



MGA

June 2024

Manchester Geological Association

CONTENT

Page 2/3 **Celebration of 100 years of the MGA in 2025**

Page 2 **A new field guide, "The Southern Pennines"**

Pages 4 to 9 **A Trip to the National Coal Mining Museum, Wakefield**

Page 10 **Other societies events**

Page 11 **MGA event details**

Printed Newsletter

Would Members please note, that except for those who have paid the full postal subscription, a printed copy of the newsletter is no longer available.

However, the newsletter is formatted so that if you so wish it can be printed on a home printer.

EVENTS

Full details on last page

Fieldtrips

July 17 Geology of Crummackdale

Aug 10 Geology and Industrial Archaeology of Healey Dell

Sep 03 Building Stones of Central Manchester

Lectures

Saturday 19 October

Fred Broadhurst Memorial

Wednesday 6 November
Zoom

Saturday 7 December
1.30pm to 4.30pm

Wednesday 15 January
Zoom



Celebration of 100 years of the MGA in 2025

By Peter del Strother

Under the leadership of Dr. Margaret Hartley, past president, some members of the MGA are writing geological trails for locations in the Manchester area. These will be published as a guide by the Geologists Association. It will replace '*Geology of the Manchester Area*', *GA Guide no. 7*, produced in 1991. Several of the ten or more excursions are incorporated in this year's field excursion programme. In order to widen its appeal, because many of its readers will have interests not confined to geology, the information in the trails will incorporate some relevant local industrial archaeology and history. Photos from some of the locations below.



Above; Mam Tor



Left: Alderley Edge

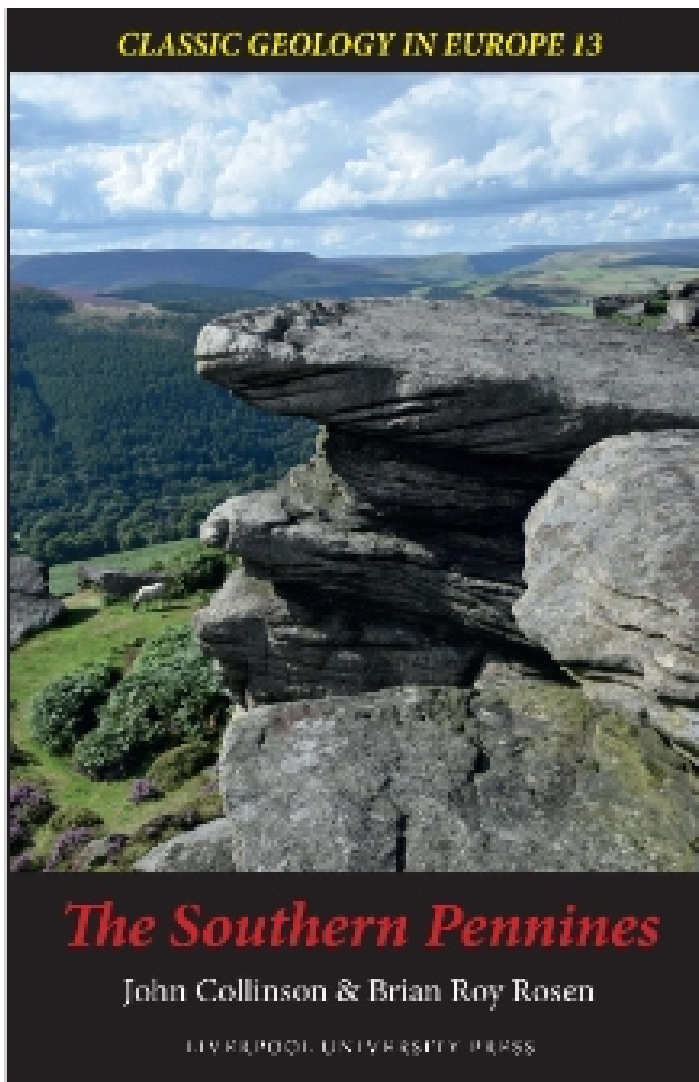
Fossil dunes





Triassic rocks by Heysham nuclear power plant

A new field guide, “**The Southern Pennines**”



It is to be published by Liverpool University Press in September. It is the latest in the well-regarded series “Classic Geology in Europe”, formerly published by Dunedin Academic Press.

The book, authored John Collinson and Brian Roy Rosen, is intended as a guide for exploring the geology of the Pennines between the southern Yorkshire Dales and the southern edge of the Peak District. Whilst concentrated on the main Pennine range and the Derbyshire White Peak limestone massif, the guide includes higher ground to the west, Rossendale, the Forest of Bowland and the Staffordshire Moorlands. Whilst written and illustrated around the level of undergraduates studying geology, the book should be relevant to those interested in environmental sciences and physical geography. It should also appeal to professional and amateur geologists and to visitors to the area, including those interested in industrial history and in a better understanding of the landscape.

The guide largely deals with sedimentary rocks of Carboniferous age (360-300 Ma), discussing the evolving tectonic regime and its influence on the development of sedimentary basins and the associated changing depositional environments. It describes how tectonic deformation at the end of the Carboniferous created structures that control present-day outcrop patterns.



A Trip to the National Coal Mining Museum, Wakefield

By Lyn Relph

This was an interesting day out with lots of machinery on display as well as history exhibits. In the Hub is a good café and other facilities. A guided tour of the wash house brings home some of the realities of working in the mine. The steam powered winding gear was running.



