

**Origin, facies:** Marine limestone, pelagic unit.

**Chronostratigraphic age:** Famennian.

**Biostratigraphy:** Conodonts restrict the unit to Upper Famennian (SCHÖNLAUB, 1971c), but a distinct zone is not mentioned.

**Thickness:** Approx. 2 m.

**Lithostratigraphically higher rank unit:** Althofen Group (see remarks at Lower Althofen Limestone).

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** Upper Auen Dolomite (conformable contact), Althofen Limestone Breccia (conformable contact).

**Overlying unit(s):** Shale, Lydite Breccia (unconformable contact).

**Lateral unit(s):** -

**Geographic distribution:** Carinthia, in the area between Althofen and Töscheldorf.

**Remarks:** -

**Complementary references:** SCHÖNLAUB (1979, 1992), NEUBAUER & PISTOTNIK (1984), KREUTZER et al. (1997).

#### **Tonschiefer, Lyditbrekzien / Shale, Lydite Breccias**

THOMAS J. SUTTNER

**Validity:** Invalid; first observations within the deposits near Althofen were made by REDLICH (1905) and later described more in detail by HABERFELNER (1936) and SCHÖNLAUB (1971c: Figs. 1, 2, p. 301).

**Type area:** ÖK50-UTM, map sheet 4102 Althofen (ÖK50-BMN, map sheet 186 Sankt Veit an der Glan).

**Type section:** Ancient quarry of Aich (SCHÖNLAUB, 1971c: Figs. 1, 2, p. 289) some hundred meters NNW of Treibach-Althofen (N 46°52'46" / E 14°28'03").

**Reference section(s):** -

**Derivation of name:** After lithological features.

**Synonyms:** Schiefer-Lyditbreccien-Komplex (SCHÖNLAUB, 1971c); Pelite-Chert-Formation (SCHÖNLAUB, 1992).

**Lithology:** Grey siliceous shale, lydites and lydite breccias.

**Fossils:** Radiolarians.

**Origin, facies:** Marine siliciclastics, pelagic unit.

**Chronostratigraphic age:** Tournaisian–Serpukhovian (see remarks).

**Biostratigraphy:** -

**Thickness:** Approx. 15 m.

**Lithostratigraphically higher rank unit:** -

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** Upper Althofen Formation (unconformable contact).

**Overlying unit(s):** -

**Lateral unit(s):** -

**Geographic distribution:** Carinthia, in the area between Althofen and Töscheldorf.

**Remarks:** Due to the lack of stratigraphically relevant fossils, the age assignment follows the suggestions of CLAR et al. (1963) and SCHÖNLAUB (1971c: p. 301), who considered the Shale and Lydite Breccias being deposited above

the Upper Althofen Formation. Since the contact between these two units is unconformable, the Shale and Lydite breccias are probably restricted to lower Carboniferous deposits.

**Complementary references:** HABERFELNER (1936), SCHÖNLAUB (1979), NEUBAUER & PISTOTNIK (1984).

#### **„Gurktaler Quarzphyllit-Komplex“ / Gurktal Quartzphyllite Complex**

BERNHARD HUBMANN

**Validity:** Invalid; description by BECK-MANNAGETTA (1959: "(Quarz-) Phyllitserie").

**Type area:** ÖK50-UTM, map sheet 4101 Gurk (ÖK50-BMN, map sheet 185 Straßburg).

**Type section:** No type section published; BECK-MANNAGETTA (1964) mentioned a typical occurrence of the Gurktal quartzphyllite at Weitensfeld (N 46°50'54" / E 14°11'30"), approximately 50 km north of Klagenfurt.

**Reference section(s):** -

**Derivation of name:** After the valley Gurktal, north of Feldkirchen in Carinthia.

**Synonyms:** Gurktaler Phyllit (SCHWINNER, 1932, 1936); (Quarz-) Phyllitserie (BECK-MANNAGETTA, 1959); Gurktaler Quarzphyllit (BECK-MANNAGETTA, 1964; KERNER, 1988; KERNER & LOESCHKE, 1991); Gurktaler Quarzphyllit-Komplex [sic!] (SCHÖNLAUB, 1979); Gurktal Quartzphyllite Complex (SCHÖNLAUB & HEINISCH, 1993); partly: Gurktaler Komplex (ZADORLAKY-STETTNER, 1961); Gurktaler und Mittelkärntner Quarzphyllitreal (SCHÖNLAUB, 1979); Altpaläozoischer Phyllit i.a. (FLÜGEL & NEUBAUER, 1984).

