

Manchester Geological Association Newsletter ~ June 2009



www.mangeolassoc.org.uk

President : Christine Arkwright PhD

Dear Member,

I hope that you have been enjoying this lovely spring weather and getting out into the field. We have several outings still to come, (see pp 9 & 10). Do contact Marjorie if you intend to come along, and booking is essential for the Lakes weekend. We hope to see many of you at Styal on July 19th and there again at the dinner on September 26th. Our August outing will be to Rochdale Cemetery; Marjorie and Sue want more time to work at Healey Dell before they take us there.

Joe MacQuaker has offered to lead a trip to Newfoundland next year, If you are interested please let Jane Michael know; if there is sufficient interest she will go ahead and start organising. (see page 4)

Those of you who took have taken advantage of Manchester University's programme of Continuing Education in the past will no doubt be dismayed at the demise of the CCE (it used to be the Extra Mural department) but some of the tutors have got together to continue offering adult classes. The organisation is called MANCENT. (see pp 7&8 for details).

Jim Spencer has been busy organising next winter's lecture programme; dates on page 3, details of speakers will follow in September.

Bolton Museum are having a Darwin Exhibition starting next week.. Looks good ! (see p6)
Best wishes to all. Enjoy your summer!

Mary Howie newsletter editor

Why not sign up to have this publication by wire in glorious technicolour?

Let me know by email :- newsletter@mangeolassoc.org.uk It will save the MGA postage and paper!

Quick Diary 2009

Sunday 19 July	Styal Mill
Sunday 9 August	Rochdale Cemetery
18 to 20 September	Lakes Weekend
Saturday 26 September	MGA Dinner
Saturday 10 October	M/C Uni stones
Wednesday 14 October (evening lecture)	Spiders: The Ultimate Predators 400 Million Years of Evolution
Saturday 21 November (day of lectures)	Darwin and the Voyage of the Beagle
Saturday 12 December (afternoon of lectures)	Volcanoes and Volcanic Hazards

Contents

Editorial & Diary	page 1
RIGS report	page 2
Ape Dale report	page 3
Lecture dates	page 4
Newfoundland ad.	Page 4
Styal Day	page 5
Who's Who	page 6
Other societies	page 6
Bolton Museum ad	page 6
MANCENT info	pp 7/8
Field Events	pp 9/10
Dinner invitation	page 11

Greater Manchester Rigs Group

I attended a North West Geodiversity Partnership meeting on 5 May at Natural England's office in Manchester. Among the items discussed was the production of a leaflet for inclusion in Natural England's advice to local planning authorities on the importance of considering geodiversity issues when dealing with planning applications. In March, Cumbria launched their Local Geodiversity Action Plan (LGAP); we are still awaiting publication of GM's LGAP. After consultation with all RIGS groups, UKRIGS is now known as Geoconservation UK.



Site visits have been made to the railway cutting between Slade Lane, Burnage, and Ladybarn Lane bridge, Fallowfield, Manchester. Two sites are situated on the disused railway track, which has been made into a well-surfaced, easily walked route from Denton to Chorlton.

Unfortunately, the outcrops at Slade Lane (SJ 868 938) are obscured by dense vegetation. However, there is a large amount of literature written at the time of the excavation for the railway in the late 19th century in the *Transactions of the Geological Society*, Volume 20, 1888-90 and Volume 21, 1890-92. One point of interest is that the excavations revealed the edges of the Upper Permian Series and some members of the Upper Coal Measures, namely the Ardwick (Spirorbis) Limestones.(1)

The site at Ladybarn Lane bridge, Fallowfield (SJ 8585 9385) although slightly obscured by vegetation, is easily accessed on the track and is a Bunter Pebble bed (Triassic) red massive, cross-bedded sandstone with a few quartz pebbles.

A visit has also been made to a site on the Rochdale Canal towpath, between the railway viaducts near the Deansgate Tunnel, Manchester (SJ 8330 9756). The canal was cut into the Bunter Pebble Beds and a 100m exposure can be seen on the towpath. As with the Fallowfield site, the sandstone is bright red, cross-bedded with millet seed grains and a few well-rounded quartzite pebbles can be found. Just north, across the canal, this rock is used as the foundations for the adjacent railway arches and a well-marked erosion surface can be seen.

