

# La Valute Formation

CARLO CORRADINI, MARIA G. CORRIGA, MONICA PONDRELLI, HANS-PETER SCHÖNLAUB & LUCA SIMONETTO

Österreichische Karte 1:50.000

Blatt BMN 197 Kötschach

Blatt BMN 198 Weißbriach

Blatt BMN 199 Hermagor

Carta Topografica d'Italia 1:50.000

Foglio 018 Passo di Monte Croce Carnico

Foglio 032 Tolmezzo

Foglio 033 Tarvisio

Blatt UTM 3109 Oberdrauburg

Blatt UTM 3110 Kötschach-Mauthen

Blatt UTM 3116 Sonnenalpe Naßfeld

Blatt UTM 3117 Nötsch im Gailtal

## Definition

Well-bedded (5–20 cm in thickness) light gray/ochreous cephalopod bearing limestone (mudstone to wackestone), slightly nodular at places (mainly in the upper part of the unit).

## Description

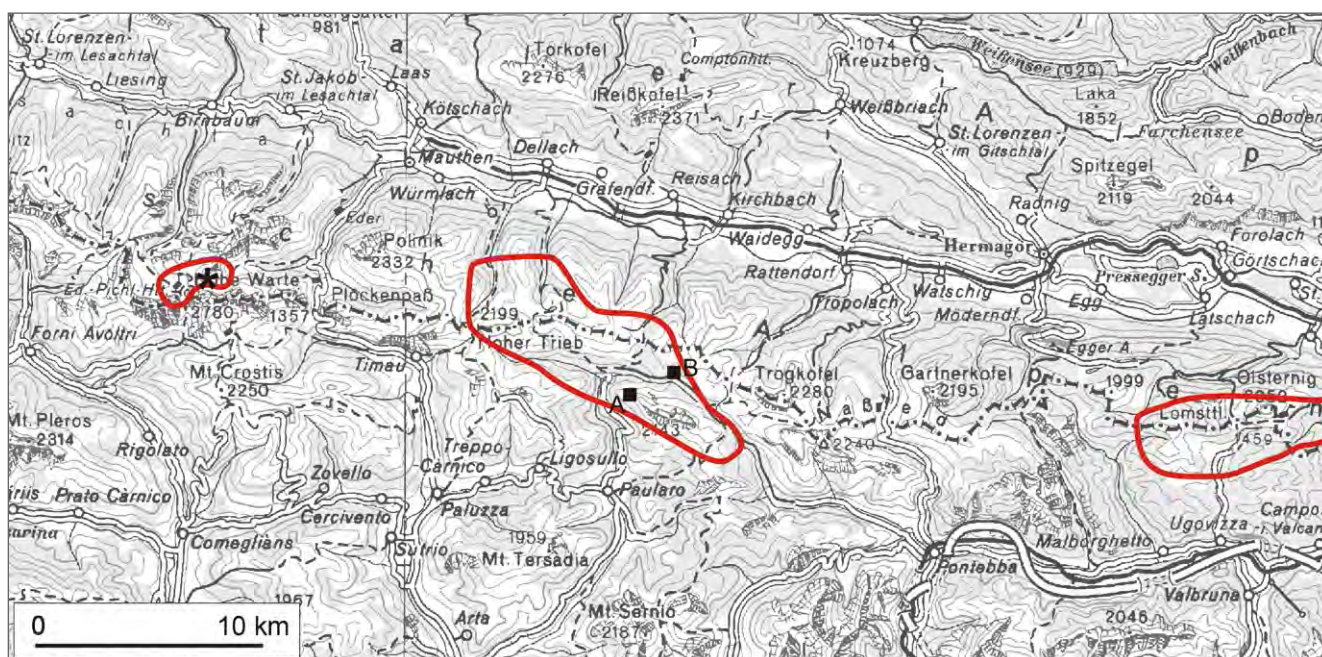
The La Valute Formation consists of thin-bedded light gray and brownish gray nodular mudstone to wackestone. At places it can be more coarse and compact. The thickness of beds is in general 10–15 cm, even if thinner or thicker beds may occur at places. In the uppermost couple of meters of the unit, beds become very thin to thin with silty and marly intercalations, then gradually pass into the Findenig Formation. Orthoceratid nautiloids, even if not very abundant, are the only fossils clearly visible in the field.

