

The Swiss Alpine Club SAC and its Role in National Mapping

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Abstract

Which came first, the hen or the egg? Tourism (including alpinism) or mapping? Fact is that the two are strongly connected. The Alps were discovered as a “playground” around 1850, and at the same time, many other fields developed rapidly: science, technology, transport... The alpinists needed maps, and the newly established national mapping agency was (more or less) able to fulfil this wish. Even nowadays, there are strong links between the SAC and the Federal Office of Topography

1. Threatening mountains

In the old days, people were afraid of the mountains. Gruesome monsters and dragons were reported to live there. Nevertheless, farmers in the valleys made their living with agriculture – and some of them specialized in the transport of goods across some passes. While hunting a chamois, one or the other of them may have climbed a ridge or a peak in his neighbourhood.

2. The people at the beginning

It was Albrecht von Haller, a bernese scientist, who promoted a different look at the mountains with his poem „Die Alpen” in 1729. Later, Jean-Jacques Rousseau took up his ideas, saying that children should stay outside far more to gain strength. Father Placidus a Spescha was the first real alpinist in Switzerland; he climbed many peaks around Disentis at the beginning of the 19th century.

3. Tourism

With these new ideas in the background, travelling became a very popular pastime for rich people. The German writer Goethe came to Switzerland for the first time in 1779 and admired the Staubbach waterfall at Lauterbrunnen. The existing trade routes were used. The Alps were no longer a threat, but something to be admired. The locals realized that they could make some money with the gentlemen (or the rare ladies) who visited the country.

4. Alpinism

Many British climbers came to central Europe around 1850 and discovered the Alps as a “playground” (Leslie Stephen). The “battle” for the Matterhorn lasted several years – and ended tragically for half of Edward Whymper’s party. But the locals wanted to climb their own summits too; in 1863 the Swiss Alpine Club was founded. It was a very upper class association these days, “ordinary” people were accepted only after the first World War. The assembly of 1907 excluded specifically women from membership (!) – until 1981, when the Women’s Alpine Club and the SAC merged.

5. Science

The theory of the ice ages may serve as an example for the development of science: in 1815 a farmer of the Val the Bagnes (Valais) brought up the idea that the valleys had been carved out by glaciers to a geologist. The National Academy of Natural Sciences discussed the theory at their assembly in 1822. Louis Agassiz published it in 1836, as a proof he established a bivouac on the Lauteraar glacier, called “Hôtel des Neuchâtelois”.



Fig. 1: The “Hôtel des Neuchâtelois” the Lauteraar glacier around 1840

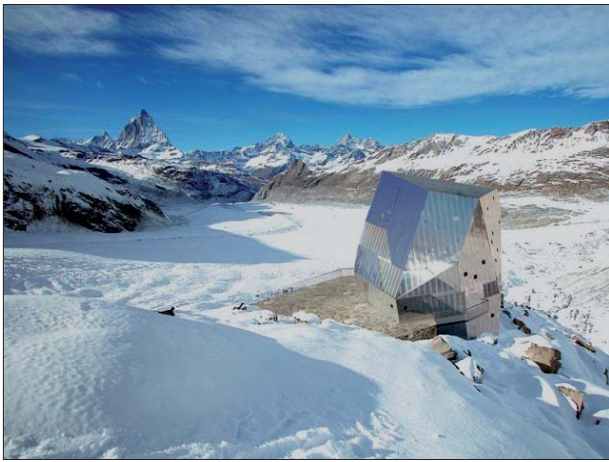


Fig. 2: The project for the new Monte Rosa hut near Zermatt

6. Accommodation

When the early tourists came to Switzerland, there were no guest houses in the mountain villages. The first hotel at Zermatt was built in 1850. The early climbers slept in farmer's huts or had to bivouac under a rock. Shortly after its foundation, the Alpine Club built a small hut on the east side of the Tödi. Today there are 150 huts forming the "highest hotel chain". Together with the ETH Zurich a spectacular building is planned near Zermatt: the new Monte Rosa hut.