The sites at Ladybarn Lane Bridge and Deansgate Tunnel are worth a visit as they are examples of accessible geology within an urban environment .

An audit has been made of the condition of the specimens on the Geological Trail in Rochdale Cemetery, details of which will be kept in the Manchester Museum.

We are participating with Natural England to broaden the scope of interest of their health walks so they cover geodiversity in both urban and rural environments.

- (1) The Manchester Museum holds the relevant copies of the *Transaction of the Geological Society* for this fascinating stretch of railway line and anyone wishing to learn more is welcome to access the records at the Manchester Museum by contacting phyllis.stoddart@manchester.ac.uk

Greater Manchester RIGS group would like to thank Manchester Geological Association, Natural England and the staff of Manchester Museum for their help and support.

Marjorie E. Mosley, Secretary, Greater Manchester RIGS Group

**Please send me your Holiday Geology Highlights
A nice photo plus a paragraph or two will let others know of good places to go!**

MGA visit to Apedale Coal Mine and Heritage Centre May 2nd 2009

Apedale is situated a few miles from Newcastle Under Lyme in Staffordshire and this visit took place on a fine, mostly sunny day.

Geology of the Area

Apedale sits on carboniferous rocks of Westphalian age - around 310 Ma (\pm 6Ma) - close to the boundary between the Coal Measures and the Warwickshire Group (formerly the Baren Group and now sometimes considered a separate stage, the Stephanian). It is on the Western Anticline of the Potteries district which trends NNE, paralleling the Red Rock Fault. The Apedale Valley trends NW and where it meets the Western Anticline important coal and ironstone seams come to the surface on the floor and sides of the valley. In the Westphalian, southern Britain was an area of rivers and lakes with equatorial forests and peat bogs. Low lying areas were subject to occasional inundation by the sea. The coal measures were laid down in the Pennine Basin and Apedale was on the southern edge. There are interbedded mudstones and sandstones with coal and ironstone. Mudstones can contain non-marine bivalves and plants reflecting the environment.



The 15 of us who attended were split into groups of 5 and went on separate guided tours of the mine and the museum. The mine is now kept open for exhibition purposes only, although a small amount of coal is still brought out of the ground. The mine lies on the site of a former steel works which closed after the war, with coal mining starting in the late 50s. The workings were extensive with several parallel seams being worked, at varying depths. The seams vary in width from a few inches to several feet.

The tour took us to number 4 drift in the shallowest seam, the Bassey, with its ironstone roof. The drifts are separated by faults. The workings run at a steep gradient of 1:1.9. This gradient allows the easy mobilisation of hand-cut coal into carts aided by gravity.

As coal and rock were extracted, pillars were left untouched, with further stability provided by packing large (gob) and small (fines) pieces of stone from floor to ceiling. Support to the mine roof is provided by steel arches in more permanent areas of the mine; in areas which are going to be used for a shorter time, perhaps a couple of months, the supports are made of pine struts.

The upper part of the mine is set up, on a smaller scale than in reality, to show the variety of areas, tools and types of workers involved in coal extraction. The overwhelming impression was of how hard and potentially dangerous the miner's job is.

There was a fascinating tour of the museum, led by very dedicated and knowledgeable guides. The museum documents the history of the area, starting with the Romans and their impact on the area in terms of habitation and communication links. Iron extraction is thought to have started in Roman times.

As well as much information about the history of mining in Apedale, there is an impressive collection of mining paraphernalia and a moving section on mine disasters.

Geology is represented by geological maps of the area and an impressive collection of plant fos-

sils; there is also a display by the North Staffordshire Group of the Geological Association, with whom the Museum has built up close links.

After lunch, we went out into the Apedale Community Country Park, an area reclaimed from open-cast mining. This area includes a dipping pond in which we saw numerous tadpoles, water boatmen and pond skaters. Important species such as great crested newts and water voles can be found in the Park. Close to the dipping pond are a couple of structures - a small house and a table – decorated with fossils, those on the bench having their names engraved on them. A cliff overlooking the pond shows bedding, in various directions, possibly representing channel fill as the whole area would have been a maze of river channels. Layers of ironstone and coal were clearly visible.

