

Where to see Frosterley Marble

You can see a superb natural outcrop of Frosterley Marble in the Bollihope Burn at Harehope Quarry, just outside Frosterley in Weardale. This disused limestone quarry is now an environmental education centre (www.harehopequarry.org). The best place to view the Frosterley Marble is from a footbridge on a permissive path at the west end of the quarry.



©NPAP/Elizabeth Pickett

Frosterley Marble in the Bollihope Burn at Harehope.

There are fonts of polished Frosterley Marble in several churches in Weardale, and sculptures in Frosterley and at the Durham Dales Centre in Stanhope. The Black Bull Inn in Frosterley has slabs of Frosterley Marble in its stone-flagged floor. Beyond the North Pennines it can be found in Auckland Castle, Durham Cathedral, the Laing Art Gallery in Newcastle, York Minster and even as far afield as Bombay Cathedral!



The font in St Michael and All Angels' Church, Frosterley. It was rescued from a churchyard in Lincolnshire, restored and installed in the church in 1989.

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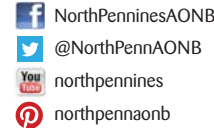
Area of Outstanding Natural Beauty



The North Pennines is one of England's most special places – a peaceful, unspoilt landscape with a rich history and vibrant natural beauty. In recognition of this it is designated as an Area of Outstanding Natural Beauty (AONB). The area is also a Global Geopark – an accolade endorsed by UNESCO.

Frosterley Marble is a layer of dark grey limestone which contains amazing fossils of extinct corals. This leaflet tells the story of this distinctive rock.

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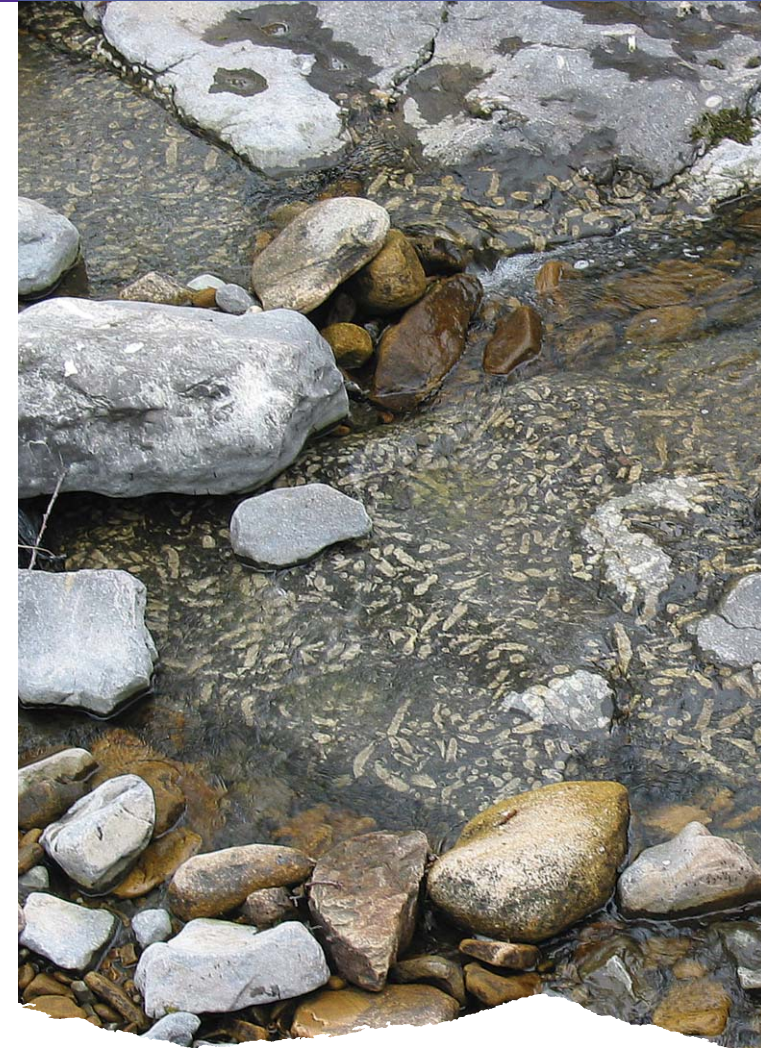


