

Manchester Geological Association

President: Dr Cathy Hollis

December 2018

www.mangeolassoc.org.uk

Founded 1925

Morven Simpson

It is with regret that we have to advise of the death at 96 of Morven Simpson. Morven co-authored with Fred Broadhurst the original guide to building stones of Manchester. 'A *Building Stones Guide to Central Manchester*' was published in 1975. We believe this was the first guide to document a city's building stones for the general public. He co-led a field trip with Fred based on the second edition of the book in October 2007. The funeral was on Friday 14 December 2018 at 12.30pm Hutcliffe Wood Crematorium in Sheffield.

Niall Clarke

Morven Simpson died on November 19th at the age of 96.

He will be remembered as a much loved member of the Geology Department, starting there in October 1951. Not many of you will have met him but, more recently, his name will seem very familiar.

He was one of the original authors, with Fred Broadhurst, of the first two editions of 'A *Building Stones Guide to Central Manchester*'. The first edition was published by the Extra Mural Department in 1975 and the second in 2008 by the Manchester Geological Association. This edition was revised by Peter del Strother and Jennifer Rhodes in 2014.

Rosemary Broadhurst

Quick Diary

Thursday 17 January lecture will start at 6.30pm

Thursday 17 January 2019 6.30pm: Joint Meeting with Geological Society NorthWest Region
Prof Robert Ward, British Geological Survey. Groundwater resource protection: present and future challenges

Wednesday 6 February 2019 7.00pm: Annual General Meeting:
Presidential Lecture by Cathy Hollis

Who's Who in the MGA Officers

President:

President: Dr Cathy Hollis

Vice-President: Niall Clarke MSc

General Secretary: Sue Plumb BSc

Membership Secretary: Niall Clarke MSc

Treasurer: Jennifer Rhodes

Indoor Meetings Secretary: Jane Michael BSc (Hons)

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

Penny Heyworth MPhil

Ex officio members of Council

The Immediate Past President, Manchester Geological Association: Jane Michael BSc

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

MGA Council Vacancies

Currently the MGA has a vacancy on Council for someone to co-ordinate field trips. This does not involve leading or attending field trips unless desired. It entails being the point of contact for people who wish to attend the field trip, emailing out information obtained from the field trip leader, liaising with the leader as required regarding health and safety information for their trip and advising the Newsletter Editor and Webmaster for inclusion in the Newsletter/on the web. The Field Trip Secretary might like to suggest field trips, but more likely they will find that other people suggest these including the leaders and also may offer to arrange them. At present several suggestions have been made for field trips for 2019. The MGA also has field trips which are jointly organised with other societies.

As from the AGM in February 2019, there will also be a vacancy for an Indoor Meetings Organiser (IMO). This entails making arrangements for some Wednesday evening and three Saturday afternoon lectures. The planning for Autumn/Winter 2019/2020 should have been completed by the AGM. Topics for the lectures are sometimes suggested by Members/Council and help is available for finding lecturers. The AGM lecture is given by the President and the Joint Meeting with the Manchester Geographical Association is arranged by that organisation so there are only four other lecture dates to fill. Once the programme is complete, and the Lecture Season is about to start, the IMO liaises with the speakers to check their travel arrangements and obtain short abstracts for circulation the week before the lectures to Members (the Membership Secretary does the circulating). On the day, the IMO gives the President brief biographical details of the speakers and meets the speakers when they arrive. This position gives an opportunity to hear lecturers YOU might want to hear on topics YOU might want to learn more about whilst ensuring the MGA has an interesting and varied Indoor Meeting programme. Council members are always on hand for help and advice.

If you would like to know more, or feel that you would like to take on either of these roles, please contact the General Secretary, Sue Plumb, secretary@mangeolassog.org.uk

Membership subscription renewals

Membership fees are now due. If you pay by cheque or cash please send the appropriate subscription to Niall Clarke, 64 Yorkdale Oldham, OL4 3AR

Obviously if you pay by SO your subs will be collected automatically, however **could all Members please confirm their contact details, including email addresses to Niall at niallclarke01@gmail.com**. If you would like to switch to paying by SO, please contact Niall.

