

Derivation of name: After facies characters.

Synonyms: Gebankte Kalke (KUPSCH et al., 1971); schillreiche Kalke (LOESCHKE & ROLSER, 1971: p. 153); Kalk (MOSHAMMER, 1989: Fig. 3).

Lithology: Grey bioclastic flaser limestone.

Fossils: Brachiopods, bryozoans, crinoids, conodonts, ostracods, trilobites.

Origin, facies: Marine limestone, neritic unit.

Chronostratigraphic age: Upper Ordovician (Katian).

Biostratigraphy: *ordovicicus* conodont zone (MOSHAMMER, 1989: p. 625).

Thickness: Approx. 8 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): -

Overlying unit(s): "Untere Schichten" (unconformable contact?).

Lateral unit(s): Equivalent units are seen within the Ordovician limestones of the Carnic Alps (MOSHAMMER, 1989).

Geographic distribution: Karavanke Mountains (Eisenkappel and Seeberg area).

Remarks: Following KUPSCH et al. (1971) the south-alpine Paleozoic units of the Eastern Karavanke Mountains (Text-Fig. 4) are separated by the Triassic of the Koschuta (Trögen Klamm). The area to the south is called the Paleozoic of Seeberg (Seeberg Aufbruch sensu SIEWERT, 1984; informal) and the area north if it is known as Paleozoic of Eisenkappel (Trögen Group sensu MOSHAMMER & FLÜGEL, 1987; formalized). In general, the Seeberg Aufbruch ("Window") can be distinguished from the Trögen Group according to differences within the depositional environment that developed regionally (LOESCHKE & ROLSER, 1971; SIEWERT, 1984: p. 41–45; MOSHAMMER, 1990: Fig. 2).

Complementary references: LOESCHKE (1974), JAEGER et al. (1975), SCHÖNLAUB (1979), MOSHAMMER (1987), SCHÖNLAUB & HISTON (1999, 2000), HUBMANN et al. (2003, 2006).

„Untere Schichten“ / “Untere Schichten”

THOMAS J. SUTTNER

Validity: Invalid; "Untere Schichten" first mentioned by GAERTNER (1931); additional work on this unit has been done by KUPSCH et al. (1971) and SCHÖNLAUB (1979).

Type area: ÖK50-UTM, map sheet 4114 Bad Eisenkappel (ÖK50-BMN, map sheets 212 Vellach, 213 Bad Eisenkappel).

Type section: -

Reference section(s): Feistritzgraben (SCHÖNLAUB, 1979).

Derivation of name: In the strict sense the name "Untere Schichten" represents a lithostratigraphic term that was introduced by GAERTNER (1931: p. 133).

Synonyms: Tonschiefer-Lydit-Sedimentation (KUPSCH et al., 1971).

Lithology: Blackish shale and sandstones.

Fossils: Brachiopods, graptolites.

Origin, facies: Marine limestone, neritic unit.

Chronostratigraphic age: Upper Ordovician (Hirnantian).

Biostratigraphy: *persculptus* graptolite zone (SCHÖNLAUB, 1979: Fig. 19, p. 45).

Thickness: Approx. 20 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Coquina Limestones (unconformable contact?).

Overlying unit(s): Nodular Limestone (unconformable contact).

Lateral unit(s): Equivalent units are exposed within the Carnic Alps (JAEGER et al., 1975).

Geographic distribution: Karavanke Mountains (Eisenkappel and Seeberg area).

Remarks: -

Complementary references: LOESCHKE (1974), SCHÖNLAUB & HISTON (1999, 2000).

Knollenkalk / Nodular Limestone

THOMAS J. SUTTNER

Validity: Invalid; mentioned by ROLSER (1968) and KUPSCH et al. (1971); biostratigraphy of an equivalent, but more distally deposited unit by MOSHAMMER (1989).

Type area: ÖK50-UTM, map sheet 4114 Bad Eisenkappel (ÖK50-BMN, map sheets 212 Vellach, 213 Bad Eisenkappel).

