



Manchester Geological Association

President: Dr Cathy Hollis

June 2019

www.mangeolassoc.org.uk

Founded 1925

Geologists' Association GeoConference 2019

You will have seen the advert for the forthcoming GeoConference, which the MGA is co-ordinating on behalf of the Geologists Association; it will be held from Friday 18th - Sunday 20th October 2019. There is a charge for the Saturday Day of Lectures of £40 for GA members and Affiliates of which MGA is one (ie the price MGA members pay is £40). Your Council has made a decision to subsidise MGA members attending the Saturday Lectures Day to the extent of £10 (ie you will pay £30 for the day - this DOES NOT include the Saturday evening Conference Dinner). For logistical reasons however, this £10 subsidy will be returned to members ON THE SATURDAY MORNING of the Conference when they register on arrival. This means you will need to book via the Geologists Association website <https://geologistsassociation.org.uk/conferencebooking/> and pay the full price together with your Conference Dinner Fee and Field Trip fees if either are applicable. The £10 will be returned to you in cash. In order to assist us in planning (ie having sufficient £10 notes available!), please email indoors@mangeolassoc.org.uk or telephone to advise me that you have booked.

Quick Diary

Outdoor Meetings 2019

Saturday 17 August 2019. Mam Tor Castleton, Geology & Landslide Joint MGA/OU
Sunday 22 September 2019. Broadhurst Memorial Field Trip – The Goyt Valley Round Marple:
Industrial History Meets Geology

Indoor Meetings 2019/20

Wednesday 25 September 2019: Holiday Geology
Friday 18 – Sunday 20 October: Geologists Association GeoConference
Saturday 23 November 2019: Broadhurst Memorial Lectures: The Anthropocene
Saturday 7 December 2019: Geotourism
Saturday 18 January 2020: Vertebrates: Cambrian to Mesozoic
Wednesday 12 February 2020: Annual General Meeting and Presidential Address
Tuesday 3 March 2020: Joint Meeting with Manchester Geographical Association
(start 6.30pm)

Who's Who in the MGA

Officers

President: Dr Cathy Hollis

Vice-President: Niall Clarke MSc

General Secretary: Sue Plumb BSc

Membership Secretary: Niall Clarke MSc

Treasurer: Jennifer Rhodes BA

Indoor Meetings Secretary: Vacant

Field Excursions Secretary: Vacant

Newsletter Editor: Lyn Relph BSc (Hons)

Webmaster: Peter Giles MSc

Other elected members of Council

Prof. Ray Burgess

Nicola Fowler BSc (Hons)

Peter Gavagan BSc (Hons)

Penny Heyworth Mphil

Ex officio members of Council

The Immediate Past President, Manchester Geological Association: Jane Michael Bsc (Hons)

RIGS Representative: Dr Chris Arkwright

The Association's representative on the North West Geologist's editorial team: Peter del Strother MBE
Mphil

President of the Student Geological Societies of the University of Manchester

MGA Archivist: Derek Brumhead MBE

MGA email addresses

To contact our President: president@mangeolassoc.org.uk

To contact our Vice-President: vicepresident@mangeolassoc.org.uk

To contact our General Secretary: secretary@mangeolassoc.org.uk

For membership enquiries: membership@mangeolassoc.org.uk

For field visit enquiries: outdoors@mangeolassoc.org.uk

For indoor meeting enquiries: lectures@mangeolassoc.org.uk

For newsletter correspondence: newsletter@mangeolassoc.org.uk

For other enquiries: info@mangeolassoc.org.uk

The Geologists' Association Annual Conference 2019

Geological Resources in the North West - Past, Present & Future



at

University of Manchester and Manchester Museum

18th - 20th October, 2019

Provisional Outline Programme

Friday 18th October

Arrival & Registration. Plus a visit to Manchester Museum's Minerals & Palaeontology section

Saturday 19th October Talks and Posters at Manchester

University campus followed by evening Conference Dinner

Geology of the North West

Oliver Wakefield

Nuclear Waste Disposal, Wylfa Newydd: Ground Investigation Rob Hunt

Brymbo Fossil Forest: Interface of Public & Palaeontology Tim Astrop

Geothermal energy prospects of the Cheshire Basin Catherine Hirst

Minerals of the Peak District Roy Starkey

Hydrogeology of the North West Vanessa Banks

Petroleum Geology of the North West Mike Bowman

Exploitation of North West Salt resources Andrew Fielding

Geoconservation in NW England: Saltscape HLF Project Cynthia Burek

Sunday 20th October Field Trips

Building Stones of Manchester Manchester GA, Jennifer Rhodes

Williamson Tunnels Tour Liverpool Geol Soc, Philip Firth

Lower Carboniferous and Ribblesdale Cement Works, Clitheroe GeoLancashire, Peter del Strother

