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## 9 Kirkby Stephen

**Theme:** Rivers, seas and life

### Location

9 Kirkby Stephen Brockram. There are rail and bus services to Kirkby Stephen. From there it is a short walk along riverside footpaths [NY 773 074].

### Description

In the valley of the River Eden beside Kirkby Stephen is a rock called Brockram. That's a local Cumbrian word and means broken rock, which is exactly how it looks.

Angular fragments, mostly of grey limestone, but with some sandstone and rare Whin Sill dolerite, are bound together in a pale red, sandy, muddy cement. The geological term for rocks like this is breccia. The fragments are mostly older Carboniferous rocks and sometimes you can find characteristic fossils of corals and other marine animals in them. Around 275 million years ago in the Permian Period these fragments were scree and debris eroded from a nearby mountain range and carried quickly downstream by flash floods onto a plain below. At that time Britain was around the same latitude that Oman is now, and the environment and its climate was the same too: hot, dry, mountainous desert with abrupt rainstorms.

Beneath Stenkrith Bridge the River Eden has cut a spectacular narrow slot channel (called the Span of Eden) through the Brockram. You can also see Brockram in old quarries west of Nateby, probably the source of some of the stone used to construct many of Kirkby Stephen's distinctive buildings.

### Photographs

(Photo 09-1) 9 The "Span of Eden" eroded in the Brockram beneath Stenkrith Bridge.

(Photo 09-2) 9 Kirkby Stephen.



*(Photo 09-1) The "Span of Eden" eroded in the Brockram beneath Stenkrith Bridge.*



*(Photo 09-2) Kirkby Stephen.*