Type section: -

Reference section(s): Section near Gehöft Illitsch south of Finkenstein (SCHÖNLAUB, 1979); Trögen Klamm section-group A (N 46°28'04" / E 14°30'28"), B (N 46°28'00" / E 14°30'24"), E (N 46°28'00" / E 14°30'30") published by MOSHAMMER (1989, 1990).

Derivation of name: After facies characters.

Synonyms: grobspätige Crinoidenkalkfazies (SCHÖNLAUB, 1975); schwarze Kieselschiefer (MOSHAMMER, 1989).

Lithology: Bedded crinoidal limestone, dark siliceous shale.

Fossils: Brachiopods, chitinozoans, conodonts, crinoids, trilobites.

Origin, facies: Marine limestone, pelagic unit.

Chronostratigraphic age: Llandovery.

Biostratigraphy: *stauognathoides* and *celloni* conodont zones (MOSHAMMER, 1989: p. 625).

Thickness: Approx. 15 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): "Untere Schichten" (unconformable contact).

Overlying unit(s): Cardiola Formation (unconformable contact).

Lateral unit(s): -

Geographic distribution: Karavanke Mountains (Eisenkappel and Seeberg area).

Remarks: -

Complementary references: LOESCHKE & ROLSER (1971), LOESCHKE (1974), SCHÖNLAUB (1979), TESSENSOHN (1983), MOSHAMMER (1987), SCHÖNLAUB & HISTON (1999, 2000).

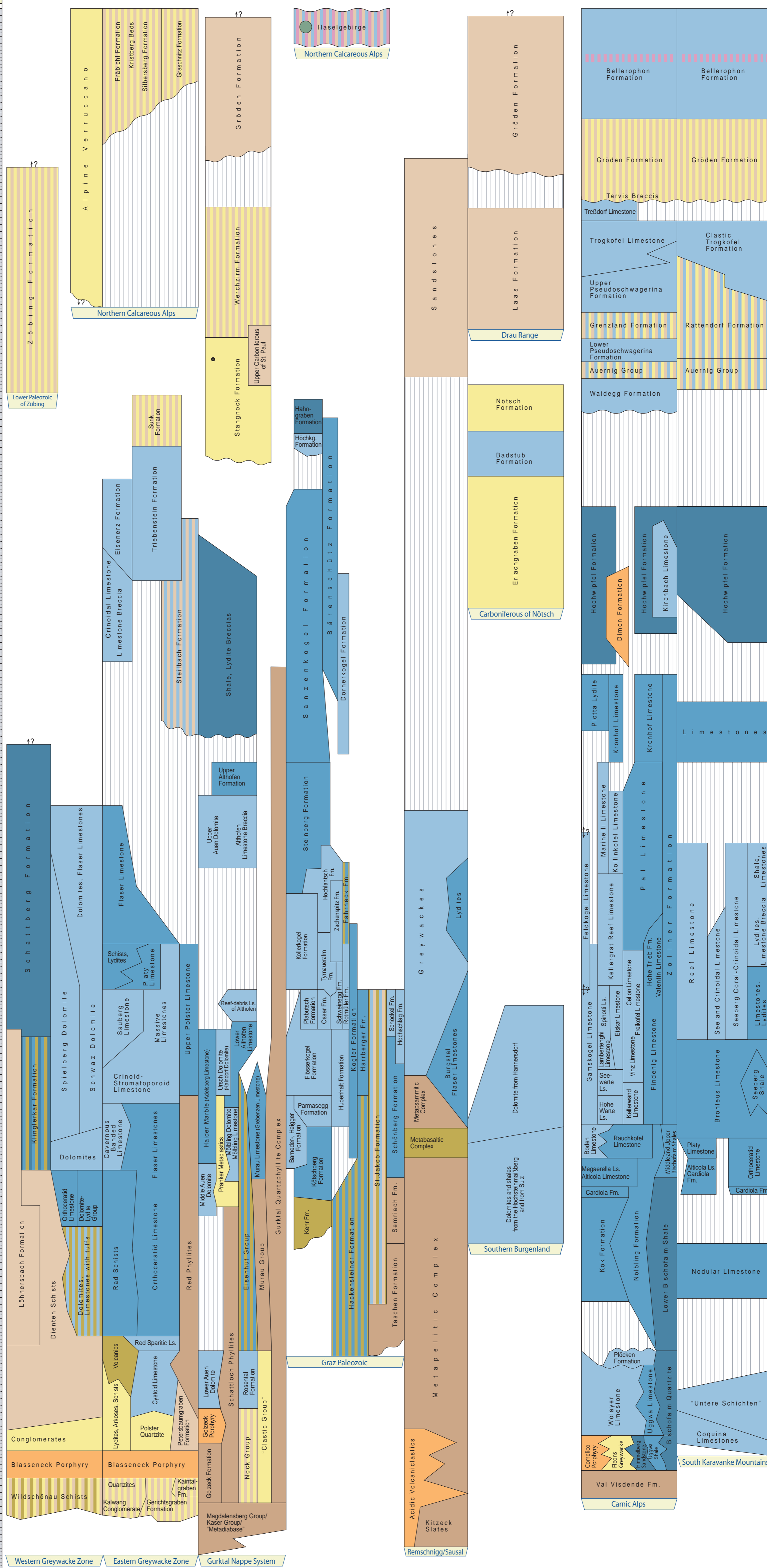
Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission



