

## Schattloch-Phyllite / Schattloch Phyllites

THOMAS J. SUTTNER

**Validity:** Invalid; first mapped by GEYER (1891a, b); well described by NEUBAUER (1979).

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

**Type section:** -

**Reference section(s):** Outcrops are located in the area near Lorenzengraben (compare NEUBAUER, 1979: Fig. 5, p. 468) at Mount Schattloch (N 47°02'00" / E 14°03'25"), southern slope of Schwarmbrunnhöhe (N 47°01'13" / E 14°04'47") to south-east of Ursch (N 47°01'50" / E 14°05'41").

**Derivation of name:** After Mount Schattloch (2,033 m).

**Synonyms:** Graue bis grauschwarze Phyllite (THURNER, 1961).

**Lithology:** Carbonaceous phyllites, chlorite-bearing phyllites, grey phyllites with quartz pebbles, metaporphyrites with phyllitic emplacements, limonitic limestone lenses (one lense with a thickness of about 1.5 m was observed by NEUBAUER (1979) along the section north of the "Hauserhütte" 1,720 meters above sea-level), metatuffs, at the base of the metatuff bright laminated limestone (1 m in thickness).

**Fossils:** -

**Origin, facies:** Marine deposits consisting of weathered products of acidic volcanites and metamorphic rocks (compare NEUBAUER, 1984: Fig. 17: "Phyllit of Frauenalpe", p. 56); phyllitic unit.

**Chronostratigraphic age:** ?Darrwilian–Ludlow.

**Biostratigraphy:** -

**Thickness:** > 250 m (NEUBAUER, 1979).

**Lithostratigraphically higher rank unit:** Pranker Group (see remarks).

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** Magdalensberg Group; Kaser Group; "Metadiabase".

**Overlying unit(s):** Pranker Metaclastics (conformable contact).

**Lateral unit(s):** Golzeck Formation; Golzeck Porphyry; Lower Auen Dolomite; ?Middle Auen Dolomite; Nock Group; Rosental Formation; Eisenhut Group.

**Geographic distribution:** Styria and Carinthia, south of St. Lorenzen near Murau, close to the Styrian/Carinthian states border (NEUBAUER, 1979: Figs. 1, 5).

**Remarks:** NEUBAUER (1979) distinguished three groups within the lower Paleozoic sequence of the Gurktal Nappe: the Auen Group, Pranker Group and Murau Group. The Pranker Group (compare Text-Fig. 3) is dominated mainly by low grade metamorphosed clastic units (Schattloch Phyllites and Pranker Metaclastics) and carbonate deposits (Ursch Dolomite). An equivalent development to the Schattloch Phyllites might be the "Phyllit-Grünschiefer-Folge" of Treibach-Althofen (GOSEN, 1978).

**Complementary references:** THURNER (1960), NEUBAUER & PISTOTNIK (1984), SCHÖNLAUB (1992).

## Pranker Metaklastika / Pranker Metaclastics

THOMAS J. SUTTNER

**Validity:** Invalid; first mapped by GEYER (1891a, b); well described by NEUBAUER (1979).

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

**Type section:** -

**Reference section(s):** Area near Lorenzengraben (compare NEUBAUER, 1979: Fig. 4, p. 468) extending from south-eastern slopes of the Schattloch, Meterhöhe to Prankerhöhe (N 47°01'24" / E 14°04'05") via Schwarmbrunnhöhe (N 47°01'18" / E 14°04'47") to south-east of Ursch (N 47°01'46" / E 14°06'04").

**Derivation of name:** After Mount Prankerhöhe (2,166 m).

**Synonyms:** Arkosen mit Tonschieferlagen (THURNER, 1958); Arkosenschieferlagen (THURNER, 1961).

**Lithology:** Bright metapsammites, coarse grained metapsammites, grey and dark well bedded dolomite, carbonaceous phyllites, graphitic phyllites, grey phyllites.

