and in the press. These releases were welcomed by both the emerging winter sports resorts and

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