

ed within the summary of the Variscan carbonate sequences in the Carnic Alps by KREUTZER (1992b); additional biostratigraphic data provided by SCHÖNLAUB & KREUTZER (1993).

Type area: ÖK50-UTM, map sheets 3109 Oberdrauburg, 3110 Kötschach-Mauthen, 3116 Sonnenalpe Naßfeld, 3117 Nötsch im Gailtal (ÖK50-BMN, map sheets 197 Kötschach, 198 Weißbriach, 199 Hermagor).

Type section: -

Reference section(s): Kronhofgraben section south-east of the village of Würmlach (KREUTZER, 1992a: p. 270), N 46°39'19" / E 13°00'57"; Grüne Schneid (Cresta Verde), Plan di Zermula, Creta di Rio Secco, Rio Chianaletta (SCHÖNLAUB et al., 1991; PERRI & SPALLETTA, 1998a).

Derivation of name: After the Kronhofgraben south of Lower Bischofalm and northwest of Mount Hoher Trieb (SCHÖNLAUB, 1969b).

Synonyms: Kronhofkalk (KREUTZER & SCHÖNLAUB, 1984); calcari pelagici (VENTURINI, 2006).

Lithology: Grey to reddish flaser limestone, black shale at the base ("Kronhof Shale").

Fossils: Cephalopods, conodonts, trilobites.

Origin, facies: Marine limestone, pelagic unit (Pelagic Carbonate Facies).

Chronostratigraphic age: Tournaisian.

Biostratigraphy: *gattendorfia* and *merocanites* ammonoid zones; *sulcata* to *isosticha* conodont zones and *anchoralis* conodont zone (SCHÖNLAUB & KREUTZER, 1993).

Thickness: Up to 10 m (+ 0.2 m Kronhof Shale at the base of the unit).

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Pal Limestone (conformable contact); Marinelli Limestone (KREUTZER, 1992a: p. 271); in the Cima di Plotta section the Kronhof Limestone disconformably overlies the Spinotti Limestone (SCHÖNLAUB & KREUTZER, 1993: Fig. 5).

Overlying unit(s): Hochwipfel Formation (unconformable contact); Dimon Formation (unconformable contact).

Lateral unit(s): Plotta Lydite, Zollner Formation.

Geographic distribution: Carnic Alps.

Remarks: -

Complementary references: GAERTNER (1931), GEDIK (1974), KREUTZER (1990), DREESEN (1992), FEIST (1992), KORN (1992, 1999), KRÄINER (1992), SCHÖNLAUB et al. (1992, 2004), SCHÖNLAUB (1997), VAI (1998), VENTURINI & SPALLETTA (1998), SCHÖNLAUB & HISTON (1999, 2000), KAISER et al. (2006), SCHÖNLAUB & FORKE (2007).

Plotta-Lydite / Plotta Lydite

THOMAS J. SUTTNER

Validity: Invalid; name "Plotta Fm." introduced and described by SCHÖNLAUB et al. (1991).

Type area: ÖK50-UTM, map sheets 3109 Oberdrauburg, 3110 Kötschach-Mauthen, 3116 Sonnenalpe Naßfeld (ÖK50-BMN, map sheet 198 Weißbriach).

Type section: -

Reference section(s): North and south-east of Cima di Plotta (SCHÖNLAUB & KREUTZER, 1993), N 46°35'24" / E 12°54'30"; surroundings of Rifugio Marinelli and Casera Promosio, Grüne Schneid, quarry "Cava Val di Collina" (N 46°35'34" / E 12°56'27"), abandoned quarry at Casa Cantoniera, quarries "Cava di Marmo", abandoned quarry Malpasso (SCHÖNLAUB et al., 1991).

Derivation of name: After Cima di Plotta (SCHÖNLAUB et al., 1991).

Synonyms: Lydite (SCHÖNLAUB, 1980b); Plotta Fm. (SCHÖNLAUB et al., 1991); radiolarian cherts (VENTURINI & SPALLETTA, 1998).

Lithology: Discontinuous silcrete layers consisting of weakly bedded breccias or massive and laminated cherts (SCHÖNLAUB et al., 1991).

Fossils: Radiolarians?

Origin, facies: Silcrete regolith, fossil soil facies (SCHÖNLAUB et al., 1991).

Chronostratigraphic age: Tournaisian.

Biostratigraphy: The above mentioned age was concluded by SCHÖNLAUB et al. (1991: p. 97) based on a mixed conodont fauna (*anchoralis-latus* Zone) from the uppermost limestone bed disconformably overlain by the Plotta Lydite.

Thickness: Approx. 3 m

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Feldkogel Limestone (unconformable contact); Gamskofel Limestone (unconformable contact); Marinelli Limestone (unconformable contact); Kronhof Limestone (unconformable contact).