**Fossils:** Conodonts.

**Origin, facies:** Near-shore to terrestrial unit.

**Chronostratigraphic age:** Ludfordian–Emsian.

**Biostratigraphy:** *crispa*, *eosteinhornensis* and *delta* conodont zones (NEUBAUER, 1979: Tab. 4, p. 475–477).

**Thickness:** > 550 m (NEUBAUER, 1979).

**Lithostratigraphically higher rank unit:** Pranker Group (see remarks at Schattloch Phyllites).

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** Schattloch Phyllites; Lower Auen Dolomite (unconformable contact).

**Overlying unit(s):** Ursch Dolomite (Kaindorf Dolomite) (conformable contact); Mölbling Dolomite (conformable contact); Mölbling Limestone (conformable contact).

**Lateral unit(s):** Middle Auen Dolomite; Haider Marble (Adelsberg Limestone); Eisenhut Group; Mölbling Dolomite; Mölbling Limestone; Lower Althofen Limestone.

**Geographic distribution:** Styria and Carinthia, south of St. Lorenzen near Murau, close to the Styrian/Carinthian states border (NEUBAUER, 1979: Figs. 1, 5).

**Remarks:** -

**Complementary references:** BECK-MANNAGETTA (1959), THURNER (1960), NEUBAUER (1984), NEUBAUER & PISTOTNIK (1984), GOSEN et al. (1985), SCHÖNLAUB (1992).

## Mölbling Dolomit / Mölbling Dolomite

BERNHARD HUBMANN

**Validity:** Invalid; description by BUCHROITHNER (1979: here-in lithological description of the "Paläozoikums-Aufbruch von Mölbling").

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

**Type section:** No type section defined; CLAR et al. (1963) published a profile of the "Althofen-Mölbling" quarries. BUCHROITHNER (1979) described the section at the Epritz quarry (N 46°51'33" / E 14°27'03").

**Reference section(s):** -

**Derivation of name:** After Möbling, a municipality 27 km northeast of Klagenfurt.

**Synonyms:** ?untere Dolomitstufe (REDLICH, 1905).

**Lithology:** Ferruginous dolomites.

**Fossils:** Conodonts, ostracods, tentaculites.

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

**Chronostratigraphic age:** Pridoli.

**Biostratigraphy:** *eosteinhornensis* zone.

**Thickness:** About 10 m.

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

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** ?Möbling Limestone.

**Overlying unit(s):** Lower Althofen Limestone.

**Lateral unit(s):** ?Möbling Limestone.

**Geographic distribution:** Möbling area; ÖK50-UTM, map sheet 4102 Althofen, ÖK50-BMN, map sheet 186 Sankt Veit an der Glan.

**Remarks:** -

**Complementary references:** SCHÖNLAUB & HEINISCH (1993).

### Möbling Kalk / Möbling Limestone

BERNHARD HUBMANN

**Validity:** Invalid; description by BUCHROITHNER (1979: here in lithological description of the "Paläozoikums-Aufbruch von Möbling").

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

**Type section:** No type section defined; CLAR et al. (1963) published a profile of the "Althofen-Möbling" quarries. BUCHROITHNER (1979) described the section at the Epritz quarry (N 46°51'33" / E 14°27'03").

**Reference section(s):** -

**Derivation of name:** After Möbling, a municipality 27 km northeast of Klagenfurt.

**Synonyms:** Dunkler, grobbankiger Kalk (CLAR et al., 1963); partly: untere Dolomitstufe (REDLICH, 1905), Althofener Paläozoicum (HABERFELNER, 1936), Althofener Fazies (BUCHROITHNER, 1979).

**Lithology:** Dark colored well-bedded limestones, platy limestones.

**Fossils:** Conodonts, ostracods, tentaculites.

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

**Chronostratigraphic age:** Pridoli–?(upper) Emsian.

**Biostratigraphy:** *eosteinhornensis*, *gronbergi* to upper *laticostatus* conodont zones.

**Thickness:** About 10 m.

**Lithostratigraphically higher rank unit:** -

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** ?Pranker Metaclastics.

