

3.2. Mt. Freikofel area (Day 2)

On the second day we will partly drive and walk to Mt. Freikofel, spanning the state boundary between Austria and Italy, mainly to observe the Devonian transitional facies. We will leave the minibus near Passo Cavallo/Rossbodentörl (1580 m). From there we will descend on the Italian side and move to the West flanking the southern part of the Mt. Freikofel from where we climb to the top (1756 m). This will allow to observe all the formations of the so called Devonian transitional sequence. From there we will descend on the western side and continue back to the Plöckenhaus (Fig. 10).

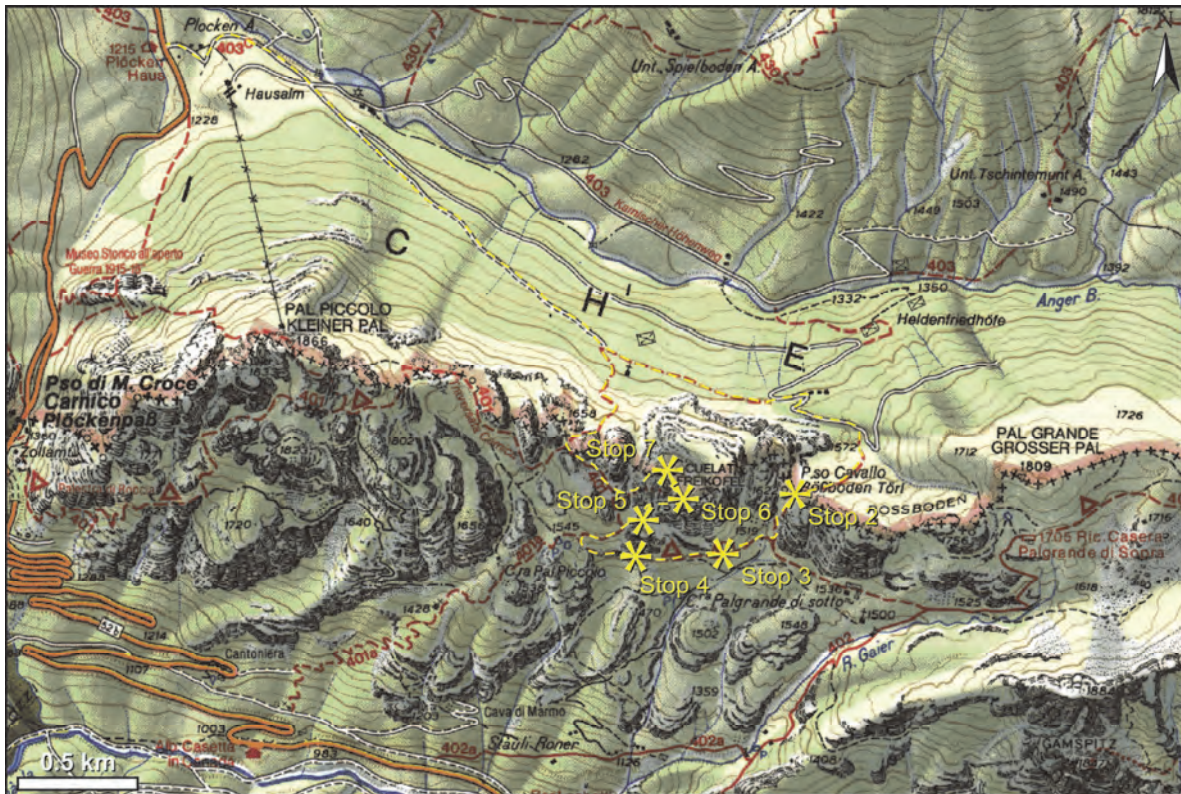


Fig. 10. Topographic map with indication of the itinerary and location of the stops of the second field trip day.

3.2.1. Stop 2 – Geological overview at Passo Cavallo/Rossbodentörl

The Angerbach valley is cut into siliciclastic rocks of the Hochwipfel Fm. which represents a syncline following the north-trending Kleiner Pal (Pal Piccolo) anticline to the south. The latter is mostly characterised by pelagic Devonian strata while in the core of the folded structure even Upper Silurian limestones are exposed between Plöckenpass and the summit of Kleiner Pal (Pal Piccolo). Farther to the North the prominent E-W trending dextral strike-slip fault located right in front of the Mt. Polinik bounds the Devonian peritidal deposits of the Polinik Fm.