Current membership fees are:

Full member, correspondence by email £16.00

Full member, correspondence by post £18.00

Full member and an associate member, correspondence by email £18.00

Full member and an associate member, correspondence by post £20.00

An associate member is an adult residing at the same address as a full member.

Gift Aid Form on page 9.

Magpie Mine and Deep Dale

by David J. Tyler

Saturday 29 September 2018 was the occasion for this year's Fred Broadhurst Memorial Field Trip, which was led by Jane Michael. The location was near the village of Sheldon, Derbyshire; to the Magpie Mine and then on to Deep Dale. All the rocks traversed are mapped as Monsal Dale Limestone, assigned to the Brigantian sub-stage of the Carboniferous Period.

These rocks have dark and a light lithofacies. The lighter lithofacies are considered to represent a shallow shelf depositional environment that exhibits cyclicity and contains a variety of fossils. The darker lithofacies (due to clay and organic matter) are considered to have formed in deeper waters. The dark limestone is quite hard; and because and it can be given a good polish it is known locally as the Ashford Black Marble.

Subsequent stresses opened numerous fractures that acted as conduits for hydrothermal mineralising fluids. These deposited galena, fluorite, baryte and calcite in the limestones. Mineralisation appears to have occurred mainly in the late Carboniferous at temperatures between 70°C – 120°C.

Our guide for the Magpie Mine was one of the Peak District Mines Historical Society volunteers. The surface remains are said to be the best example in Britain of a 18th and 19th century lead mine. The miners were working numerous veins of galena (Fig. 1) that converge below the surface buildings. Several shafts are preserved and protected by surface grills. The guide explained the different techniques used by the miners to extract, crush and sort the ore.



Fig. 1 an example of the ore worked by the miners..

As with all mines, profitability is dependent on the price the ore can command in the market, and the fortunes of Magpie Mine waxed and waned in response. At its peak, during the 18th and 19th Centuries, the nearby village of Sheldon the population grew by an influx of Cornish miners; most of the stone-built cottages date from this period. As the workings became deeper, the mine faced significant problems of flooding with many different strategies to remove the water being explored. This culminated in the building of a sough (1873-1881), taking mine waters a couple of miles north to the River Wye.



Fig. 2 Magpie Mine surface workings, viewed looking west.

For a short time in the 1950s (linked to the Korean War), the mine was reopened and the 1869 Cornish engine house was brought again into action (visible in Figure 2). However, since then the site has become a Scheduled Ancient Monument.

Deep Dale lies north west of the mine, although a detour was necessary to avoid a face-to-face encounter with a bull. We passed a small limestone pavement (sufficient to note the development of clints and grykes) and we knew we had reached Deep Dale when we saw the line of bell-pits, old lead workings that followed a rake, ahead of us (Fig.3). It was a reminder that the whole area is affected by mineralisation, not just those localities with mine buildings.



Fig. 3 Magpie Mine surface workings, viewed looking west.

The formation of Deep Dale was the topic of much discussion. Cavern collapse was considered but rejected: as the Dale is long with only gentle curvature, and there is no base of chaotic fallen blocks. River erosion under today's conditions could not take place as the water table is too low and even when it rises to produce a surface flow, there is only a stream. One member of the party subsequently drew our attention to the following passage from "*Geology Explained in the Peak District*" by F. Wolverson Cope (1998, p.54): "It is quite impossible for this dry valley to have been eroded while the water-table was at its present level. The valley can only have been eroded when the water-table was at a relatively higher level than the present. The fall in level of the water-table to its present position could have been brought about by a regional uplift after this and other dry valleys were eroded."

The sides of Deep Dale contained numerous terracettes resulting from soil creep. We noted the paucity of surface water (limestone is notoriously free-draining) and the need for dew ponds (constructed for stock grazing). Exposures of limestone were limited to a few craggy outcrops, and it was not easy to find fossils in them or in the scree. However, the stone walls revealed some fine examples of *Gigantoproductus* (Fig. 4) and of colonial corals (Fig. 5).



