

Manchester Geological Association

Newsletter ~ December 2009

President : Christine Arkwright PhD

www.mangeolassoc.org.uk



Dear Member,

This should reach you in time to say Happy Christmas. I hope that this year has been good for you. We certainly have had a rich programme of geological events, and these continue in the New Year thanks to the efforts of our various organisers, speakers and leaders.



In **January** we have an afternoon in the **Precambrian**, February brings the **AGM** and our **President's lecture**, "**Various Volcanoes**" and our last indoor meeting is a joint one with the *Geographical Society*. (details p 11)

January is also time to pay your **subscriptions**.. Please help Fred Owen by paying promptly. If you sign a standing order you won't forget! (Renewal form on page 12)

The proposed visit to **Newfoundland** with Joe Macquaker is postponed till 2011, but in the meantime John Nudds has offered to take a group to **North Germany**, in May (details on page 2). Contact Marjorie Moseley if you are interested in going, **ASAP**.

The **Herdman Symposium** in Liverpool, the **Shell lecture** and **GEMS Seminars** in Manchester are all aimed at students, but **MGA** members are welcome and will find them very interesting. (See p8)

Most of you will already know that our very dear friend and Honorary Member, **Fred Broadhurst**, died in October. He will be greatly missed by many, many folks; Derek Brumhead's lovely tribute to him is on pp 3 & 4. With all good wishes for the festive season and 2010,

Mary Howie

MGA newsletter editor

Quick Diary 2010

Sat 16 Jan 1.30 pm	Scenes from the Precambrian
Wed 17 Feb 7.00 pm	AGM & Presidential Address "Various Volcanoes - Vesuvius et al."
Wed 10 Mar 6.30 pm	The Sichuan Earthquake Disaster

Future Field Trips ~ details in March newsletter

April	Date to be decided.	Dr. Tony Adams ~ Inner City Salford ~ Geology and Urban Geomorphology
Sun 23 May		Dr. Jacqui Malpas ~ Carboniferous Limestone, Llangollen
28 May - 3 June		Dr. John Nudds ~ North Germany
Sun 4 July		MGA Open day at Styal
Sat 17 July		David Craven ~ Jumbles Country Park & Bolton Museum
Sat 14 Aug		Paul Chandler ~ Good Luck Lead mine, Matlock
Sat 4 Sept		Jane Michael ~ The Fred Broadhurst Memorial Walk

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Proposed MGA visit to North Germany

May 2010

More amazing fossils of Germany

Dr John Nudds (Manchester University and MGA Hon Member) has offered to take a group of MGA members to Germany next May.

Probable dates will be May 28th - June 3rd, 2010

(or one day either side).

This will be a modestly priced visit, staying in local Guest houses and travelling around in self-drive minibus (es).



We plan to fly to Frankfurt from Manchester.....

Visit the Messel Pit and Darmstadt Museum.

Drive to Halle and see the Geiseltal opencast pit and the Halle Museum

Take a steam train ride up The Brocken (Harz Mountains)

Continue to Berlin to visit the Humbolt Museum (Berlin Archaeopteryx)

and Pergamon Museum (Gates of Babylon) and other tourist sites

Returning after 6 days to Manchester by air from Berlin.



We shall stay for two nights at :-

Darmstadt, Halle and Berlin.

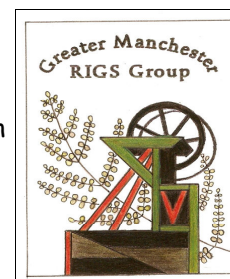
If you are interested in joining this group please contact

Marjorie Mosley ASAP

0161 432 4343 or marjoriemosley@talktalk.net

Greater Manchester RIGS Group

For the past few weeks, Sue and I have been compiling a spreadsheet containing brief details of each of the 700 geological site records held in the Manchester Museum. This list was requested by Greater Manchester Geological Unit and will be circulated by them to all ten Greater Manchester Authorities and any other interested parties. Research on the Victorian geology trail in Rochdale Cemetery is progressing very well.



