Kellerwand Formation

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Österreichische Karte 1:50.000
Blatt BMN 197 Kötschach

Blatt UTM 3109 Oberdrauburg
Blatt UTM 3110 Kötschach-Mauthen
Blatt UTM 3116 Sonnenalpe Naßfeld

Carta Topografica d'Italia 1:50.000
Foglio 018 Passo di Monte Croce Carnico
Foglio 031 Ampezzo
Foglio 032 Tolmezzo

Definition

Prevalent pelagic mudstone/wackestone interbedded with lithoclastic packstone/grainstone and rare floatstone/rudstone (Schönlaub, 1985; Kreutzer, 1989, 1990, 1992a, b; Hubmann et al., 2003; Spalletta & Pondrelli, 2009).

Description

The Kellerwand Formation consists of four well-bedded facies listed in order of decreasing abundance.

Facies A: medium dark gray, thin to medium-bedded, wackestone to packstone with moderate yellow thin laminae of silt;

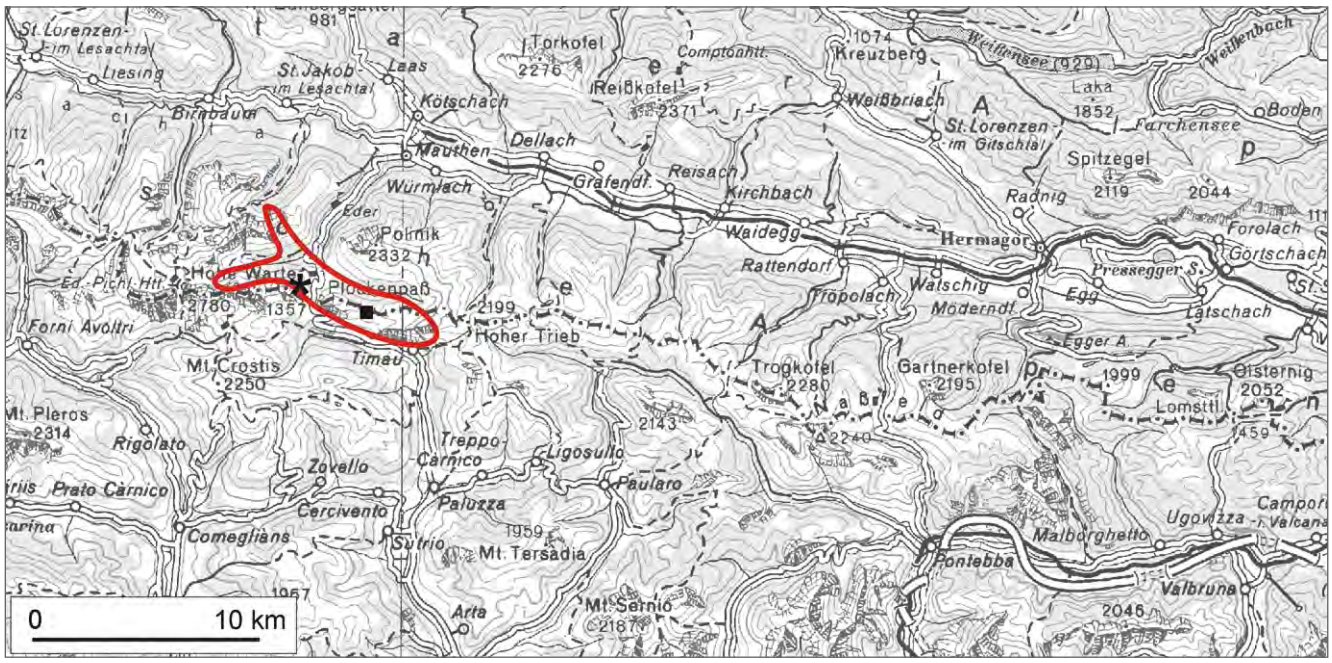
Facies B: medium dark gray, thin to thick bedded, often fining upward, moderately to well sorted and locally laminated grainstone (from very coarse up to granules to fine-grained) to packstone;

Facies C: medium light gray, medium to thick bedded, moderately to well sorted crinoidal-bearing grainstone (biosparite);

