Origin, facies: The rocks of the Silbersberg Formation are considered as terrestrial deposits at the margin of a depositional basin.

Chronostratigraphic age: Although originally considered as Ordovician or older (CORNELIUS, 1952b), the composition and macroscopic appearance remember that of the Permian Alpine Verruccano as already stated by NIEVOLL (1984). This was confirmed by $^{40}Ar/^{39}Ar$ dating of concentrates of detrital white mica which yield an age of 359.6 ± 1.1 Ma implying a depositional age younger than the approximate Devonian/Carboniferous boundary (HANDLER et al., 1997).

Biostratigraphy: -

Thickness: Unknown.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): In nearly all cases a tectonic boundary including a sheared boundary to underyling Paleozoic quartzphyllite.

Overlying unit(s): Tectonic boundary.

Lateral unit(s): -

Geographic distribution: Lower Austria and eastern Styria.

Remarks: -

Complementary references: -

Graschnitz-Formation / Graschnitz Formation

FRANZ NEUBAUER

Validity: Invalid and informal unit; the term Graschnitz Formation was introduced on the ÖK50-UTM, map sheet 4217 Kindberg (ÖK50-BMN, map sheet 134 Passail) (FLÜGEL et al., 1990; erronously named "Graschitz-Formation" in the map's legend). Unfortunately, neither a description of the succession was ever published, nor explanatory notes for the map sheet.

Type area: ÖK50-UTM, map sheet 4217 Kindberg (ÖK50-BMN, map sheet 134 Passail).

Type section: No type section defined. A sort of type section is exposed along a long road cut north of Frauenberg village.

Reference section(s): -

Derivation of name: After the small village Graschnitz near St. Marein im Mürztal.
Remarks: The correct name of the small village in the Mürz Valley SW of St. Marein is Graschnitz and not Graschitz as misprinted in the legend of the map.

Synonyms: -

Lithology: Grey phyllites and other grey metaclastics of the Veitsch Group (not shown on ASC 2004) are overlain by reddish-grey metapsammitic and metapelitic rocks intercalated by quartz-rich metabreccias and acidic metatuffites. All rocks are metamorphosed in lower greenschist facies metamorphic conditions. In general, sand- and gravel-sized clasts display a reddish color. The lower boundary of the Graschnitz Formation is defined by a color change from grey phyllites to grey-reddish metaclastic rocks, which allows an easy separation from the underlying unit.

Fossils: -

Origin, facies: The Graschnitz Formation could be considered as a terrestrial deposit at the margin of a depositional basin.

Chronostratigraphic age: In Central Europe, the color change is commonly assigned to the approximate Carboniferous/Permian boundary, and the red colour is believed typical for Permian successions. A further argument for a possible Early Permian depositional age is the presence of several decimeter- to meter-thick layers of acidic metatuffites near the base of the Graschnitz Fm., which contain abundant volcanic quartz and K-feldspar phenocrysts. These layers are correlated with the Lower Permian Bozen Quartzporphyry.

Biostratigraphy: -

Thickness: Unknown.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Greyish, upper Carboniferous phyllites of a hitherto unnamed part of the Veitsch Group (not shown in the ASC 2004).

Overlying unit(s): Tectonic boundary.

Lateral unit(s): -

Geographic distribution: Veitsch Nappe of the Greywacke Zone in eastern Styria south of the Mürz Valley (ÖK50-BMN, map sheet 134 Passail).

Remarks: -

Complementary references: -

Haselgebirge / Haselgebirge

KARL KRAINER

Validity: Invalid; informal term for multiphase deformed and weakly metamorphosed Permo-Triassic evaporites of the Northern Calcareous Alps (see MEDWENITSCH, 1951; KÜHN, 1962; TOLLMANN, 1976; SPÖTL, 1989).

Type area: Hallstätter Salzberg (Upper Austria), N 47°33'55" / E 13°37'54", ÖK50-UTM, map sheet 3217 Hallstatt (ÖK50-BMN, map sheets 95 Sankt Wolfgang im Salzkammergut, 96 Bad Ischl).

Type section: No type section defined.

Reference section(s): Poorly exposed on the surface, most studies are based on outcrops in saltmines of Hallstatt (Upper Austria), Hallein (Salzburg) and Hall (Tyrol).

Derivation of name: Old mining term (historical review in SCHAUBERGER, 1986).

Synonyms: Alpines Haselgebirge, Alpine Haselgebirge Formation.

Lithology: The Haselgebirge is a chaotic mélange of shale, siltstone, sandstone, anhydrite, carbonate and rare magmatic rocks embedded in a matrix of clayey halite. The mélange formed during severe tectonization caused by different tectonic processes during Alpine deformation (SPÖTL, 1989). Within undeformed Late Permian successions exposed in saltmines of Hallstatt (Upper Austria), Hallein (Salzburg) and Hall (Tyrol) SPÖTL (1988a, b, 1989) distinguished three lithofacies: (1) red beds and anhydrite, (2) nodular and stratified anhydrites, and (3) bedded halite.

Fossils: Pollen and spores, rare bivalves (KLAUS, 1953, 1963, 1965, 1972; SPÖTL, 1987).

Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission

Cutout and English adaptation of the "Die Stratigraphische Tabelle von Österreich 2004": Geological Survey of Austria

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