

Travel of about 100 km by bus to the first stop at the village Payerbach, south of Vienna.

## Stop 1: Roadside at Payerbach, viewpoint.

Explanation of the geological situation at the southern margin of NCA - see Fig.4.

The village Payerbach is situated within the Palaeozoic rocks of the Greywacke Zone. This zone can be separated into three nappes:

- 1) the lower Veitsch Nappe, built by Carboniferous conglomerates, sandstones and dark shales and small bodies of magnesite;
- 2) the intermediate Silbersberg Nappe with remnants of a crystalline basement („Vöstenhof-Crystalline”) and transgressing siliciclastics of probably Permian age - the sequence is tectonically overturned; a very characteristic element are small intercalated bodies of Riebeckit-gneiss;
- 3) the upper Noric Nappe, built by grey shales, greenschists and sandy shales with lydites of probably Lower Palaeozoic age. Above follow with transgressive contact the Permo-Skythian Prebichl-Fm and Werfen-Fm.

The transgressive siliciclastics are shown in Fig.4 as Werning Zone and are assigned to the Tirolic units.

Above follows with overthrust contact a zone of tectonized narrow slices with Middle to Upper Triassic pelagic carbonates - the Juvavic Geyerstein-Sieding Slices in a basinal facies. In the same tectonic position we will see the Meliata-Klippe at Florianikogel.

The uppermost tectonic element is represented by the Schneeberg Nappe. It is part of a mainly Middle Triassic carbonate platform (Wetterstein Limestone). Its southern margin has been affected by Post-Gosauic backthrusting, which has created a complex pattern of small slices of Werfen Shales, Wetterstein Limestone and associated pelagic limestones, as well as of rocks of the Gosau-Group - see also Figs. 5, 7.

The Juvavic units below the Schneeberg Nappe, as there are the Mürzalpen Nappe, Hohe Wand Unit, Geyerstein-Sieding Slices and numerous smaller units, are not the erosional remnants of a former continuous nappe. They have different palaeogeographic origins - see Fig.2. Their today arrangement to each other is thought to be a product of the Upper Jurassic gravitational tectonics.

For the reconstruction of the pre-tectonic arrangement of the Juvavic units the facies trends within them can be used.

For example the Schneeberg Nappe shows a platform to basin transition (Grafensteig Limestone) toward the north with onlapping Reingraben Shales in the Carnian - Figs.2 and 6. A similar trend is visible in the northeastern part of the Mürzalpen Nappe (Schnealpen area) - Fig.2. Therefore the two nappes may belong to the same northern margin of a larger carbonate platform. On the other hand there is also a platform margin preserved at the southern slope of Rax Mountain, which one shows a transition from reef to allogenic slope sediments and to variegated limestones of Hallstatt-type. Middle Triassic Hallstatt Limestones today can be found in the Geyerstein-Sieding Slices, within the Ödenhof Window and north of the Hohe Wand. Their depositional area can be assigned to an area „south” of the Wetterstein platform of the Schneeberg Nappe.

## Stop 2: Kaiserbrunn, Vienna Water Supply.

Visit of the tapping of Kaiserbrunn Spring.

For some data see chapter „The Water Supply of Vienna”.