

*Looking at this quarry face, what does it tell us about the history of the Earth?*

*The rocks are mostly grey with some thin brown bands*

*The rocks are arranged in beds dipping down to the right*

*Parts of fossils*

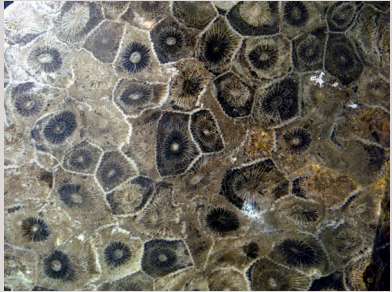
Grey rocks like these usually contain lots of calcium - the stuff that sea shells and our teeth and bones are made of. The thin brown bands are deposits of silt and mud, which must have been carried by rivers into the sea from a nearby land mass.

Rocks with layers like these are called "sedimentary" rocks. These layers are usually laid down in water over a very long time.

Fossils are the 'remains' of animals and plants that lived when these rocks were being made. They include corals, sea lilies, shellfish, trilobites and sea urchins.

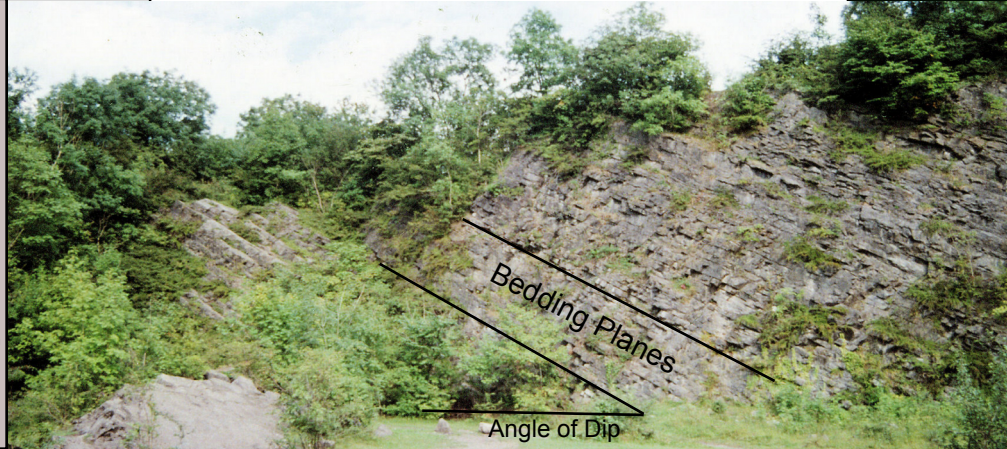
Sometime later, the flat beds of rock must have been folded by great forces to make them dip downhill.

These animals need warm, clear, shallow seas which the sun can shine through like those found in the Tropics today.



*Lonsdalia coral*

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*Spirifer brachiopod*

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If we put these facts together with some more information from other nearby quarries, we can say:

1. The rocks are limestone which was created millions of years ago in warm seas near the Equator.
2. Sometimes rivers carried mud and silt into sea where it was laid down as thin beds.
3. The sea was a living environment vibrant with life.
4. After the layers had become rock, they were pushed by a great force from the south-east which tipped them up.
5. Very slowly, the rocks were moved from the tropics where they formed nearly 5000 kilometres to Clitheroe.
6. At some time the rocks emerged from the sea and were worn down by rivers and glaciers to their present level.
7. All this happened very very slowly so it must have taken a very long time - over 300 million years!

*Cross Hill Quarry*