Remarks: This formation is characterized by the occasional occurrences of big colonial rugose *Argutastrea* corals (LIAO & HUBMANN, 2006).

Complementary references: HUBMANN & MESSNER (2007).

Fahrneck-Formation / Fahrneck Formation

BERNHARD HUBMANN

Validity: Valid; first description and formalization by EBNER (1998: p. 128–129).

Type area: ÖK50-UTM, map sheet 4222 Leoben (ÖK50-BMN, map sheet 163 Voitsberg).

Type section: Due to bad outcrops no type section published so far; according to EBNER (1998) outcrops are in the area around the farmstead "Reicherhöhe" (at altitude 999 m) north of Übelbach (30 km northwest of Graz) on ÖK50-UTM, map sheet 4222 Leoben (ÖK50-BMN, map sheet 163 Voitsberg) (N 47°25'34" / E 15°26'45").

Reference section(s): See above.

Derivation of name: After Fahrneck near Übelbach, approximately 40 km northwest of Graz.

Synonyms: Kalkschiefer im allgemeinen (WAAGEN, 1937).

Lithology: Alternating sequence of grey-blue limestones, flaser limestones, argillaceous shales and greenstones.

Fossils: Conodonts.

Origin, facies: Open marine environment?

Chronostratigraphic age: Frasnian–Famennian.

Biostratigraphy: Conodonts indicate do I and do II (= *Manticoceras* and *Cheiloceras* ammonite zones) according to TSCHELAUT (1985).

Thickness: About 60–80 m.

Lithostratigraphically higher rank unit: Lantsch Group.

Lithostratigraphic subdivision: -

Underlying unit(s): Rotmüller Formation.

Overlying unit(s): -

Lateral unit(s): -

Geographic distribution: Styria, highland in the surroundings of Graz; ÖK50-BMN, map sheet 134 Passail.

Remarks: TSCHELAUT (1985) supposed an affiliation of this succession to the Hochlantsch Nappe due to the existence of Middle to Upper Devonian volcaniclastic sediments within the formation.

Complementary references: FLÜGEL (2000).

Hochlantsch-Formation / Hochlantsch Formation

BERNHARD HUBMANN

Validity: Valid; first description by CLAR (1874: "Hochlautschkalk" Sic! typological error); formalized by FLÜGEL (2000: p. 35; Hochlantschkalk-Formation); change of name into Hochlantsch-Formation by EBNER et al. (2001).

Type area: ÖK50-UTM, map sheet 4223 Weiz (ÖK50-BMN, map sheet 134 Passail).

Type section: At the Hochlantsch, a mountain 40 km north of Graz (N 47°21'46" / E 15°25'28").

Reference section(s): -

Derivation of name: After Hochlantsch (1,720 m), a mountain approximately 40 km north of Graz.

Synonyms: Hochlantsch-Kalk (H. FLÜGEL, 1975); Hochlantschkalk (FLÜGEL & NEUBAUER, 1984); partly: Quadrigemminum-Kalk (PENECKE, 1890); Stringocephalenschichten (HERITSCH, 1906).

Lithology: Massive and bedded grey-blue limestones with rare fossils.

Fossils: Rugose and tabulate corals, stromatoporoids, conodonts.

Origin, facies: Lagoonal environment with some patch reefs.

Chronostratigraphic age: Givetian–Frasnian (? lower Famennian)

Biostratigraphy: Conodonts indicate upper Givetian to "do I and do II/III" (= *Manticocera*s and *Cheiloceras*/*Platyclymenia* ammonoid zones) according to GOLLNER & ZIER (1985: p. 52).

Thickness: Variable in thickness; up to 800 m.

Lithostratigraphically higher rank unit: Lantsch Group.

Lithostratigraphic subdivision: -

Underlying unit(s): Tyrnaueralm Formation.

Overlying unit(s): Steinberg Formation.

Lateral unit(s): Tyrnaueralm Formation, Zachenspitz Formation.

Geographic distribution: Styria, highland in the surroundings of Graz; ÖK50-BMN, map sheet 134 Passail.

Remarks: -

Complementary references: HUBMANN & MESSNER (2007).

Steinberg-Formation / Steinberg Formation

BERNHARD HUBMANN

Validity: Valid; first entry by ROLLE (1856: "Steinberger Kalke"); formalized by FLÜGEL (2000: p. 28) as Steinbergkalk-Formation; change of name into Steinberg-Formation by EBNER et al. (2000).

Type area: ÖK50-UTM, map sheet 4228 Voitsberg (ÖK50-BMN, map sheet 163 Voitsberg).

Type section: At the type region at Forstkogel north of village Steinberg, 15 km west of Graz (ÖK50-BMN, map sheet 163 Voitsberg) (N 47°04'14" / E 15°19'28"), FLÜGEL & ZIEGLER (1957) described a section on the southern slope of Forstkogel. BUCHROITHNER et al. (1979) studied five sections in that area, but due to bad outcrop situation and the fact of "considerable fluctuation of zone thickness", they considered a type profile inappropriate.

