

Heritage stones in the Carboniferous of Belgium: a story of blue, grey, beige, red and black

Julien Denayer * ¹, Francis Tourneur ²

¹ Département de Géologie, University of Liège, Belgium

² Service Géologique de Wallonie, Belgium

Belgium is a country rich in ornamental stones, competing in diversity and quality with the Mediterranean. A large number of varieties are Devonian, such the famous red and black marbles of Frasnian age. The Belgian Carboniferous is nonetheless rich in ornamental facies. The lower Carboniferous succession – the Dinantian auct. – is dominated by carbonates. Besides local topography of the shelf and the presence of troughs and (Waulsortian) banks, the deposition was driven by the third-order eustatic sequences. It resulted in a series of limestones, either massive or bedded, dense and non-porous, dark to light in colour. The quality of the rocks, their abundance and good outcropping conditions allowed their extraction since the Antiquity. Two of these limestones are already recognised as Heritage Stones by the IUGS: the Belgian ‘black marbles’ and ‘petit granit’ or ‘blue stone’.

Behind the term black marble are hidden several varieties (‘marbre noir de Dinant’, ‘de Denée’ or ‘de la Molinee’, ‘de Theux’, ‘de Basècle’, ‘de Namur’, ‘de Golzinne’) which corresponds to distinct stratigraphic horizons, depositional settings and fossil contents, but also different uses, often prestigious.

The ‘petit granit’, a thickly-bedded crinoidal limestone, dark grey to dark blue, with abundant white fossils was quarried since the 16th century but used as ‘marble’ from the second part of the 19th century onwards, and still is in the Condroz and Soignies areas. The ‘petit granit du Bocq’ variety is from a slightly older horizon with distinct fossils. Uncountable buildings, public and private are made of ‘petit granit’ in Belgium, northern France, the Netherlands, and more surprisingly, in central and south America and in along the Suez Canal.

The famous Waulsortian banks cropping in the Meuse River valley provided several ornamental stones of local use (‘marbre de Saint-Gérard’, ‘rose de Gérin’), or more distributed (‘marbre de Ferrière-la-Petite’, a few kilometres from the Belgian border).

Light-grey and beige massive limestone of lower Visean age (‘pierre de Chenoy’ in historical use, ‘pierre de Vinalmont’ in contemporaneous nomenclature), or upper Tournaisian (‘pierre de Longpré’) were also used since the Middle Ages, notably in floors in combination with the black marbles.

The middle Visean ‘pierre de Meuse’ is an assemblage of ash-grey (‘pierre de Meuse’ s.s.) to black limestone (‘marbre noir de Namur’) was used since the Antiquity as building and ornamental (polished) stone, often used in combination with red marbles and white material (Carrara white marble) in religious buildings.

The ‘marbre bleu belge’, an upper Visean, black fine-grained limestone cut with many aesthetic veins of white calcite, was particularly appreciated since the end of the 19th century, notably during the Art Déco period.

Limestone breccias were abundantly quarried since the Middle Ages in the Meuse River valley. The ‘brèche de Waulsort’ or ‘Herculeanum’, ‘brèche de Walzin’ and ‘brèche de Houx’, with their reddish matrix, were particularly appreciated.

Many other rocks of Carboniferous age were used very locally, either as rubble stone, dimension stone or ornamental stone. Their diversity, somewhat eclipsed by the dominant ‘black marbles’ and ‘petit granit’, deserves to be reassessed.