**Overlying unit(s):** Möbling Dolomite.

**Lateral unit(s):** ?Pranker Metaclastics.

**Geographic distribution:** Möbling area; ÖK50-UTM, map sheet 4102 Althofen, ÖK50-BMN, map sheet 186 Sankt Veit an der Glan.

**Remarks:** -

**Complementary references:** SCHÖNLAUB & HEINISCH (1993).

### Ursch-Dolomit (Kaindorf Dolomit) / Ursch Dolomite (Kaindorf Dolomite)

THOMAS J. SUTTNER

**Validity:** Invalid; Kaindorf Dolomite was first observed by THURNER (1935); described in detail by NEUBAUER (1979).

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

**Type section:** -

**Reference section(s):** Area near Lorenzengraben, exposures are found near Ursch (compare NEUBAUER, 1979: p. 477; Mount Ursch: N 47°01'51" / E 14°06'03"); Kaindorf Dolomites are exposed south of St. Lorenzen near Murau in the vicinity of Schafflinger farmstead (compare NEUBAUER, 1979: Fig. 8, p. 481–482) (Schafflinger farmstead is located at N 47°05'59" / E 14°07'04").

**Derivation of name:** After Mount Ursch (1,848 m).

**Synonyms:** Dolomite von Kaindorf (THURNER, 1935).

**Lithology:** Bright yellowish weathering grey laminated dolomites (beds 40–60 cm thick), carbonaceous phyllites, micaceous marble.

**Fossils:** Conodonts, stromatoporoids or stromatolites? (NEUBAUER, 1979).

**Origin, facies:** Shallow marine, neritic unit.

**Chronostratigraphic age:** Emsian–Eifelian (NEUBAUER, 1979: p. 477); not only Emsian as mentioned in the ASC 2004.

**Biostratigraphy:** *kitabicus*, *gronbergi* and *kockelianus* conodont zones (NEUBAUER, 1979: Tab. 5, p. 477).

**Thickness:** > 20 m.

**Lithostratigraphically higher rank unit:** Pranker Group (see remarks at Schattloch Phyllites).

**Lithostratigraphic subdivision:** -

**Underlying unit(s):** Pranker Metaclastics (conformable contact); Lower Althofen Limestone (conformable contact).

**Overlying unit(s):** -

**Lateral unit(s):** Haider Marble (Adelsberg Limestone); Lower Althofen Limestone.

**Geographic distribution:** Styria and Carinthia, south of Kaindorf near Murau, close to the Styrian/Carinthian states border (NEUBAUER, 1979: Figs. 1, 5, 8).

**Remarks:** The Kaindorf Dolomite is combined with the Ursch Dolomite since NEUBAUER (1984: Fig. 17, p. 56) as it shows a similar lithology and stratigraphic range. It differs in the sedimentary development that is exposed below the dolomites, as in the Ursch area metapsammities are exposed whereas in the Kaindorf area shales and purple to greenish platy flaser-dolomites are outcropping (compare NEUBAUER, 1979: Figs. 6, 9, p. 477, 481).

**Complementary references:** THURNER (1931, 1932, 1960), NEUBAUER (1984), NEUBAUER & PISTOTNIK (1984), GOSEN et al. (1985), SCHÖNLAUB (1992).

