Grindelwald: first glacier measurement and idealistic-realistic glacier landscapes

Probably for the first time in the history of glaciology, the advancing of ice masses was measured at the Upper Grindelwald Glacier in 1773 by a shepherd boy and a naturalist, Bernhard Fried-
rich Ruh (1732–1802), a legal scholar and statesman born in Grindelwald. He describes this measurement in his essay "An attempt on the mechanisms of glaciers": "A shepherd boy of about 15 years guarded his goats in 1773 near the Upper Grindelwald Glacier. He had heard of the theory only a few days ago. That day he decided to study the behavior of the glaciers and to measure their progress directly. He observed the marks left by the advancing ice, and used them to determine the extent of the movement. He measured the distance between the marks daily, and found that the glacier had advanced by about 50 meters in a single day.

During that time, works by the prominent landscape artist Jean- Antoine Lincé (1716–1845) from Geneva are of particular value for the scientific history. Liné visited
the village of Les Bois by 20 steps before retreating after 1821. Several photographically accu-
surate maps of the Mer de Glace before 1800 and the subsequent re-advance at the end of the 19th century.

Due to its central role in the history of alpinism, the Mont Blanc massif was the subject of sev-
eral visual and textual representations. The Englishman Samwel Wyttenbach (1748–1830), a parson and one of the most important naturalists of that time. These masterpieces show in an impressive way how glacier landscapes can be depicted scientifically precise but also artistically idealized.

According to the findings of Viollet-le-Duc (1876), from 1812 to 1817 the winters were long and severe in the valley of Chamonix and the summers were very, particularly in 1816, the in-
famous "year without a summer" which followed the 1815 eruption of Mount Tambora. Con-
sistent with these meteorological observations, the Mer de Glace advanced during this period (mainly between 1810 and 1820) to just 40 m short of the 1844 maximum, as docu-
mented by several drawings by Liné (made around 1820) and Birmann (made in 1823). The famous Swiss landscape artist Samuel Birmann (1750–1847) was full of enthusiasm for the Glacier of the Bos. His notebook contains detailed descriptions of the glacier approaches to the village of Les Bois by 20 steps before retreating after 1821. Several photographically accurate drawings made from different viewing positions allow a meticulous reconstruction of the glacier margin in 1823.

During the Little Ice Age (LIA), the attractiveness of glacier scenes was on the rise. Travelling at the time. These field companions had a direct impact on the content of the paintings of Wolf. In the time when Wolf was making drawings or paintings, Wyttenbach was conducting topographic, geomorphologic, and meteorological observations. Thanks to the unique collection of oil paintings by Wolf, probably the most famous artist of Alpine landscapes at that time, the advances of several Alpine glaciers are richly documented.

On his travels the painter was accompanied by either Abraham Wagner, his patron or Jakob Samuel Wythtenbach (1748–1830), a parson and one of the most important naturalists of that time. These masterpieces show in an impressive way how glacier landscapes can be depicted scientifically precise but also artistically idealized.

Figure 2: C. Wolf: semi-panorama of Grindelwald with Upper and Lower Glaciers between Wetterhorn, Mettenberg, and Eiger (1774 edition, 1774, Kunstmuseum Basel).