

# Alfred Oberli

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**Abstract:** This article offers a biographical portrait of Alfred Oberli (1916–2005), a copperplate engraver, and later on, a cartographer specialised in rock depiction, at the Swiss Federal Office of Topography. He was an artist, map collector, alpinist, and honorary member of the Swiss Alpine Club (SAC).

**Keywords:** mountain cartography, *swisstopo*, Swiss Alpine Club (SAC), copperplate, artist, Swiss map history

Alfred “Fred” Oberli (1916–2005), was a dedicated cartographer specialised in rock scribing. He was probably known only to a small circle of enthusiastic Swiss historians, maybe some Swiss Alpine Club (SAC) members, and people interested in regional art prints. Contributing a significant reappraisal of Swiss cartographic history of the nineteenth and early twentieth centuries, and being an outstanding copperplate engraver with great artistic talent—moreover, an extraordinary cartographer of rock scribing—he deserves to be introduced to an international audience (Feldmann 2005; Figures 1–3).

Alfred Oberli grew up in the hamlet of Dicken (in the municipality of Neckertal, St. Gallen canton), in a side valley of the Toggenburg, in Eastern Switzerland; an area where at the time, as he once said, luxury was unknown (Figure 4). In the spring of 1933, he started his four-and-a-half-year apprenticeship as a copperplate engraver at the Swiss Federal Office of Topography which, at the time, was located in Kirchenfeld, an urban district of the Swiss capital Bern. That is to say, he learnt cartography on the job in the department of topographic cartography, as it is still customary in Switzerland. Once a week, he attended classes at the School of Applied Arts in Bern.



Figure 1. Alfred Oberli (ca. 2001). Credit: EIGENART.

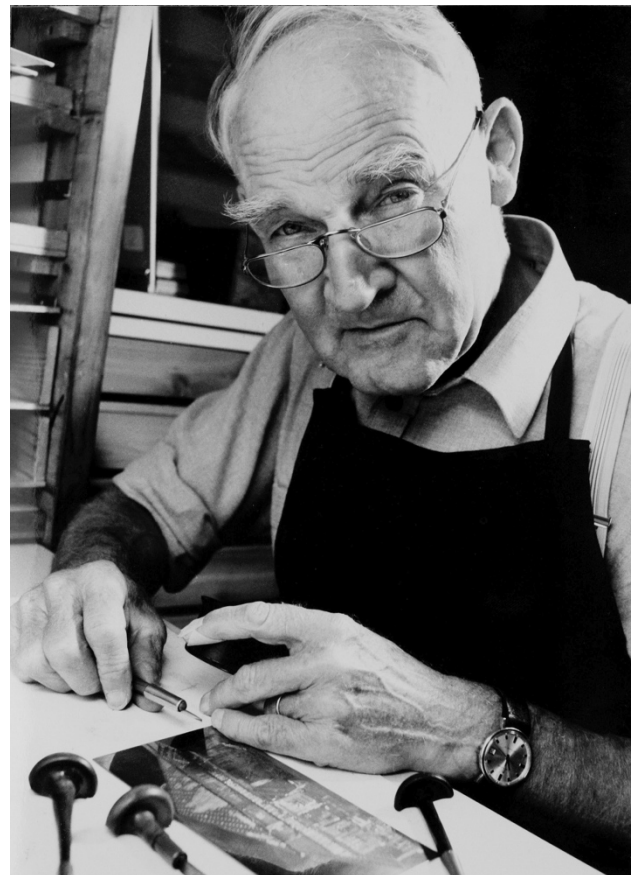


Figure 2. Alfred Oberli engraving a copperplate at home (1985). Credit: Margrith Baumann.



Figure 3. Alfred Oberli on the summit Honiese (Bündihore / Honiese, Swiss coordinates 2°611'075.250, 1°158'468.750), 2,454 metres above sea level, Diemtigtal, Switzerland (1993). Credit: Alex Luczy.