## Fossil content

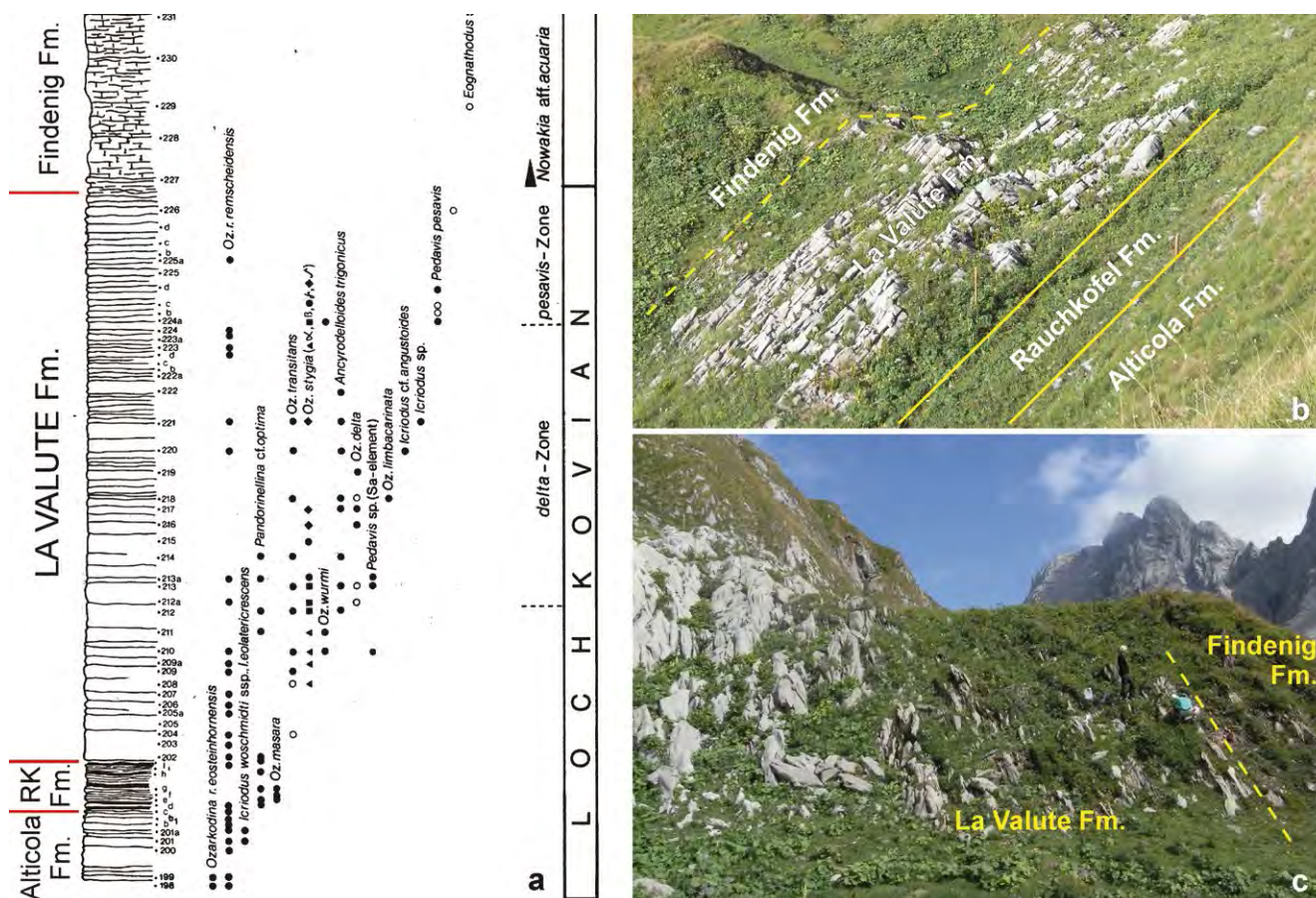
Conodonts, cephalopods (nautiloids), dacroconarids, sponge spicules, trilobites, ostracods, crinoids, brachiopods.

## Depositional environment

Pelagic environment.



Areas of outcrop of the La Valute Formation with indication of the stratotype (asterisk) and reference sections (squares). A: La Valute Cave Section; B: Rio Malinifer West Section.



The Rauchkofel Boden Section. a) log of the Devonian part of the section (modified after SCHÖNLAUB, 1980); b-c) views of the section (photo C. CORRADINI).

## Stratotype

Rauchkofel Boden Section, located on the southern slope of Mt. Rauchkofel (SCHÖNLAUB, 1970, 1980; SCHÖNLAUB et al., 1997), at coordinates N 46°36'53.5", E 12°52'33.0".