ERA	SYSTEM / PERIOD / SERIES / EPOCH	STAGE / AGE	DURATION Ma	Global Classification					
				ERATHM / ERA	SYSTEM / PERIOD / SERIES / EPOCH				
PALEOZOIC	PERMIAN	CHANGHSINGIAN / Dorashamian	251	PERMIAN	MID PERMIAN / GUADALUPIAN / LOPINGIAN				
		WUCHIAPINGIAN / Duhullian	255						
		CAPITANIAN	260						
		WORDIAN	265						
		ROADIAN	270						
		PERMIAN	LOWER PERMIAN / CISURALIAN			KUNGURIAN	275		
						ARTINSKIAN	280		
						SAKMARIAN	285		
						ASSELIAN	290		
		PERMIAN	TRIAS			GZHELIAN	295	TRIAS	U. CARBONIFEROUS / PENNSYLVANIAN
KASIMOVIAN	300								
MOSKOVIAN	305								
BASHKIRIAN	310								
PERMIAN	LOWER CARBONIFEROUS / MISSISSIPPIAN			SERPUKHOVIAN	315				
				VISEAN	320				
				TOURNAISIAN	325				
PERMIAN	DEVONIAN			FAMENNIAN	330	DEVONIAN	UPPER DEVONIAN		
				FRASNIAN	335				
				GIVETIAN	340				
		EIFELIAN	345						
		DEVONIAN	LOWER DEVONIAN	EMSIAN	350				
				PRAGIAN	355				
				LOCHKOVIAN	359.2				
		PERMIAN	DEVONIAN	LUDFORDIAN / GORSTIAN	365			DEVONIAN	MIDDLE DEVONIAN
				HOMERIAN / SHEINWOOD	370				
				TELYCHIAN	375				
AERONIAN	380								
RHUDDANIAN	385								
PERMIAN	UPPER ORDOVICIAN			HIRNANTIAN	390				
				DARRIWILIAN	395				
				TREMA-DOCIAN	400				
PERMIAN	CAMBRIAN			PAIBIAN	405	CAMBRIAN	UPPER CAMBRIAN		
				CAMBRIAN	MIDDLE CAMBRIAN				
		415							
		420							
		CAMBRIAN	LOWER CAMBRIAN	425					
				430					
				435					
				440					
		PALEOZOIC	PERMIAN	443.7	PERMIAN			LOWER PERMIAN / CISURALIAN	
				445					
450									
455									
460									
465									
470									
475									
480									
485									
488.3									
PALEOZOIC	PERMIAN	490	PERMIAN	LOWER PERMIAN / CISURALIAN					
		495							
		500							
		505							
		510							
		515							
		520							
		525							
		530							
		535							
PALEOZOIC	PERMIAN	540	PERMIAN	LOWER PERMIAN / CISURALIAN					
		542							



- 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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