7. Transport

Napoleon built the first road across the Simplon Pass "pour faire passer le canon". Before, most of the goods were carried on horse (or men's) backs. More and more roads were built, stage coaches linked the main cities together, and travelling became easier. Not very long after the first rail connection between Zurich and Baden was built (1847), the first mountain was "conquered" by a rack railway: the Rigi in 1871. The first aerial passenger line opened up near Grindelwald just before World War 1.

8. Mapping

8.1. National Mapping

A few month before the SAC was officially founded, some of its representatives wrote to the government to rename the "Highest Peak" of the country to honour the general of the civil war of 1847 and the chief of the first accurate map, Guillaume-Henri Dufour. Four Days later (!), the motion was accepted and subsequently the map was updated. Since 1863, the highest rise of the Monte Rosa massive is called "Dufourspitze". At the first general assembly of the SAC, Dufour was elected an honorary member. Until the turn of the century, the club subsidised the publication of the so called Siegfried map!

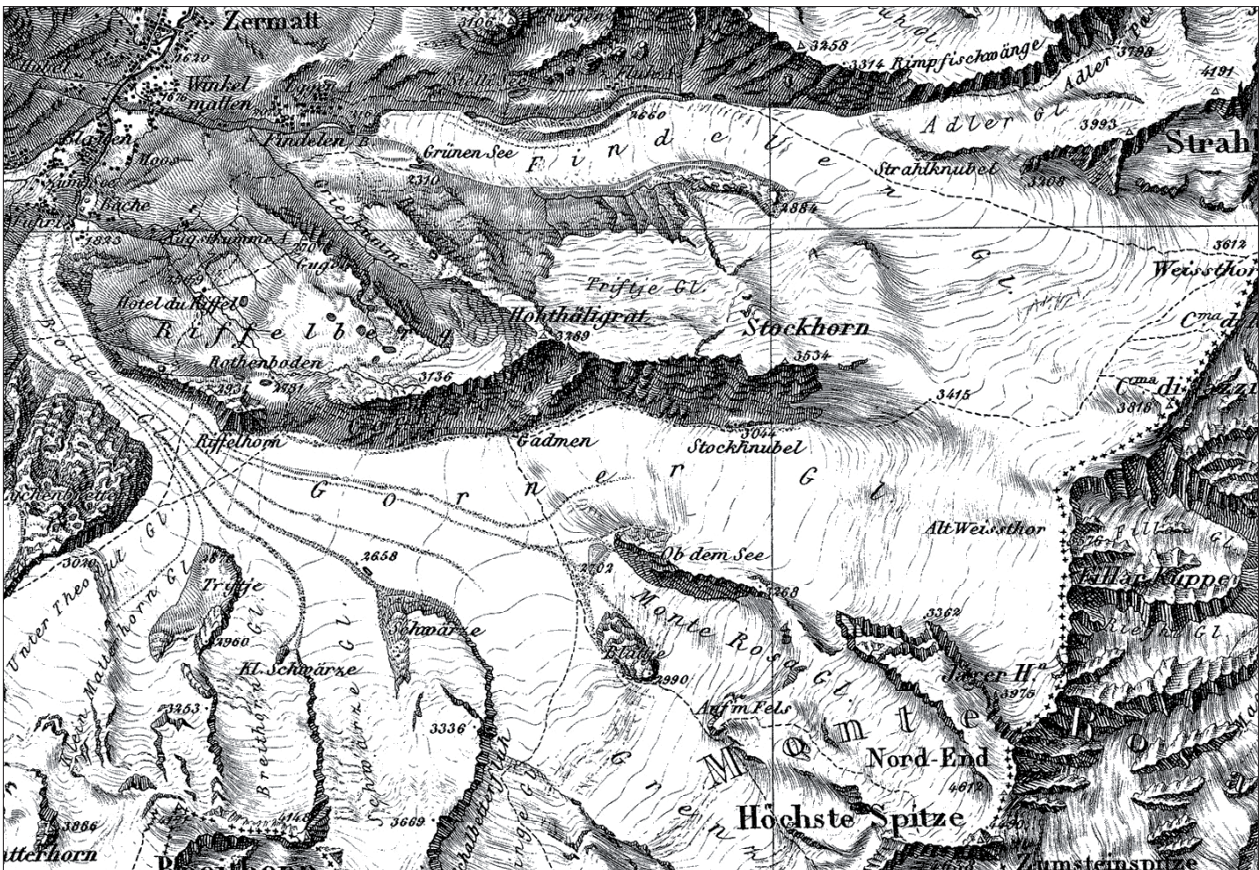


Fig. 3: The Topographic Map of Switzerland 1:100,000, showing the "Highest Peak"

