



Swiss Chapter of Sigma Xi - The Scientific Research Society

Excursion 2006

Bridges and Mines



*Sunniberg bridge (Klosters)
Salginatobel bridge (Schiers)*

*Iron oxides and carbonate minerals
Visiting a former iron mine*

Location Famous bridges built by Swiss engineers in the Prättigau (GR) and iron ore mining at the former Iron Mine Gonzen (SG)

Date Saturday, September 2, 2006

Contents This excursion will satisfy engineers, geologists and biologists alike. We will see the newest and a famous old bridge, visit a former iron mine and learn about ore bearing layers, iron minerals and methods of mining them and will see demonstrated in the microscope [ferrous iron oxidizing bacteria](#) which are known to have played an important role in earth history at the time when oxygen began to be produced on earth.

The Prättigau (GR) is a region that has a collection of famous bridges built by Swiss engineers. We will visit *Robert Maillart's* famous reinforced concrete bridge spanning the [Salgina Tobel](#) between Schiers and Schuders and which was declared a World Monument in 1991, like the Eiffel tower in Paris and the Statue of Liberty in New York. We will then continue to [the Sunniberg bridge](#) (--> [Sunnibergbrücke](#)) which spans the Landquart near Klosters. This cable-stayed bridge is supported by low pylons on top of piers up to 60 m high. One of its builders, engineer Dr. Werner Brändli, will be with us and offer details about this most inventive bridge project.

Travel **By train:** Please purchase your tickets to Sargans (SG) round trip. We will organize the local trip by bus and by private cars. It is a 20-minute walk from the train station to the Gonzen Visitors' Center. Departure times for trains that will get you to Sargans on time are: Basel: 7:22 or 8:07; Bern: 7.30 or 8:02; Fribourg: 7.04 or 7:34; Lausanne: 6.20 or 6:45; Neuchâtel: 6. 43 or 7:24; Zürich: 8.37 or 9:12. These trains will arrive in Sargans at 09:32 and 10:19, respectively. Participants arriving on the 10:19 train will be picked up at the station by car.

By car: If you travel by car to Sargans you may park on the parking place in front of the Visitors' Center at the Gonzen Mine. Follow the signs to „Bergwerk Gonzen“.

Afternoon: We will travel to the various bridges by private cars. There will be a number of seats in a small bus for participants who arrive in Sargans by train.

Program

10:15	Meet at the Visitors' Center of the „Gonzen Mine“ (Bergwerk). Participants traveling by train will be picked up at the railroad station from the 10:19 train.
10:30	Ride on the mine train from the Visitors' Center to the central hall of the mine. Please be on time; train departs on schedule.
10:00 – 12:15	Information about iron mining in Gonzen and a walk through some of the former mine tunnels and shafts with Mr. Peter Grünenfelder.
12:30	Return to the Visitors' Center and departure to Schiers.
13:00	Lunch at Restaurant Prättigauerhof, Schiers (Tel. 081 330 40 50). Please choose one of the suggested menus; this will speed up serving the meals.
14:00	Departure for bridge excursion to Salginatobel and Sunniberg with Dr. Werner Brändli, Engineer.
17:00	Back in Sargans. Train to Zürich and west departs at 17:24

Clothing The excursion will take place regardless of the weather forecast. Please prepare accordingly.
At the mine you will be equipped with a hard hat and a lamp. Please wear sturdy shoes and warm clothes for the mine visit, since it is rather cool inside the mountain (13°C).
Take a camera with a flash if you intend to take pictures inside the mine.

Costs Entrance fee to the mine and transportation with the mine train is Fr. 20.- per person. The fee will be collected during the trip. Lunch at your own cost.

Insurance is the responsibility of the participant. The tour organizers and Sigma-Xi cannot be held liable for damages or lost items.
Please do not leave the group in the mine since you might get lost or get yourself into danger in the extensive tunnel system of the mine.

Signing up If you can join the group please sign up as soon as possible by calling or sending the registration form by e-mail or mail to the president Dr. Antonio Pita, Av. de la Gare 16, 1700 Fribourg, apita@bluewin.ch; tel. 026 322-8156 or to Dr. Georgiana Hanselmann, Hammerstr.107, 8032 Zürich, hanselmann@swissonline.ch; tel. 044 381-3122.

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