## Reference sections

La Valute Cave Section (coordinates N 46°34'18", E 13°07'19.1"), where the upper boundary of the unit is well exposed and the name La Valute limestone has been used for the first time (CORRIGA et al., 2011).

Rio Malinfier West Section (coordinates N 46°34'50", E 13°07'151.6"), where the boundaries with the Rauchkofel Formation, the Nölbling Formation and the Findenig Formation are exposed and the facies is deeper than the stratotype (CORRIGA, 2011; CORRADINI et al., 2012).

## Type area

Carnic Alps.

## Main outcrop areas

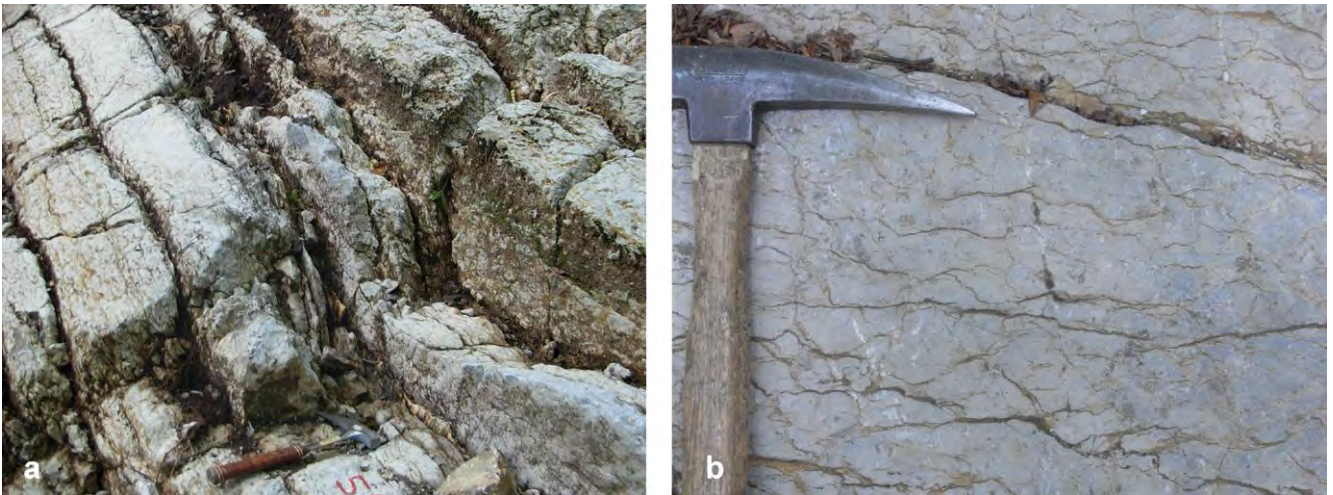
The La Valute Formation crops out along the whole Carnic Alps, mainly in Lake Wolayer-Rauchkofel, Cuestalta/Hoher Trieb to Mt. Pizzul and Monte Cocco sectors.

## Thickness

About 18 m.

## Boundaries

*Underlying unit* – Rauchkofel Formation (conformable sharp), Nölbling Formation (conformable sharp).



Views of the La Valute Formation in the field, Rio Malinfier West Section (a: photo L. SIMONETTO; b: photo C. CORRADINI).

*Overlying unit* – Findenig Formation (conformable gradual).

*Lateral unit* – Rauchkofel Formation, Nöbling Formation.

### Derivation of name

After La Valute, the westernmost top of Mt. Zermula massif.

### Synonymy

Grauer und rother Kramenzelkalk [partim]: FRECH (1894).

Calcari stratificati con calcescisti: TARAMELLI (1895).

Calcari a tentaculiti [partim]: VAI (1963); VENTURINI (2006).

Calcari nerastri a Brachiopodi e Crinoidi, calcari nodulari: ASSERETO et al. (1968).

Findenig-Kalk [partim]: PÖLSLER (1969).

Grey Flaser-limestone: SCHÖNLAUB (1980).

Nodular grey limestone: SCHÖNLAUB (1980).

*Orthoceras* limestone [partim]: SCHÖNLAUB (1980).

Pelagic tentaculitid limestone [partim]: SPALLETTA & VENTURINI (1990); VAI (1998).

Boden-Kalk: SCHÖNLAUB (1985).