Fig. 4 *Gigantoproductus* incorporated into the stone wall.

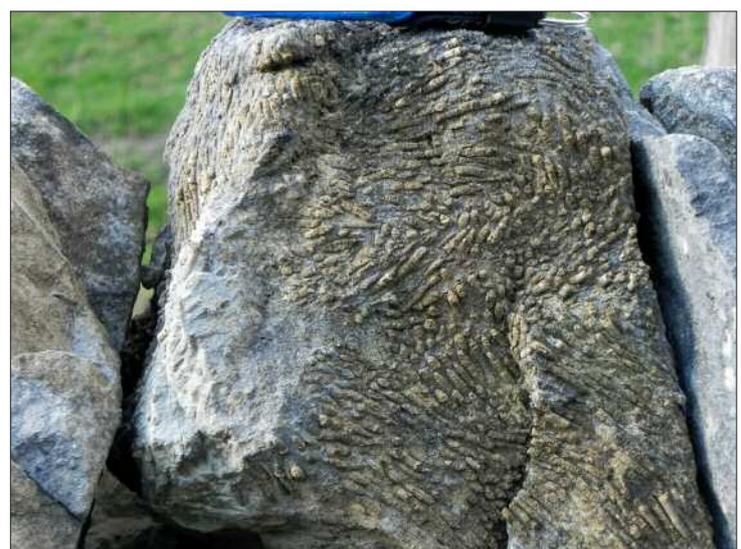


Fig. 5 Colonial coral incorporated into the stone wall.

We also discovered a piece of rock which clearly wasn't limestone. It was very hard and strangely weathered. After pondering it for a while, Jane said she would show it to Cathy Hollis who is an expert in carbonates for her opinion. This was done later and it appears that it is a piece of siliceous material (it certainly scratched Jane's penknife badly!). It is not, however, quite chert (see Fig. 6). Cathy was very interested as she had heard of such rocks but never found them. The chert which is found in the lower part of the Monsal Dale limestones particularly round Cresswell is much shinier and darker. The piece will be given to Cathy for her (or one of her students) to investigate further.

