

Bulletin

Number 86

July 2008



The Group has Public Liability Insurance through a GA insurance policy which also carries limited personal accident cover for members attending meetings or field trips. Non-members attending Group field trips are advised to take out their own personal accident insurance to the level they feel appropriate.

Diary Dates:

FIELD PROGRAMME FOR 2008

Note: a field fee of £2.00 per head is made

Sunday 20 July:

Crummack Dale, Austwick, Yorkshire.

Leader: Alan Diggles

The minibus has been cancelled, please contact the field secretary if you need to liaise over car travel. The arrangements for joining are as follows:-

The start will be at the school in Austwick village (Sheet 98 - 768686) at 10.30am on Sunday 20th July.

The aim of the excursion is to look at the geology arising from the Dent and Craven faults and glaciation effects. A walk into Crummack Dale from Austwick (situated to the SE of Ingleton) for rocks of the Silurian (Austwick Formation Sandstones), Carboniferous Limestones and Ordovician Siltstones. Features to include the Norber erratics, Nappa scars and Moughton Whetstone Hole.

The trip will take until 4.00pm (or thereabouts), a packed lunch will be needed as will boots and wet weather gear.

The distance to be walked will be approximately 9km. As regards severity, the walk will follow the usual fell side paths, with rocky outcrops and occasional steep areas which can be slippery if wet. There are a number of ladder styles and wall steps to be negotiated.

Saturday 16 August:

The Roaches

Leader Dr Patrick Cossey

Meet at 9.30AM at the Roaches car park at SK004622.

This excursion visits some spectacular sections of the Upper Carboniferous (Namurian) Roaches Grit on the prominent escarpments of the Roaches, Hen Cloud and Ramshaw Rocks, north of Leek in the Staffordshire Moorlands (pray for a fine day). The deposits form part of an extensive delta that flooded into the Central Pennine Basin during Upper Carboniferous (Marsdenian) times. Participants will, it is hoped, work out for themselves which way the Carboniferous rivers were flowing and consider the dramatic effects of Variscan deformation (folding and faulting) and glacial activity in the area. A vast array of sedimentary structures will be seen during the day, and discussions are likely to range widely from coal-mining and subsurface petroleum reservoirs, to geotrails, the Lord of the Roaches and gigantic Carboniferous amphibians.

An earlier start is being made because of limited car parking space, it is suggested that people travel together where possible. The trip will cover about 5 miles over rough terrain; no rock climbing involved just easy scrambling with 3 – 4 steep sections taken steadily. No hard hats required, but will need sturdy footwear, wet weather gear and a packed lunch.

Saturday 27 September:

Calton Hill Quarry, nr. Buxton

Leader: Dr Chris Arkwright

Meet at 10.00am at Miller's Dale Station Car Park, Grid Ref: SK137733 (parking fee payable).

To investigate Carboniferous igneous intrusions and lavas and their associated limestones in the Buxton area. Overall length of walks about 5km, limestone succession and interbedded lavas in Miller's Dale Quarry then, driving into Tideswell for a dolerite quarry to examine lithology and thermal effect on surrounding country rocks. Packed lunch at picnic site in the quarry. After lunch drive to Calton Hill, park at SK112710 to examine the structure and lithology of a Visean volcanic complex and dolerite intrusion in the disused quarry.

For further information contact NSGGA Field Secretary **Gerald Ford**,

☎ 01630-673409 or e-mail: g.ford@ukonline.co.uk

For contact with the **Field Secretary** on the day of a field trip the mobile phone number is 07789 826807 when there is a chance that it will be switched on

Joint NSGGA/BCGS Visit to Lapworth Museum



A joint meeting of the NSGGA and the Black Country Geological Society was held at the Lapworth Museum and attended by some 24 members. Charles Lapworth was the first Professor of Geology at Mason College the forerunner of the University. He originated the Ordovician system. The collections reflect both the history of the University and of the development of geological knowledge.

After a welcome coffee, the Curator Jon Clatworthy gave a brief introduction to the museum and its contents; Lapworth (1842 – 1920) was appointed in 1880, specimens were then collected as a teaching and research aid for the students.

Currently amounting to some 250,000 accessioned items (and increasing), the minerals and fossils displayed in systematic order form only a small part of the material held; maps, photographs, zoological exhibits and archaeological artefacts are contained in the collections. The main strength is palaeontology with fossils collected from Wrens Nest (Wenlock Limestone) and the Coseley coalfields with some 30,000 Carboniferous specimens of fauna and flora. About 4,500 type specimens are used as international reference tools and figured specimens (illustrated in publications) being the most important scientifically. The collections are important for fossil fish, the evolution of vertebrates and fossil footprints of early land animals from Shropshire. Minerals number some 20,000 specimens.