Boden Limestone: KREUTZER (1992); FERRETTI et al. (1999); CORRIGA & CORRADINI (2009).

Calcari di Cuestalta [partim]: SPALLETTA & PONDRELLI (2009).

La Valute Limestone: CORRIGA et al. (2011, 2012); CORRADINI et al. (2012).

La Valute Formation: CORRIGA et al. (2012).

Bodenkalk/Boden Limestone: SUTTNER & KIDO (2014).

### Chronostratigraphic age

Devonian: Upper part of lower Lochkovian to upper Lochkovian.

### Biostratigraphy

*Conodonts*. – From the uppermost part of *Icr. postwoschmidti* Zone to within the *M. pandora*  $\beta$  Zone.

Different ages have been documented for the base of the unit in various parts of the Carnic Alps: in the central sector the base of the unit is in the lower part of the *A. carlsi* Zone (CORRIGA, 2011; CORRADINI et al., 2012), whereas in the eastern part (Monte Cocco area) lies in the uppermost part of the *Icr. postwoschmidti* Zone (CORRIGA & CORRADINI, 2009). The upper boundary can be always traced within the *M. pandora*  $\beta$  Zone (i.e. SCHÖNLAUB, 1980; CORRIGA et al., 2011).

*Dacryoconarids*. – *Homoctenowakia bohémica* to *Paranowakia intermedia* zones (ALBERTI, 1985).