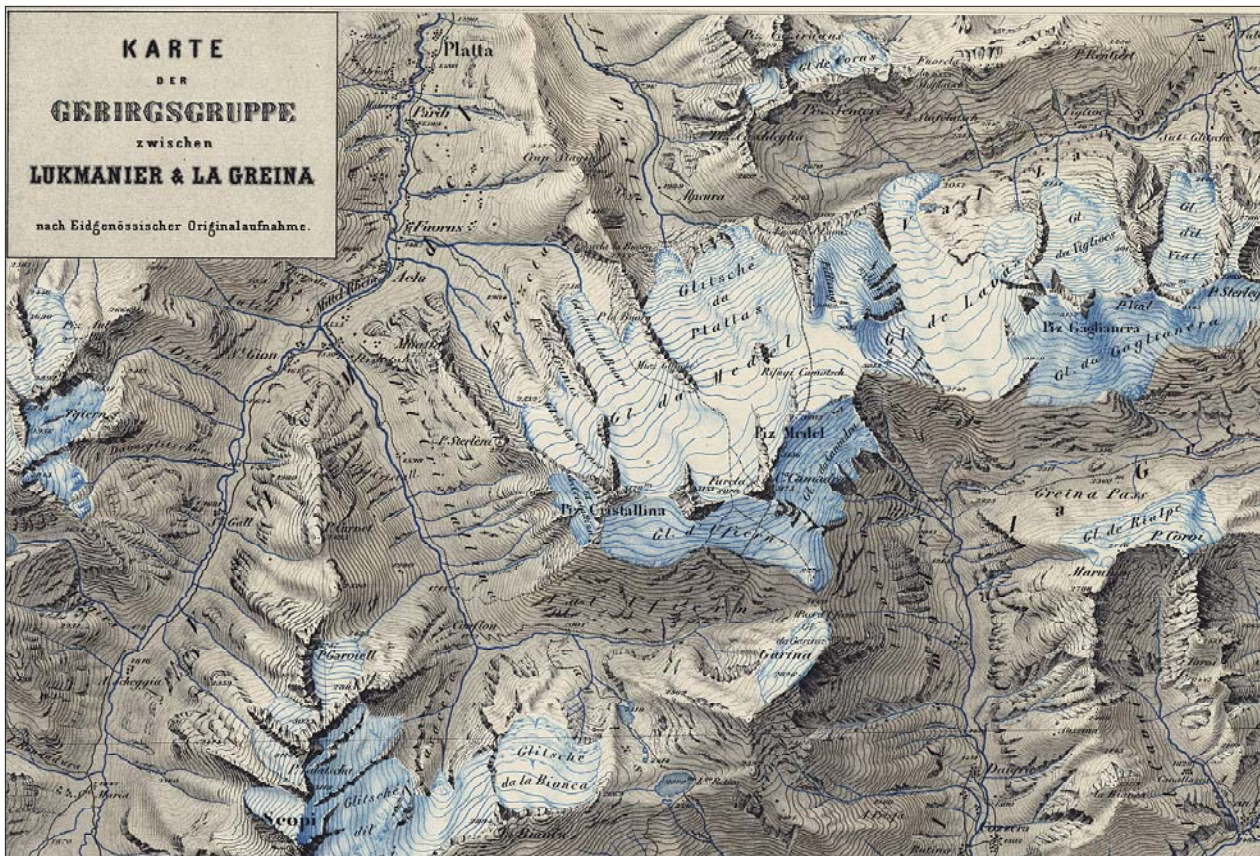


Fig. 4: Map of the Greina region 1:50,000, by R. Leuzinger

8.2. Private mapping

Since the scale of 1:100,000 was not really sufficient, the Alpine Club and the Academy of Sciences soon pleaded for the publication of the original surveys, with contour lines and at scales of 1:25,000 for the plateau and the Jura, 1:50,000 for the Alps. In his yearbook of 1864, the SAC published a first map at own costs, based on the official surveys. One year later, the cartographer Rudolf Leuzinger finished the map for the Greina region, the first one with continuous tone hill shading.

8.3. Three experts

The Alpine Club produced 35 maps until 1900, many of them made by Leuzinger. He also worked for the government. Xaver Imfeld surveyed 23 sheets of the national maps after his studies and he is well known for his detailed rock drawings. Later he had a small private company and published maps, panoramas and produced 3D-models – and was elected honorary member of the SAC in 1901.

Eduard Imhof was a professor at the Federal Institute of Technology in Zurich (ETH) for 46 years. Between 1927 and 1934, he was the spokesman of the Alpine Club in the discussion about the future National Map Series. He



Rudolf Leuzinger
1826–1896



Xaver Imfeld
1853–1909



Eduard Imhof
1895–1986

Fig. 5: Three experts in Swiss cartography



Fig. 6: A small fragment of a panorama drawn by X. Imfeld at top of the Gross Ruchen

pleaded for larger scales covering the whole country. He convinced the minister of defence, because of what he is called the “father of the National Maps”. His school maps are the base of geography lessons in hundreds of classrooms. He also worked on a guidebook for the Alpine Club and was named honorary member in 1958

