

(N 46°28'00" / E 14°30'24"), C (N 46°27'59" / E 14°35'03"), E (N 46°28'00" / E 14°30'30"), F1 (N 46°28'02" / E 14°30'12"), F2 (N 46°28'01" / E 14°30'18") published by MOSHAMMER (1989, 1990).

Derivation of name: After dominating lithologies.

Synonyms: Gailthaler Schichten (Kalk und Schiefer) (LIPOLD, 1856b: p. 349); rötlicher, gebankter bis geflaseter Kalk (do II) (MOSHAMMER, 1989: Fig. 3); "Mudstone mit Cephalopoden" (MOSHAMMER, 1990: p. 575).

Lithology: Shale alternating with thin limestone layers.

Fossils: Cephalopods.

Origin, facies: Marine pelagic deposits; note wrong color code in the ASC 2004.

Chronostratigraphic age: Frasnian–Famennian.

Biostratigraphy: *marginifera* conodont zone (MOSHAMMER, 1989: p. 627).

Thickness: Approx. 2 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Lydites, limestone breccia (conformable contact).

Overlying unit(s): Limestones (unconformable contact).

Lateral unit(s): Seeberg Coral-Crinoidal Limestone.

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

Remarks: -

Complementary references: SCHÖNENBERG (1965, 1967), SCHÖNLAUB (1971a, 1979), MOSHAMMER (1987), SCHÖNLAUB & HISTON (1999, 2000).

Kalke / Limestones

THOMAS J. SUTTNER

Validity: Invalid; first recognized by LIPOLD (1856b) and TELLER (1898); later described by KOLLMANN (1938) and KUPSCH et al. (1971); biostratigraphy by SCHULZE (1968).

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

Type section: -

Reference section(s): South-east of Storschitz, between Seebergpaß and Jeritsch-Felsen (N 46°25'09" / E 14°32'10"; N 46°25'11" / E 14°31'49"), south-west of the Pasterkfelden (N 46°25'42" / E 14°32'48") published by SCHULZE (1968).

Derivation of name: After lithology.

Synonyms: Gailthaler Kalk (LIPOLD, 1856b: p. 350); Devon in Bänderkalkfazies (KOLLMANN, 1938); Bänderkalkschuppen (KUPSCH et al., 1971: Fig. 2, p. 95); Bänderkalke (KUPSCH et al., 1971: Fig. 3, p. 95); graue Bänderkalke bzw. Graue spätige Kalke des Unter-Karbon (SCHULZE, 1968); banded limestone (SCHÖNLAUB, 1980b).

Lithology: Grey, laminated limestone (reddish brown weathering), grey sparry limestone.

Fossils: Brachiopods, cephalopods, conodonts, crinoids.

Origin, facies: Marine limestone, pelagic unit.

Chronostratigraphic age: Tournaisian.

Biostratigraphy: *anchoralis* conodont zone (SCHULZE, 1968: p. 176); middle *Gattendorfia* ammonoid zone to middle *Pericyclus* ammonoid zone (SCHULZE, 1968: p. 176).

Thickness: Approx. 300 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Reef Limestone; Seeland Crinoidal Limestone; Seeberg Coral-Crinoidal Limestone; Shale, Limestones (all units mentioned: unconformable contact).

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

Lateral unit(s): -

Geographic distribution: Karavanke Mountains (Seeberg area).

Remarks: -

Complementary references: HERITSCH (1927d), SCHÖNLAUB (1979), KREUTZER et al. (1997), SCHÖNLAUB & HISTON (1999, 2000).

Hochwipfel-Formation / Hochwipfel Formation (description see Carnic Alps)

Post-Variscan Sequence

Auernig-Gruppe / Auernig Group (see description in Carnic Alps)

Rattendorf-Formation / Rattendorf Formation

HANS P. SCHÖNLAUB

Validity: Invalid.

Type area: ÖK50-UTM, map sheet 3116 Sonnenalpe Naßfeld (ÖK50-BMN, map sheet 198 Weißbriach), Carnic Alps, Carinthia.

Type section: Not defined.

Reference section(s): Section on western cliff of Mountain Schulterkofel following the crest south of Rattendorfer Alm to Zottachkopf (HERITSCH et al., 1934: p. 176).

Remarks: According to HERITSCH et al. (1934: p. 163) the post-Variscan sequence of the Carnic Alps is subdivided into the "Auernig-Schichten" and the "Rattendorfer Schichten" ranging from the upper Carboniferous to the Lower Permian. The latter were subdivided into the Lower Schwagerina Lst., the Grenzlandbänke and the Upper Schwagerina Lst.

Derivation of name: After the village of Rattendorf west of Hermagor to which the pastures around Rattendorfer Alm belongs.

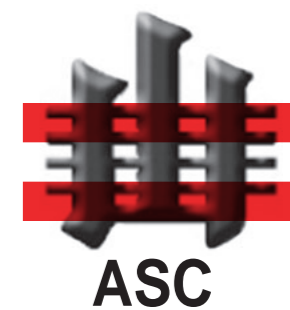
Synonyms: Rattendorfer Schichten.

Lithology: This lithostratigraphic unit is generally used to designate a Lower Permian sequence of limestones and clastics which cannot be further assigned to one of the Lower Permian formations, e.g., the Schulterkofel, Grenzland or Zweikofel Formation.