Apedale Geotrail and Heritage Centre, with optional underground coal mine tour North Staffs group of the GA, Ian Stimpson

For further information and registration:

Visit: www.geologistsassociation.org.uk or email: conference@geologistsassociation.org.uk

Registration opens 1st April, 2019

Hosted by the geological groups of Lancashire, Liverpool, Manchester, North Staffordshire & North Wales



MGA / GeoLancashire field excursion to Thurns Head Quarry and Healey Dell, near Rochdale.

Sixteen people met at Cwm Water Ski Centre car park at Whitworth where we were greeted by Arthur Baldwin, our leader for Thurns Head. A highlight was magnificent examples of soft sediment deformation giving rise to load casts on a metre scale. Fragments of flaggy sandstone left by the quarrymen displayed examples of ripple bedding and abundant examples of *Lockeia isp.*, the trace fossil of the 'foot anchor' of a non-marine bivalve.



Load casts, Thurns Head Quarry. Width of largest example (right) approx. 1m.



Load cast, Thurns Head Quarry, width approx. 0.7m. Flame structure of mud rock to upper right of load cast.



Lockeia isp. in loose block. Hand lens body 90mm long.

Evidence of the work of man was also widespread, with examples of large thin ripple marked slabs set vertically in rows in the ground as fences and a paved stone road, probably for bringing stone down into the valley on wooden sledges.



Thin sandstone slabs used as fences. Cwm Reservoir as backdrop.



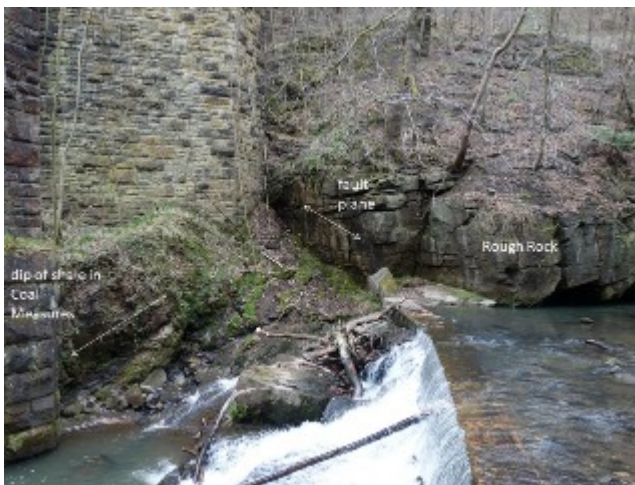
Quarry haul road with wear grooves, perhaps from sledges.

Two erratics were observed, one of coarse-grained quartz gritstone likely to be local Rough Rock, and the other a finely crystalline igneous rock with twinned potassium feldspars. Granitic erratics like this one are fairly common locally, and probably came from the Lake District.



Granitic erratic, left. Hand lens body 90 mm long. Fracture surface (not created by any of us), right, approx. 100 mm horizontal field of view.

In the afternoon the group, less one or two who had to leave early, assembled at the car park at Healey Dell where we met Ron Powell, our leader for the afternoon. Ron was part of the team who had the site registered as an LGS (Local Geodiversity Site, previously known as RIGS). He is currently preparing a geological trail around the Dell and he used the same route for our excursion. Two faults, one at either end of the reserve, bring the older Upper Namurian, Rough Rock, into juxtaposition with the younger Westphalian, Lower Coal Measures. The more southerly fault is visible in the gorge where the dip of the bedding in Westphalian mudrocks has been increased adjacent to the well-exposed fault plane, having been 'dragged' in that direction by the upward movement of the Rough Rock.



Fault plane between Namurian Rough Rock and shales in Westphalian Coal Measures. The dip of the shales is increased local to the fault plane. Out of picture to the left the dip in the shales is near horizontal.



Potholes in bed of River Spodden.

In the river bed we saw examples of potholes, formed when water born small pebbles and sediment swirl to erode flask shaped holes in the bedrock. We also saw a variety of sedimentary structures, such as foresets, in the cliffs on the side of the gorge where the Rough Rock is well exposed.