Once he had settled in Bern, he quickly joined a youth group. He learnt skiing and joined Bern's section of the SAC, leading a group of mountaineers for 20 years. A whole generation of alpinists directly benefited from his

knowledge. Famous were his tours with his 140-cm long, wooden Lindauer "summer skis." Until the spring of 1998—when he was already 82 years old—he was still ski touring in the foothills of the Bernese Alps (Figure 3).

After completing his apprenticeship in the autumn of 1937, Oberli remained at the Swiss Federal Office of Topography (swisstopo; [swisstopo.admin.ch](https://www.swisstopo.admin.ch)) and updated the Siegfried maps. In the following years, he worked on the new Swiss National maps, based on the provisions of legislation that had been passed in 1935, which are still in use with some innovations in content and design. These maps were implemented at varying scales and subsequently replaced the Dufour and Siegfried Maps. In 1953, map production changed from copperplate engraving to an in-house developed scribing technique on coated glass plates. Oberli scribed rock at 1:25,000 in 10 half-sheets and two full ones. Furthermore, he partly drew the rock of a sheet at 1:50,000. He retired in 1981, after working for 44 years at swisstopo, minus about 1,000 days of active military service in the Second World War.

In 1996, being a pensioner, Oberli was interviewed for a piece titled "Oberli's fine Felsgravuren" ("Oberli's fine rock engravings") by *Der Kleine Bund's* journalist Walter Däpp. In it, he said "Drawing a map—mapping the world—that is, after all, giving information to others, showing routes to take and destinations to go. This is a wonderful and meaningful job" (Däpp 1996). This self-image as a cartographer is worth striving for!

There were, and still are, discussions among swisstopo's cartographers about achieving the best quality in rock drawings, and this type of terrain representation is checked internally for compliance with the principles of good rock drawing and to ensure a good graphical effect (Imhof 1982; Jenny et al. 2014). From my point of view, Oberli masterfully drew the terrain in delicate hachures, following good rock drawing principles; the graphical

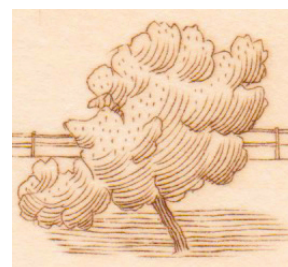
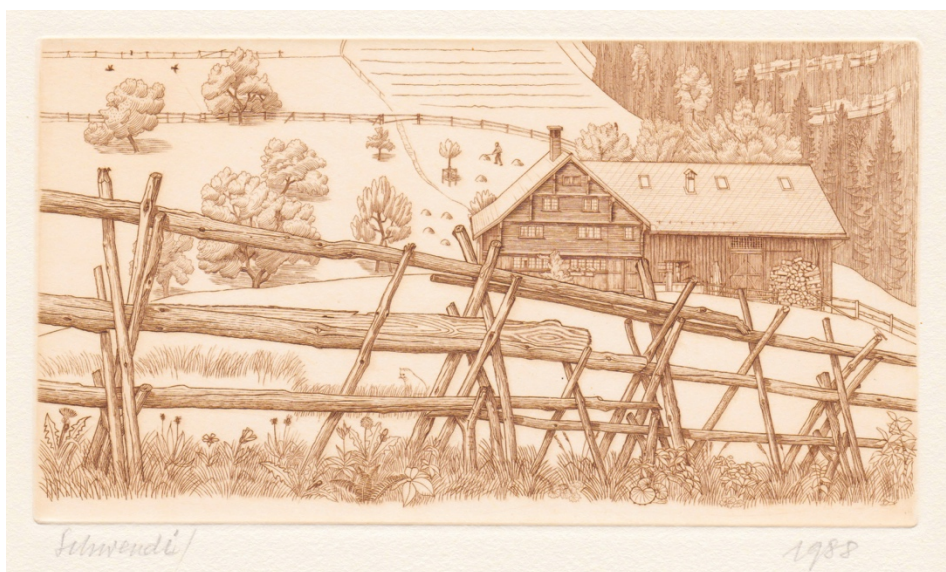
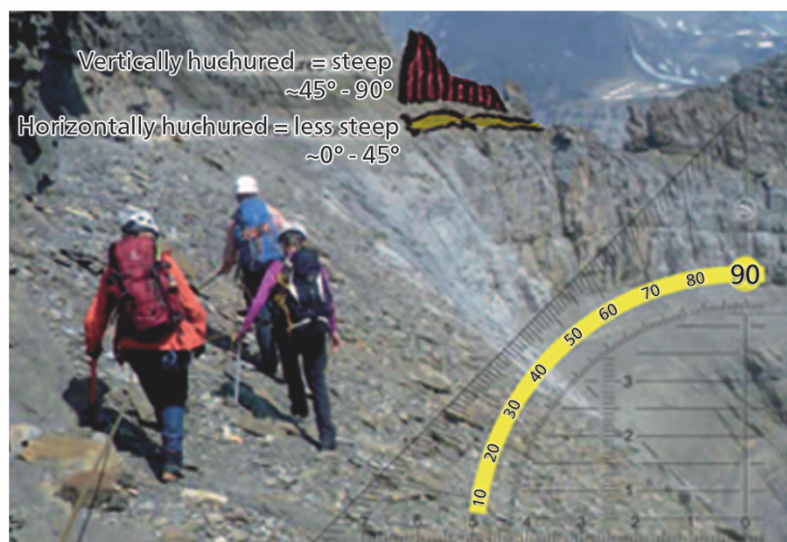