There are underground trips, but it is advisable to book in advance; I didn't go down.

In the Hub there are a few specimens of plant fossils, but not much else geology related; that is until I ventured to the far western end of the site, which got much more interesting.

The sound of running water is coming from the mines. It is bright orange as can be seen in the screen shot from Apple Maps. This contaminated water is pumped into huge settlement ponds of which there are six. To the right, north-east, of the ponds are the reed filtration beds.

Now the really interesting bit is to be found at the very bottom of the map where the word road is just visible. Behind a building and mine ventilation shaft is the entrance to Hope Mine, which is marked on the site plan. Now to the right of the mine entrance is a small rock face exposure.

The face is crumbly and the upper part is stabilised with netting and rock bolts.

I took several close-up photos starting at the bottom. The whole exposure is about two metres high.





At the very bottom is shiny black coal; the lower contact was not seen.

Next is a layer of orange, soft clay which smears when I rubbed my finger on it. The bottom contact with the coal is sharp.

This orange clay grades up into pale grey which becomes darker and more crumbly.

This crumbly material does not appear to have any pebbles, but is sandy in places.

The contact with the overlying coal is sharp.





The coal seam is weathered and quite fissile. There appears to be several breaks or changes in the dispositional environment during the time that it was deposited.

At the top is a small sandstone bed which has a sharp base, above this is a bed of black shale (see below).

There is a pile of fallen material to the right of the exposure where I turned over a few bits of shale that I think came from this bed. This turned up some nice fossils including a piece of *Cordaites* leaf (see next page).

This must be from one of the marine bands, but I don't know which.





So what was happening here? Well my thoughts are black shiny coal deposited in raised area of delta without any clastic inputs. Muds in calm shallow water possibly oxbow lake. Main coal deposited on flood plane which flooded. This was capped by sand from flooding with relative sea level rise and the deposition of the shales.

It was a good day out, but some information on this interesting exposure would have been very welcome.



Other Societies Events

BCGS <http://bcgs.info/pub/>

28 July Field Meeting : Tardebigge, Bromsgrove

17 August A Geology Walk around the Severn Valley Country Park, Shropshire

Leeds Geological Society <http://www.leedsga.org.uk/>

October 10 Here be sea monsters: New perspectives on fossil marine reptiles.

GeoLancashire <https://geolancashire.org.uk/lectures-and-excursions/>

July 17 PdS on “Geology of Crummackdale”

Aug 10 BJ/PdS: “Geology and Industrial Archaeology of Healey Dell” (courtesy of Ron Powell)

Sep 03 PdS: “Building Stones of Central Manchester” (joint with MGA).

Sep 17-24 Iceland: GeoLancashire (1922-2022) trip organised by ‘Volcanic Experiences’

OUGS North West Branch <https://ougs.org/northwest/>

July 13 The Castle Head intrusion, Keswick. Alan Smith (CGS)

July 14 Geology and mines of West Cumbria. David Kelly (CGS)

Liverpool Geological Society <https://liverpoolgeologicalsociety.org/>

1-10 August Iceland. Field excursion organised by Hazel Clark via Izzy Tours.



MGA field excursions 2024

July 17 PdS “Geology of Crummackdale” (joint WGS and perhaps with YGS).

Meet at Town Head Rd, Austwick at SD769687 or at Crag Hill Rd, Horton-in-Ribblesdale at SD805724. This will be a one-way trail, north to south, about 12 km long but with an option to reduce that by missing the Norber erratic locality. It will be necessary to leave a car at Austwick to take drivers back to Horton in Ribblesdale. This will be arranged prior to the excursion. We will see Carboniferous limestone and what is probably the most spectacular limestone pavement in northern England, a Silurian mudstone with Liesegang rings, a well exposed unconformity at Austwick Beck Head where a Carboniferous lime mudstone/siliciclastic conglomerate overlies bedded and cleaved Ordovician basement with enigmatic jointing, Silurian turbidites with rip-up clasts, cleavage and cleavage refraction, an unconformity at Nappa Scars with a difficult to interpret boulder bed and the Norber Erratics. All this is set in a glaciated landscape with a well exposed syncline in Silurian rocks seen in one side of the valley.

Aug 10 BJ/PdS: “Geology and Industrial Archaeology of Healey Dell”. Meet on Station Rd, Broadley. Coal measures sandstones and industrial archaeology in a spectacular gorge with waterfalls, created by glacial meltwater.

Sep 03 PdS: “Building Stones of Central Manchester”. Meet (probably at 13.30) at Visitor Reception Area on Library Walk, which is between Manchester Town Hall Extension and the Central Library. If oversubscribed, for traffic safety reasons I will run a repeat. Building stones and their geological background, plus some aspects of the history of Manchester.

Please email the excursion secretary Peter del Strother at outdoors@mangeolassoc.org.uk for details and meeting times.

Indoor Meetings Summary 2024/25

Saturday 19 October 1.30pm to 4.30pm Fred Broadhurst Memorial
Prof Peter Falkingham (Liverpool University), TBA

Wednesday 6 November Zoom

Saturday 7 December 1.30pm to 4.30pm

Wednesday 15 January Zoom

Saturday TBA February AGM

Saturday events are in the Williamson Building, University of Manchester.

Doors open from 12.30.

Bring your own drinks. There will be a social comfort break of 20-30 minutes between the talks.