We followed the River Spodden downstream through a narrow gorge, past a succession of waterfalls, to the visitor centre where some were led astray by the attractions of the café. Those remaining examined a road-cutting exposure of non-marine shales which contained a bed of siderite nodules. A 7.5 kg nodule did not effervesce with HCl and, using Archimedes principle, the SG was found to be 3.4 compared with fully cemented limestone and sandstone about 2.7 and pure siderite 4.0. It is likely that these iron-rich nodules were the ore used in a nearby 12th or 13th Century bloomery.

The leaders were thanked for the hard work they had put in to make the day such a success. The industrial archaeology in Healey Dell is very extensive and a field excursion to examine it in the context of the local geology is being planned.

Peter del Strother

Jura Beige Honed Limestone

A new library and NHS building in Market Street, Altrincham is decorated with attractive fossiliferous stone. On enquiring with the architect I learned that it was 'Jura Beige honed limestone from Germany'. Further online enquiries revealed that its source is the Titting-Kaldorf region of Upper Bavaria. It comes from the same quarries as the Jura Grey, seen in the Bridgewater Hall and several other locations described in the recently revised Building Stones Guide to Central Manchester. Details are at <http://www.globalstoneportal.com/blog/analysis/jura-beige-limestone-from-germany>

Many of the fossils are clearly the same in the 'Beige' as in the 'Grey' and it is difficult to distinguish the difference in colour without seeing them side-by-side. However, there is one 'fossil?' which occurs in several stones which looks quite different and I have no idea what it might be. Note that the stone colour is truly beige, not as gray as it appears in the image.



If you live nearby, or visit Altrincham, it is worth a walk round the outside of the building to examine the range of fossils displayed.

Without revealing what has been suggested I would be interested to hear any further suggestions as to what it might be. Email your thoughts to info@mangeolassoc.org.uk

Fred Owen

OTHER SOCIETY EVENTS

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

Sunday 28 July (*Field Meeting*): Nottingham's Sandstone Caves, led by Tony Waltham.

Saturday 17 August (*Field Meeting*): Walk round Castle Hill, led by Ian Beech (Wren's Nest Warden) and Graham Worton.

Monday 16 September (*Indoor Meeting*): 'How and why Earth's land ice cover is changing'. Speaker: Dr Nicholas Barrand (Lecturer in Geosciences, University of Birmingham).

Monday 21 October (*Indoor Meeting*): 'A Geological Grand Tour of the Solar System'. Speaker: Andrew Lound.

Monday 18 November (*Indoor Meeting*): 'Minerals of the English Midlands'. Speaker: Roy Starkey.

Monday 16 December (*Indoor Meeting, 7.00 for 7.30 start*): Members' Evening and Christmas Social.

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

14 July 2019 Sunday Daytime Malham Cove & Gordale Scar. Dr Doug Holliday, BGS (retired)

07 Sept 2019 Saturday Daytime Roseberry Topping & Cliff Rigg Quarry. Alan Simkins, Chris Hill.

04 - 06 Oct 2019 Friday - Sunday Residential Weekend: Abberley and Malvern Hills Geopark.

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

Thursday 11 July Bashall Eaves Permo Triassic outlier. Leader: Alan Harrison.

Mon (morning) 22 July Preesall Salt fields meet at Knott End car park 10.30 am. Leaders G. Williamson and Barbara Gordon.

15th August. Knaresborough. Leader Lesley Collins

Sykes Quarries field trip will now be taken in September (date to be announced). Leader Peter Del Strother.

North Staffordshire <http://www.esci.keele.ac.uk/nsgga/>

20-22 September. Field Weekend: Mid-Wales.

Shropshire Geological Society.

<http://www.shropshiregeology.org.uk/SGS/SGSEvents.htm>

August 2019: afternoon meeting: Westwood Quarry, 2.00pm. Leader: Frank Hay.

Wednesday 04 September 2019: afternoon meeting: Wrekin, 2.00pm at the Ercall Wood car park.

Sir Charles Lyell's Notebooks

The Geologists' Association has sent the following: the University of Edinburgh is making a public plea in its efforts to acquire the notebooks of Sir Charles Lyell. This opportunity has arisen due to an Export Bar being placed on his collection, which is being sold. The importance of Lyell to the history of geology and the earth sciences will be well known to your Members. The opportunity to save Lyell's notebooks and make them publicly available is a unique opportunity; some include correspondence with Darwin. Here is a link to a brief overview of the notebooks and the plans to save them.

https://gallery.mailchimp.com/b3ea23a6951bcf5950bddd925/files/46ac9eff-4ece-403e-b304-a1410523c8ae/Making_public_the_notebooks_of_Charles_Lyell.01.docx

Given the short time scales (initially 15 July and hopefully 15 October to raise the funds) we need to act fast. The dedicated website is open for pledges: www.ed.ac.uk/giving/save-lyell-notebooks/pledge-to-save.