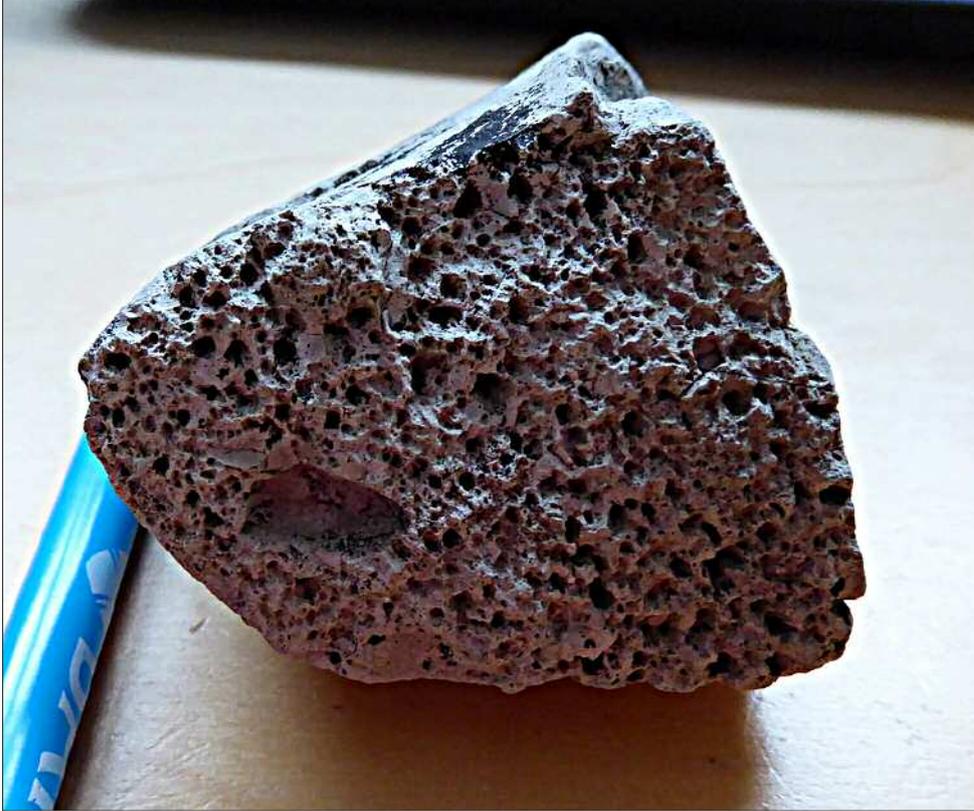


Fig. 6 Enigmatic siliceous rock sample.

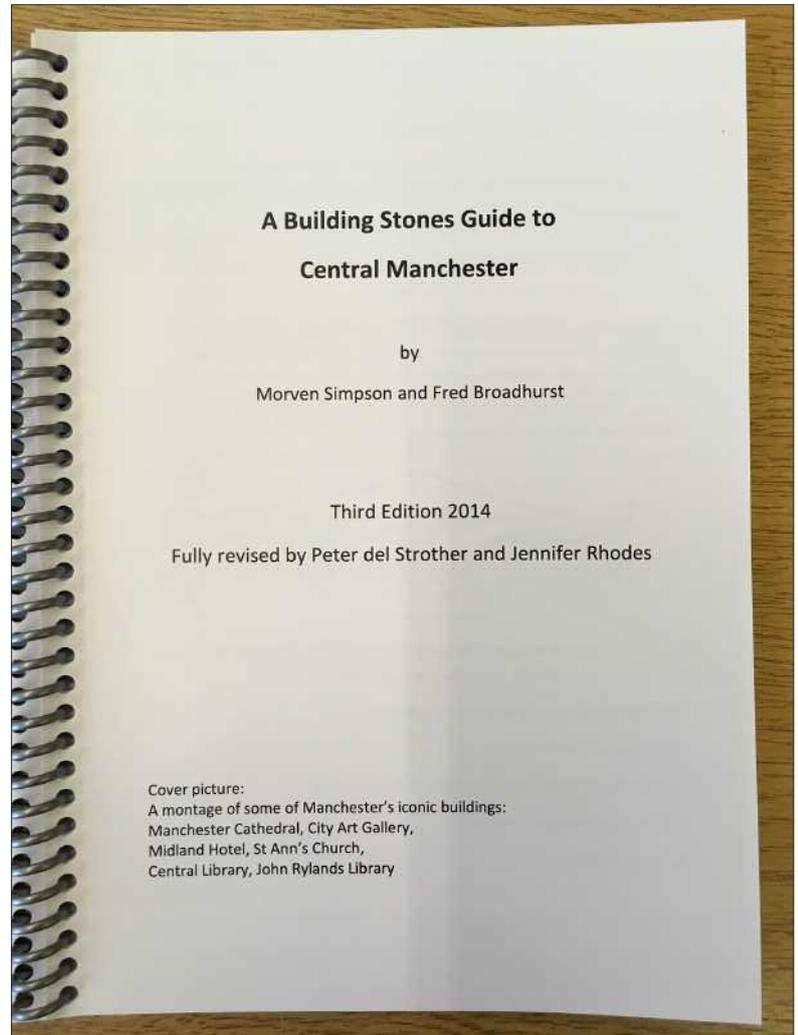
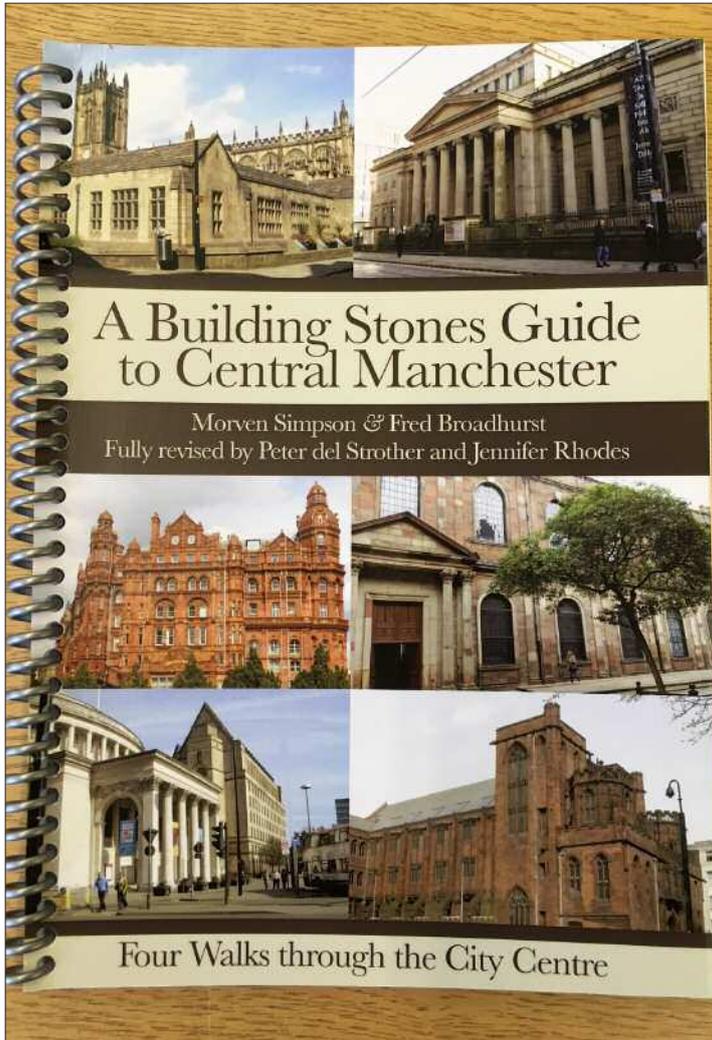
On the Mine Tour, we learned about the building of a major sough to drain the mine. The Magpie sough tail is just about visible near the River Wye, but our journey back to the starting point was memorable mainly because of a steep climb up a scarp face and the need to avoid two bulls next to our trail. Damage to Jane Michael's reputation as a trip leader was avoided by the wonderful sunshine, the blue skies, and the stimulating conversations that helped make the trip so enjoyable.