We will walk along the northern flank of the huge anticline (Fig. 11). In the core that roughly corresponds to the valley south of the Mt. Freikofel, the oldest parts of the succession, including Upper Ordovician deposits of the Valbertad and Uqua Fms. and Silurian of the Kok and Alticola Fms., crop out, while the younger strata are exposed progressively (with some minor deformations) towards the top of the surrounding mountains. The Devonian starts with the Rauchkofel Fm. (Lochkovian) at its base followed by the whole succession of the transitional units: Kellerwand (Pragian-Emsian), Vinz (Emsian-lower Givetian), Cellon

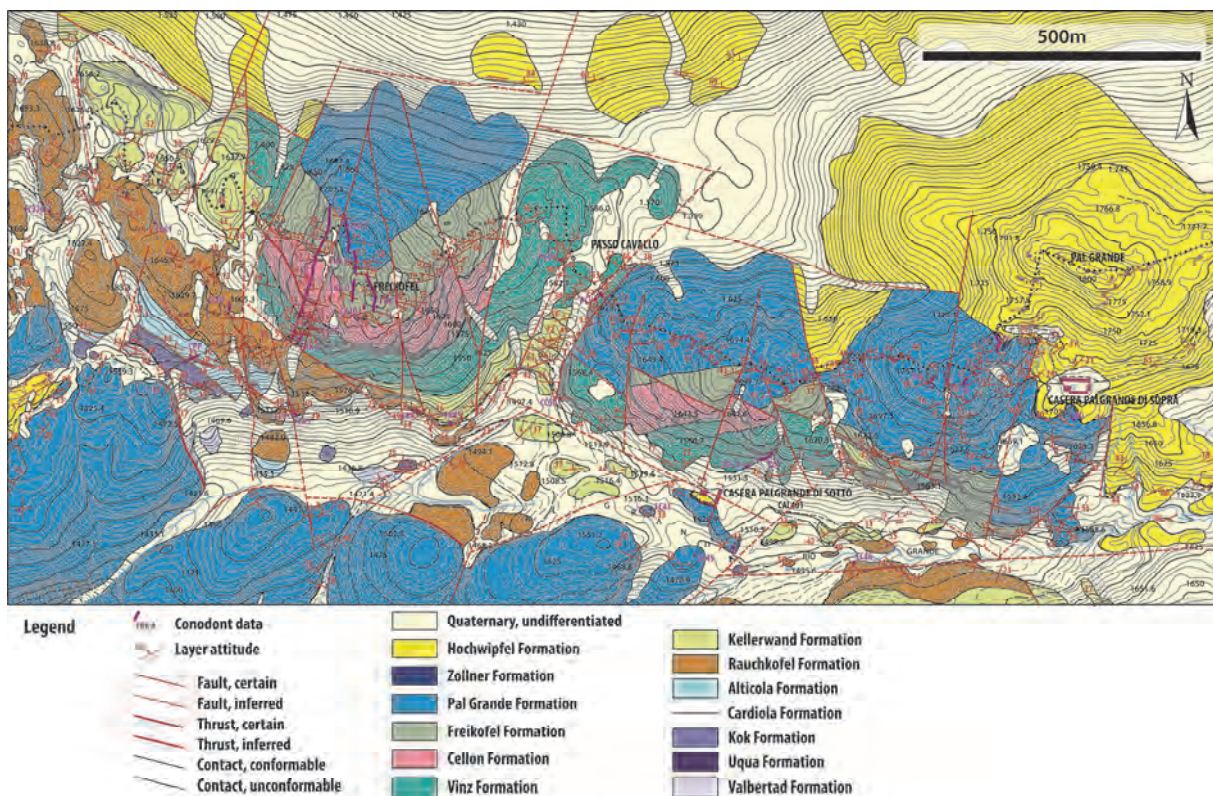


Fig. 11. Geological map of Mt. Freikofel and surroundings.

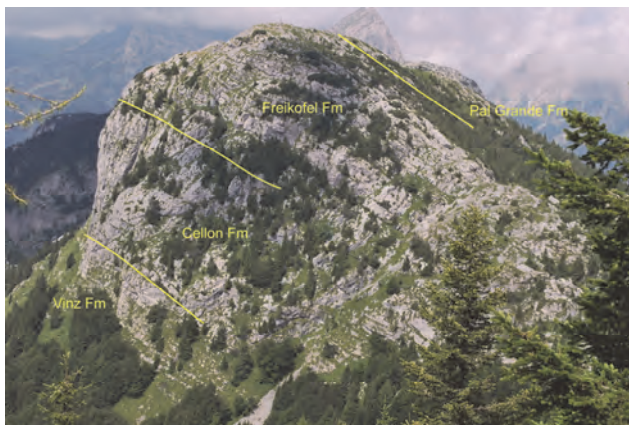


Fig. 12. View of the Mt. Freikofel from the East with the lithostratigraphic subdivisions.

(Givetian) and Freikofel (Givetian-Frasnian) Fms (Fig. 12). The transitional units provide an insight into the development of the entire platform, reflecting the depositional evolution of the moderately shallow water part of the basin, with the advantage of an almost complete sedimentary record, also datable by conodonts.

This sequence is covered by the Pal Grande Fm. (Frasnian-Famennian and locally Tournaisian in this area) and, in disconformity, by patches of Plotta Fm. The Variscan sequence in this area

terminates with the mostly turbiditic Hochwipfel Fm. (Visean-Bashkirian).

3.2.2. Stop 3 – Rauchkofel-Kellerwand formations transition

The limit between the Rauchkofel and Kellerwand Fms is exposed in correspondence of the FRKS section (Fig. 13), at the altitude of 1525 m and coordinates N 46°35'55.7" E 12°58'46.7".

Here the very dark grey packstone/grainstone to locally coral-bearing rudstone of the Rauchkofel Fm. are covered by medium dark grey mudstone and wackestone of the