At the recent Council Meeting, your Council agreed that £100 donation should be made to the appeal.

Geologists Association GeoConference

Special rate for MGA Members. Please book online as per the information on page one; you will be charged the full rate, but you can claim a £10 rebate at registration.

Sunday 22 September 2019

Fred Broadhurst Memorial Field Trip led by Jane Michael The Goyt Valley Round Marple: Industrial History Meets Geology

The Goyt Valley round Marple is not just geologically interesting (top of the Namurian/bottom of the Westphalian, an area of changing environments) but the industrial history is fascinating too. So if you would like to learn why, though he probably didn't realise it, Samuel Oldknow made a good choice for the site of Mellor Mill, then join me. The morning will be spent looking at how the geology influenced Mellor Mill's construction. This will be around 2 miles of flat walking on a stony track. In the afternoon, we will visit the canal, Marple Aqueduct and the Goyt valley around its confluence with the Etherow. This will be 3 miles with around 100 ft of moderately steep ascent on canal towpath and grassy/muddy river bank. For more indepth information, please contact me on gmicsch@gmail.com or 07917 434598.



Mam Tor Castleton, Geology & Landslide Joint MGA/OUGS Saturday 17 August 2019

Leader:

Chris Arkwright

Aim: To study the Carboniferous limestone, delta sediments, minerals and landslips around the Castleton area.

Meet at: End of the abandoned road past Blue John Cavern entrance

Grid Ref: SK 131 833

Post Code: S33 8WA

Meet at: 10 15 am for 10.30 start Finish: Approx. 4.00 pm

Itinerary, terrain and length of walk

Morning:

Mam Tor Landslip back scarp to look at the sandstones and mudstones deposited by a prograding delta with an overview of the landslipped material and movement.

Windy Knoll as an example of a back reef limestone facies with fossils, minerals and hydrocarbons.

Castleton to visit the museum and have lunch.

Afternoon:

Odin's Rake to see evidence of mining and minerals. Also looking at the continuing effects of landslide movement.

Walking up to 2 miles in total on day on uneven quarry floors and grassy/rocky footpaths with some uphill stretches.

Toilet and lunch arrangements: Bring packed lunch or food and drinks are available at Castleton museum cafe.

Toilets at the museum.

Field Equipment: Wear walking boots and clothing suitable for the weather on the day. Bring hard hats, waterproofs, sun hat and cream, notebook, pencil and hand lens. Walking poles may be useful if you normally use them.



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Outdoor Meetings

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Leader: Chris Arkwright

Sunday 22 September 2019. Broadhurst Memorial Field Trip – The Goyt Valley Round Marple: Industrial History Meets Geology

Leader: Jane Michael.

Contact: Jane Michael, gmisch@gmail.com or 07917 434598.

Indoor Meetings 2019/20

Wednesday 25 September 2019: Holiday Geology

Friday 18 – Sunday 20 October: Geologists Association GeoConference

Programme available on

<https://geologistsassociation.org.uk/conferences/>

Saturday 23 November 2019: Broadhurst Memorial Lectures: The Anthropocene

Speakers: Dr Colin Waters, Leicester University

Dr Colin Summerhayes, University of Cambridge

Prof Mark Williams, Leicester University

Saturday 7 December 2019: Geotourism

Speakers: Javier Carmona Carrillo

Prof Cynthia Burek, University of Chester

Dave Cropp, Martley GeoVillage

Saturday 18 January 2020: Vertebrates: Cambrian to Mesozoic

Speakers: Prof Rachel Wood, Edinburgh University(Provisional)

Elsa Panciroli, Edinburgh University (Provisional)

Dr Martin Brazeau, Imperial College, London

Wednesday 12 February 2020: Annual General Meeting and Presidential Address

Tuesday 3 March 2020: Joint Meeting with Manchester Geographical Association (start 6.30pm)

The 2018 Sulawesi Earthquake and the Hazard Management in Indonesia

Speaker: Professor David Petley, Sheffield University

Venue: Manchester Metropolitan University, Brooks Building. Exact

locations within the campus will be communicated to members nearer the time.

Date to be agreed: Joint Meeting with NW Branch of the Geological Society (probably March).

Bring Your Own Reusable Mugs

Would Members please bring a cup to use for tea/coffee when attending lectures, where refreshments are provided. It would be much appreciated. The MGA will be using biodegradable cups when our supply of polystyrene ones runs out, but these do cost more.