The Giants Causeway, Northern Ireland. Ed's holiday photo.

Manchester Building Stones Guide

An updated version of the original guide written by Morven Simpson and Fred Broadhurst



*Wishing all MGA Members a very merry Christmas
and a Happy New Year
from all your Council Members*



OTHER SOCIETY EVENTS

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

Thursday 24th January 2019. 19:30 The geomorphological and geological impacts of glaciers: recent insights from glacial land systems. Dr Richard Waller (Keele University)

Thursday 7th February 2019. 19:30 BGS collections: over 200 years in the making. Dr Michael Howe (Head of the National Geological Repository, British Geological Survey)

Thursday 14th March 2019. 19:00 AGM and @ 19:30 Chair's Address. Dr Stuart Egan (Keele University)

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

20 January 10.30-2.00. Geoconservation Day, Lickey Hills, Barnt Green Road Quarry

21 January 7.30 Indoor Meeting, 'The Piltdown Man hoax – a skeleton in the cupboard'

16 February 0.30-2.30. Geoconservation Day, Wren's Nest

18 February 7.30. Indoor Meeting, 'Turning Soil into Stone'

2 March 10.30 – 2.30. Geoconservation Day, Barrow Hill

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

31 - JAN - 19 Archaeopteryx and the Dinosaur - Bird Transition. Speaker Dr John Nudds. University of Manchester

21 - FEB - 19 Presentations by Students of the School of Earth and Environment, Leeds University

21 - MAR - 19 Victoria Cave and the Forgotten Climate Controversy. Speaker Dr Phil Murphy, Earth and Environment University of Leeds

09 - MAY - 19 The Environmental Consequences of Volcanism. Speaker Dr Evgenia Ilyanskaya, Earth and Environment Leeds University