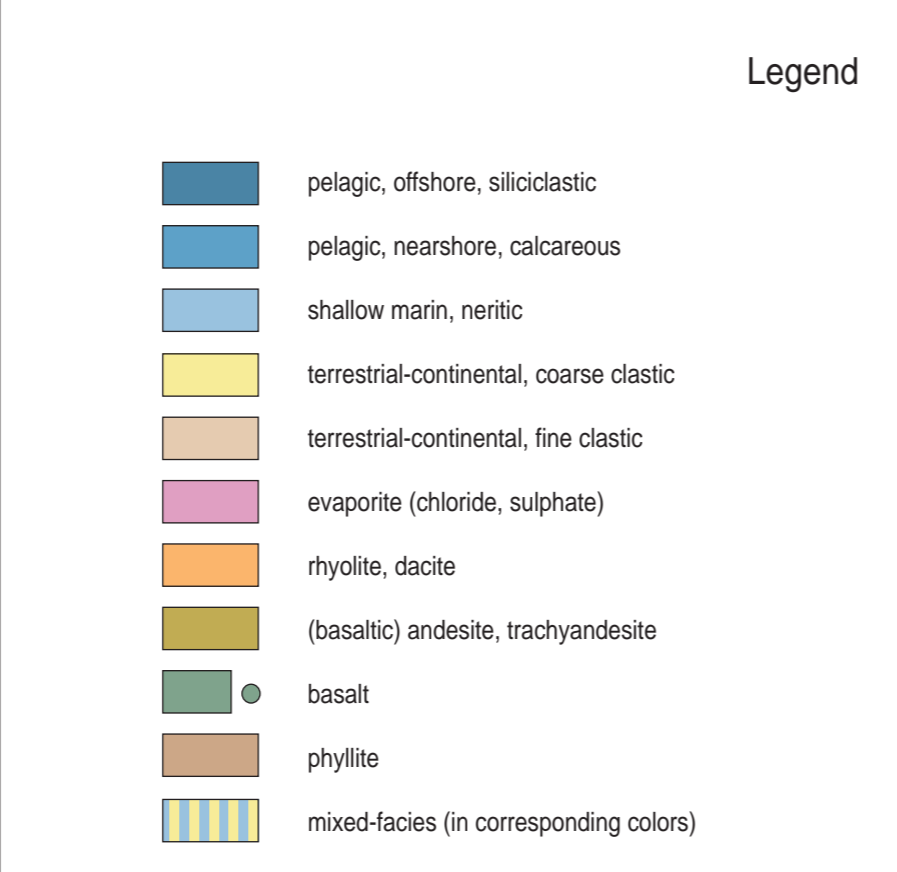
# Austrian Stratigraphic Chart 2004 - Paleozoic

(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	LOWER DEVONIAN	EMSIAN	370				
				LOCHKOVIAN	375				
		PERMIAN	DEVONIAN	LUDFORDIAN / GORSTIAN	380			DEVONIAN	MIDDLE DEVONIAN
				HOMERIAN / SHEINWOOD	385				
				TELYCHIAN	390				
				AERONIAN	395				
RHUDDANIAN	400								
DEVONIAN	LOWER DEVONIAN			PRAGIAN	405				
				LOCHKOVIAN	410				
PERMIAN	DEVONIAN			WEN-LOCK / LOW	415	DEVONIAN	LOWER DEVONIAN		
				HIRNANTIAN	420				
				DARRIWILIAN	425				
		TREMA-DOCIAN	430						
		DEVONIAN	UPPER ORDOVICIAN	PAIBIAN	435				
				PAIBIAN	440				
		PERMIAN	CAMBRIAN	PAIBIAN	443.7			CAMBRIAN	UPPER CAMBRIAN
				PAIBIAN	445				
				PAIBIAN	450				
				PAIBIAN	455				
PAIBIAN	460								
PAIBIAN	465								
PAIBIAN	470								
PAIBIAN	475								
PAIBIAN	480								
PAIBIAN	485								
PERMIAN	CAMBRIAN	PAIBIAN	488.3	CAMBRIAN	MIDDLE CAMBRIAN				
		PAIBIAN	490						
		PAIBIAN	495						
		PAIBIAN	500						
		PAIBIAN	505						
		PAIBIAN	510						
		PAIBIAN	515						
		PAIBIAN	520						
		PAIBIAN	525						
		PAIBIAN	530						
PERMIAN	CAMBRIAN	PAIBIAN	535	CAMBRIAN	LOWER CAMBRIAN				
		PAIBIAN	540						
		PAIBIAN	542						



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

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