



# SGA 2023



Visit us in Zurich in 2023 • 28th August – 1st September 2023

## Post-conference excursion FT3

### Ore deposits in the Alpine collisional orogen (Val d'Aosta, NW Italy):

### Orogenic gold, seafloor VMS and distal Mn deposits

Start:	01.09. 16:00 hr, Bern main railway station
End:	03.09. 20:00 hr, Bern main railway station
Duration:	Evening travel + 2 days in the field
Participants:	max. 21
Leaders:	Larryn W. Diamond, Robin Wolf (University of Bern)
Price:	290 CHF/person

Excursion fee covers van transportation, 2 nights of hotel accommodation (shared rooms) with breakfast, 1 dinner with pre-selected menu, mine entrance fees, excursion guidebook. *Not included: train connection Zurich–Bern–Zurich, 1 dinner in restaurant en route to Italy, 2 picnic lunches (supermarket stop).*

The spectacular outcrops in the Western Alps of NW Italy display examples of three major types of ore deposits typically found in collisional orogens. Excursion Day 1 will visit a swarm of hydrothermal gold-bearing quartz veins, hosted in extensional structures caused by orogenic collapse. These well-exposed veins illustrate the key tectonic, structural, mineralogical and alteration features of orogenic-type gold deposits, which have formed worldwide since Archean time. We will discuss field and lab evidence for the genesis of the deposits, including structural controls, fluid evolution and fluid–rock interaction, with implications for exploration.

Excursion Day 2 will visit paleo-seafloor hydrothermal ore deposits transported into the Alpine orogen within the Piemonte ophiolite nappe. We will examine a volcanogenic massive-sulfide (VMS) deposit (La Servette), where features of the original black-smoker setting can be reconstructed from blocks in waste dumps. A second stop will visit a well exposed stratiform Mn deposit (Prabornaz), displaying a multitude of eclogite-facies Mn minerals. This deposit exemplifies distal hydrothermal fallout from black-smokers. We will discuss the genesis of the deposits and their structural and metamorphic overprinting, with implications for exploration in orogenic belts.

#### Excursion program

- 01.09. 1st day: Departure 16:00 hr from Bern railway station (reachable by 15:02 train from Zurich). 4-hr van trip (including dinner) to Châtillon, Val d'Aosta, Italy.
- 02.09. 2nd day: Supermarket stop to buy 2 lunches. Brusson: Orogenic gold deposits, including underground visit to former Fenilia mine (helmets provided). Includes 2 hr hike on steep path (200 m elevation difference).
- 03.09. 3rd day: Val Saint-Marcel: Field introduction to Alpine tectonics; La Servette VMS deposit; Prabornaz Mn deposit. Includes 4 hr hike on gravel road (300 m elevation difference). Return to Bern railway station (20:00 hr) with optional stops *en route* at Nus (Val d'Aosta) and Martigny (Switzerland) railway stations.

Contact us on [sga2023.ch](http://sga2023.ch)