

Underlying unit(s): Hochwipfel Formation (unconformable contact?).

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Lateral unit(s): Hochwipfel Formation.

Geographic distribution: Carnic Alps.

Remarks: -

Complementary references: KRAINER (1992), SCHÖNLAUB et al. (1992, 2004), SCHÖNLAUB (1997), SCHÖNLAUB & HISTON (1999, 2000), SCHÖNLAUB & FORKE (2007).

Post-Variscan Sequence

Waidegg-Formation / Waidegg Formation

HANS P. SCHÖNLAUB

Validity: Valid; first denomination and formalization by SCHÖNLAUB (1985a: p. 46). Note that SCHÖNLAUB & FORKE (2005: p. 17) renamed the formation in Collendiaul Formation.

Type area: ÖK50-UTM, map sheet 3110 Kötschach-Mauthen (ÖK50-BMN, map sheet 197 Kötschach), Carnic Alps, Carinthia.

Type section: Outflow of Lake Zollner to the west forming a waterfall and a cliff at approx. 1,760 m (N 46°36'13" / E 13°04'39").

Reference section(s): -

Derivation of name: After the ridge west of Lake Zollner (Italian: "Collen") in the Gail Valley between Hermagor and Kötschach-Mauthen.

Synonyms: Waidegger Gruppe (pars) (FENNINGER et al., 1971) exposed at the northern part of the "Waschbühel" ridge east of Waidegger Alm.

Remarks: In Austrian literature, the basal "Auernig beds" (Auernigschichten sensu HERITSCH et al., 1934) have long been described as "Waidegger Group" (FENNINGER et al., 1971). Consequently, SCHÖNLAUB (1985a: p. 46) has defined the Waidegg Formation with the type locality at the outflow of the Lake Zollner. However, the term Waidegger Group has always been intimately connected with the "Waidegger Fauna" (HERITSCH, 1934; HERITSCH et al., 1934; METZ, 1936; GAURI, 1965), which occurs in siltstones of the basal Auernig Formation and is therefore not part of the Waidegg Formation. To avoid further confusion about the lithologic subdivision and the fossil content, the new name "Collendiaul Formation" has been introduced by SCHÖNLAUB & FORKE (2005: p. 17). VENTURINI (1990a), when describing the basal conglomerates and breccias below the Auernig Formation (= Bombaso Formation), introduced the term "Pramollo Member" as part of the "Bombaso Formation". However, the type section of the "Pramollo Member" of the "Bombaso Formation" at the southern foothill of Auernig Mountain in fact represents sediments of the pre-Variscan Hochwipfel Formation. They are not equivalent to the basal conglomerates and breccias at Lake Zollner.

Lithology: Up to 20 m thick lydite breccias and conglomerates which are clast-supported in the lower and matrix-supported in the upper part.

Fossils: The coarse breccia and conglomerate contain no fossils except at the transition to the overlying pebble-bearing beds where some crinoids and gastropods occur.

Origin, facies: According to KRAINER (1992) and VENTURINI (1990a, b) these rocks are interpreted as alluvial fan deposits at the transition to an offshore beach environment.

Chronostratigraphic age: Since direct fossil evidence is missing, the age can only be inferred from conodonts and fusulinids occurring in the overlying beds. They indicate an equivalent of the lower Kasimovian Stage (FORKE & SAMKASSOU, 2000; SCHÖNLAUB & FORKE, 2007). At locality Tomritsch in the basal deposits also plants of Cantabrian age occur suggesting an overall late Moscovian to early Kasimovian age for the formation of the Waidegg Formation (Collendiaul Formation).

Biostratigraphy: In the basal Auernig Fm. fusulinids (*Protriticites permirus*, *Beedeina asiatica*) and conodonts (*Idiog-nathodus* cf. *expansus*, *Swadelina* ? aff. *makhlinae*) indicate lower Kasimovian.

Thickness: Approximately 20 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Bischofalm and Zollner Formations (Silurian to Devonian). An unconformity separates the post-Variscan Waidegg Formation from the underlying pre-Variscan basement (FENNINGER et al., 1976; SCHÖNLAUB, 1985a).

Overlying unit(s): Auernig Formation.

Lateral unit(s): Malinfier Formation (VENTURINI, 1982) and Auernigalm Limestone Breccia (VENTURINI 1990a, b; SCHÖNLAUB & FORKE, 2005) (both not indicated in the ASC 2004).

Geographic distribution: Carnic Alps, Naßfeld and Zollner region across the Austrian/Italian border.

Remarks: -

Complementary references: -

Auernig-Gruppe / Auernig Group

HANS P. SCHÖNLAUB

Validity: Invalid; the name "Auernigschichten" was introduced by FRECH (1894b).