A short walk up the hill took us to the Miners' Memorial, a mine wheel, from where there is a spectacular view over the surrounding countryside. Interpretation of the view is made easier by the presence of wooden posts with holes in, through which can be seen near and far-off landmarks such as Shining Tor, Shutlingsloe and some local churches. On the way back to the Centre we saw an exposed coal seam, sited in beautiful bluebell woodland.

There are plans to have a working narrow-gauge railway on the site in the next year or so.

Kathleen Mais

Our Programme of Indoor Meetings starts in October 2009

Here are the dates for your diary ~

**Wednesday 14th October 2009 – Spiders: The Ultimate Predators –
400 Million Years of Evolution**

Saturday 21st November 2009 – Darwin and the Voyage of the Beagle

Saturday 12th December 2009 – Volcanoes and Volcanic Hazards

Saturday 16th January 2010 – Scenes from the Precambrian

Wednesday 17th February 2010 – AGM & Presidential Address

Wednesday 10th March 2010 – The Sichuan Earthquake Disaster

Details of speakers and lecture notes follow in the September newsletter

?? Newfoundland September 2010??

Dr Joe Macquaker, our Past President, has offered to show us the Geological Delights of Newfoundland next year. If you have any interest in this trip please let Jane Michael know ASAP. 0161 366 0595 secretary@mangeolassoc.org.uk

If there is sufficient interest, she will go ahead and start organising... if not, not.

Styal Desert?

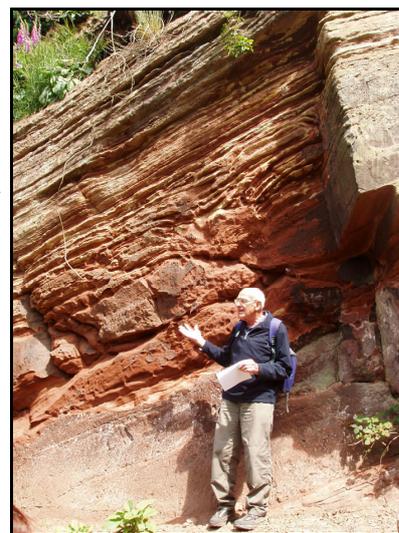
A special MGA day at Quarry Bank Mill, Sunday 19 July

We have teamed up with the National Trust at Quarry Bank Mill, Styal Country Park, for a day of geological fun, frolics and fossils on Sunday 19 July. The theme for the day is the Styal Desert?, reflecting the arid, fluvial setting which the underlying geology tells us existed where the Park is now located. There will be a MGA gazebo in the main yard, furnished with appropriate displays of the local geology, activities to interest youngsters and lots of other things to promote geological interest for the public.

Central to the day is a series of six short walks, being lead by Fred Broadhurst and myself, around the newly renovated Secret Garden and a section of my Styal Country Park geology trail along the River Bollin. The walks, lasting about an hour, have easy access and are suitable for accompanied children. The NT will charge £3 for adults (children free) and will take bookings in advance to Jayne Gudgeon on tel: 01625 445845. For safety and access reasons a maximum of 20 persons/walk will be allowed.

Put the date in your diary now and tell all your friends about it - it's at the start of the school holidays.

It will be a great family day out.



Fred B explains dewatering structures in the Secret Garden

Please help us make this new venture a huge success.

Volunteers needed!

Although we have a small organising group, on the day, we will really need assistance of other people. We are not asking folk to give up the whole day but just maybe a couple of hours. We need to cover from about 10.30 am to 5.00 pm and are looking for about a dozen helpers to man the display, answer queries and cover breaks. If you are interested and would like to get involved in this brilliant event, which will give the Association lots of publicity, please could you let Jane Michael know either by email (jane.michael1@tesco.net) or telephone 0161 366 0595 as soon as possible.

Thanks very much. Fred Owen

The next newsletter will be in **September** Copy to me by end of **August** please.

Mary Howie -

newsletter@mangeolassoc.org.uk or Snail Mail to Kinder View, 118 Glossop Road, Marple Bridge, Stockport SK6 5EL.

Tel: 0161 427 2965 Views expressed in the Newsletter are not necessarily those of the Association or its Council.

