ExSat5: Lower Grindelwald Glacier - Holocene climate change and environments
Saturday 26 August 2017, 09.00 – 18.30 h.
Guide: Dr. Samuel Nussbaumer, World Glacier Monitoring Service, University of Zurich

The excursion reviews Holocene glacier changes and brings us to the Lower Grindelwald Glacier, a valley glacier 8.2 km long and covering 17.8 km², situated within the UNESCO World Heritage site “Swiss Alps Jungfrau-Aletsch”.

Thanks to the good accessibility of the low ice front during the Little Ice Age LIA, the Lower Grindelwald Glacier is the best-documented Swiss valley glacier. A wealth of high quality depictions by top artists (e.g. Caspar Wolf and Samuel Birmann) over the centuries has allowed for the reconstruction of the LIA glacier fluctuations in a uniquely precise way. A longer reconstruction of glacial history (3,000 years!) was made possible by the discovery of fossil trees from the lateral moraines. Since the end of the LIA, the glaciers in the Grindelwald valley have been retreating (50% volume loss), with a dramatic increase in the rate of ice loss in recent years. Model simulations indicate a complete disintegration of the glacier by the end of the 21st century.

The excursion also discusses recent changes in the landscape, namely the disintegration of the former ice tongue into a chaotic mass of moraines, ice dams and dead ice, leading to the formation of potentially high-risk glacier lakes. For example, a big rockslide occurred below the Eiger east face in 2005. Today, the lateral moraine has partly collapsed and erosion and debris-flow processes continue.

Itinerary
The excursion takes us from Interlaken East (Railway Station, rail departure 09.05 h) to Grindelwald and then to Pfingstegg by cable car. We will hike from Pfingstegg (1386 m) on a good trail to Bäregg (1772 m; ca 1.5 h and 400 m upward) with several stops. The view from Bäregg to the glaciers is spectacular. In the afternoon, we will walk from Bäregg to Marmorbruch and the Glacier Gorge (1013 m, 750 m downward, 1.5 h hike). Total walking is 4 hrs, 400 m upward and 750 m downward, good trails, intermediate level, good physical condition required. Return: Bus ride to Grindelwald and by railway from Grindelwald (departure 17.49 h) to Interlaken East (arrival 18.24 h). The excursion uses public transportation only.

Equipment, food and drinks
Good hiking/trekking boots (!), sun/wind/rain protection, sunglasses and a small backpack with your own snacks and water for the hike. Lunch: typical alpine cheese and meat buffet, soup, pure alpine spring water and coffee at mountain hut Bäregg. Soft drinks and alcoholic beverages are not included but can be purchased at the mountain hut Bäregg at your own costs.

Maximum number of participants
30; minimum 15

Costs
The registration fee covers public transportation costs (Railway, cable car and bus), lunch at Bäregg (soup, meat and cheese, water and coffee) and handout. Price: 70 CHF

Disclaimer
Health insurance and insurance against accidents is fully within the responsibility of the participants. The program may be subject to small changes.