Figure 4. Schwendi, as seen from the south. Typical farmhouse in Toggenburg, St. Gallen (Oberschwendi, Swiss coordinates 2°731'476, 1°243'899), a valley community. The farmhouse is the neighbouring one to where Alfred Oberli grew up. He was especially fond of the typical wooden fences, of the old days, that he even drew a still life of it. His humour often showed itself in hidden things, like in a picture puzzle (find the snail and the head!). Copperplate print, 1988, by Alfred Oberli.





South-east of Bifertenstock/Piz Durschin  
(Swiss coordinates 2'715'933.750, 1'184'792.250). Photographer unknown.  
Sketch and lettering added by ©Jürg Gilgen, 2014

### Generalised **orographic** rock depiction (displaying angles of inclination):

This is an important information for the alpinist to choose the tour route in order to avoid dangers.

The vertical to the contour lines hachuring is steep, **~45° - 90°**. The alpinist climbs.

The horizontal to the contour lines hachuring is less steep, **0° - ~45°**. The alpinist walks.



### Generalised **geomorphologic** rock depiction (displaying the look of earth's surface):

Geomorphologic features are useful landmarks.

Triangular rock features



Stratification (layers of steep and less steep layers)



Forms of erosion



Figure 5. Left, *Engelhörner* (*Grosses Engelhorn*, Swiss coordinates 2'656'729.000, 1'169'254.000): Positive, true-sided copy of the rock original made by Alfred Oberli for the national map 1:25,000, sheet 1230 Guttannen. The original was a negative, true-sided, engraving to the scale in a coated glass plate with blueprints. The illustration is enlarged. Notice the well depicted geomorphology with layers, steps and triangular eroded rock features. The rock depiction is well generalised to the scale, according to cartographic principles: emphasizing the important, simplifying the complicated, and omitting unnecessary features. The hypsometry (elevation and depth of Earth's surface—atmospheric perspective) is optimally drawn with high contrast clearly representing the orography (angles of inclination) in a generalized way. Credit: swisstopo, 2023.

effect of his work is perfect. He never drew the terrain in a mannerly way (too standardised and, therefore, unnatural), but depicted the geomorphology—how the surface looks—very vividly (Figure 5, excerpt of sheet 1230 Guttannen). This Swiss style of rock drawing, with crisp and clearly generalised geomorphologic rock depiction, is probably distinguished from that of other map producers.