The general layout of the museum is very much traditional in appearance with cabinets and cases full of “wonderful things”, providing an amazing study resource; a welcome change to some of the “hyperactive” displays that tend to be favoured nowadays!

In the laboratory Jon had displayed examples from the collections which we then had the opportunity to handle and examine using hand lenses and microscopes. These included:-

- The historically important William Murdock collection of minerals made in the 1780's; Murdock was an inventor and engineer, associate of Boulton and Watt, installing steam engines in Cornwall.
- Samuel Allport collected in the period 1850 – 60's, visited South America and pioneered the use of microscopic thin slides in the 1850's; his collection contains some 2,000 petrology specimens, including igneous rocks from the South Staffordshire coalfield, with its original catalogue.
- Jasper More MP for Shrewsbury (died 1903) collected large and fine mineral specimens from the Shropshire lead mines that were exhibited at a British Association meeting in 1886 and eventually donated to the museum.
- C. Ketley a mining engineer from Smethwick collected at Wrens Nest; 1,650 specimens from the Silurian rocks of Dudley were purchased as a nucleus when the museum was founded in 1880.
- Lapworth, worked in the south of Scotland and then in Shropshire, a member of the Vesey Club (a Birmingham based society), visited Norway in 1890 and became a world authority on graptolites; there are 6,000 – 7,000 in the collection. Lapworth used them when mapping the southern uplands of Scotland, on the basis of which he was appointed to the post at Birmingham.
- P. B. Brodie (1815 – 1897), a rector in Warwickshire and President of the Warwickshire Natural History & Archaeology Society, collected fossilised insects, a collection influential in palaeontology.

Among the many specimens examined were thin sections of Coal Balls (typically plant debris cemented by calcite) from the Lower Coal Measures showing perfectly preserved plant cell structures e.g. rootlets of *Stigmara*.

At midday the group split into two, either for an early lunch or to visit the Lapworth room where his archive is housed. Here some of the Sir Charles Holcroft collection was also examined. Holcroft, a mine owner in the Black Country in the 1870 - 80's paid his quarry foreman for specimens from the Wenlock limestone, a common practice at the time. The collection register (included in the donation), recording the date, and the amount paid for each specimen e.g. 336p (old money) for a trilobite – a significant sum then. Coseley ironstone nodules (known locally as gubbin stone) from the lagerstätte are also in the collection. Among the curiosities included examples of fakes, these varied from trilobites that were clearly handmade to those that gave even the trained eye cause for concern.

After lunch we then visited the new archive store named after Professor Fred Shotton (1906 – 1990) head of department until the 1970's, a Quaternary geologist who researched the Anglian glacial deposits in Warwickshire and had been a military geologist during the 2nd World War. The archives include his records from his time in N Africa identifying water resources and of the Normandy coastline prior to D Day in 1944. Early BGS maps, mine plans (beautifully drawn, with engines), maps produced by Lapworth when mapping in Scotland and maps by Murchison of the Silurian system were set out for our inspection. The collection of 10,000 photographs is held digitally, these include Professor Lapworth and students on field visits to Shropshire, dressed somewhat more formally than nowadays and pictures taken during the construction of the Howden Dam across the Derwent valley (Lapworth had been the engineering geologist). From the geological maps of our local area to a first hand report (in copperplate) by the Captain who recorded his observations when sailing in the vicinity of Krakatoa in 1883, there was much of interest to all.

Particular thanks are due to Jon Clatworthy for preparing such a fascinating day and giving so freely of his time. Jon's extensive knowledge of the history and scientific importance of the collections gave them an extra dimension. The collections continue to be the subject of research by students at the University and in the wider scientific community.

Gerald Ford

WINTER LECTURES 2008/2009

9th October 2008 7.30 pm **Speaker: Christine Blackmore, Wardell Armstong**
"Landfill Engineering – protecting the Environment".

6th November 2008 7.30 pm **The Professor Wolverton Cope Annual Lecture**
Speaker: Professor Aubrey Manning, Emeritus Professor of Natural History, University of Edinburgh and well known TV personality. "2008 UN International Year of Planet Earth"

2008 is the 150th Anniversary of the founding of the Geologists' Association and the 60th Anniversary of the formation of our Group. This lecture will celebrate both events. Not to be missed, apply on the attached flyer by **1ST SEPTEMBER TO AVOID DISAPPOINTMENT.**

4th December 2008 7.00 pm **Christmas Social & buffet** with a talk by **Bob Roach**

8th January 2009 7.30 pm **Speaker: Dr Ian Stimpson, Keele University**
"Boxing Day Earthquake and Tsunami"

5th February 2009 7.30 pm **Speaker: Professor David Siveter, University of Leicester.**
"Silurian soft-bodied sensations: a unique window on the evolution of life".