Marjorie E. Mosley, Secretary, GMRIGS Group. December, 2009



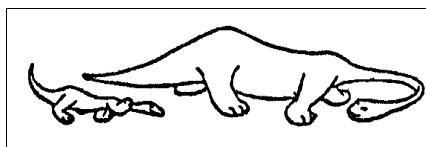
IN MEMORIAM ~ FRED BROADHURST

Frederick Munro Broadhurst, always known as Fred, was born in Withington, Manchester, an only child for parents May and Fred. Fred spent his childhood and early adulthood in Burnage where he attended the local primary school, known as The Acacias and later in 1939, the William Hulme School.

In 1946, at the age of 18, Fred volunteered to become a 'Bevin Boy' at Bradford Colliery in east Manchester. Working underground, managing the coal trucks and transport of the coal to the surface, inspired his love of geology (especially the Coal Measures.) He decided to further his education and whilst working down the pit he attended day release and night school at Stockport College, studying science subjects to enable him to gain entry to university to study geology full time. In 1948 he left the pit and with the help of the ex-serviceman's grant, he attended Manchester University to study geology.

In 1951 Fred graduated with a First Class Honours degree and became an Assistant Lecturer, then soon after a Lecturer, going on to gain his MSc in 1953 and his PhD in 1956. He subsequently became a Senior Lecturer, and PhD supervisor.

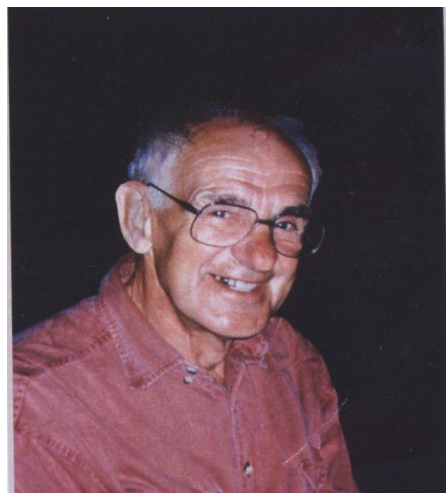
One highlight of Fred's career was the discovery in 1960 of the near-complete skeleton of a 14 ft plesiosaur. The remains were found at Ravenscar (Alum Shales of the Upper Lias) on a field trip with his students and caused great excitement at the time. Later, Fred returned with his students and spent ten days excavating the reptile. For many years it was displayed in a large purpose-built showcase outside the Geology Departmental library (1970-90), and is now in the Manchester Museum.



Over thirty years ago I arranged for Fred's rough sketch of the plesiosaur (with

baby added!) to be used on the Association card. It is now the Association's logo. At the time many knew of the logo's origin although unfortunately no official note was made. So it is appropriate that MGA members, should be told or reminded of the origin of their logo. It's Fred's!

5 February 1928 ~ 1 October 2009



Hundreds, if not thousands of people, all over our region knew Fred from his wonderful WEA, Extra-Mural (later CCE) and Wilmslow Guild classes, day courses, field excursions and visits abroad. You could not meet any person interested in geology who did not know Fred. His passing leaves a gap that will never be filled. The success of his teaching was a result of his boundless enthusiasm for his subject, his patience and courtesy in dealing with everyone he met and how he made those with little knowledge of the subject feel just as important as the knowledgeable ones, so that no-one felt left out.

I spent most of my career in liberal adult education and I can say that Fred was the greatest adult educator I ever met. I have never known a person so universally appreciated and admired. So, how appropriate that in 2000 he should receive a national award as Adult Tutor of the Year in North West England at the 'Dome' in London.

Fred also contributed greatly to the summer school held at Bangor University which was held jointly by the WEA and the Extra-Mural Department each year. Ian Foster and Fred worked together to deliver a weekend course there as recently as 1996, combining their specialities as 'Rocks and Rails'.

In 1990, Fred retired from Manchester University to concentrate on his work with the WEA and CCE lecturing at many day and night classes and organizing foreign geological trips with the Wilmslow Guild. With Paul Selden, he was leader and guide writer for visits to places such as Norway, the western USA and New



Zealand (1993-2000). The work involved in the academic preparation and infrastructure of each course was immense, but the huge ability and attention to detail of Fred and Paul ensured some memorable trips.

