

**Underlying unit(s):** Rauchkofel Limestone (conformable contact).

**Overlying unit(s):** Feldkogel Formation (conformable contact), Plotta Lydite (unconformable contact).

**Lateral unit(s):** Hohe Warte Limestone, Seewarte Limestone, Lambertenghi Limestone, Spinotti Limestone, Kellergrat Reef Limestone.

**Geographic distribution:** Carnic Alps.

**Remarks:** -

**Complementary references:** SCHÖNLAUB & HISTON (2000), SCHÖNLAUB et al. (2004).

### Hohe Warte-Kalk / Hohe Warte Limestone

THOMAS J. SUTTNER, ERIKA KIDO

**Validity:** Invalid; lithologically well described by BANDEL (1969); additional stratigraphy and facies analysis by VAI (1973), SCHÖNLAUB & FLAJS (1975), SCHÖNLAUB (1980b) and POHLER (1982); summary on this unit is provided by KREUTZER (1990, 1992b: p. 27); detailed biostratigraphy is given by SUTTNER (2007b), who used the name Hohe Warte Formation for this unit.

**Type area:** ÖK50-UTM, map sheets 3108 Sillian, 3109 Oberdrauburg, 3110 Kötschach-Mauthen, 3116 Sonnenalpe Naßfeld (ÖK50-BMN, map sheets 196 Obertilliach, 197 Kötschach).

**Type section:** -

**Reference section(s):** Section along the lower part of the Koban-Prunner route at the northern wall of Mount Hohe Warte [= Monte Coglians] (SCHÖNLAUB & FLAJS, 1975; KREUTZER, 1990: p. 296), N 46°36'29" / E 12°53'17"; Seewarte (N 46°36'35" / E 12°52'15"), southern continuation of Seekopf, Biegengebirge (BANDEL, 1969; SCHÖNLAUB et al., 2004).

**Derivation of name:** After Mount Hohe Warte (KREUTZER, 1992a: p. 270).

**Synonyms:** Riffkalk-Facies der Stockwerke H-G-H [partim] (STACHE, 1884, p. 339); Korallenriffkalk am Wolayer- u. Seekopf-Thörl [partim] (FRECH, 1887: p. 700); unterdevonischer Riffkalk [partim] (FRECH, 1894b: p. 229); Riffkalk mit *Karpinskya conjugula* (GAERTNER, 1931); Schichten mit *K. conjugula* (PÖLSLER, 1967); Helle Crinoiden-Kalke (BANDEL, 1969); bioclastic Ist. (SCHÖNLAUB, 1980b: Fig. 3); Heller Crinoidenschuttalk mit *Karpinskya conjugula* (SCHÖNLAUB, 1985a); Riffkalke des Prag (SCHÖNLAUB, 1985a); Heller Crinoidenschuttalk (KREUTZER, 1990: Fig. 19); Riffkalk (KREUTZER, 1990: Fig. 19); Hohe Warte Formation (SUTTNER, 2007b; not formalized).

**Lithology:** Massive, light grey limestone.

**Fossils:** Calcareous algae brachiopods, conodonts, corals, crinoids, cyanobacteria, gastropods, stromatoporoids, trilobites.

**Origin, facies:** Marine limestone, neritic unit with patch reefs; Southern Shallow-water Facies (KREUTZER, 1992a).

**Chronostratigraphic age:** Pragian.

**Biostratigraphy:** ?*serratus-celtibericus* conodont zones (SUTTNER, 2007b).

**Thickness:** 350 m.

**Lithostratigraphically higher rank unit:** -

**Lithostratigraphic subdivision:** According to its microfacies a reefal and a crinoidal limestone unit are described (VAI, 1967; BANDEL, 1969); within the paper of BANDEL (1969) this unit was divided into "Schicht 1-20".

**Underlying unit(s):** Rauchkofel Limestone (conformable contact).

**Overlying unit(s):** Seewarte Limestone (conformable contact).

**Lateral unit(s):** Gamskofel Limestone, Kellerwand Limestone.

**Geographic distribution:** Carnic Alps.

**Remarks:** -

**Complementary references:** GORTANI (1912), PICHL (1929), VAI (1968, 1998), KODSI (1971), SCHÖNLAUB (1971–1973, 1984b, 1991), ELLERMANN (1992), LATZ (1992), KREUTZER et al. (1997, 2000), SCHÖNLAUB & KREUTZER (1997), SCHÖNLAUB & HISTON (2000), HUBMANN et al. (2003), MAY et al. (2004), SUTTNER (2005), CARULLI (2006), VENTURINI (2006), HUBMANN & SUTTNER (2007).