5th March 2009 7:30pm AGM and **Chairman's Address** by **Elizabeth Hallam**

OTHER SOCIETIES NEWS

East Midlands Geological Society Diary Dates 2008

Indoor meetings take place in lecture theatre B3 of the Biology building at the University of Nottingham.

Wednesday 23rd July - Evening walk: Charnwood Forest

Leader: Keith Ambrose

Starting Point: Quarry Weighbridge. Take the road due north out of the village of Huncote (called Forest Road). After just over 0.5km from the village centre, the quarry entrance is on the left. Drive down this until you reach the weighbridge - the first building you come to. We will be looking at 2 exposures. The first shows the Bytham Sand and Gravel. Where best developed, there is a clear subdivision with basal cross bedded clast supported gravels up to 10m thick, overlain by cross bedded sands, up to 6.5m in thickness. The current exposure shows mainly gravel with some sand. The gravel clasts are mainly of local Carboniferous, Triassic and Jurassic origin. In the sands, coal is locally common. Current directions are mainly to the east and north east. At the second exposure, we will be looking at Oadby Till and Thrussington Till.

Secretary: Mrs Janet Slatter, 100 Main Street, Long Whatton, Loughborough, Leicestershire LE12 5DG

e-mail: j.slatter@zoom.co.uk. tel. no. 01509 843297

Black Country Geological Society Diary Dates 2008

Lecture meetings are held at Dudley Museum, St James's Road, Dudley. Phone (01384 815575)
7.30 for 8 o'clock start unless stated otherwise.

Sunday 27th July 2008 (*Field meeting*)

Permo/Trias geodiversity of Kinver. Leader: Alan Cutler BCGS

This local excursion will include a visit to the well-known rock houses and Alan will be aided by local historian **David Bills**.
Meet at **10.30am** in Stourbridge at the Trinity Grange development (DY8 4DJ), **Amblecote High Street** (A491) just north of the town's ring road. (GR: SO900848)
(Contact number 07977 928493)

Monday 29th September 2008 (*Indoor meeting*)

Spencer Mather will give a talk on Gemstones

For further details contact BCGS Hon. Secretary: Sarah Worton, 158 Oakham Road, Oldbury B69 1QQ
Tel 01384 235946 or email: sarah.worton@atkinsglobal.com

Manchester GA Diary Dates 2008

Field trips: Contact Jane Michael 0161 366 0595 or e-mail outdoors@mangeolassoc.org.uk

Sat 12 July - Castleshaw Moor and Pule Hill, Marsden

Sun 21 Sept - Ingleton and White Scar caves - joint with OUGS

Fri 10 - Mon 13 Oct Isle of Man

Sun 19 Oct - Urban geology of Liverpool.

More details from website www.mangeolsocassoc.org.uk

Exhibition

There is an exhibition at Derby Museum and Art Gallery, The Strand, Derby, entitled **Explorations in Geology**. Works based on 18th century investigations into the formation of the Earth. Mon-Sat (10am-5pm), Sun 1pm-4pm. Ends 1st September.

Festival of Science

Attached is a copy of the programme for the Festival of Science being organised by the British Association for the Advancement of Science

Below is a reprint of an article published in Bulletin No 5 in 1988 (40 years after the formation of the NSGGA).

THE BEGINNINGS: A Personal Account
of the Formation of the NSGGA
by John Myers

It is just possible that our Local Group might not have come into existence but for a chance suggestion by my Headmaster. It all began a long time ago. It was 1920 when I had been offered a place at King's College, London for a four-year course, the fourth year being in the Education Department. My intention was to teach Chemistry. At that time, in the first year, it was necessary to study four subjects. I had Pure Mathematics, Physics and Chemistry, and it was at this point my Headmaster made a prophetic suggestion that I should take Geology as my fourth subject. However, it was the influence of A.K. Wells in that first year that shifted my interest from the Chemistry to the Geology Honours course. So, with an Honours Degree in Geology I began to train, in my fourth year, as a teacher of Geography.

It was not until 1944 that my Geology really came into use when the Headmaster of Wolstanton County Grammar School (formerly known as the Orme Boys' School) asked me if I would establish an Advanced Course in Geology for what was then known as the Higher School Certificate Examination. It was a challenge, for the problems were many, especially with text books, specimens and equipment. One example will suffice. I decided that I wanted a petrological microscope but, as it was war time, we had to apply to the Ministry of Supply for a permit to buy one. How that course developed is quite another story.