A 'professional' appreciation of Fred and his career will appear elsewhere. Suffice to say that he published over 50 articles often in association with other eminent geologists and in journals of international repute. In 1982, he was awarded the prestigious John Phillips Medal of Yorkshire Geological Society for major contributions to our knowledge of the geology of Northern England, and later was awarded the Silver Medal of Liverpool Geological Society.

Despite his academic eminence, it was very easy to discuss with him any aspect of the subject. But members will more likely know of his more general writing - the popular 'Rocky Rambles in the Peak District' (which brought out his skill as an illustrator), the guide to the building stones of the Trafford Centre, and the recent superb revision of the 'Guide to the Building Stones of Central Manchester' (with Morven Simpson). This last book, first published in 1975, was a pioneer in opening a new field in the teaching of geology, and over the next few years a plethora of town and city guides for the UK appeared.

The work involved in drawing up these guides shows Fred at his best (along with Morven), tracking down architects and stone masons and discovering the names of the often unusual rock types. Such work could involve delicate negotiation (eg arranging with management for students to be allowed to crawl around the floors of the Trafford Centre!), something that Fred was excellent at.

I first met Fred just forty years ago leading a geology trail in Lyme Park, and I still have my notes. Over the succeeding years we met many times and I benefited so much from his knowledge and expertise imparted with much generosity; always up to date, of course, with the latest developments and theories, and this continued into his 'retirement'. The last walk I went with him was with the MGA group at Styal in July 2009. It

lasted an hour and a half, with Fred going at his usual 150 mph. At the end when we were all looking forward to a cup of tea, Fred said he must be off to take a second group around. What more can one say ?

He had a lovely sense of humour. My favourite example (worth repeating for those who may not already know of it) was when we were in Dublin, thirty years ago, with the Palaeontological Association. We both came across a bus stop sign which said - 'The following buses do not stop here'. We both fell about laughing and took a slide each. No doubt his will still be there among the many thousand others. What a treasure trove there must be amongst those ?

It's only a few months ago since we were emailing each other about re-arranging his talk to the New Mills Local History Society ('New Mills 300m years ago' !) and getting down to finishing a trail on the Torrs gorge. What is shocking is that such a seemingly indestructible person should be taken so quickly in this way. When we lose someone like Fred, it reminds us all of our own mortality.

Despite his enormous commitments, Fred was a wonderful family man. Having met Rosemary at a University Union dance, they married in 1958, and had a son and daughter. Now, there are also four grandchildren. Fred took great delight in his children and grandchildren and had a fantastic relationship with them. He had a real love of mountains and walking in the Peak District and as a family they all loved it too, and this continued until summer of this year when he started to feel poorly. At the wonderfully simple ceremony, the grandchildren each gave a moving appreciation of their 'inspirational' grandfather. His presence will be missed but the 'Fred Effect' will pass on for generations to come.

Derek Brumhead PhD OBE (MGA Archivist)



Building Stones of Manchester University and its Environs

Leader Norma Rothwell 10th October, 2009 ~ Report by Marjorie Mosley

A group of MGA and OUG members, plus visitors, gathered with Norma Rothwell outside The Manchester Museum, Oxford Road, for this, the last MGA outdoor event for 2009.

In the boot of her car, Norma had an extensive and fascinating collection of building stones with matching postcards for reference, including exotic granites, local sandstones and limestones, and marbles. Norma made the point that the older the building, the more likely it was that the building stone was local - with obvious exceptions, such as Canterbury Cathedral, built with limestone from Caen, France. However, over time, as transport links improved, more "exotic" building stones reflecting the economic prosperity of towns and cities were used, such as Imperial Mahogany, which is a dark igneous rock from South Dakota, the decorative limestone from Portland and Larvikite from Norway. Many fine examples of these stones and more besides can be seen locally in the buildings of Manchester and Liverpool.