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Frosterley Marble



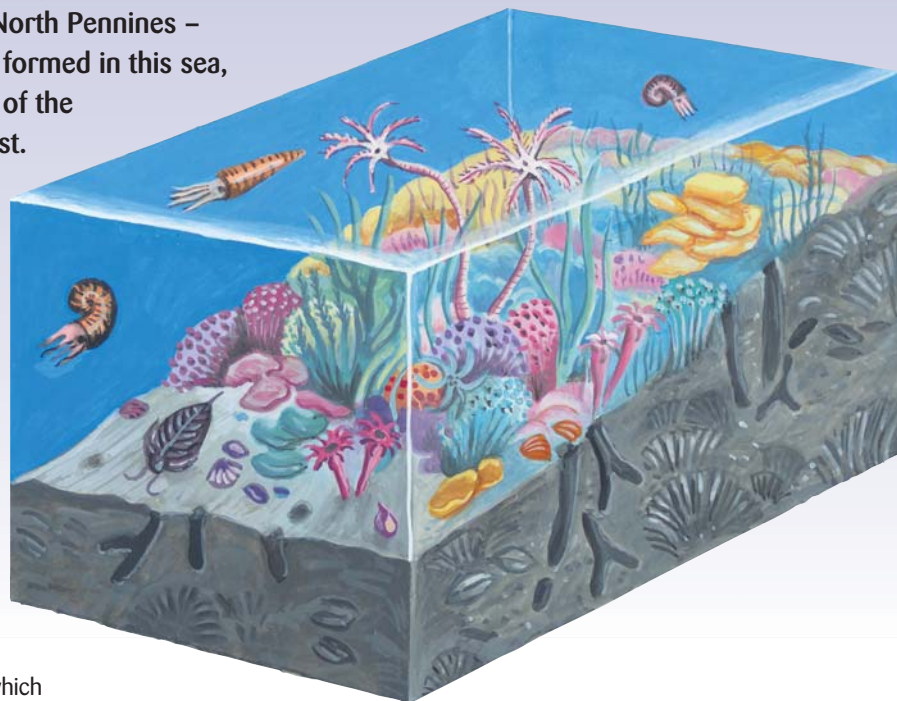
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Imagine a shallow tropical sea, alive with bright corals and shellfish. This isn't the Bahamas but the North Pennines – 325 million years ago! Frosterley Marble formed in this sea, and its beautiful fossils give us a glimpse of the creatures that lived here in the distant past.

Tropical seas

About 325 million years ago – in the Carboniferous Period – the piece of the Earth's crust which would eventually become Britain lay almost astride the equator. Northern England basked in a tropical climate and was periodically covered by warm, shallow seas. Sea creatures such as corals, crinoids, sponges and brachiopods flourished in the clear, sunlit waters. Their remains accumulated on the sea floor, eventually becoming the layers of grey limestone we see in the North Pennines today.



Elizabeth Pickett © BGS, NERC

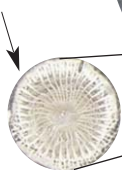
▲ A Carboniferous tropical sea.

A bed of corals

Frosterley Marble is a layer of dark grey limestone which contains beautiful fossils of the extinct solitary coral *Dibunophyllum bipartitum*. These creatures had curved horn-shaped skeletons and tentacles which filtered out particles of organic matter from the seawater. When they died, their skeletons collected on the sea floor and were covered by limy ooze which hardened into dark grey limestone. The corals are now visible as white shapes which show the internal structure of their skeletons in intricate detail.



This cross-section through a coral is shown here at actual size



▲ The corals would have looked like this.

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▲ Fossil corals in polished Frosterley Marble.

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Not a marble!

Despite its name Frosterley Marble is not a true marble, but a limestone which can be cut and polished to create an ornamental stone. To a geologist, marble is limestone which has been altered, or 'metamorphosed', by heat or pressure, or both, in the Earth's crust. Frosterley Marble has not been affected in this way – unlike the 'Sugar Limestone' of Upper Teesdale, which was recrystallised by heat from the once-molten Whin Sill and thus is a true marble.

The Great Limestone

Frosterley Marble is a layer, up to a metre thick, within the upper part of the Great Limestone. At 20 metres thick, this is one of the thickest limestones in the North Pennines and has been quarried in Weardale for centuries – to produce lime and roadstone, and for use in the iron, steel and cement industries. Today, one of the two remaining working quarries in Weardale lies just outside Frosterley.



The Great Limestone in an old quarry near Frosterley.

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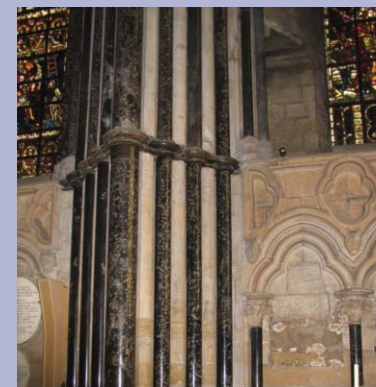


▲ Late 19th or early 20th century quarrymen in the Parson Byers limestone quarry near Stanhope.

Courtesy of J. Bainbridge

Prized for centuries

Frosterley Marble has been quarried and worked as an ornamental stone for many centuries. A document from 1183 mentions 'Lambert the marble cutter' of Stanhope – almost certainly a reference to the working of Frosterley Marble. In Durham Cathedral, Frosterley Marble has been used for flooring and columns, most famously in the 13th century Chapel of the Nine Altars. In the 19th and early 20th centuries Frosterley Marble was popular for making fountains, floors and columns in churches and public buildings in northern England.



Frosterley Marble columns in the Chapel of the Nine Altars, Durham Cathedral.

© Durham Cathedral