

Lithology: At the base coarse grained massive sandstones frequently alternating with argillaceous shales and phyllites. Sandstones are mostly developed as light colored arkoses, feldspar-rich fine-grained grey sandstones and light-colored quartz-sandstones.

Fossils: -

Origin, facies: Probably sediments of a marginal marine basin.

Chronostratigraphic age: ?Middle–Upper Ordovician.

Biostratigraphy: -

Thickness: Strong variations; up to 1,000 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Magdalensberg Group, Kaser Group.

Overlying unit(s): Murau Group, ?Eisenhut Group.

Lateral unit(s): ?Nock Group.

Geographic distribution: ÖK50-UTM, map sheet 3106 Radenthein (ÖK50-BMN, map sheets 183 Radenthein, 184 Ebene Reichenau).

Remarks: -

Complementary references: SCHÖNLAUB & HEINISCH (1993).

Murau-Gruppe / Murau Group

THOMAS J. SUTTNER

Validity: Invalid; the name Murau-Gruppe was introduced by NEUBAUER (1979: p. 484).

Type area: ÖK50-UTM, map sheets 3230 Tamsweg, 4225 Murau (ÖK50-BMN, map sheets 158 Stadl, 159 Murau).

Type section: -

Reference section(s): Area between Bodendorfer Ochsenberg and Rosenkranzhube south of St. Lorenzen; the best outcropping section is found close to the Lorenz creek north of Konrad farmstead in the area of Georgenberg (N 47°05'38" / E 14°05'31"); Birkleitenkogel (NEUBAUER, 1979: Fig. 10, p. 484).

Derivation of name: After the town Murau.

Synonyms: Phyllitische Glimmerschiefer (THURNER, 1935); Phyllonite [partim] (THURNER, 1935).

Lithology: Fine grained micaceous shale, graphitic micaceous shale containing sometimes garnet, phyllites, siliceous shale, phyllites with carbonate lenses, quartzite beds, siliceous shale with lydites intercalated, grey bedded dolomite, grey laminated micaceous shale.

Fossils: Conodonts.

Origin, facies: The depositional environment suggests an euxinic basin with intercalations of calciturbidites (NEUBAUER, 1984: p. 57).

Chronostratigraphic age: Llandovery–Ludlow.

Biostratigraphy: *sagitta* and *crispa* conodont zones.

Thickness: > 200 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): "Clastic Group" (conformable contact).

Overlying unit(s): Murau Limestone (Greibenzen Limestone) (conformable contact).

Lateral unit(s): Eisenhut Group; "Gurktal Quartzphyllite Complex".

Geographic distribution: Styria, surrounding of Murau between Bodendorfer Ochsenberg and Lorenzer Bach (NEUBAUER, 1979: Figs. 1, 10, p. 484).

Remarks: NEUBAUER (1979) distinguished 3 groups within the Lower Paleozoic sequence of the Gurktal Nappe: the Auen Group, Pranker Group and Murau Group. The Murau Group consists of several epimetamorphic units which are not discriminated into distinctive formations until now (compare Text-Fig. 3).

Complementary references: THURNER (1958), SCHÖNLAUB (1979, 1992).

Murau-Kalk (Greibenzenkalk) / Murau Limestone (Greibenzen Limestone)

BERNHARD HUBMANN

Validity: Invalid; early descriptions by ROLLE (1854: "Kalklager der Grebenzen") and GEYER (1891a: "Kalke [der Murauer Mulde]"); THURNER (1933) considered the Grebenzenkalk as a facial variety of the "Murauer Kalk".

Type area: ÖK50-UTM, map sheet 4225 Murau (ÖK50-BMN, map sheet 159 Murau).

Type section: No type section defined; THURNER (1933) mentioned typical "Murauer Kalke" at Blasenkogel (1,602 m; N 47°06'44" / E 14°18'26"); METZ (1963) specified the Grebenzen (1,870 m; N 47°02'21" / E 14°19'49"), a mountain north of Friesach (Carinthia) as "locus typicus" for the Grebenzen Limestone.

Reference section(s): -

Remarks: The synonymy of Murau Limestone and Grebenzen Limestone respectively their relationship is a matter of controversy in the literature.

Derivation of name: After the town Murau respectively the mountain Grebenzen (1,900 m).

Synonyms: Grebenzenkalk (THURNER, 1930); Murauer Kalke (THURNER, 1930); Murauer-Kalke und Dolomite (THURNER, 1952); Grebenzer-Kalk (THURNER, 1952); Pleschaitz-Kalk (THURNER, 1952); Grebenzen-Pleschaitz-kalk (SCHÖNLAUB, 1979); Bänderkalke (Typ Murau) (SCHÖNLAUB, 1979); Murau-Kalk (NEUBAUER, 1980b); Kalke der Grebenzen und des Pleschaitz (THURNER & VAN HUSEN, 1980); Murauer Kalke (THURNER & VAN HUSEN, 1980); Murauer Bänderkalke (THURNER & VAN HUSEN, 1980); Murauer Kalk (FLÜGEL & NEUBAUER, 1984); Grebenzenkalk (FLÜGEL & NEUBAUER, 1984).

Lithology: Recrystallized banded limestones and marbles. Locally lower parts of the succession are dominated by grey laminated marbles which contain fragments of crinoids whereas upper parts are mainly built up by whitish to pink colored marbles which are in some part cloudy dolomitized.

Fossils: Crinoids and rare conodonts.

Origin, facies: Open marine environment (?).

Chronostratigraphic age: Pridoli–Emsian.

Biostratigraphy: -

Thickness: 200–800 m.

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	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									
PERMIAN	LOWER PERMIAN / DEVONIAN			GIVETIAN	395	PERMIAN	LOWER PERMIAN / DEVONIAN		
				EIFELIAN	400				
		405							
		410							
		415							
		420							
		425							
		430							
		435							
		PERMIAN	UPPER PERMIAN / DEVONIAN	LOCHKOVIAN	435			PERMIAN	UPPER PERMIAN / DEVONIAN
440									
443.7									
445									
PERMIAN	UPPER PERMIAN / DEVONIAN			HIRNANTIAN	445	PERMIAN	UPPER PERMIAN / DEVONIAN		
				450					
				455					
				460					
				465					
				470					
		475							
		480							
		485							
		PERMIAN	UPPER PERMIAN / DEVONIAN	TREMA-DOCIAN	485			PERMIAN	UPPER PERMIAN / DEVONIAN
490									
495									
500									
505									
510									
515									
520									
525									
PERMIAN	UPPER PERMIAN / DEVONIAN			PAIBIAN	525	PERMIAN	UPPER PERMIAN / DEVONIAN		
		530							
		535							
		540							
		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

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), 2nd edition. - In: Piller, 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

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