### Kellerwand-Kalk / Kellerwand Limestone

THOMAS J. SUTTNER, ERIKA KIDO

**Validity:** Invalid; description is given by SCHÖNLAUB (1985a: p. 43); facies of this limestone at Mount Cellon is observed by KREUTZER (1990: p. 280) and SCHÖNLAUB et al. (2004: p. 22); summary of unit is given by KREUTZER (1992b).

**Type area:** ÖK50-UTM, map sheets 3109 Oberdrauburg, 3110 Kötschach-Mauthen, 3116 Sonnenalpe Naßfeld (ÖK50-BMN, map sheet 197 Kötschach).

**Type section:** -

**Reference section(s):** Lower part of the Kellerwand – located between Obere Valentinalm and Eiskarkopf (N 46°36'54" / E 12°54'39"), Cellon avalanche gully, Kleiner Pal (KREUTZER, 1990: p. 282, 1992b).

**Derivation of name:** After the lower Kellerwand below the Eiskar glacier (KREUTZER, 1989).

**Synonyms:** Calcari stratificati giallastrati [partim] (SPALLETTA et al., 1982); yellow bedded limestone [partim] (SPALLETTA & VENTURINI, 1989); Gelbe Plattenkalke der Kellerwand (KREUTZER, 1990).

**Lithology:** Yellow tentaculite limestone with bioclastic layers.

**Fossils:** Bivalves, brachiopods, conodonts, corals, echinoderms, ostracods, nautiloids, tentaculites (dacryoconarids; KREUTZER, 1992b: p. 28), trilobites.

**Origin, facies:** Marine limestone; following KREUTZER (1992a) the depositional environment corresponds with the Transitional Facies.

**Chronostratigraphic age:** Pragian–lower Emsian.

**Biostratigraphy:** *serotinus* and *patulus* conodont zones (KREUTZER, 1990).

**Thickness:** 145 m.

**Lithostratigraphically higher rank unit:** -

**Lithostratigraphic subdivision:** -

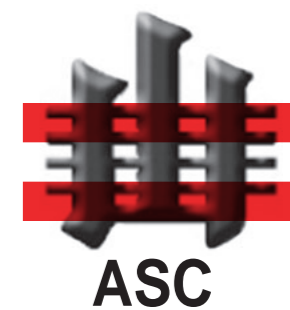
**Underlying unit(s):** Rauchkofel Limestone (conformable contact).