Moving on we made our way to the plaza and foyer of the Museum both of which are paved with microgranite, a pale grey, medium-grained crystalline stone with easily seen crystals of mica, feldspars and quartz. This was imported from China in 2004. The polished foyer stones contain numerous autoliths, the result of later pulses of magma moving up through the original magma on thermal currents. The Egyptian obelisk in the foyer was carved from a coarse-grained dark pink Syenite quarried in Aswan and twinning was seen. Opposite the Museum entrance, the Carboniferous Darley Dale sandstone walls of the geology gallery have fine examples of cross-bedded sandstone.

On Oxford Road we observed that the Museum had been built from thick and thin blocks of Darley Dale

sandstone; the thinner blocks had been used as ties between the thicker blocks to secure the building, making an attractive design feature. In some of the blocks, more cross and graded bedding could be seen and higher up one block had a fine example of Liesegang Rings – a form of iron staining that looks like fine lamination, except where they are clearly seen to cross-cut bedding planes.

The flags under the archway leading into the University quadrangle are Haslingdon Flags from the Carboniferous period with parting lineation, giving them an uneven appearance. The archway has intricate carvings and Norma pointed out that this was constructed from a freestone, which is a competent stone, easy to carve and withstand weathering.

Passing under the archway and into the university quadrangle, paved with ripple marked Haslingdon flags, we looked back at the archway. There was a clear colour difference in the stone used for the archway and the adjacent buildings. The archway stone was pinker, and is a Binney Sandstone of Carboniferous age and was older than the more buff coloured Darley Dale Sandstone used in the other buildings.

At the far end of the quadrangle is an imposing glacial erratic discovered in 1888 during excavations for a new sewer in Oxford Street. The weathered erratic is an andesite from the Lake District Borrowdale Volcanic Series. The striations on its north and south faces are indicative of transportation



Erratic boulder in the Quad
Photo ~ Mary Howie



by ice.

Surrounding the erratic is a decorative collection of smooth, rounded, iron- stained metaquartzite cobbles. During the Triassic period, the cobbles were carried by large, fast flowing rivers from a mountain range in what is now Brittany and deposited in desert basins in what is now southern Britain. The pebbles become smaller towards the north of the country indicating that the rivers flowed from the south. The small bruise like marks on the surface of the cobbles is caused by pressure solution at the points of contact between the cobbles as they were buried and compacted during lithification.

Back in Oxford Road, we made our way to the Students' Union Building to search for Jurassic fossils in the Portland Stone. Weathering has caused many fossils to stand proud of the matrix, so with a little patience, *oyster*, *Turitella* and *Solenopora* could be found. We were asked not to collect!

Across the road from the Students' Union Building is the Holy Name Catholic Church. The church was built in 1871 from Warwick Bridge Stone, a competent sandstone from the Upper Carboniferous age and younger than the Collyhurst sandstone.

Inside the church use had been made of a variety of



Alabaster pulpit in the Holy Name Church.
Photo Mary Howie

aesthetically pleasing material. The pulpit is constructed from an amber and cream streaked alabaster (a form of gypsum) and has serpentinite columns. Serpentinite (a green, coarse-grained crystalline ultra basic metamorphic rock) is also used for the altar rail; underneath this

are inlaid flower designs made from jasper and serpentinite. The high altar is a beautiful Caen limestone and the statues of St. Teresa and Our Lady

of Fatima have been carved from white, medium-grained Italian Carrara marble, a metamorphosed limestone that is much valued by sculptures both past and present. The font at the rear of the church is alabaster, similar to the pulpit. The floor is flagstones with parting lineations and the piscinas near the door are clamshells (*Tridacna*).

Passing the Williamson Building with its new granite seats, we crossed the road to the Museum's geological garden in Bridgeford Street. This collection of fourteen specimens demonstrates the rich diversity of natural stone found in the wider region of Manchester and ranges in age from the Ordovician Green Slate (~500 Ma), a metamorphosed volcanic ash from Cumbria, to the brick red, sedimentary Triassic St. Bees Sandstone (~225 Ma). There is a splendid specimen of Shap Granite (~400 Ma) with its pink orthoclase feldspar crystals and autoliths of darker material. The Carboniferous period is represented by specimens of limestone from Swaledale and Derbyshire and a basaltic lava from Millers Dale, alongside sandstones from Darney, Blaxter and Doddington. Local sandstones, found in the base of the Coal Measures, are represented by specimens from Appley Bridge, near Wigan and include Harrock Hill Grit, Crutchman Sandstone and Old Lawrence Rock.

