

Remarks: This formation is characterized by the occasional occurrences of big colonial rugose *Argutastrea* corals (LIAO & HUBMANN, 2006).

Complementary references: HUBMANN & MESSNER (2007).

Fahrneck-Formation / Fahrneck Formation

BERNHARD HUBMANN

Validity: Valid; first description and formalization by EBNER (1998: p. 128–129).

Type area: ÖK50-UTM, map sheet 4222 Leoben (ÖK50-BMN, map sheet 163 Voitsberg).

Type section: Due to bad outcrops no type section published so far; according to EBNER (1998) outcrops are in the area around the farmstead “Reicherhöhe” (at altitude 999 m) north of Übelbach (30 km northwest of Graz) on ÖK50-UTM, map sheet 4222 Leoben (ÖK50-BMN, map sheet 163 Voitsberg) (N 47°25'34" / E 15°26'45").

Reference section(s): See above.

Derivation of name: After Fahrneck near Übelbach, approximately 40 km northwest of Graz.

Synonyms: Kalkschiefer im allgemeinen (WAAGEN, 1937).

Lithology: Alternating sequence of grey-blue limestones, flaser limestones, argillaceous shales and greenstones.

Fossils: Conodonts.

Origin, facies: Open marine environment?

Chronostratigraphic age: Frasnian–Famennian.

Biostratigraphy: Conodonts indicate do I and do II (= *Manticoceras* and *Cheiloceras* ammonite zones) according to TSCHLAUT (1985).

Thickness: About 60–80 m.

Lithostratigraphically higher rank unit: Lantsch Group.

Lithostratigraphic subdivision: -

Underlying unit(s): Rotmüller Formation.

Overlying unit(s): -

Lateral unit(s): -

Geographic distribution: Styria, highland in the surroundings of Graz; ÖK50-BMN, map sheet 134 Passail.

Remarks: TSCHLAUT (1985) supposed an affiliation of this succession to the Hochlantsch Nappe due to the existence of Middle to Upper Devonian volcanoclastic sediments within the formation.

Complementary references: FLÜGEL (2000).

Hochlantsch-Formation / Hochlantsch Formation

BERNHARD HUBMANN

Validity: Valid; first description by CLAR (1874: “Hochlantschkalk” Sic! typological error); formalized by FLÜGEL (2000: p. 35; Hochlantschkalk-Formation); change of name into Hochlantsch-Formation by EBNER et al. (2001).

Type area: ÖK50-UTM, map sheet 4223 Weiz (ÖK50-BMN, map sheet 134 Passail).

Type section: At the Hochlantsch, a mountain 40 km north of Graz (N 47°21'46" / E 15°25'28").

Reference section(s): -

Derivation of name: After Hochlantsch (1,720 m), a mountain approximately 40 km north of Graz.

Synonyms: Hochlantsch-Kalk (H. FLÜGEL, 1975); Hochlantschkalk (FLÜGEL & NEUBAUER, 1984); partly: Quadrigemminum-Kalk (PENECKE, 1890); Stringocephalenschichten (HERITSCH, 1906).

Lithology: Massive and bedded grey-blue limestones with rare fossils.

Fossils: Rugose and tabulate corals, stromatoporoids, conodonts.

Origin, facies: Lagoonal environment with some patch reefs.

Chronostratigraphic age: Givetian–Frasnian (? lower Famennian)

Biostratigraphy: Conodonts indicate upper Givetian to “do I and do II/III” (= *Manticoceras* and *Cheiloceras/Platyclymenia* ammonoid zones) according to GOLLNER & ZIER (1985: p. 52).

Thickness: Variable in thickness; up to 800 m.

Lithostratigraphically higher rank unit: Lantsch Group.

Lithostratigraphic subdivision: -

Underlying unit(s): Tyrnaueralm Formation.

Overlying unit(s): Steinberg Formation.

Lateral unit(s): Tyrnaueralm Formation, Zachenspitze Formation.

Geographic distribution: Styria, highland in the surroundings of Graz; ÖK50-BMN, map sheet 134 Passail.

Remarks: -

Complementary references: HUBMANN & MESSNER (2007).

Steinberg-Formation / Steinberg Formation

BERNHARD HUBMANN

Validity: Valid; first entry by ROLLE (1856: “Steinberger Kalke”); formalized by FLÜGEL (2000: p. 28) as Steinbergkalk-Formation; change of name into Steinberg-Formation by EBNER et al. (2000).

Type area: ÖK50-UTM, map sheet 4228 Voitsberg (ÖK50-BMN, map sheet 163 Voitsberg).

Type section: At the type region at Forstkogel north of village Steinberg, 15 km west of Graz (ÖK50-BMN, map sheet 163 Voitsberg) (N 47°04'14" / E 15°19'28"), FLÜGEL & ZIEGLER (1957) described a section on the southern slope of Forstkogel. BUCHROITHNER et al. (1979) studied five sections in that area, but due to bad outcrop situation and the fact of “considerable fluctuation of zone thickness”, they considered a type profile inappropriate.

