

Complementary references: TOLLMANN (1977), SCHÖNLAUB (1980a), EBNER et al. (1989, 2008), SCHÖNLAUB & HEINISCH (1993).

Eisenerz-Formation / Eisenerz Formation

FRITZ EBNER

Validity: Invalid; first description (SCHÖNLAUB, 1979; SCHÖNLAUB et al., 1980) used in terms of a formation, but not formalized.

Type area: Eisenerzer Alpen; ÖK50-UTM, map sheet 4215 Eisenerz (ÖK50-BMN, map sheets 101 Eisenerz and 131 Kalwang).

Type section: Not indicated.

Reference section(s): -

Derivation of name: After the town Eisenerz situated near to the Styrian Erzberg, ÖK50-UTM, map sheet 4215 (ÖK50-BMN, map sheet 101 Eisenerz).

Synonyms: "Eisenerzer Schichten" (SCHÖNLAUB, 1979, 1982a; SCHÖNLAUB et al., 1980); "Grenzschiefer" (VACEK, 1903); "Zwischenschiefer" (JUNGWIRTH & LACKENSCHWEIGER, 1922).

Lithology: Grey, partly graphitic schists with intercalations of greyish-green to violet schist, sandy schists, thin bedded to platy brownish grey sandstone, black lydite and siliceous schists (SCHÖNLAUB, 1979, 1982a; SCHÖNLAUB et al., 1980). Often the schists are laminated and convolute bedding is locally present.

The Eisenerz Formation can be divided into two parts: at the bottom "oil" green sericite-quartzite schists occur, followed by schists, rich in graphite (HAJEK, 1966: p. 26, 27; SCHÖNLAUB et al., 1980). The inclusion of porphyroids (HAJEK, 1966) has not been confirmed later (SCHÖNLAUB et al., 1980). Most probably they form tectonic slices of porphyroidic materials (SCHÖNLAUB et al., 1980).

Fossils: -

Origin, facies: Probably fine clastic basinal environment.

Chronostratigraphic age: Unclear, but it should be younger than the Visean Crinoidal Limestone Breccia. However, a late Carboniferous age cannot be excluded (SCHÖNLAUB et al., 1980).

Biostratigraphy: -

Thickness: Approx. 80 m at the Erzberg (SCHÖNLAUB et al., 1980) and 100–150 m maximum at other localities (SCHÖNLAUB, 1982a). Mostly the thickness is tectonically reduced and sometimes the Eisenerz Formation is even missing (e.g., at the contact of Variscan nappe structures).

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Crinoidal Limestone Breccia.

Overlying unit(s): At Erzberg this unit forms the top of the "Liegendscholle" which is superposed due to Variscan Nappe tectonics by Silurian/Devonian limestones of the "Hangendscholle" (SCHÖNLAUB et al., 1980).

Lateral unit(s): -

Geographic distribution: E-GWZ; Styria, Eisenerzer Alpen.

Remarks: The outcrops described at Erzberg (SCHÖNLAUB et al., 1980) do not exist anymore due to mining operations.

Complementary references: TOLLMANN (1977), SCHÖNLAUB (1980a), EBNER et al. (1989), SCHÖNLAUB & HEINISCH (1993).

Radschiefer / Rad Schists

FRITZ EBNER

Validity: Invalid; not formalized, but used in terms of a formation since NIEVOLL (1983, 1987).

Type area: ÖK50-UTM, map sheet 4211 Neuberg an der Mürz (ÖK50-BMN, map sheet 103 Kindberg).

Type section: Not indicated. Detailed descriptions (NIEVOLL, 1983, 1987) derive from the section of the Steinbachgraben valley approx. 5.5 km NW Veitsch, ÖK50-UTM, map sheet 4211 Neuberg an der Mürz (ÖK50-BMN, map sheet 103 Kindberg).

Reference section(s): -

Derivation of name: After "Rad" which is a field name but also the name of a former inn (Radwirt; N 47°36'55" / E 15°27'14") in the Veitschbach valley, ÖK50-UTM, map sheet 4211 Neuberg an der Mürz (ÖK50-BMN, map sheet 103 Kindberg).

Synonyms: "Radschieferserie" (CORNELIUS, 1952a), "Rad Phyllit" (NEUBAUER et al., 1994), Rad subunit (NIEVOLL, 1983, 1987).

Lithology: Monotonous dark grey, quartzitic phyllite; at the base intercalation of < 10 m coarse grained sandstones with detritus deriving from the Blasseneck Porphyry (NIEVOLL, 1983, 1987).

Fossils: Slightly calcareous metasiltstones close to the base include badly preserved fossils (cystoideans, bryozoans, brachiopods/bivalves) (NIEVOLL, 1983, 1987).

Origin, facies: Fine clastic basinal environment.

Chronostratigraphic age: Uppermost Ordovician (Katian)–Lower Devonian (NIEVOLL, 1983, 1987).

Biostratigraphy: The age is constrained by the position above the Blasseneck Porphyry and conodonts of the overlying Metalliferous Limestone (EBNER, 1973, 1974; NIEVOLL, 1983, 1987).

Thickness: 400 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Sedimentary contact to the Blasseneck Porphyry.

Overlying unit(s): Metalliferous Limestones (NIEVOLL, 1983, 1987).

Lateral unit(s): The fossiliferous siltstones at the base of the Rad Schists as well as the sandstones with porphyroidic detritus imply a correlation of the basal parts with the Polster Quartzite and the Peterbaumgraben Formation.

Geographic distribution: E-GWZ; Styria, ÖK50-UTM, map sheet 4211 Neuberg an der Mürz, ÖK50-UTM, map sheet 4212 Mürzzuschlag (ÖK50-BMN, map sheet 103 Kindberg).

Remarks: After the first description of CORNELIUS (1952a) the Rad Schists were subdivided by NIEVOLL (1983, 1987) into the Rad and the Stocker subunits. Both units are overlain by Metalliferous Limestones. Since the correlation between both units remains problematic the description above is restricted to the Rad unit only.

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