After lunch, we met up at the entrance to the Whitworth Art Gallery and a discussion took place as to whether the small fragments of darker material within the grey granite portico columns were xenoliths or autoliths. It was mooted that, as a rule of thumb, xenoliths tend to have angular edges and autoliths tend to be rounder. As there seems to be both angular and rounded examples within this granite, the jury is still out on this. Interestingly, though, some of the more angular fragments showed signs of weathering.

Beyond the steps of Carboniferous sandstone, the foyer floor is constructed from white marble and black limestones tiles; the limestone showing indistinct fossil traces.



Inside the art gallery proper, more tiles of marble and limestone can be seen alongside beautiful examples of green opicalcite (a marble inundated by serpentinite, similar to Connemara marble). The crowning glory of this area is the columns of Blue Pearl Larvikite.

This coarse-grained crystalline igneous rock is a variety of syenite from Norway. The iridescent blue 'Schiller' effect is caused by the predominant large anorthoclase feldspar crystals.

The dark Otta Slate used for the floor of the art gallery was of note. It is not a slate but a schist and lineation is

obvious when the rock was examined by the window; the acicular (needle-like) porphyroblasts of amphibole (hornblende) can be picked out standing proud where few people had walked. These acicular porphyroblasts are the result of secondary mineral growth after metamorphism.

Many thanks to Norma from the MGA, OUGS and guests for bringing to our attention the wide diversity of accessible building stones within the University locality and giving us such an informative and enjoyable day.

Marjorie Mosley

Matthew Jones (aged 13) is now a regular on our field trips and at our meetings (he makes his Mum and Dad come along too!) He has sent us his account of the Building Stones day plus illustrations:-

Field trip Building Stones of Manchester University.

Together with the Open University Geological Society we met outside the Manchester Museum.

Once we were together we headed round the corner to view the car boot display-case of building stones, which was interesting. We then went back to the meeting place and up some steps to the area just outside the museum where we looked at a wall of micro granite imported from China and tried to find the few garnets in it.



Egyptian syenite column in Manchester Museum
Photo MDH

Inside the foyer to the museum we saw an Egyptian column of red granite about 12 ft high, engraved with hieroglyphs. Also inside we examined some more micro granite from the same quarry looking at the enclaves (other foreign rocks in the rock). As we walked along the main road we looked at a sandstone wall with interlocking bricks showing gradual variation. After that we moved around the building and looked at an area of the wall where the iron in the sandstone had migrated slowly into one patch.

As we continued to walk through into the quadrangle we saw a flagstone with ripples in it. We looked at the sandstone types in the

surrounding walls, there was the Collyhurst sandstone which is the older rock and Binney sandstone which is less pink and also younger.

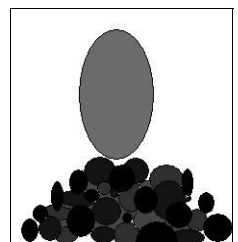
We moved around the quadrangle to look at a large Andesite boulder which was found in a glacial drift. The smaller rocks it is supported by are quartzite pebbles.

We continued to a university building further down the main road where there were some blocks of Jurassic limestone containing fossilized oysters and *Turetella* shells.

After that we walked further up the street towards a church. Inside we looked around

quietly and looked at a lot of things including a large clam shell about an arms length long. There was a pulpit made of gypsum with serpentinite columns. Next we visited the rock garden in, literally a garden of rock, containing as well as a lot of other things, some interesting fossils.

