

FLÜGEL, 1961, 1975); Barrandeikalk-Formation (HUBMANN, 1993; FLÜGEL et al., 2011). During evaluation of the conceptual content of the formation and re-definition (HUBMANN, 2003: p. 285–287) the Draxler-Formation (sensu FLÜGEL, 2000: p. 25; equivalent to “unterer Schweineggkalk” of ZIER, 1982) was synonymised with the Plabutsch Formation.

**Lithology:** The succession represents a highly fossiliferous sequence dominated by dark marly bioclastic limestones. In the lower parts, especially at the boundary to the underlying Flösserkogel Formation yellow to brownish shales occasionally blotched with moulds of chonetid brachiopods are characteristic. In the upper parts of the formation intercalations of red marls and marly limestones are common.

**Fossils:** Coral and sponge taxa dominate the diverse fauna. Among tabulate corals most common are thamnoporids (*Thamnopora reticulata*, *Th. vermicularis*, “*Striatopora suessi*”), favositids (*Favosites styriacus*, *F. alpinus*), and heliolitids (*Pachycanalicula barrandei*). The rugose coral fauna is dominated by mostly fractured dendroid (phaceloid) taxa. A frequent and distinctive phillipsastroid taxon is *Thamnophyllum* (*Th. stachei*, *Th. murchisoni*). Stromatoporoids are mostly recrystallized and thus precluding precise determinations (common genera are *Actinostroma* and *Clathrocoilona*). Among brachiopods the thick valved *Zdimir* cf. *hercynicus* may occur in coquina horizons. For faunal list see H. FLÜGEL (1975: p. 44–46).

**Origin, facies:** A deposition on a differentiated and gently inclined carbonate platform of some few (tens) meters is assumed (HUBMANN, 1993). Conspicuous is the rarity of in situ organisms, the intermittently high supply of clayey sediments (marl-limestone intercalations) and high supply of lime mud, temporary influx of high amounts of continental phytoclasts and storm impacts (tempestites) (HUBMANN, 1995).

**Chronostratigraphic age:** Eifelian; locally the sequence may range from Upper Emsian to Lower Givetian (HUBMANN, 1993).

**Biostratigraphy:** -

**Thickness:** 80–100 m, strong variation.

**Lithostratigraphically higher rank unit:** Rannach Group.

**Lithostratigraphic subdivision:** In some sections at the base of the unit less than 5 m thick brownish to yellow marly slates with moulds of chonetid brachiopods are named Gaisberg Bed (FLÜGEL, 2000; HUBMANN & FRITZ, 2004; HUBMANN & MESSNER, 2007).

**Underlying unit(s):** Flösserkogel Formation (conformable contact, transgressive).

**Overlying unit(s):** Kollerkogel Formation (conformable contact).

**Lateral unit(s):** Flösserkogel Formation, Kollerkogel Formation, Tyrnaueralm Formation, Osser Formation.

**Geographic distribution:** Styria, highland in the surroundings of Graz; ÖK50-BMN, map sheets 134 Passail, 162 Köflach, 163 Voitsberg, 164 Graz.

**Remarks:** -

**Complementary references:** EBNER & HUBMANN (2012).

## Osser-Formation / Osser Formation

BERNHARD HUBMANN

**Validity:** Valid; first entry by VACEK (1891: “Osserkalk”); formalized by FLÜGEL (2000: p. 25; Osser-Formation).

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

**Type section:** Not defined, but FLÜGEL (2000) defined the hill Osser (N 47°20'40" / E 15°30'03") north of Passail as type region.

**Reference section(s):** -

**Derivation of name:** After the hill Osser (1,548 m) north of Graz (FLÜGEL, 2000).

**Synonyms:** Partly: Kalkschiefer [Folge] (CLAR, 1874; HERITSCH, 1917c); Flaserkalk (Osserkalk) (CLAR et al., 1929); Kalkschiefer-Stufe im Allgemeinen (WAAGEN, 1937); Kalkschiefer-Folge (H. FLÜGEL, 1961, 1975).

**Lithology:** Bluish platy tectonically stressed flaser limestones and grey dolostones with local intercalations of marly clay/siltstones and sandstones.

**Fossils:** Bad preserved rugose and tabulate corals.

**Origin, facies:** Shallow subtidal environment.

**Chronostratigraphic age:** ?Eifelian.

**Biostratigraphy:** -

**Thickness:** 50–100 m.

**Lithostratigraphically higher rank unit:** Rannach Group (FLÜGEL, 2000, p. 25).

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** Flösserkogel Formation.