Older articles describe swisstopo's rock representation style as "genetic." In geology, this term refers to the processes and characteristics relating to the genesis, i.e., the formation of rocks. Later, the term "geomorphologic" rock depiction was used to describe swisstopo's rock drawing. Institut géographique national (IGN), the official French mapping agency, on the other hand, talks about their "orographic" rock drawing, displaying the





Figure 6. Nünene flue (Grossi Nünene flue), in the foothills of the Bernese Alps, as seen from northwest (Swiss coordinates 2'601'733.000, 1'172'793.250). Notice the special geomorphology with vertically stratification. Ink and aquarelle drawing, August 5–6, 1987, by Alfred Oberli.

angle of inclination (Gondol, Le Bris, and Lecordix 2007). Swiss rock drawing is orographic as well as a geomorphologic, showing the rocky surface as it is, and intuitively comprehensible. The main disadvantages of the Swiss style of rock representation are the time-consuming production, which is therefore very costly, and its dependence solely on human talent as long as it is executed manually. Oberli was a master in rock drawing, combining his great artistic talent with a profound knowledge of geomorphology.

Privately, Oberli continued engraving copperplates as an artistic hobby. His favorite theme was the mountains—it runs through his entire work. The technique in his artistic work varied; most were engravings, but he also made ink and watercolor drawings. Thus, it might be concluded, that his favorite technique was copper engraving. The richness of detail in his copperplate prints—sometimes visible only with a magnifying glass—is both impressive and amazing (Figure 4). He once told the journalist Christine Kopp in 1999, “Copper engraving is a matter of feeling,” and “you have to feel exactly how hard you have to press, for example, to get a line of the desired width.” Oberli saw himself as a craftsman: “You can't say I'm an artist—I have too little imagination! I have to see something, and then I can work it out, engrave it myself and print it myself” (Kopp 1999). But if you look at sheet after sheet of his graphics, you quickly realize that behind the mastery of the craft also hides the fine sensibility of the artist. The sheets—quite different in their nature—captivate with their artistic expressiveness and the



Figure 7. Schilt, as seen from the southwest. (Swiss coordinates 2'638'199.250, 1'166'610.375). Notice the geomorphology with layering and triangular shaped, eroded rock features with clear fractures. Copperplate engraving combined with aquatint technique, 1976, by Alfred Oberli.



Figure 8. Free Art, Faces, 1964. Copperplate work by Alfred Oberli.

original, aptly implemented subjects (Figures 4, 6, 7, & 8; swisstopo 1966–2008; Gilde Schweizer Bergmaler 1995, 31). To reproduce his artistic engravings himself, he even built his own printing press at home.

He knew how to draw a landscape, especially the rocky areas, like no other—not only Swiss-style rock drawing in a bird's eye view, but also from an oblique perspective. From 1949, Oberli illustrated 16 SAC guide books in whole or in part. Within about 50 years, he created the



incredible number of about 500 new route drawings, along with numerous additions and supplements (Figure 9). For this great oeuvre d'art, he was awarded honorary membership of the SAC in 1999. His artistic work was not only recognized by mountaineers but also by cultural institutions. For example, he was honoured with the Paul Haupt Prize in 1985 and the Cultural Award of Wabern in 1998.

Oberli started collecting maps early in his life. His collection comprises about 20,000 maps, mainly so-called state prints (*épreuves d'état d'une gravure*), which are often unique, very valuable and are therefore of great scientific interest. It is thus one of the most important private map collections in Switzerland. All his collected maps are listed in detail in his neat and very legible handwriting. Examining these lists reveals that he was a very meticulous man, just like how he worked as a cartographer. In 2000, he generously donated his huge map collection to the Swiss Federal Office of Topography, which is accessible online ([alexandria.ch](http://alexandria.ch)).

Having a profound knowledge of copperplate reproduction and cartography, Oberli was often consulted by many map researchers and experts interested in the Dufour and the Siegfried maps, the previous map series of the Swiss Federal Office of Topography (Feldmann 2009; Speich 1997).

Oberli passed away on 11th February, 2005 at his home in Wabern, Switzerland, leaving behind a rich and significant legacy for the public.