Matthew Jones (aged 13 ~ a Rockwatch member)



Andesite boulder and pebbles ~
Matthew Jones



'Geoscience Frontiers'
The Herdman Society Symposium ~~ Saturday 20th February 2010

**Department of Earth and Ocean Sciences, Sherrington Lecture Theatre
University of Liverpool**

Professor Nick Kuszniir, University of Liverpool. 'Exploring Arctic Oceans and micro-continents'.
Professor Jane Francis, University of Leeds. 'Fossil forests of Antarctica – Life at the South Pole in a warmer world'.
Professor Tim Druitt, University of Clermont Ferrand. 'The late Bronze age eruption of Santorini and the demise of the Minoan Civilization'.
Professor Steve Sparks FRS, University of Bristol. 'Assessment of volcanic hazards, risks, vulnerability and uncertainty'.
Professor Ian Stanistreet, University of Liverpool. 'Pliocene life and times, environments exploited by earliest man, Olduvai gorge, Tanzania'.
Professor Trond Torsvik, University of Trondheim. 'Mantle dynamics: Linking surface and deep processes'.
Professor Peter Kokelaar, University of Liverpool. Closing remarks followed by a Wine Reception

Further details, including map, from helenk@liv.ac.uk or Mrs H. Kokelaar, Department of Earth and Ocean Sciences, University of Liverpool, 4 Brownlow Street, Liverpool L69 3GP (tel: 0151 794 5146). Tickets and full programme will be available at the door.

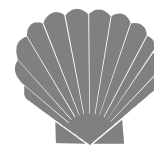
£6.00 non-members and £3.00 Herdman Society Members (includes coffee and buffet lunch) However, pre-booking (if possible) by e-mail, phone or mail is requested to assist with catering.

Geol. Soc. and Shell Sponsored Lecture at the University of Manchester on

17th February 2010 at 17.30

Palaeo-perspectives on Human-Climate-Environment Interactions -

David Hodell (Cambridge University)



Free tickets from Alys Hilbourne ~ alys.hilbourne@geolsoc.org.uk

Lecture abstract and more information on <http://www.geolsoc.org.uk/shellunilectures10>

Other Shell sponsored lectures in Oxford, Durham and Aberdeen see website.

MUGS are now GEMS

The Geological and Environmental Manchester Student's Society (GEMS) seminars are aimed at undergraduate students but all are welcome to attend these lectures

February 8th: T.B.C., Dr Chris Jackson, Imperial College.

February 15th: T.B.C., Prof Paul Wignall, Leeds.

February 22nd: TBA

Tea, coffee and biscuits will be available from 4.40 pm in the library foyer on the ground floor. Seminars will start at 5 pm in G33

MGA members are welcome to attend these student seminars on Monday afternoons



Our Secretary has been trekking ... she writes:-

I recently undertook two treks in the Himalayas. One was on the Singalila Ridge in West Bengal and from which we got stunning views of the Everest group (including Lhotse and Makalu) and the Kanchenjunga Group.

The second one was in Sikkim where we trekked to the Gocha viewpoint (at 4680m) to see Kanchenjunga at close quarters.



La

Dawn striking Everest © Jane Michael



Lateral moraines in front of Kanchenjunga with a, now small, glacier, covered with rock debris and a river issuing from beneath it.
© Jane Michael

The rocks were a mix of gneisses and schists, although the most noticeable features at the pass were the many lateral and medial moraines and debris-covered retreating glaciers.

Jane Michael

Professor Paul Selden and a Swiss colleague, Danny Stockli, are leading a study tour to the Swiss Alps next year centred on Luzern, Zermatt, Wengen & Locarno

May 22nd to June 5th

GEOLOGY, SCENERY, NATURAL HISTORY OF
THE SWISS ALPS
A STUDY TOUR

Details are on Paul's website

<http://homepage.mac.com/paulselden/Home/page3/page13/page13.html>



Geology Courses in Lyme Regis in February and March 2010



The Natural History Museum is joining together with the Field Studies Council, Jurassic Coast World Heritage Team and Lyme Regis Development Trust to offer a range of natural science courses operating from the Town in February and March 2010.

<http://www.field-studies-council.org/2010/walkingandgeology/jurassiccoast.aspx>.

Check out their website for details of some super courses.

(I can personally recommend FSC courses as being very good value for money. Lyme Regis is of course the cradle of fossil studies. Ed.)