### Complementary references -

### Remarks -

## References

- ALBERTI, G.K.B. (1985): Zur Tentaculitenführung im Unter- und Mittel-Devon der zentralen Karnischen Alpen (Österreich). – *Courier Forschungsinstitut Senckenberg*, **75**, 375–387, Frankfurt am Main.
- ASSERETO, R., DESIO, A., DI COLBERTALDO, D. & PASSERI, L.D. (1968): Note illustrative della Carta Geologica d'Italia alla scala 1-100.000. Foglio 14A Tarvisio. Ministero dell'Industria, del Commercio e dell'Artigianato. Direzione Generale delle Miniere. – Servizio Geologico d'Italia, 1–70, Ercolano.
- CORRADINI, C., PONDRELLI, M., CORRIGA, M.G., SIMONETTO, L., KIDO, E., SUTTNER, T.J., SPALLETTA, C. & CARTA, N. (2012): Geology and stratigraphy of the Cason di Lanza area (Mount Zermula, Carnic Alps, Italy). – *Berichte des Institutes für Erdwissenschaften, Karl-Franzens-Universität Graz*, **17**, 83–103, Graz.
- CORRIGA, M.G. (2011): Biostratigrafia a conodonti attorno al limite Siluriano-Devoniano in alcune aree del Nord Gondwana. – PhD Thesis, University of Cagliari, 152 p., Cagliari.
- CORRIGA, M.G. & CORRADINI, C. (2009): Upper Silurian and Lower Devonian conodonts from the Monte Cocco II section (Carnic Alps, Italy). – *Bulletin of Geosciences*, **84/1**, 155–168, Praha.
- CORRIGA, M.G., SUTTNER, T.J., KIDO, E., CORRADINI, C., PONDRELLI, M. & SIMONETTO, L. (2011): The age of the La Valute limestone-Findenig limestone transition in the La Valute Section (Lower Devonian, Carnic Alps, Italy). – *Gortania Geologia, Paleontologia, Paleontologia*, **32**, 5–12, Udine.
- CORRIGA, M.G., CORRADINI, C., PONDRELLI, M. & SIMONETTO, L. (2012): Lochkovian (Lower Devonian) conodonts from the Rio Malinfier section (Carnic Alps, Italy). – *Gortania Geologia, Paleontologia, Paleontologia*, **33**, 31–38, Udine.
- FERRETTI, A., HISTON, K. & SCHÖNLAUB, H.P. (1999): The Silurian and Early Devonian of the Rauchkofel Boden Section, Southern Carnic Alps, Austria. – In: HISTON, K. (ed.): V International Symposium, Cephalopods – Present and Past, Carnic Alps Excursion Guidebook. – *Berichte der Geologischen Bundesanstalt*, **47**, 55–62, Wien.
- FRECH, F. (1894): Die Karnischen Alpen. Ein Beitrag zur vergleichenden Gebirgs-Tektonik. – *Abhandlungen der Naturforschenden Gesellschaft zu Halle*, **18**, 1–514, Halle.
- KREUTZER, L.H. (1992): Photoatlas zu den variszischen Karbonat-Gesteinen der Karnischen Alpen (Österreich/Italien). – *Abhandlungen der Geologischen Bundesanstalt*, **47**, 1–129, Wien.
- PÖLSLER, P. (1969): Stratigraphie und Tektonik im Nordabfall des Findenigkofels (Silur bis Karbon; Karnische Alpen, Österreich). – *Jahrbuch der Geologischen Bundesanstalt*, **112**, 355–398, Wien.
- SCHÖNLAUB, H.P. (1970): Vorläufige Mitteilung über die Neuaufnahme der silurischen Karbonatfazies der Zentralen Karnischen Alpen (Österreich). – *Verhandlungen der Geologischen Bundesanstalt*, **1970**, 306–315, Wien.
- SCHÖNLAUB, H.P. (1980): Carnic Alps. Field Trip A. with contributions from JAEGER, H., HOUSE, M.R., PRICE, J.D., GÖDDERTZ, B., PRIEWALDER, H., WALLISER, O.H., KRÍŽ, J., HAAS, W. & VAI, G.B. – In: SCHÖNLAUB, H.P. (ed.): Second European Conodont Symposium, ECOS II, Guidebook, Abstracts. – *Abhandlungen der Geologischen Bundesanstalt*, **35**, 5–57, Wien.
- SCHÖNLAUB, H.P. (1985): Das Paläozoikum der Karnischen Alpen. – In: SCHÖNLAUB, H.P. (ed.): Arbeitstagung der Geologischen Bundesanstalt 1985 Kötschach-Mauthen, Gailtal – *Geologische Bundesanstalt*, 34–52, Wien.
- SCHÖNLAUB, H.P., HISTON, K., FERRETTI, A., BOGOLEPOVA, O. & WENZEL, B. (1997): Stop 2: Rauchkofel Boden Section. – In: SCHÖNLAUB, H.P. (ed.): IGCP-421 North Gondwanan Mid-Palaeozoic Biodynamics, Guidebook. – *Berichte der Geologischen Bundesanstalt*, **40**, 107–120, Wien.
- SPALLETTA, C. & PONDRELLI, M. (2009): Calcarei di Cuestalta. – In: VENTURINI, C. (ed.): Note Illustrative del Foglio 031 Ampezzo. – *Carta Geologica d'Italia alla scala 1:50000*, Istituto Superiore per la Protezione e la Ricerca Ambientale (ex-Agenzia per la Protezione dell'Ambiente e per i Servizi Tecnici, Servizio Geologico d'Italia), 41–42, Stampa A.T.I. – S.EL.CA. srl. – L.A.C. srl. – System Cart srl., Firenze.
- SPALLETTA, C. & VENTURINI, C. (1990): Stratigraphic correlation form of the Palaeozoic sequence in the Carnic Alps. – *Rendiconti della Società Geologica Italiana*, **12**, 417–421, Roma.
- SUTTNER, T.J. & KIDO, E. (2014): Bodenkalk / Boden Limestone. – In: PILLER, W.E. (ed.): The lithostratigraphic units of the Austrian Stratigraphic Chart 2004 (sedimentary successions), Vol. I – The Paleozoic Era(them). – *Abhandlungen der Geologischen Bundesanstalt*, **66**, 70, Wien.
- TARAMELLI, T. (1895): Osservazioni stratigrafiche sui terreni paleozoici nel versante italiano delle Alpi Carniche. – *Rendiconti della Reale Accademia dei Lincei*, s. **5**, 4, 185–193, Roma.
- VAI, G.B. (1963): Ricerche geologiche nel gruppo del M. Coglians e nella zona di Volaia (Alpi Carniche). – *Giornale di Geologia*, **30**, 137–198, Bologna.
- VAI, G.B. (1998): Field trip through the Southern Alps: an introduction with geologic settings, palaeogeography and Palaeozoic stratigraphy. – In: PERRI, M.C. & SPALLETTA, C. (eds.): Southern Alps Field Trip Guidebook. Seventh International Conodont Symposium held in Europe. – *Giornale di Geologia, Special Issue*, **60**, 1–38, Bologna.
- VENTURINI, C. (2006): Evoluzione geologica delle Alpi Carniche. – *Edizioni del Museo Friulano di Storia Naturale*, **48**, 208 p., Udine.

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Autor(en)/Author(s): Corradini Carlo, Corriga Maria G., Pondrelli Monica, Schönlaub Hans-Peter, Simonetto Luca

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