Reference section(s): BUCHROITHNER et al. (1979) mentioned five sections at Forstkogel; further reference sections are west of Gratwein 17 km northwest of Graz at Weihermühle (N 47°07'51" / E 15°18'22") and Gratwein-Au (N 47°08'31" / E 15°19'13") (EBNER, 1980).
Remarks: Some sections in eastern parts of the Rannach Nappe feature stratigraphic gaps especially in their upper parts (BUCHROITHNER et al., 1979; EBNER, 1980; EBNER et al., 1980a, b).

Derivation of name: After the village Steinberg, 15 km west of Graz.

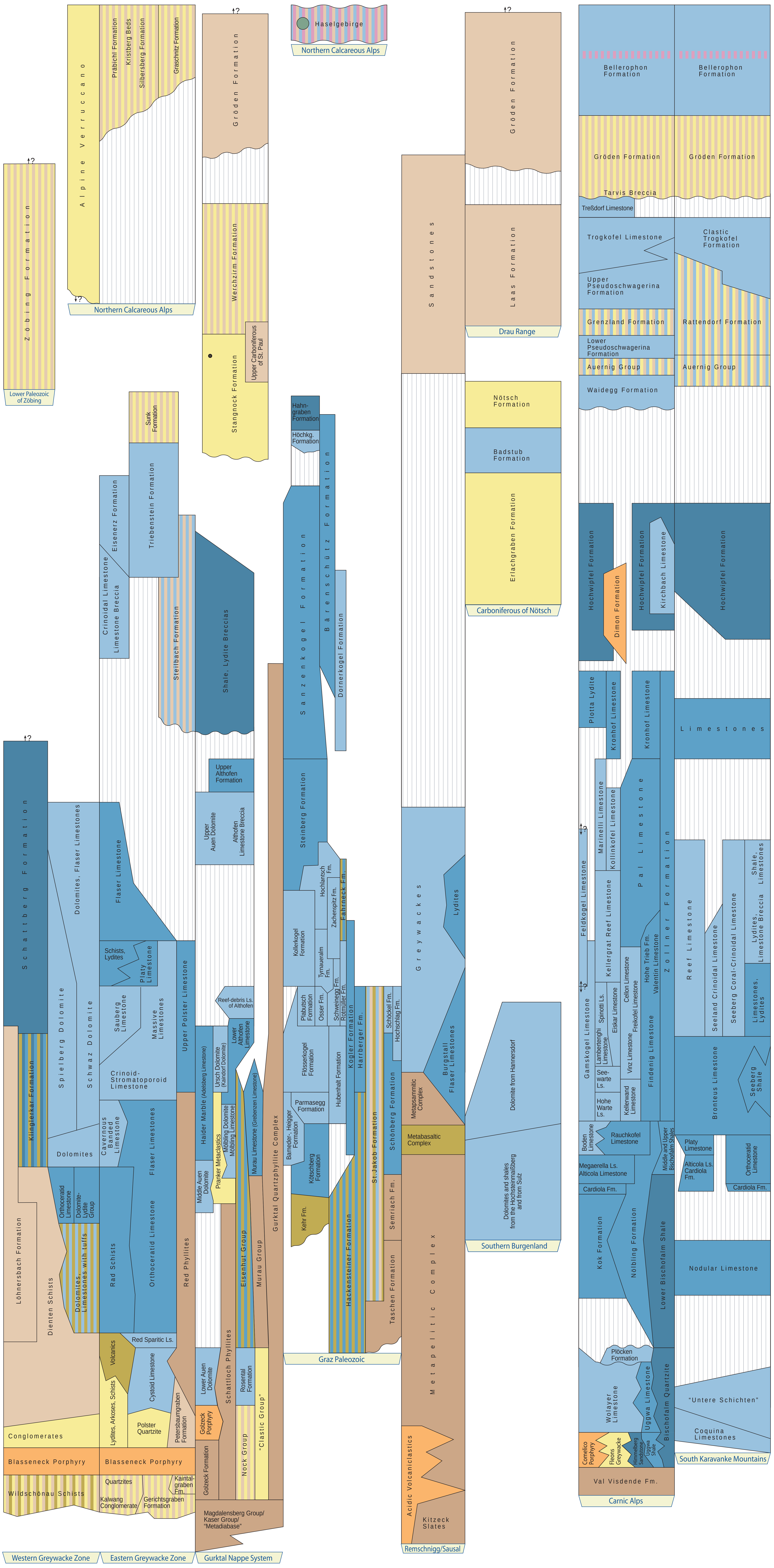
Synonyms: Steinbergkalk (H. FLÜGEL, 1975; BUCHROITHNER et al., 1979; EBNER, 1980; EBNER et al., 1980a, b; FLÜGEL & NEUBAUER, 1984); partly: Clymenienkalk (PETERS,

Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission

ASC



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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