**Overlying unit(s):** Tyrnaueralm Formation?

**Lateral unit(s):** Plabutsch Formation?

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

**Remarks:** -

**Complementary references:** STATTEGGER (1984).

## Schweinegg-Formation / Schweinegg Formation

BERNHARD HUBMANN

**Validity:** Valid; first description by ZIER (1982: “oberer Schweineggkalk”); formalized by FLÜGEL (2000: p. 35–36; Schweinegg-Formation).

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

**Type section:** No type section defined, but FLÜGEL (2000) appointed the Schweinegg (= Schweineck, 1,457 m), a hill southwest of Teichalmhütte in the Hochlantsch area as type region (N 47°20'52" / E 15°26'40").

**Reference section(s):** -

**Derivation of name:** After a hill called Schweinegg in the Hochlantsch region, approximately 55 km north of Graz.

**Synonyms:** Oberer Schweineggkalk (ZIER, 1982).

**Lithology:** Dark grey to brown fossiliferous limestones.

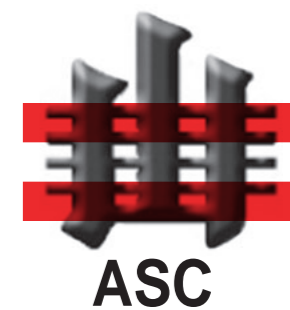
**Fossils:** Stromatoporoids, rugose and tabulate corals, crinoids (see ZIER, 1982).

**Origin, facies:** Subtidal depositional environment with minor terrigenous influx.

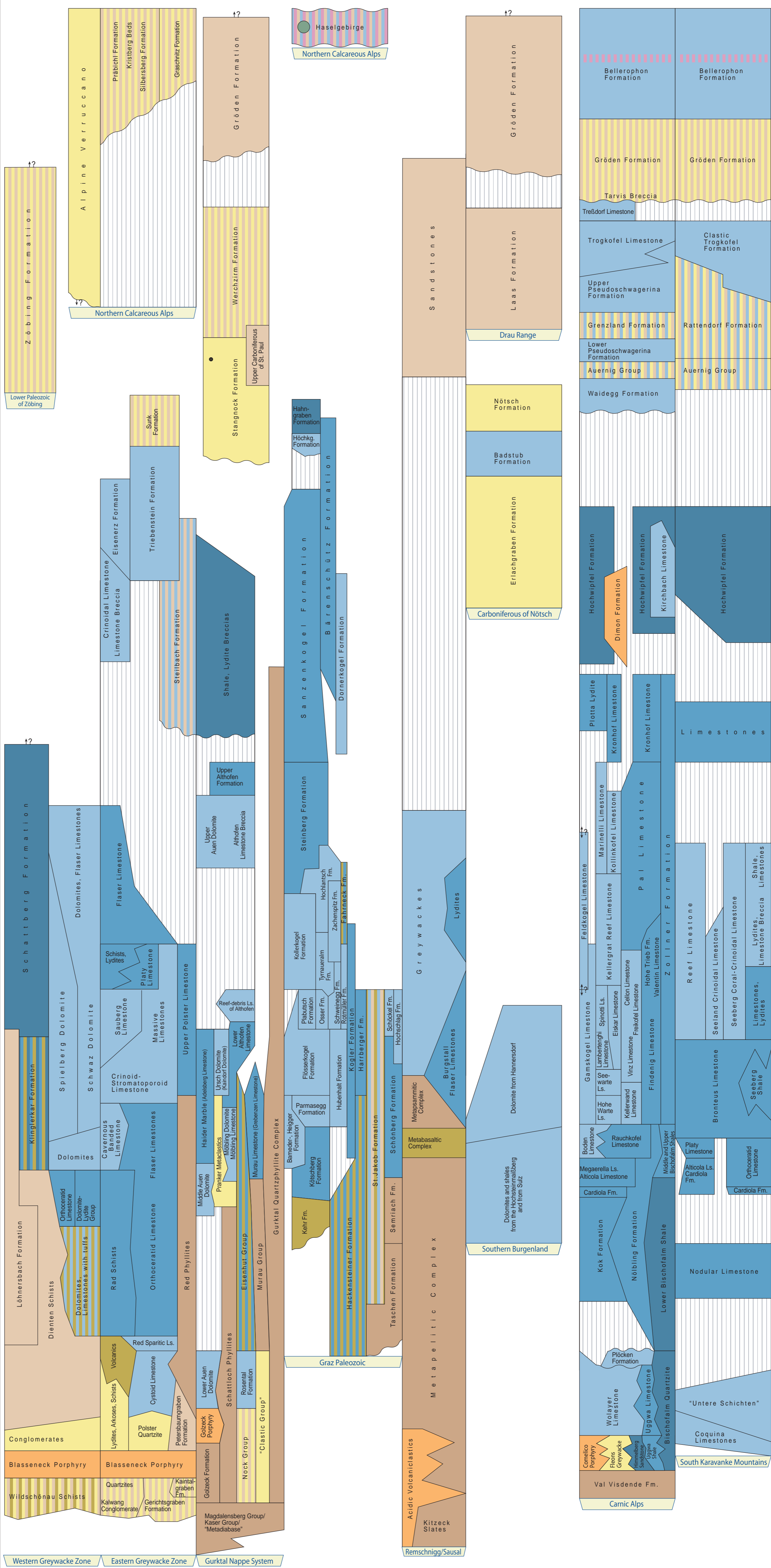
# Austrian Stratigraphic Chart 2004 - Paleozoic