Who's Who in the MGA Council 2009

President	Dr Christine Arkwright	
Vice President	Dr Tony Adams	SEAES University of Manchester
General Secretary	Jane Michael	22 St Giles Drive, Godley, HYDE, Cheshire SK14 2ST 0161 366 0595 secretary@mangeolassoc.org.uk
Membership Secretary	Fred Owen	
Treasurer	Niall Clarke	
Indoor Meetings Organiser	Jim Spencer	0161 434 7977
Field Excursions Organiser	Marjorie Mosley	0161 432 4343
News Letter Editor	Mary Howie	0161 427 2965
Web Site	Sue Plumb	www.mangeolassoc.org.uk
RIGS Group	Marjorie Mosley	gmrigs@hotmail.com
Minutes Secretary	Sue Plumb	
Archivist	Derek Brumhead	
Other Council Members	Chantal Johnson, Lisa Abbott and James Jepson	
President Manchester University Geol. Society (ex officio)		

Other MGA email addresses :- To contact our President or Membership Secretary use info@mangeolassoc.org.uk
Marjorie Moseley for field visits - outdoors@mangeolassoc.org.uk
Jim Spencer and indoor meetings - lectures@mangeolassoc.org.uk
Mary Howie and the newsletter - newsletter@mangeolassoc.org.uk

Simple Beginnings -
The Story of Evolution
13 June – 7 November 2009

An exhibition looking at the fascinating story of evolution, its legacy and its effects on the natural world.

Monday to Saturday, 9am – 5pm. Free Admission

Bolton Museum, Aquarium and Archive
Le Mans Crescent
Bolton, BL1 1SE
www.boltonmuseums.org.uk

Bolton
Museum and
Archive Service

Other Societies

MGA members are welcome guests at other Geological Societies events, some outings below. Ring the contact given below for further details or look on their websites via links from ours.

Leeds Geological Society

Contact anthea.brigstocke@zen.co.uk
Sun 14 June Jurassic Runswick Bay
Professor Paul Wignall, University of Leeds
Sat 27 June - Cretaceous Chalk succession in Lincolnshire
Paul Hildreth

Liverpool Geological Society

Contact **Joe Crossley** 0151 426 1324
Sat 13 Jun Calton Hill and Ashford with Fred Broadhurst.

North Staffs GA

Contact **Gerald Ford**, 01630-673409
Sat 27 June: Brymbo Fossil Forest, nr Wrexham (jointly with the BCGS). Leader: Dr Jacqui Malpas
Sunday 19th July: The Geology of the Malham Tarn and Malham Cove

Oldham GS

Contact **Jo Holt** 01457 874095
WED24TH JUNE SMITHYBRIDGE, LITTLEBOROUGH 7.30PM
Another chance to visit the 'Tenny Collections'!!
SAT 11TH JULY STAITHES, N YORKS 11.00AM
Our annual trip to the east coast—Lower Jurassic around Staithes. Leader Andrew Tenny (01706 372450)

Open University Geological Society, North West

Contact **Ian Barrow** 0161 969 6229
Sunday 23 Aug Borrowdale Volcanic Group rocks and Quaternary Glacial Features with Dr Alan Smith

Russell Society

Contact **Alan Dyer** on Aldiip@aol.com or Harry Critchley, Tel: 01204 694345 if you are interested in these mineralogical outings
18th July: Field trip to quarry*, Pateley Bridge. To be confirmed subject to quarry progress. 10:00 at quarry office.
Saturday 22nd August: Field trip to Caldbeck Fells

"Courses for the Public" at Manchester University

For many years, MGA members have enjoyed courses, day seminars and walks organised by Manchester University's Continuing Education Dept and may already be aware that the department is closing down after the summer session 2009. However, many students have expressed their wish to continue with such courses and tutors are certainly willing to teach them. Therefore, in order to satisfy this need, lecturers and students of the former "Courses for the Public" have set up "The Manchester Continuing Education Network" (MANCENT) in the firm belief that continuing education of a high quality should be available to all who want it.

How it works:

MANCENT aims to match interested students with highly qualified and experienced lecturers in the Arts and Sciences. It operates as a loose network of independent, self-employed lecturers who, by choosing their own fees and venues, put on courses which, when presented as a joint listing, offers students a one-stop shop for locating courses in their chosen field of interest.