Oberli's rock drawings at the Swiss Federal Office of Topography include the following:

### 1:25,000

- 1210 Innertkirchen W (initial creation 1968)
- 1218 Zerneß E (initial creation 1965)
- 1225 Gruyères (initial creation 1955)
oldenhorn W (initial creation 1972)
- 1236 Savognin E (initial creation 1962)
- 1239b Müstair E (initial creation 1969)
- 1265 Les Mosses (initial creation 1958)
- 1269 Aletschgletscher E (initial creation 1974)
- 1278 La Rōsa E (initial creation 1966)
- 1290 Helsenhorn E (initial creation 1970)
- 1324 Barberine W (initial creation 1964)
- 1344 Col de Balme W (initial creation 1967)

### 1:50,000

- 52 Prättigau, partly (initial creation 1952)

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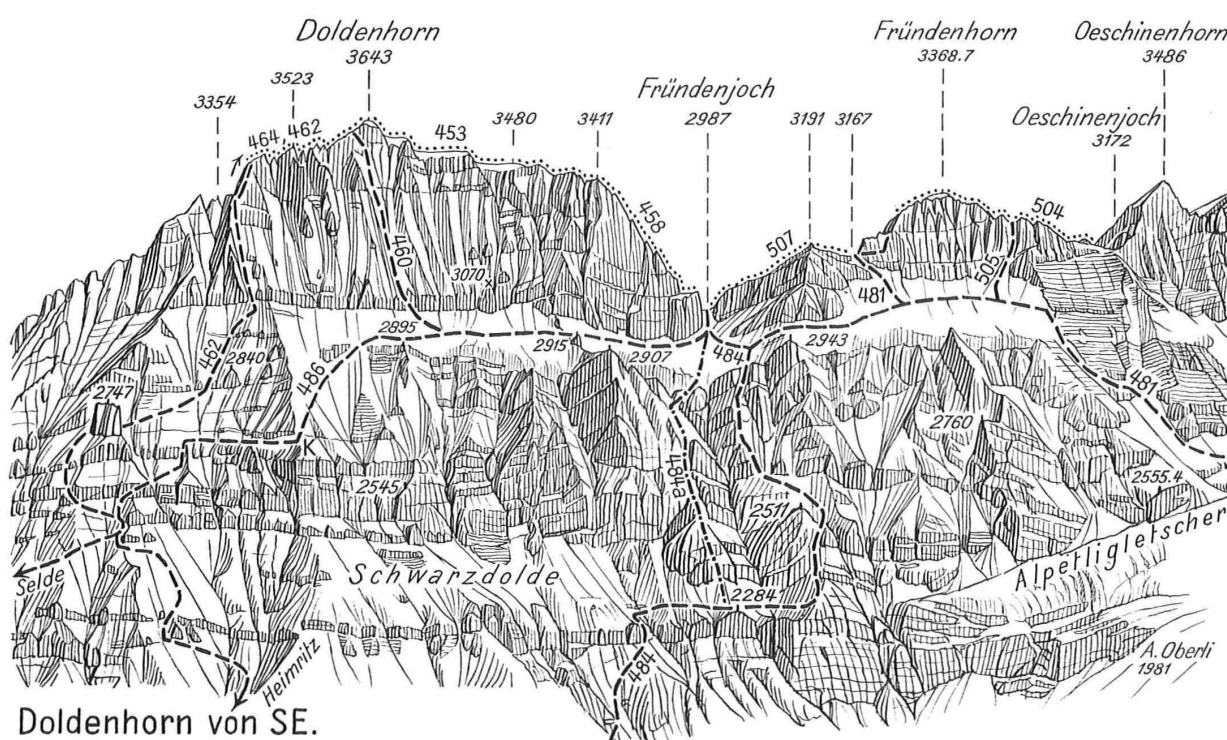


Figure 9. Route drawing for the Swiss Alpine Club (SAC) guide book 2 of the Bernese Alps (Doldenhorn, Swiss coordinates 2°622'755.750, 1°146'396.375). Notice the well depicted geomorphology with different layers, steps and triangular eroded rock features. The correct geomorphological rock representation is essential to make the best route choice (dashed, dash dotted and dotted routes in the drawing, with number of description in the guide book) in order to avoid life-threatening hazards. Ink drawing, 22×13cm, 1982, by Alfred Oberli.



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