(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 / Dabuffian	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	LOWER DEVONIAN	EMSIAN	370				
				PRAGIAN	375				
				LOCHKOVIAN	380				
		PERMIAN	DEVONIAN	LUDFORDIAN / GORSTIAN	385			DEVONIAN	MIDDLE DEVONIAN
				HOMERIAN / SHEINWOOD	390				
				TELYCHIAN	395				
AERONIAN	400								
RHUDDANIAN	405								
DEVONIAN	UPPER ORDOVICIAN			DARRIWILIAN	410				
				TREMACIAN	415				
				PAIBIAN	420				
PERMIAN	CAMBRIAN			WEN-LUD-LOCKHOLM	425	CAMBRIAN	UPPER CAMBRIAN		
				HORNBLAND	430				
		TELYCHIAN	435						
		AERONIAN	440						
		RHUDDANIAN	445						
		CAMBRIAN	MIDDLE CAMBRIAN	DARRIWILIAN	450				
				TREMACIAN	455				
				PAIBIAN	460				
		PERMIAN	CAMBRIAN	WEN-LUD-LOCKHOLM	465			CAMBRIAN	LOWER CAMBRIAN
				HORNBLAND	470				
TELYCHIAN	475								
AERONIAN	480								
RHUDDANIAN	485								
CAMBRIAN	MIDDLE CAMBRIAN			DARRIWILIAN	490				
				TREMACIAN	495				
				PAIBIAN	500				
PERMIAN	CAMBRIAN			WEN-LUD-LOCKHOLM	505	CAMBRIAN	LOWER CAMBRIAN		
				HORNBLAND	510				
		TELYCHIAN	515						
		AERONIAN	520						
		RHUDDANIAN	525						
		CAMBRIAN	MIDDLE CAMBRIAN	DARRIWILIAN	530				
				TREMACIAN	535				
				PAIBIAN	540				
		PERMIAN	CAMBRIAN	WEN-LUD-LOCKHOLM	545			CAMBRIAN	LOWER CAMBRIAN
				HORNBLAND	550				
TELYCHIAN	555								
AERONIAN	560								
RHUDDANIAN	565								
CAMBRIAN	MIDDLE CAMBRIAN			DARRIWILIAN	570				
				TREMACIAN	575				
				PAIBIAN	580				
PERMIAN	CAMBRIAN			WEN-LUD-LOCKHOLM	585	CAMBRIAN	LOWER CAMBRIAN		
				HORNBLAND	590				
		TELYCHIAN	595						
		AERONIAN	600						
		RHUDDANIAN	605						
		CAMBRIAN	MIDDLE CAMBRIAN	DARRIWILIAN	610				
				TREMACIAN	615				
				PAIBIAN	620				



- 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

The Austrian Stratigraphic Chart 2004 - Paleozoic is a supplement of:  
 Hubmann, B., Ebner, F., Ferretti, A., Kido, E., Krainer, K., Neubauer, F., Schönlaub, H.-P. & Suttner, T.J. (2014): The Paleozoic Era (them), 2<sup>nd</sup> edition. - In: Pillner, W.E. (Ed.): The lithostratigraphic units of the Austrian Stratigraphic Chart 2004 (sedimentary successions) - Vol. 1 - Abhandlungen der Geologischen Bundesanstalt, 66, 9-133, Wien.

Printing: Grasl Druck & Neue Medien GmbH, Bad Vöslau 2014

