

3.2. Stop Gmundner Berg

Panoramic view to the eastern side of Lake Traunsee

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Lake Traunsee covers an area of 25,6 km², has a maximum depth of 191 m (average 89,7 m) with a water volume of 2.300,000.000 m³ and a catchment area of 1417 km².

The profile from the North to the South (from TOLLMANN, 1985, Fig. 93) shows a sequence from the Rhenodanubian Flyschzone and the Northern Calcareous Alps.

The Grünberg (984 m) is built of Attlengbach Formation (Maastrichtian to Late Paleocene), which is rich in sandstones and the Campanian Zementmergelserie dominated by marls.

The smooth depression north of the Traunstein (1691 m) is the Gschlifgraben which represents in a tectonic window the Ultrahelvetetic Zone. The Gschlifgraben has been famous for landslides and debris flows since the 15th century. An area of apx. 5 km² is affected by the slowly downhill slipping debris flows. The triggering factor is the loose „Buntmergel“ (= marls) of the Ultrahelvetetic Zone in combination with the tectonic position at the front of the Northern Calcareous Alps (NCA). The front is composed of small tectonic slices (Bajuvaric part of the NCA) which include Haselgebirge (a sandstone-clay-evaporite association, containing gypsum and salt of the Permian-Skythian), the most mobile horizon in the Northern Calcareous Alps. Towards the north some beds of the southern parts of the Rhenodanubian Flysch Zone occurs the Perneck Formation (Campanian-Maastrichtian) - which is also very mobile, due to the geological material (slates and marls).

The Traunstein (1691 m) and the Schönberg (895 m) already belong to the Tirolic part of the NCA, that consists of Mid-Triassic Steinalmkalk.

In the depression of the Eisenbach we find Cretaceous Sediments of the „Gosau-Group“. In a quarry at Karbach, right at the eastern side of Lake Traunsee, we find a sequence of Upper Triassic (Platten Limestone, Dachstein Limestone), Lower Jurassic (Hierlatz Limestone), Middle to Upper Jurassic [?] (Grünanger Beds), Upper Jurassic (Plassen Limestone, Tressenstein Limestone, Oberalmer Beds) and Cretaceous Sediments („Gosau-Group“).

The peak of Erlkogel (1575 m) is formed of the Liassic Adnet Formation (red limestones) which is underlain by the Upper Triassic at the slopes of the Mountain. The Rindbach-Valley with beautiful waterfalls, which are protected as a Natural Monument, show the deepening of the water within the Upper Triassic Platten Limestone and the Lower Jurassic Hierlatz Limestone.

References:

- EGGER, H. et al. (1996): Geologische Karte der Republik Österreich, 66 GMUNDEN.- Geol. B.-A., Wien
 MANDL, G.W. & HOFMANN, T. (1993): Bericht 1992 über geologische Aufnahmen im Steinbruch Karbach auf Blatt 66 Gmunden.- Jb. Geol. B.-A., 136, 571-573, Wien
 SCHÄFFER, G. (1983): Massenbewegungen des Gschlifgrabens und Umgebung.- Arbeitstagung 1983 Gmunden, S. 37-41, 5 Abb., Wien
 TOLLMANN, A (1985).: Geologie von Österreich. Bd II: Außerzentralalpiner Anteil. XV + 710 S., 286 Abb., 27 Taf., Wien

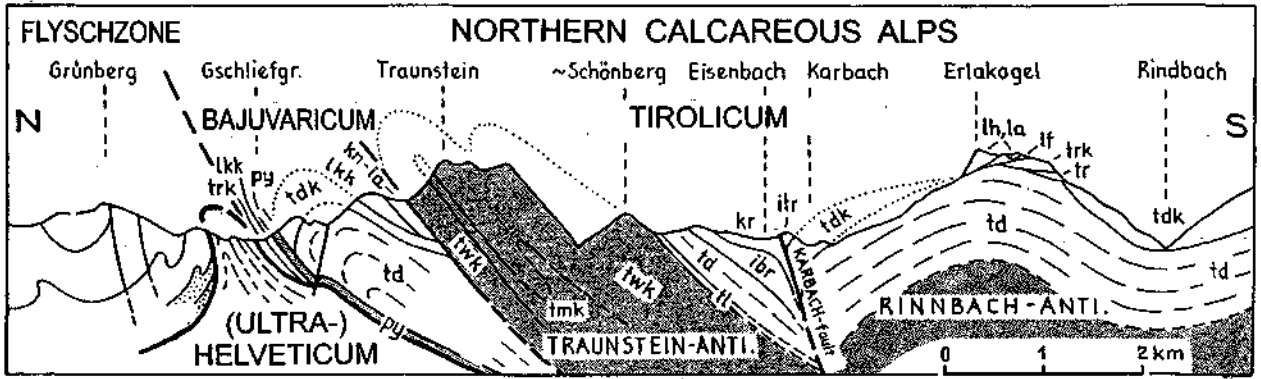


Fig. 3.2.: Geological section of the eastern border of Lake Traunsee (from TOLLMANN, 1985)

3.3. Bus tour Gmunden-Hallstatt

Along the road on the western side of the lake the Calcareous Alps are crossed to reach the town of Bad Ischl. During the second half of the 19th and the early 20th centuries, this lovely town was the favourite place of Emperor Franz Josef I. for recreation.

After passing Bad Ischl the road continues southward for some further 25 km to Hallstatt. For explanatory notes concerning the history of research, stratigraphy, tectonics and the overall implications of this classical region for Triassic-Jurassic geology of the Alps see chapter 2.5., 4.1., 4.2., 5.1. and 5.2.