**Lithology:** Various epimetamorphic rocks; mostly dark-grey phyllites; in the upper parts dolomitic lenses up to 20 m in thickness may occur.

**Fossils:** Unknown.

**Origin, facies:** ?

**Chronostratigraphic age:** Presumably Ordovician–Carboniferous.

**Biostratigraphy:** -

**Thickness:** About 250 m.

**Lithostratigraphically higher rank unit:** -

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** ?

**Overlying unit(s):** ?

**Lateral unit(s):** ?Murau Group.

**Geographic distribution:** Gurktal range; ÖK50-BMN, map sheets 184 Ebene Reichenau, 186 Stankt Veit an der Glan.

**Remarks:** -

**Complementary references:** NEUBAUER & SASSI (1993).

#### **Stangnock-Formation / Stangnock Formation**

HANS P. SCHÖNLAUB

**Validity:** Valid; the term was introduced and formalized by KRAINER (1989: p. 568) at the northwestern margin of the Gurktal Nappe System of Carinthia.

**Type area:** ÖK50-UTM, map sheet 3106 Radenthein (ÖK50-BMN, map sheet 183 Radenthein) (PISTOTNIK, 1996), Carinthia. Area of Stangnock and mountain Königsstuhl

# 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	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	LOWER DEVONIAN			HIRNANTIAN	390				
				DARRIWILIAN	395				
				TREMA-DOCIAN	400				
PERMIAN	DEVONIAN			WEN-LUD-LOCK / LOW	405	DEVONIAN	LOWER DEVONIAN		
				WEN-LUD-LOCK / LOW	410				
		WEN-LUD-LOCK / LOW	415						
		WEN-LUD-LOCK / LOW	420						
		WEN-LUD-LOCK / LOW	425						
		PERMIAN	LOWER DEVONIAN	WEN-LUD-LOCK / LOW	430				
				WEN-LUD-LOCK / LOW	435				
				WEN-LUD-LOCK / LOW	440				
		PERMIAN	DEVONIAN	WEN-LUD-LOCK / LOW	443.7			DEVONIAN	UPPER ORDOVICIAN
				WEN-LUD-LOCK / LOW	445				
WEN-LUD-LOCK / LOW	450								
WEN-LUD-LOCK / LOW	455								
WEN-LUD-LOCK / LOW	460								
PERMIAN	LOWER DEVONIAN			WEN-LUD-LOCK / LOW	465				
				WEN-LUD-LOCK / LOW	470				
				WEN-LUD-LOCK / LOW	475				
PERMIAN	DEVONIAN			WEN-LUD-LOCK / LOW	480	DEVONIAN	MIDDLE ORDOVICIAN		
				WEN-LUD-LOCK / LOW	485				
		WEN-LUD-LOCK / LOW	490						
		WEN-LUD-LOCK / LOW	495						
		WEN-LUD-LOCK / LOW	500						
		PERMIAN	LOWER DEVONIAN	WEN-LUD-LOCK / LOW	505				
				WEN-LUD-LOCK / LOW	510				
				WEN-LUD-LOCK / LOW	515				
		PERMIAN	DEVONIAN	WEN-LUD-LOCK / LOW	520			DEVONIAN	UPPER ORDOVICIAN
				WEN-LUD-LOCK / LOW	525				
WEN-LUD-LOCK / LOW	530								
WEN-LUD-LOCK / LOW	535								
WEN-LUD-LOCK / LOW	540								
PERMIAN	LOWER DEVONIAN			WEN-LUD-LOCK / LOW	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

© Commission for the Palaeontological and Stratigraphical Research of Austria (CPSA) of the Austrian Academy of Sciences and Austrian Stratigraphic Commission

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: Graßl Druck & Neue Medien GmbH, Bad Vöslau 2014

Landesmuseum Joanneum, OAW, Geologische Bundesanstalt, UNI GRAZ, OGG, Universität Wien, Naturhistorisches Museum Wien