9. Guidebooks

Traditionally, the authors of the Alpine Club’s guidebooks are the ones who use the topographic maps most intensely. Therefore swisstopo (the Swiss Federal Office of Topography) was always interested to keep close contacts to them. Besides the conventional summer guides, the sales of hiking and skiing books have increased considerably during the last years. The map reading manual was a joint publication of the SAC and the Federal Office of Topography.

10. New publications

Two CDs were produced together: route descriptions, photos and maps for the most popular climbs in the Bernese Alps and the Valais. Since 2006, the SAC is a joint editor of the ski touring maps 1:50,000, being responsible for the yellow overprint with the protected sites: game and nature reserves. The maps are published by swisstopo, however the routes on them have the same numbers as the descriptions in the SAC guidebooks.

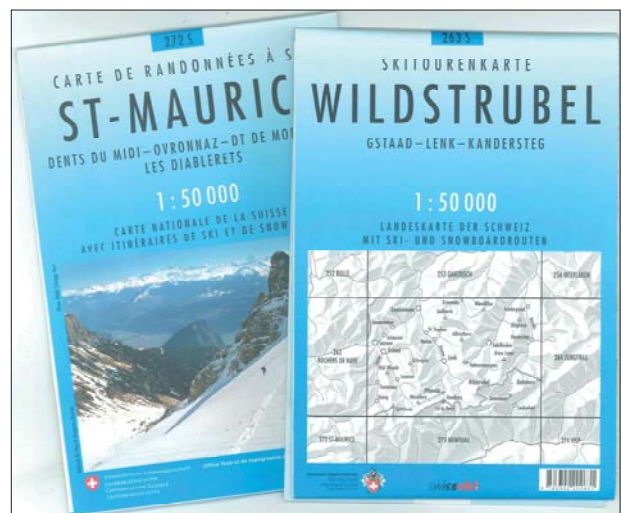


Fig. 7: The ski touring maps 1:50,000 are a joint product of swisstopo, Swiss Ski and SAC.

11. The future

swisstopo will take up the production of the new topographic landscape model TLM in 2008. With this data – updated every year – navigation will be much more reliable. As the download rates increase, alpinists will be able to get the latest map (and maybe the aerial photography as well) on his GPS. But he will still carry a paper map as well: it provides a far better overview and it needs no batteries!