10 Lacy’s Caves

Theme: Rivers, seas and life

Location

10 Lacy's Cave — Penrith aeolian sandstone. Park in Little Salkeld and take the footpath north beside the railway line and the river. It is a 5 kilometre roundtrip walk [NY 563 380].

Description

In the Vale of Eden, from just south of Carlisle, in a band passing through Penrith and Appleby to Kirkby Stephen, a red sandstone dominates both natural rock outcrops and the building stones of towns, villages and farms.

The rock is called the Penrith Sandstone and it is Permian in age, that’s around 275 million years ago. Lacy’s Caves are just one of many places you can see it. If you look at the sandstone with a magnifying lens you can see many rounded grains of quartz, with a red, iron-rich, coating. The surface of the grains is frosted (finely pitted), telling us that this was once sand blowing around in a desert. In other outcrops, such as Cowraik Quarry, you can even see the dunes, formed by a prevailing wind that blew from the southeast. Desert environments at that time hosted few animals and rarely preserved fossils, but footprints of vertebrates (perhaps amphibians or reptiles) have been found in slabs of sandstone nearby.

At Lacy’s Caves, like many other places, the sandstone is soft enough to be carved, but elsewhere it can be a hard and durable building stone. The difference is that the hard rock has silica holding the grains together; a secondary solution process that happened not long after the dunes were formed. Diagonal white veins that crisscross the rock were also once a silica solution.

Who was Lacy? He was a Lieutenant Colonel who lived in Salkeld Hall in the 18th Century. Like others at the time, he was attracted by the notion of romantic nature and so had the caves carved; it’s even claimed he installed a hermit there to complete the folly. His empathy with landscape didn’t extend to Long Meg stone circle however; he is said to have planned to have it blown up but if he did that failed.

Photographs

(Photo 10-1) Silica veins criss-crossing Penrith Sandstone in Lacy’s Caves.

(Photo 10-2) Lacy's, Caves.

(Photo 10-3) Close-up of rounded and frosted sand grains.

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