Who's Who in the MGA Council 2009 ~ 2010

President	Dr Christine Arkwright	
Vice President	Dr Tony Adams	SEAES University of Manchester
General Secretary	Jane Michael	secretary@mangeolassoc.org.uk
Membership Secretary	Fred Owen	
Treasurer	Niall Clarke	
Indoor Meetings Organiser	Jim Spencer	
Field Excursions Organiser	Marjorie Mosley	
News Letter Editor	Mary Howie	
Web Site	Sue Plumb	www.mangeolassoc.org.uk
RIGS Group	Marjorie Mosley	gmrigs@hotmail.com
Minutes Secretary	Sue Plumb	
Archivist	Dr Derek Brumhead	
Other Council Members	Chantal Johnson, Lisa Abbott and James Jepson	

President Manchester University Geol. Society (ex officio)

MGA email addresses :- To contact our President or Membership Secretary email info@mangeolassoc.org.uk

for Marjorie Mosley and field visits - outdoors@mangeolassoc.org.uk

for Jim Spencer and indoor meetings - lectures@mangeolassoc.org.uk

for Mary Howie and the newsletter - newsletter@mangeolassoc.org.uk

Our officers may be contacted via the MGA website

Other Societies

MGA members are welcome guests at other Geological Societies' events, some of their events 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
No details for next year available at present

Liverpool Geological Society

Contact **Joe Crossley** 0151 426 1324
10 Jan - 150th Anniversary of the First LGS Meeting - *Distinguished Visitor's Address.*
26 Jan - Past *Presidents'* Evening.
.13 Mar - Practical & Field Meeting - National Science Week Event.
16 Mar - *Distinguished Visitor's Address* by Lynn Frostick on ' Rivers, Floods and Climate Change'.

North Staffs GA

Contact **Eileen Fraser** 01260 271505
Thursday 14th January 2010 7.30 pm
Speaker: Dr. Richard Waller (University of Keele)
'Past, present and future challenges associated with the development of permafrost regions.'

Thursday 18th February 2010 7.30pm
Professor Andrew Willmott (Proudman Oceanographic

Laboratory)

'Sea Level Science; Global and Local Relevance.'
Thursday 4th March 2010 7pm AGM and Chairman's address Dr Ian Stimpson (University of Keele)
'Staffordshire Stone'

Oldham geological Society

No details at present ~ monthly meetings in Oldham
Contact **Jo Holt** 01457 874095

Open University Geological Society NW Branch

Contact **Jane Schollick** 01704 565 751
Saturday Jan 30 NW AGM and Dinner
Sunday Feb 28 Lancaster Lectures
Sunday March 28 Day trip ~ Clitheroe area

Russell Society

Contact **Alan Dyer** on Aldilp@aol.com or Harry Critchley, Tel: 01204 694345 if you are interested in these mineralogical events.

Friday 8th January 2010: Branch AGM to be held in the Secretary's House at 20:00 followed by "What's New in Minerals", Dr David Green. Branch AGM
Friday 12th February 2010: "Franklin and Sterling Hill", the mines with the largest number of different minerals credited to them - many of them fluorescent. David Hardman. Indoor Meeting

The next newsletter will be in March Copy to me by end of **February** 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.



MGA Programme of Indoor Meetings

Spring 2010



Saturday 16 January 2010 Scenes from the Precambrian Afternoon Lectures 1.30 pm

Precambrian Shields - What can they tell us about the Origins of Continents?