22 - MAY - 19 The Green Lecture: Getting Information from Noise. Joint Meeting with SEE. Speaker Prof Roel Snieder, Colorado School of Mines

10 - OCT - 19 The Great Glen Fault Zone - Back and Forth for Longer Than We Thought. Speaker Dr Eddie Dempsey, University of Hull

07 - NOV - 19 Does Size Really Matter? A Look at Aeolian Forms. Speaker Dr Oliver Wakefield, BGS

05 - DEC - 19 AGM and Conversazione – Short Talks and Displays by Members

OUGS <https://ougs.org/northwest/>

January 26th 2019. North West OUGS Branch AGM. Gathurst Golf Club near Wigan
13.30 AGM preceded by morning meeting and lunch. Geology of Raasay and Skye Dr Ian Williamson

September 2019 Proposed 4-5 field days exploring the geology of the islands of Raasay and Skye with Dr Ian Williamson, an expert in the British Palaeogene Igneous Province.

NWGA <http://www.ampyx.org.uk/cdgc/rhaglen.html>

26th January 2019. Annual General Meeting at Antioch, Capel Salam, Colwyn Bay.

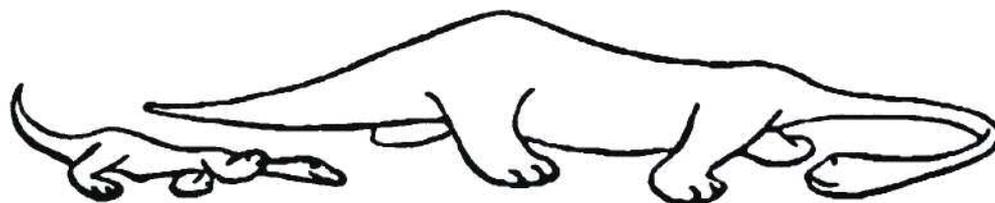
Geolancashire <http://geolancashire.org.uk/lectures-and-excursions/>

28 December. Professor Steve Donovan will lead a field excursion at Cleveleys beach, meeting at 11 am

25 January 2019 Lesley Collins. The Dalradian of N W Scotland

15 February Annual General Meeting followed by Peter del Strother on the "Aspects of the geology of Bhutan"

15 March Harry Pinkerton (vulcanologist) will give a talk on "How Volcanoes Work"



Gift Aid Form

Title.....

Full Name.....

Full Address.....

.....

Post Code.....

I wish my subscriptions and/or donations to the Manchester Geological Association, paid in the current tax year and hereafter, to be treated as Gift Aid donations.

SignedDate.....

Please note that:

- You should have paid sufficient tax in the year to cover the amount to be reclaimed.
- You may cancel this Declaration at any time, by informing the MGA Membership Secretary.

Manchester Geological Association 2018/19 Indoor Meetings Calendar

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Prof Robert Ward, British Geological Survey. Groundwater resource protection: present and future challenges

Wednesday 6 February 2019 7.00pm: Annual General Meeting:
Presidential Lecture by Cathy Hollis

All lectures with the exception of the Joint Meeting with the Manchester Geographical Association will take place in the Lecture Theatre in the Williamson Building, Manchester University, Oxford Road, Manchester. The venue of the Joint Meeting with the Manchester Geographical Association will be the same as last year.

Holiday Geology 2019

After the success of the October Indoor Meeting on Holiday Geology, I am proposing to repeat this for the 2019/20 Indoor meetings. Because MGA is hosting the Geologists' Association GeoConference in October 2019, the first MGA Indoor Meeting will be Wednesday 25 September 2019 and the topic will be Holiday Geology.

So please could anyone who would like to give a 10, 15 or 20 minute presentation on somewhere geologically interesting that they have been, please let me know. You don't have to do an 'indepth' geological presentation. In fact you may have seen interesting landscape and want some help in identifying what you saw. It doesn't have to be overseas. There are some lovely places in the UK. And don't worry if you are not used to speaking in public - you will be 'chatting' to friends. Don't be shy, put yourself forward and give us all ideas for our next holiday.

Jane Michael
Indoor Meetings Organiser