Reference section(s): BUCHROITHNER et al. (1979) mentioned five sections at Forstkogel; further reference sections are west of Gratwein 17 km northwest of Graz at Weihermühle (N 47°07'51" / E 15°18'22") and Gratwein-Au (N 47°08'31" / E 15°19'13") (EBNER, 1980).

Remarks: Some sections in eastern parts of the Rannach Nappe feature stratigraphic gaps especially in their upper parts (BUCHROITHNER et al., 1979; EBNER, 1980; EBNER et al., 1980a, b).

Derivation of name: After the village Steinberg, 15 km west of Graz.

Synonyms: Steinbergkalk (H. FLÜGEL, 1975; BUCHROITHNER et al., 1979; EBNER, 1980; EBNER et al., 1980a, b; FLÜGEL & NEUBAUER, 1984); partly: Clymenienkalk (PETERS,

Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission



ERA	SYSTEM / PERIOD / SERIES / EPOCH	STAGE / AGE	DURATION Ma	Global Classification					
				ERATHEM / ERA	SYSTEM / PERIOD / SERIES / EPOCH				
PALEOZOIC	PERMIAN	CHANGHSINGIAN / Dorashanian	251	PERMIAN	MID PERMIAN / GUADALUPIAN / LOPINGIAN				
		WUCHIAPINGIAN / Dufuflian	255						
		CAPITANIAN	260						
		WORDIAN	265						
		ROADIAN	270						
		PERMIAN	LOWER PERMIAN / CISURALIAN			KUNGURIAN	275		
						ARTINSKIAN	280		
						SAKMARIAN	285		
						ASSELIAN	290		
		PERMIAN	UPPER PERMIAN / CARBONIFEROUS / PENNSYLVANIAN			GZHELIAN	295	PERMIAN	LOWER PERMIAN / CISURALIAN
KASIMOVIAN	300								
MOSKOVIAN	305								
BASHKIRIAN	310								
PERMIAN	UPPER PERMIAN / CARBONIFEROUS / PENNSYLVANIAN			SERPUKHOVIAN	315				
				VISEAN	320				
					325				
PERMIAN	LOWER PERMIAN / MISSISSIPPIAN			TOURNAISIAN	330	PERMIAN	LOWER PERMIAN / MISSISSIPPIAN		
				335					
				340					
		345							
		350							
		355							
		359.2							
		365							
		370							
		375							
PERMIAN	UPPER DEVONIAN	FAMENNIAN	380	PERMIAN	UPPER DEVONIAN				
		FRASNIAN	385						
		GIVETIAN	390						
		EIFELIAN	395						
		DEVONIAN	LOWER DEVONIAN			EMSIAN	400		
						405			
		DEVONIAN	LOWER DEVONIAN			PRAGIAN	410		
						415			
		PERMIAN	LOWER DEVONIAN			LOCHKOVIAN	420	PERMIAN	LOWER DEVONIAN
						425			
430									
435									
440									
443.7									
445									
450									
455									
460									
PERMIAN	UPPER ORDOVICIAN	LUDFORDIAN / GORSTIAN	465	PERMIAN	UPPER ORDOVICIAN				
		HOMERIAN / SHEINWOOD	470						
		TELYCHIAN	475						
		AERONIAN	480						
		RHUDDANIAN	485						
		HIRNANTIAN	490						
		495							
		498.3							
		500							
		505							
PERMIAN	MIDDLE ORDOVICIAN	DARRIWILIAN	510	PERMIAN	MIDDLE ORDOVICIAN				
		515							
		520							
		525							
		530							
		535							
		540							
		542							
		PERMIAN	LOWER ORDOVICIAN			TREMA-DOCIAN	545	PERMIAN	LOWER ORDOVICIAN
						550			
555									
560									
565									
570									
575									
580									
585									
590									
PERMIAN	UPPER CAMBRIAN	PAIBIAN	595	PERMIAN	UPPER CAMBRIAN				
		600							
		605							
		610							
		615							
		620							
		625							
		630							
		635							
		640							
PERMIAN	MIDDLE CAMBRIAN	PAIBIAN	645	PERMIAN	MIDDLE CAMBRIAN				
			650						
			655						
			660						
			665						
			670						
			675						
			680						
			685						
			690						
PERMIAN	LOWER CAMBRIAN	PAIBIAN	695	PERMIAN	LOWER CAMBRIAN				
			700						
			705						
			710						
			715						
			720						
			725						
			730						
			735						
			740						



- Legend**
- pelagic, offshore, siliciclastic
 - pelagic, nearshore, calcareous
 - shallow marin, neritic
 - terrestrial-continental, coarse clastic
 - terrestrial-continental, fine clastic
 - evaporite (chloride, sulphate)
 - rhyolite, dacite
 - (basaltic) andesite, trachyandesite
 - basalt
 - phyllite
 - mixed-facies (in corresponding colors)
 - coal (may include several seams)
 - ? position/age doubtful/controversial
 - | equal units
 - \ older unit left \ younger unit right
 - hiatus
 - unconformity
 - GSSP
 - Fm. Formation
 - Ls. Limestone

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

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