Overlying unit(s): Hochwipfel Formation (unconformable contact).

Lateral unit(s): Kronhof Limestone.

Geographic distribution: Carnic Alps.

Remarks: -

Complementary references: KRÄINER (1992), SCHÖNLAUB et al. (1992, 2004), SCHÖNLAUB (1997), VAI (1998), SCHÖNLAUB & HISTON (1999, 2000), VENTURINI (2006).

Hochwipfel-Formation / Hochwipfel Formation

THOMAS J. SUTTNER

Validity: Valid; stratigraphic relations discussed by KAHLER & METZ (1955), described in detail by VAN AMEROM et al. (1984), SCHÖNLAUB (1985a), SPALLETTA & VENTURINI (1988), VENTURINI & SPALLETTA (1998), VENTURINI (2006), validated by KREUTZER (1992a).

Type area: ÖK50-UTM, map sheets 3109 Oberdrauburg, 3110 Kötschach-Mauthen, 3116 Sonnenalpe Naßfeld, 3117 Nötsch im Gailtal, 3118 Arnoldstein, 4114 Bad Eisenkappel (ÖK50-BMN, map sheets 196 Obertilliach, 197 Kötschach, 198 Weissbriach, 199 Hermagor, 200 Arnoldstein, 201 Villach, 210 Aßling, 212 Vellach, 213 Bad Eisenkappel).

Type section: Mount Hochwipfel of the eastern Carnic Alps (KREUTZER, 1992a: p. 270), N 46°35'40" / E 13°10'35".

Reference section(s): Obere Wolayeralm, Kronhoftörl, east of the Obere Bischofalm, Nölblinggraben, Hoher Trieb,

Mount Findenig (N 46°35'42" / E 13°06'14"), Achomitz-Unoka section in the eastern Carnic Alps, Kokragraben near Pöckau, Feistrizgraben and Korpitschgraben, Rio Chianaletta, Casera Collinetta di Sotto, Casera Collinetta di Sopra, Monte Cavallo, Creta di Rio Secco (SCHÖNLAUB, 1985a; KRAINER, 1992); according to MOSHAMMER (1989) sediments of the Hochwipfel Formation can be found in the Karavanke Mountains in the area of the Trögen Klamm at the Smertnik-Bach and section-group E (N 46°28'00" / E 14°30'30").

Derivation of name: After the Mountain Hochwipfel (KREUTZER, 1992a: p. 270).

Synonyms: Hochwipfelschichten (KAHLER & METZ, 1955); Unter-Karbon-Flysch (TESSENHORN, 1968); Flysch (KUPSCH et al., 1971: Figs. 2, 3, p. 96).

Lithology: Turbidite sequence consisting of graded sandstones alternating with siltstone and shale, siliceous shale, lydites (breccias and conglomerates), tuffs.

Fossils: Plants, spores.

Origin, facies: Marine siliciclastics (flysch), pelagic unit (Distal Siliciclastic Facies).

Chronostratigraphic age: Tournaisian–Viséan.

Biostratigraphy: *anchoralis* to *texanus* conodont zones.

Thickness: > 1,000 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Plotta Lydite, Kronhof Limestone and the Zollner Formation in the Carnic Alps and "Limestones" in the Karavanke Mountains (all units mentioned: unconformable contact which equates with the Variscan Event).

Overlying unit(s): Waidegg Formation in the Carnic Alps and Auernig Group in the Karavanke Mountains (all units mentioned: unconformable contact which equates with the Variscan Event).

Lateral unit(s): Dimon Formation, Kirchbach Limestone.

Geographic distribution: Carnic Alps, Karavanke Mountains.

Remarks: -

Complementary references: FRECH (1894b), FRANCAVILLA (1966), PÖLSLER (1967, 1969a), TESSENHORN (1971, 1983), GEDIK (1974), SCHÖNLAUB (1979, 1980b, 1982c, 1982d, 1984b, 1991, 1997, 1998), HUNGER (1984), KREUTZER & SCHÖNLAUB (1984), KREUTZER (1990), PERRI & SPALLETTA (1998a, d), VAI (1998), SCHÖNLAUB & HISTON (1999, 2000), MADER & NEUBAUER (2004), SCHÖNLAUB & FORKE (2007), KUTTEROLF et al. (2008).

Dimon-Formation / Dimon Formation

THOMAS J. SUTTNER

Validity: Valid (SPALLETTA et al., 1980).

Type area: ÖK50-UTM, map sheet 3109 Oberdrauburg (ÖK50-BMN, map sheets 196 Obertilliach, 197 Kötschach).

Type section: Monte Dimon (SPALLETTA et al., 1980), N 46°34'03" / E 13°03'26".