Type area: ÖK50-UTM, map sheet 3116 Sonnenalpe Naßfeld and 3110 Kötschach-Mauthen (ÖK50-BMN, map sheets 197 Kötschach, 198 Weißbrach), central Carnic Alps extending on both sides of the state border between Garnitzen gorge, Naßfeld and Lake Zollner.

Type section: No continuous section is known through the whole succession. FORKE et al. (2006) proposed for the lower parts the "Waschbühel" ridge in the vicinity of the Waidegger Alm (N 46°35'39" / E 13°07'02"), for the middle parts the Naßfeld region above the Watschiger Alm, and for its upper parts the ridge from Gugga to Garnitzen south of Watschiger Alm (N 46°33'37" / E 13°17'53") as type sections.

Reference section(s): -

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				
		WUCHIAPINGIAN / Dzhulfian	255						
		CAPITANIAN	260						
		WORDIAN	265						
		ROADIAN	270						
		PERMIAN	LOWER PERMIAN / CISURALIAN			KUNGURIAN	275		
						ARTINSKIAN	280		
						SAKMARIAN	285		
						ASSELIAN	290		
		PERMIAN	UPPER PERMIAN / ZEPHYRIAN			GZHELIAN	295	PERMIAN	UPPER PERMIAN / ZEPHYRIAN
KASIMOVIAN	300								
MOSKOVIAN	305								
BASHKIRIAN	310								
PERMIAN	LOWER PERMIAN / CISURALIAN			SERPUKHOVIAN	315				
				VISEAN	320				
				TOURNAISIAN	325				
PERMIAN	UPPER PERMIAN / ZEPHYRIAN			FAMENNIAN	330	PERMIAN	UPPER PERMIAN / ZEPHYRIAN		
				FRASNIAN	335				
				GIVETIAN	340				
		EIFELIAN	345						
		PERMIAN	LOWER PERMIAN / CISURALIAN	EMSIAN	350				
				LOCHKOVIAN	355				
		PERMIAN	UPPER PERMIAN / ZEPHYRIAN	LUDFORDIAN / GORSTIAN	359.2			PERMIAN	UPPER PERMIAN / ZEPHYRIAN
				HOMERIAN / SHEINWOOD	365				
				TELYCHIAN	370				
				AERONIAN	375				
RHUDDANIAN	380								
PERMIAN	LOWER PERMIAN / CISURALIAN			HIRNANTIAN	385				
				ORDOVICIAN	390				
PERMIAN	UPPER PERMIAN / ZEPHYRIAN			WEN-LUD-LOCK	395	PERMIAN	UPPER PERMIAN / ZEPHYRIAN		
				PRAGIAN	400				
				LOCHKOVIAN	405				
		LLANDOVERY	410						
		AERONIAN	415						
		PERMIAN	LOWER PERMIAN / CISURALIAN	RHUDDANIAN	420				
				HIRNANTIAN	425				
		PERMIAN	UPPER PERMIAN / ZEPHYRIAN	ORDOVICIAN	430			PERMIAN	UPPER PERMIAN / ZEPHYRIAN
				DARRIWILIAN	435				
				ORDOVICIAN	440				
ORDOVICIAN	443.7								
ORDOVICIAN	445								
PERMIAN	LOWER PERMIAN / CISURALIAN			ORDOVICIAN	450				
				ORDOVICIAN	455				
PERMIAN	UPPER PERMIAN / ZEPHYRIAN			ORDOVICIAN	460	PERMIAN	UPPER PERMIAN / ZEPHYRIAN		
				ORDOVICIAN	465				
				ORDOVICIAN	470				
		ORDOVICIAN	475						
		ORDOVICIAN	480						
		PERMIAN	LOWER PERMIAN / CISURALIAN	ORDOVICIAN	485				
				ORDOVICIAN	490				
		PERMIAN	UPPER PERMIAN / ZEPHYRIAN	ORDOVICIAN	495			PERMIAN	UPPER PERMIAN / ZEPHYRIAN
				ORDOVICIAN	500				
				ORDOVICIAN	505				
ORDOVICIAN	510								
ORDOVICIAN	515								
PERMIAN	LOWER PERMIAN / CISURALIAN			ORDOVICIAN	520				
				ORDOVICIAN	525				
PERMIAN	UPPER PERMIAN / ZEPHYRIAN			ORDOVICIAN	530	PERMIAN	UPPER PERMIAN / ZEPHYRIAN		
				ORDOVICIAN	535				
				ORDOVICIAN	540				
		ORDOVICIAN	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

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