**Overlying unit(s):** Vinz Limestone (conformable contact).

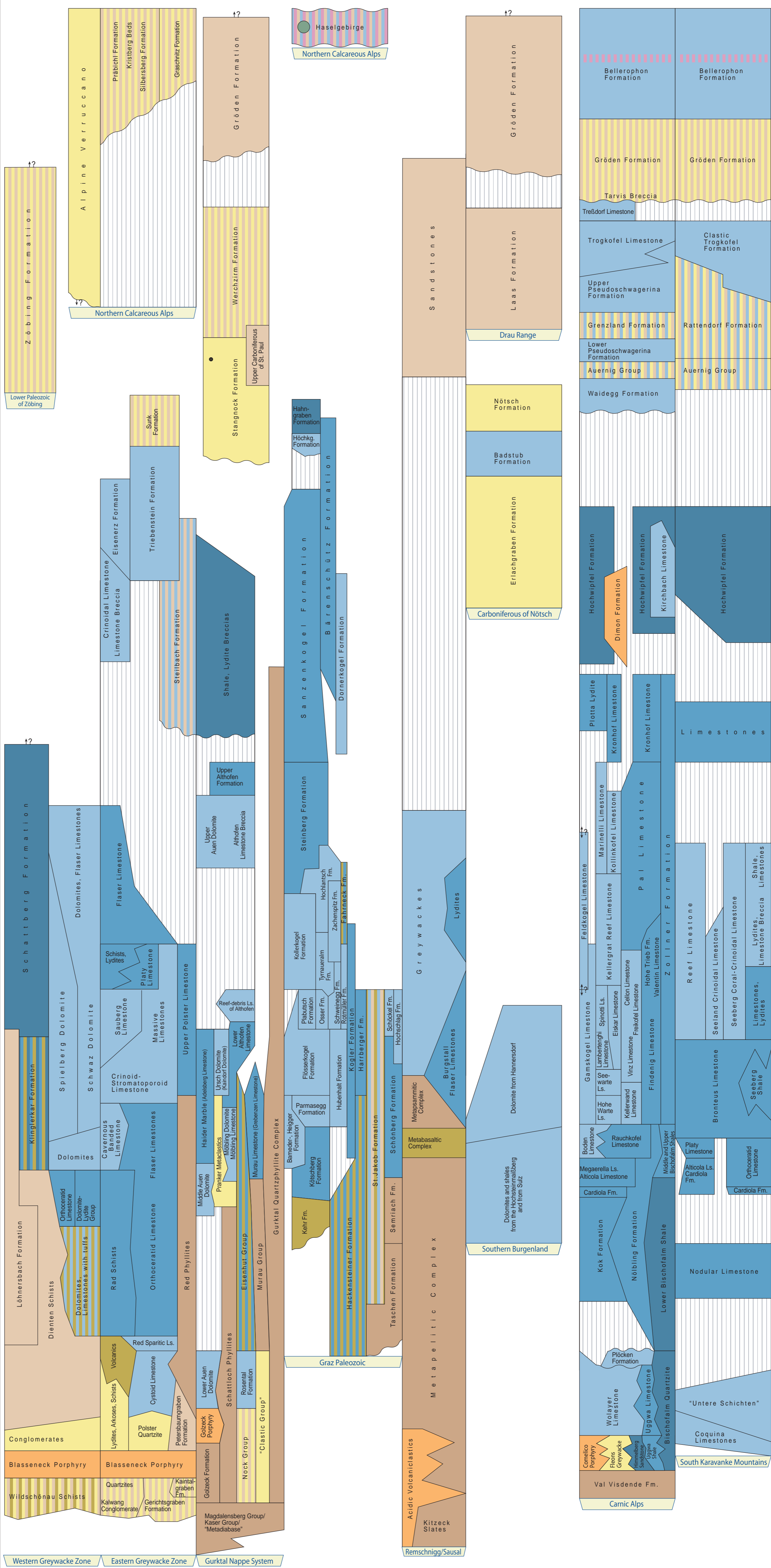
# Austrian Stratigraphic Chart 2004 - Paleozoic

(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 / Dzhulfian	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								
TRIAS	LOWER CARBONIFEROUS / MISSISSIPPIAN			SERPUKHOVIAN	315				
				VISEAN	320				
				TOURNAISIAN	325				
PERMIAN	DEVONIAN			FAMENNIAN	350	DEVONIAN	UPPER DEVONIAN		
				FRASNIAN	355				
				GIVETIAN	360				
		EIFELIAN	365						
		DEVONIAN	MIDDLE DEVONIAN	EMSIAN	370				
				LOCHKOVIAN	375				
				PRAGIAN	380				
		PERMIAN	DEVONIAN	Zlichovian	385			DEVONIAN	LOWER DEVONIAN
				Dalejian	390				
				WEN-LUD-LOCKLOW	395				
HOMERIAN	400								
SHEINWOOD	405								
DEVONIAN	UPPER ORDOVICIAN			TELYCHIAN	410				
				AERONIAN	415				
				RHUDDANIAN	420				
PERMIAN	DEVONIAN			HIRNANTIAN	425	DEVONIAN	MIDDLE ORDOVICIAN		
				LLANDOVERY	430				
		WEN-LUD-LOCKLOW	435						
		PRIDOLI	440						
		DEVONIAN	LOWER ORDOVICIAN	WOLYER	443.7				
				UGWA	445				
				BISCHOLZIM	447				
		PERMIAN	DEVONIAN	VAL VISDENTE	448.3			DEVONIAN	LOWER ORDOVICIAN
				PAIBIAN	449				
				UPPER CAMBRIAN	495				
CAMBRIAN	MIDDLE CAMBRIAN			505					
				510					
CAMBRIAN	LOWER CAMBRIAN			515					
				520					
CAMBRIAN	LOWER CAMBRIAN			525					
				530					
CAMBRIAN	LOWER CAMBRIAN			535					
		540							



**Legend**

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

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

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