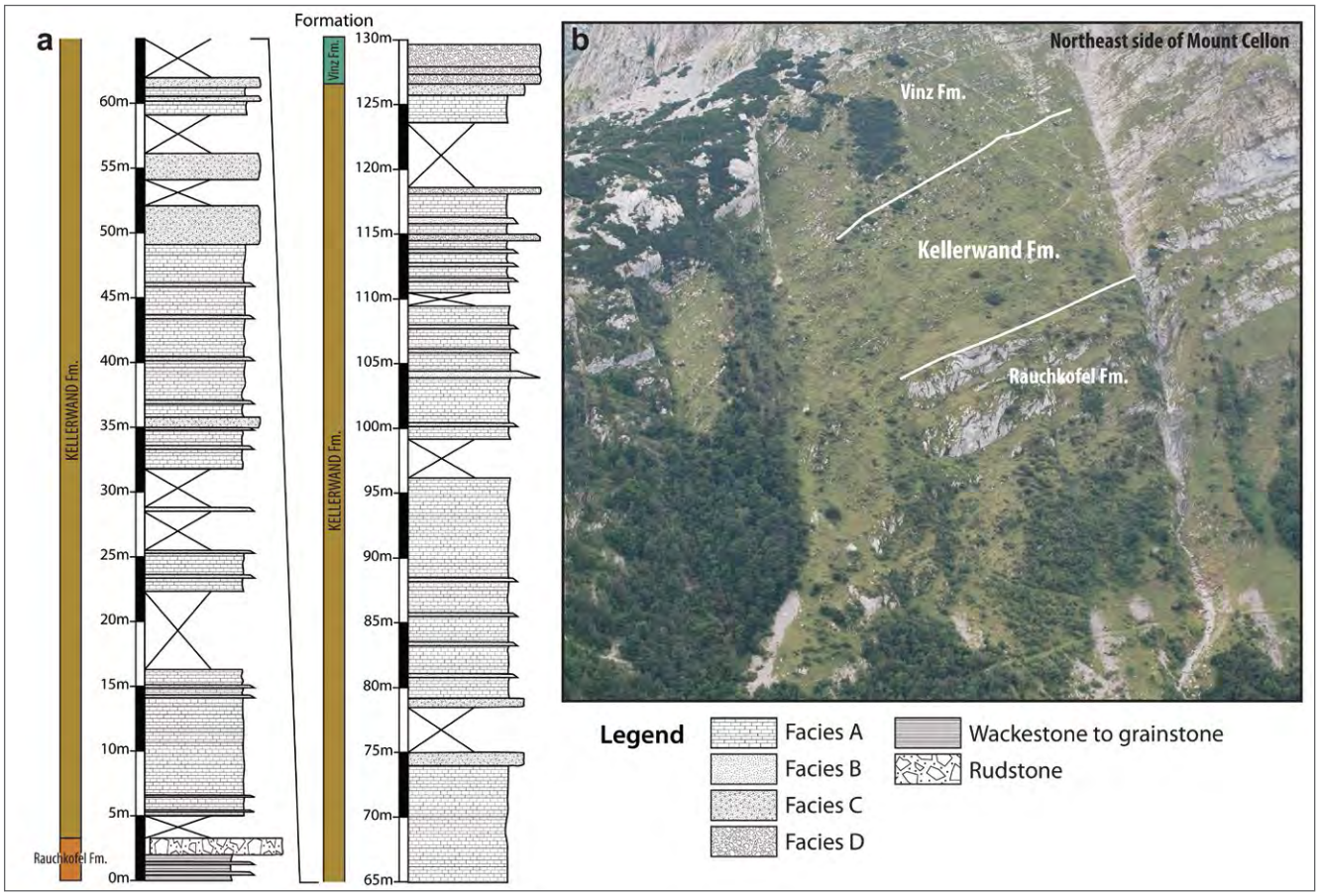
Facies D: medium dark gray, thick bedded, poorly sorted coral-bearing rudstone with clasts up to about 10 cm of diameter and poorly sorted very coarse to fine grainstone matrix.

Fossil content

Conodonts, crinoids, dacryoconarids, nautiloids, ostracods and trilobites have been found in the mudstone/wackestone deposits. Reworked bivalves, corals, echinoderms and foraminifers are described from the lithoclastic facies (Kreutzer, 1990, 1992a, b).



Areas of outcrop of the Kellerwand Formation with indication of the stratotype (asterisk) and reference section (square).



The Cellon Section. a) log of the Kellerwand Formation; b) view of the section taken from Pal Piccolo/Kleiner Pal (photo M. PONDRELLI).

Depositional environment

The Kellerwand Formation was deposited in different depositional environments depending on the different facies:

Facies A: pelagic sedimentation (outer ramp and basin);

Facies B: gravity-driven resedimented levels (tempestites) (outer ramp and basin);

Facies C: shoreface (inner ramp);

Facies D: gravity-driven resedimented deposits along a progressively forming slope and toe-of-slope.

Stratotype

Cellon Section, located on the north-eastern slope of Mt. Cellon/Creta di Collinetta (BANDEL, 1972), between coordinates N 46°36'28.1", E 12°56'26.0" (base of the section) and N 46°36'28.5", E 12°56'17.5" (top of the section).

Reference sections

Freikofel south Section, on the southern slope of Mt. Freikofel along the path n. 401 at coordinates N 46°35'55.7", E 12°58'46.7", where the lower boundary of the Formation is better exposed than in the type section.

Type area

Central Carnic Alps.

Main outcrop areas

The Kellerwand Formation crops out in the Rauchkofel area, in the south side of the Valentintal and between the Cellon/Creta di Collinetta and the Creta di Timau.

Thickness

About 95 m (Freikofel) to about 150 m (Kellerwand).

Boundaries

Underlying units – Rauchkofel Formation (conformable sharp contact).

Overlying units – Vinz Formation (conformable interfingering contact).

Lateral units – Hohe Warte Formation, Seewarte Formation (proximal part); Findenig Formation (distal part).

Derivation of name

After the lower Kellerwand below the Eiskar glacier.

Synonymy

Formazione di Monte Lodin [partim]: SELLI (1963).
Calcari stratificati giallastri [partim]: SPALLETTA et al. (1982).
Kellerwand Kalk [partim]: SCHÖNLAUB (1985).
Yellow bedded limestones [partim]: SPALLETTA & VENTURINI (1990).
Gelbe Plattenkalke der Kellerwand [partim]: KREUTZER (1990).
Kellerwand Kalk: KREUTZER (1992a).
Kellerwand limestone: KREUTZER (1992b).
Calcareniti di transizione distali: VENTURINI (2006).
Pal Grande Calcarenite [partim]: BRIME et al. (2008).
Calcareniti di Pal Grande [partim]: SPALLETTA & PONDRELLI (2009).

Views of the Kellerwand Formation in the field (photos M. PONDRELLI). a) Facies A: Freikofel section; b) Facies B: Cellon Section; c) Facies C: Cellon Section; d) Facies D: Cellon Section.

Chronostratigraphic age

Devonian: Pragian to Emsian (Kreutzer, 1990, 1992a, b).

Biostratigraphy

Conodonts. – The Kellerwand Formation spans up to the *inversus* Zone (*laticostatus* Subzone) (Cellon Section).

Complementary references -

Remarks -

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