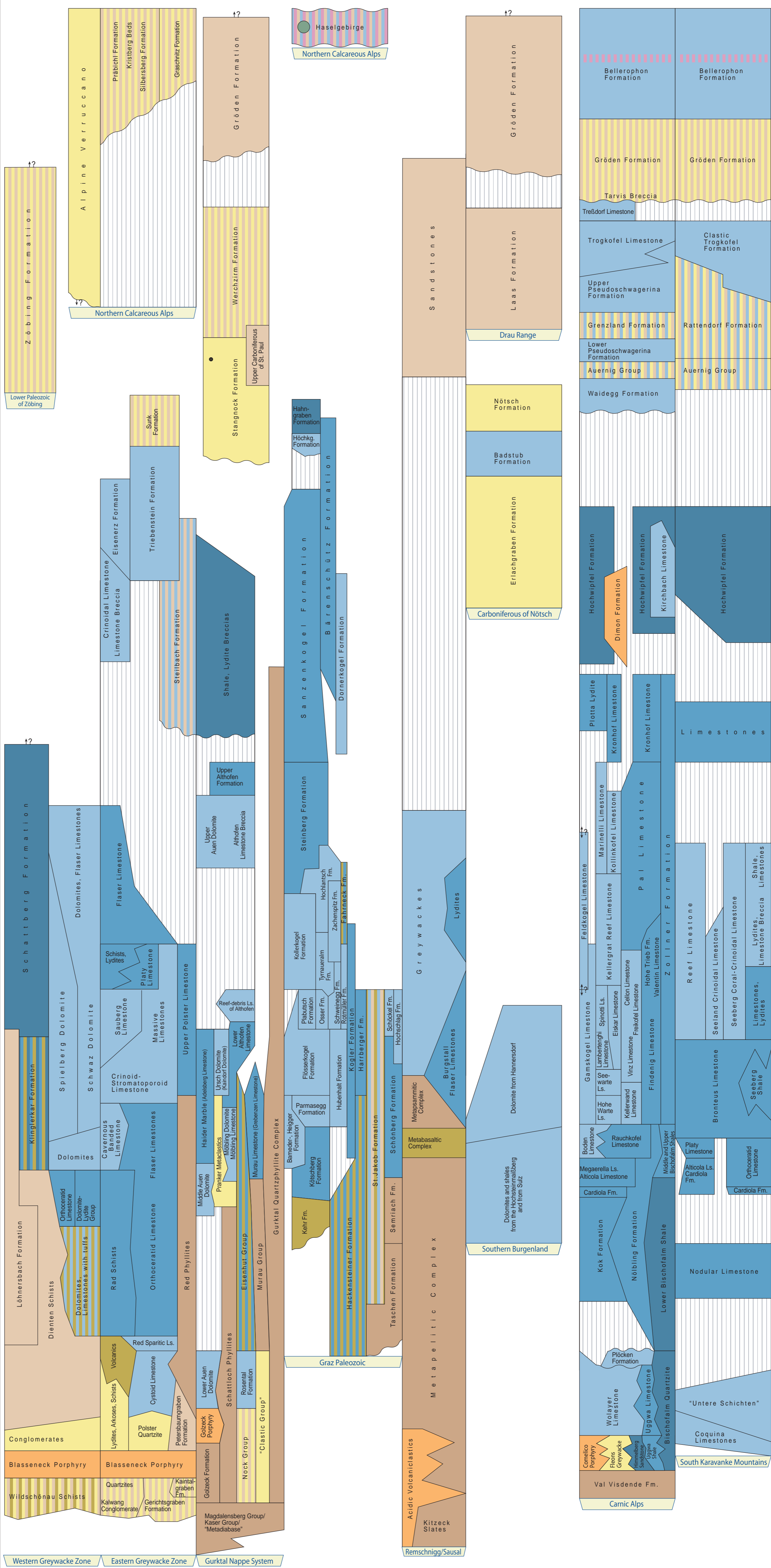
Austrian Stratigraphic Chart 2004 - Paleozoic

(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 / 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 / CISURALIAN			TOURNAISIAN	330	PERMIAN	LOWER PERMIAN / CISURALIAN		
				335					
				340					
		345							
		350							
		355							
		359.2							
		PERMIAN	UPPER PERMIAN / DEVONIAN	FAMENNIAN	360			PERMIAN	UPPER PERMIAN / DEVONIAN
				FRASNIAN	365				
				370					
375									
380									
385									
390									
395									
400									
405									
PERMIAN	LOWER PERMIAN / DEVONIAN	EMSIAN	410	PERMIAN	LOWER PERMIAN / DEVONIAN				
		PRAGIAN	415						
		LOCHKOVIAN	420						
		425							
		430							
		435							
		440							
		443.7							
		445							
		PERMIAN	UPPER PERMIAN / DEVONIAN			LUDFORDIAN / GORSTIAN	450	PERMIAN	UPPER PERMIAN / DEVONIAN
HOMERIAN / SHEINWOOD	455								
TELYCHIAN	460								
AERONIAN	465								
RHUDDANIAN	470								
HIRNANTIAN	475								
480									
485									
488.3									
490									
PERMIAN	UPPER PERMIAN / DEVONIAN	PAIBIAN	495	PERMIAN	UPPER PERMIAN / DEVONIAN				
		500							
		505							
		510							
		515							
		520							
		525							
		530							
		535							
		540							
CAMBRIAN	LOWER CAMBRIAN	542	CAMBRIAN	LOWER CAMBRIAN					
		540							
		535							
		530							
		525							
		520							
		515							
		510							
		505							
		500							



- 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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