What MANCENT offers:

A mailing list has been assembled for the purpose of sending information to interested students about courses which have been arranged. The first mailing, containing the programme for autumn 2009, has just been distributed - see list attached and www.mancent.org.uk for more details.

If you want more information about the network or want to join, please contact Birgitta Hoffmann (Coordinator & Administrator) on latinteacher@btinternet.com or send the form below to her at 55 Broadwalk, Wilmslow, Cheshire SK9 5PL

-----"

I would like to be informed about future events and courses organised by MANCENT, in the following subjects:-

.....

I am willing to travel to venues in:-

Central Manchester; North & East Manchester;

South Manchester/North Cheshire; Warrington and West Manchester

Name e-mail

Address

.....

Post Code

See the MANCENT programme overleaf

MANCENT - Autumn 2009 programme at a glance

Archaeology/Ancient History - Birgitta Hoffmann

- Defying Rome: Commius, Caratacus, Boudicca and Calgacus (Thursday afternoon)
(Re)making Rome: a closer look at the late Roman Republic, to death of Augustus (Wednesday afternoon)
Roman mosaics in Latin antiquity (Dayschool 13 November)
Roman food and nutrition (Dayschool 4 December)

Art - Christine Musgrove

- Renaissance splendour: the arts of the 16th century (Wednesday afternoon)
Object of desire: sensuality and art (Dayschool 10 November)

Biology - Bob Callow

- Darwin, Dawkins and divinity: conflict between science and religion (Monday eve)
The life and work of Charles Darwin (Wednesday afternoon)

Drama, performing arts - Julian Hill

- Writing for theatre (Monday evening)

Geology - Christine Arkwright

- Discover geology (Thursday afternoon)

History - Andrew Jones & Alan Sennett

- Europe in the Age of Imperialism (1870-1914) (Wednesday afternoon)
The Soviet Union on film: cinema, politics and society (1917-1945) (Tuesday am)

Latin - Birgitta Hoffmann

- Intermediate Latin (Monday afternoon)

Literature - Barry Wood

- Coleridge and Wordsworth: contrary imaginations (Thursday am)

Music - Gareth Curtis

- Robert Schumann (1810-56): a celebration (Monday afternoon)
The British musical renaissance: a new look (Wednesday am)
The musical world of Henry VIII (1509-47) (Dayschool 14 November)

Theology & Biblical Studies - Michael Tunnicliffe

- First Book of Kings (Tuesday afternoon)

For detailed programme and booking form see www.mancent.org.uk
or contact Birgitta Hoffmann at 55, Broadwalk, Wilmslow, Cheshire SK9 5PL

Manchester Geological Association



Remaining OUTDOOR EVENTS Summer 2009

DATE: Sunday, 19th July, 2009

Venue: Styal Mill and Quarry Bank Gardens

Leaders: Fred Broadhurst & Fred Owen,

Time: 10.30 am – 4 pm

Description This is an event aimed at the public visiting the National Trust property at Styal Mill so all members are invited to bring along their friends and relations to support it. All are welcome. There will be guided walks round the Secret Garden and also part of the Styal Geology Trail together with displays and activities for children.

DATE Sunday, 9th August

Venue Rochdale Cemetery

Leader Marjorie E. Mosley

Time 10.30 am – 1.00 pm

Description Here is a chance to examine a unique geology trail reflecting late Victorian knowledge and interest in geology. The trail, designed possibly with the idea "to educate and instruct others in the science of the earth" (Maxim J. L. ms. c. 1930) has 28 pillars laid out in order, starting with lavas and ending with glacial boulder stones – "*the arrangement of the Strata of the Earth's Crust in the order they were formed by the Creator*" being part of the inscription on the Starting Stone. Most of the specimens are from Great Britain and Ireland, many of which retain legible inscriptions of rock type and origin. The trail is on an easily walked footpath and is accessible by public transport.

DATE Friday 18th September to Sunday 20th September 2009

Venue: Southern Lake District

Leader: Chris Arkwright

Time: Arrive Friday evening, leave Sunday afternoon

Description: **see overleaf**

Contact: Marjorie Mosley – **Booking Essential**

DATE Saturday 10th October 2009

Venue: Building Stones of Manchester University and its environs

Leader: Norma Rothwell

Time: To be advised in September newsletter

Description: To follow

Contact: Marjorie Mosley

Field Excursions Organiser

Marjorie Mosley

0161 432 4343

outdoors@mangeolassoc.org.uk

Please book with Marjorie for all our outdoor events... times and dates sometimes change.