Professor Hugh Rollinson, University of Derby

The Belingwe Greenstones, Zimbabwe, Professor Euan Nisbet, Royal Holloway, University of London

Wednesday 17 February 2010 AGM followed by the Presidential Address 7.00 pm

Various Volcanoes ~ Vesuvius et al Dr. Christine Arkwright, University of Manchester

Wednesday 10 March 2010 – The Sichuan Earthquake Disaster - Evening lecture 6.30 pm

Professor David Petley, University of Durham a Joint Meeting with the Geographical Association

Please note the various start times for lectures

All meetings will be in the Williamson Building, Oxford Road, Manchester (opposite the Manchester Museum)
Tea and coffee will be served before the evening lectures and in the afternoon break on Saturdays

Further information about the MGA from the Hon. Gen. Secretary Jane Michael
tel. 07932 927040, or email info@mangeolassoc.org.uk or go to our website www.mangeolassoc.org.uk

Visitors are always welcome

Lecture notes ~ for January Scenes from the Precambrian

Professor Hugh Rollinson, University of Derby and Professor Euan Nisbet, Royal Holloway, University of London

The name 'Precambrian' dates from Adam Sedgwick's original investigations into the geology of Wales, where he dubbed the system of rocks 'Cambrian'. In Caernarvonshire he observed that some gnarled rocks underlay, and were therefore older than, the Cambrian rocks; these he termed pre-Cambrian.

Precambrian rocks form but a small percentage of the British succession; worldwide, however, they cover a much larger percentage of the earth's surface, occupying large parts of Canada, Greenland, North and South America, Scandinavia, Siberia, Africa, Arabia, India and Australia.

These Precambrian areas are of great economic importance, containing, as they do, most of the world's supply of industrially important metals, such as iron, nickel, cobalt, copper and zinc. They also host virtually all of the world's chromium, platinum, gold and diamonds.

From a purely geological point of view, though, Precambrian rocks are of the greatest importance for providing the only evidence we have to support and test theories about the formation of the earth, the evolution of continental crust, or the origins of the earliest life forms.

~ February ~ Presidential Lecture ~ Various Volcanoes - Vesuvius et al. ~ Dr Christine Arkwright

A collection of images taken on visits to a range of volcanoes will be used to illustrate the wide variety of eruption styles, types of magma and tectonic settings seen around the world today. Sites include the currently active Etna, Vesuvius, Stromboli, Iceland and Hawaii, together with ancient volcanoes seen in the Auvergne, Scotland and the Lake District.



Renewal Subscriptions for 2010

Membership renewal subscriptions are due on 01 Jan 10. Prompt payment will be appreciated. It would help me greatly if all renewals could be completed by 31 Jan 10. *Each year I have to remind about 15 members repeatedly to renew; to avoid me pestering you please do it now while it is fresh in your mind! It would help if those not intending to renew would let me know too.*

The subscription rates are unchanged at:

Full	£13.00/yr
Associate	£2.00/yr
Joint Full and Associate	£15.00/yr

Payment Methods:

By cheque: Complete the form below and return it to me with your cheque made payable to MGA.

By Standing Order: If you pay by Standing Order, or have advised me that you intend to from 01 Jan 10, you will find the letters 'SO' after your membership number on the label of the envelope in which you received this Newsletter.

Send in a form *only* if your details have changed.

At a meeting: If you give me cash or a cheque at a meeting please ensure that you give me your form with your payment, so that I do not forget to give you credit for it!

Recent New Members who have joined for the first time on, or since, 01 November 09 do not renew subscriptions until 01 Jan 2011.

Gift Aid Declarations (GAD) *do not* have to be renewed. However, if you pay UK income or capital gains tax, and have not already completed a GAD it would benefit the Association if you would do so. A form can be downloaded from the website or obtained from me.

Changed your details? - Please complete the form to keep our database up-to-date. This applies especially to new or changed email addresses if you wish to be informed of short-notice events or event changes.

We hope you enjoy another eventful year with the MGA in 2010.

Fred Owen,
Membership Secretary

Full Members only:

Surname:.....Initials:.....

Address:.....

.....Postcode:.....

Tel: day:.....evening:.....mob.....

Email:

I enclose a cheque for £13.00 payable to MGA to renew my subscription for 2010.

Signed:..... Date:.....

For Full and Associate Members (both must live at the same address):

Associate Member Surname:.....Initials:.....

I enclose a cheque for £15.00 payable to MGA to renew our subscriptions for 2010.

Signed (*Associate Member*).....Date:.....

(Return by 31 Jan 10 to Fred Owen, 29 Westage Lane, Gt Budworth, Northwich, CW9 6HJ)