Reference section(s): Section along the road from Paularo to Casera Ramaz in the Chiarso valley (PELLIZZER & TOMADIN, 1962; LÄUFER et al., 1993), Plenge (N 46°39'04" /

E 12°54'03"), between Kreuzleitenjoch and Nostra Alm, south of the Stallonkofel (SCHÖNLAUB, 1985a).

Derivation of name: After Mount Dimon.

Synonyms: Plengeserie (GAERTNER, 1931); Plenge-Dimon Formation (SCHÖNLAUB, 1979); Plenge-Formation (SCHÖNLAUB, 1985a).

Lithology: Pillow lavas and breccias, volcanoclastic sediments, green and red argillites (PELLIZZER & TOMADIN, 1962; LÄUFER et al., 1993).

Fossils: -

Origin, facies: Volcanites and volcanoclastic deposits.

Chronostratigraphic age: Viséan; according to VAI (1998) the formation is of Bashkirian age.

Biostratigraphy: -

Thickness: approx. 300 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Kronhof Limestone (unconformable contact).

Overlying unit(s): Waidegg Formation (unconformable contact which equates with the Variscan Event).

Lateral unit(s): Hochwipfel Formation.

Geographic distribution: Carnic Alps.

Remarks: -

Complementary references: FRECH (1894b), PÖLSLER (1967), KRAINER (1992), SCHÖNLAUB et al. (1992, 2004), SCHÖNLAUB (1997, 1998), VENTURINI & SPALLETTA (1998), SCHÖNLAUB & HISTON (1999, 2000), VENTURINI (2006), SCHÖNLAUB & FORKE (2007).

Kirchbach-Kalk / Kirchbach Limestone

THOMAS J. SUTTNER

Validity: Invalid; first described by PÖLSLER (1967); further description and fossil data by SCHÖNLAUB (1985a: p. 44), FLÜGEL & SCHÖNLAUB (1990) and AMLER et al. (1991).

Type area: ÖK50-UTM, map sheets 3109 Oberdrauburg, 3110 Kötschach-Mauthen, 3116 Sonnenalpe Naßfeld (ÖK50-BMN, map sheets 197 Kötschach, 198 Weißbriach).

Type section: -

Reference section(s): Plöckentunnel, Hochwipfel (SCHÖNLAUB, 1985a), N 46°35'40" / E 13°10'35".

Derivation of name: After the village of Kirchbach.

Synonyms: Kalke in den Hochwipfelschichten (PÖLSLER, 1967: p. 40).

Lithology: Micritic, light grey nodular limestone; it occurs only in lenticular bodies which laterally grade into silty shale.

Fossils: Conodonts, crinoids.

Origin, facies: Marine limestone, neritic unit.

Chronostratigraphic age: Viséan.

Biostratigraphy: According to SCHÖNLAUB (1985a), the conodont assemblage points to Viséan age; no distinct conodont zone is mentioned.

Thickness: 8–10 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

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 / Dufallian	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						
		EMSIAN	370						
		DEVONIAN	LOWER DEVONIAN	LOCHKOVIAN	375				
				PRAGIAN	380				
				ZILCHOVIAN	385				
				WEN-LUD-LOCKLOW	390				
		PERMIAN	DEVONIAN	LUDFORDIAN / GORSTIAN	395			DEVONIAN	MIDDLE DEVONIAN
HOMERIAN / SHEINWOOD	400								
TELYCHIAN	405								
AERONIAN	410								
RHUDDANIAN	415								
PERMIAN	UPPER ORDOVICIAN			HIRNANTIAN	420				
				DARRIWILIAN	425				
				TREMACIAN	430				
				PAIBIAN	435				
PERMIAN	CAMBRIAN			PAIBIAN	440	CAMBRIAN	MIDDLE CAMBRIAN		
		PAIBIAN	445						
		PAIBIAN	450						
		PAIBIAN	455						
		PAIBIAN	460						
		CAMBRIAN	LOWER CAMBRIAN	PAIBIAN	465				
				PAIBIAN	470				
				PAIBIAN	475				
				PAIBIAN	480				
		CAMBRIAN	CAMBRIAN	PAIBIAN	485			CAMBRIAN	UPPER CAMBRIAN
PAIBIAN	490								
PAIBIAN	495								
PAIBIAN	500								
PAIBIAN	505								
CAMBRIAN	LOWER CAMBRIAN			PAIBIAN	510				
				PAIBIAN	515				
				PAIBIAN	520				
				PAIBIAN	525				
CAMBRIAN	CAMBRIAN			PAIBIAN	530	CAMBRIAN	LOWER CAMBRIAN		
		PAIBIAN	535						
		PAIBIAN	540						
		PAIBIAN	545						
		PAIBIAN	550						
		CAMBRIAN	LOWER CAMBRIAN	PAIBIAN	555				
				PAIBIAN	560				
				PAIBIAN	565				
				PAIBIAN	570				



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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