Marjorie will send you full details of times, meeting places and transport when you contact her.

MGA Field Weekend in Southern Lake District - 18-20 September 2009

Leader: Chris Arkwright

Time: Arrive Friday evening, leave Sunday afternoon

Saturday: Coniston

On our visit last year to the eastern Lake District we looked at Ordovician deep-sea sediments of the Skiddaw Group near Shap. These had been deposited in the Iapetus Ocean and later folded by tectonic movement during ocean closure at the start of the Caledonian Orogeny. Subsequent continental collision caused increasingly violent, volcanic eruptions on land and in shallow water, eventually forming the Borrowdale Volcanic Group (BVG) which outcrops over much of the central Lake District. More uplift and erosion resulted in a major unconformity between BVG and the overlying marine sediments of the Windermere Group (WG).

We shall visit sites near Coniston to look at the volcanic and sedimentary rocks, tectonic features and mineralisation associated with this unconformity.

Sunday: Silverdale and Heysham

Moving up the succession, we shall examine Dinantian limestones of the Lower Carboniferous in Trowbarrow Quarry near Leighton Moss, an RSPB site near Silverdale. Although similar to the fossiliferous rocks seen last year near Orton, the beds of limestones and shales here are vertical and display interesting paleo-karst surfaces and trace fossils. The quarry is also a nature reserve and has some industrial archaeological remains, also.

Then, to Heysham village near Morecambe, to look at Mid-Carboniferous sandstones of the Millstone Grit Group which, being up to 2.5 km depth in Northern England, are the thickest sequence of this group in Western Europe. This huge volume of sediment was brought down from the Caledonian mountains by the large river systems of a prograding delta. Small-scale folds and faults seen at Heysham are evidence of subsequent tectonic movement during the Variscan Orogeny. The sedimentary features and fossils seen in these sandstones and shales will be examined and used to work out their depositional environments. The magnificent views across Morecambe Bay from the ruined priory on the headland should make a beautiful end to the weekend.

Chris Arkwright

If you require accommodation **Booking is essential as soon as possible.**

Contact: Marjorie Mosley tel: 0161 432 4343

or email: outdoors@mangeolassoc.org.uk

Manchester Geological Association



President's Dinner Saturday 26 September 2009 at the National Trust's Quarry Bank Mill in Styal Country Park



I have great pleasure in inviting you to this delightful venue for the President's Dinner.

The MGA has close connections with Quarry Bank Mill due to the work done by members over the years to interpret and publicise the interesting geology found on the Styal Estate. More recently, Fred Owen and Fred Broadhurst have created a geology trail in the newly-restored gardens and will be leading short geology walks as part of the MGA's day in July, *The Styal Desert*.

The National Trust has kindly allowed us free access to these gardens for a pre-dinner geology walk, led by Fred and Fred. Then, after dinner Alan Knapper, the Head Gardner, will tell us more about the garden's history and restoration. The reception and dining areas at Quarry Bank have recently been refurbished and a lift to the upper floors installed. Also, the restaurant is gaining an excellent reputation since the arrival of a new manager and chef. See below the details of our selected menu and evening programme.

I hope you will decide to come, and do please bring along your family and friends, too.

Chris Arkwright

President of MGA

Pre-dinner walk at 6.00 pm Dinner 7.00 pm for 7.30 pm Carriages at 10.30 pm

Menu: Carrot and Butter Bean Soup; Roast Sirloin of Beef with Yorkshire Pudding and Seasonal Vegetables; Homemade Apple Pie and Cream; Tea or Coffee and Mints.

Booking forms & cheques to: Chris Arkwright, 28 Highgale Gardens, Lostock Hall, Preston PR5 5YT

MGA President's Dinner Saturday 26 September 2009 Cost £20 per person

NAME(S)

No. of people booked Cheque Enclosed £..... (payable to MGA)

Address

.....e-mail
(address or e-mail needed to send a receipt & location map)

Special dietary requirements