About this time I was also concerned with evening classes in Geology at what was then popularly called "Stoke Tech", as well as in Longton for the W.E.A. (Workers Educational Association). It was these W.E.A. classes which paved the way for the formation of our G.A. Group.

I cannot exactly recall what gave me the idea for a local group, but when I made the suggestion to the class members they promised me their support. The next move was to call a meeting for anyone interested in the project. More people came than I had expected. I remember that the late Tom Purcell offered his services as Secretary of the Group, an office he held continuously until ill-health forced him to resign. For his long service for the Group he received, some time later, the Foulerton Award. It was Tom who used to bring his own 35mm projector for the convenience of lecturers.

Towards the end of 1947 I forwarded 24 application forms to London for membership. I was told later that as the names for new members were read out, with address after address in the Stoke-on-Trent area, the first ten created some interest, but when the numbers exceeded 20, and finally reached 24 there was quite a stir. So the birth of a new group came about. After this meeting official recognition quickly followed and the North Staffordshire Group began life in 1948. There was an interesting offshoot to all this. I wrote to the District Secretary of the W.E.A. asking why Geology was not included in the W.E.A. Summer School at Oxford University. The idea was promptly taken up and for the first two years I was invited to be one of the tutors. It was the support of the Longton Geology Class that helped to make the Oxford Summer School Geology a success.

Schools soon took advantage of the new Group and many Sixth Form geologists became student members. In this way school geology was broadened not only with lectures by distinguished geologists, but also by excursions to areas well beyond the local region. The Group, from about 1950, developed close links with the new University College of North Staffordshire (later Keele University), links which still continue. Professor Cope was a good friend to the Group. In addition to lectures he took the Group to areas as far apart as Wenlock Edge, Millersdale and the Astbury Inlier. The late Mr. J.T. Wattison led many field excursions, often to Shropshire, including Sheinton, Shelve, Chern's Dingle and the Onny River. His wife, although blind, came on many of these early excursions. Quite early the Committee decided to offer a field weekend to North Staffordshire to G.A. Headquarters and this took place at Whitsun in 1950. Other excursions covered a wide area as you will see from the following list:-

the Lias of the Cheltenham area (D.O. Thomas), Wroxton Ironstone workings, near Banbury (J. Myers), Oxford Area (J.C. Parrack), Whitby (J.C. Parrack), Charnwood Forest (Dr. W.W. Black), North Cotswolds (D.O. Thomas & J. Myers), Fauld Alabaster Mine (J. Myers), Ashover (T.S. Jones) and the Manifold Valley (J.E. Prentice). I well remember the Manifold Excursion as it took place on an exceptionally hot July Sunday. On the Saturday afternoon of the Cotswold excursion, on a narrow road we were looking for ammonites in the downwash from the steep slope above. A man, unsteady on his feet after a session at the local, paused, watched us for a few minutes, then quite seriously asked, "Have you found any with heads on yet?" After we told him we had not, he lost interest and lurched away homewards.

From time to time we had lectures by people of distinction. These included S.H. Straw (Evolution), T. Eastwood (Uses of Geology), Professor W.G. Fearnside (N.C.B. Exploration in North Staffordshire), Professor F.W. Shotton (Geology and geologists in World War II), Professor J.F. Kirkaldy (History of Geological Research in the Weald), K.P. Oakley (New Light on Early Man), and Professor L.R. Moore (Coal and Oil Shales). Professor Shotton, I recall, told us that before Montgomery and the 8th. Army made each move forwards, geologists (Prof. Shotton was one of them) had to go ahead to locate adequate sources of water. Once they had been located Montgomery made his next move forward. This reminds me of a Careers Master telling a pupil that geology was no use to anybody.

Some time later there developed a close link with the North East Lancashire Group and joint excursions became a regular feature.

Looking back now to 1948 few of us little realised how successfully the Group was to develop. I recall how enthusiastic all members were and so full of ideas. No wonder then that, at times, seating accommodation at the Newcastle Arts Centre became quite a problem.

John Myers' Awards 2008

Having read the above extract from bulletin 5 you will know a little more about John Myers.

Ann and Terry Myatt have kindly offered to increase the two winners' awards from £100 each to £150 each. The NSGGA committee decided to pay an additional £30 out of the John Myers' Fund to each of the runners-up to increase their awards from £20 each to £50 each.

This year's assessment took place on Friday 6th June, the panel comprising: John Reynolds, Lloyd Boardman, David Osborn, Vicky Tunstall, Eileen Fraser and Mike Fereday. The panel read through 6 final year undergraduate projects and then discussed each one to decide which was considered to be the best from the 3-year Single/Dual Honours course and the 4-year MGeoscience course.

At the awards ceremony at Keele on Tuesday 8 July, Elizabeth Hallam gave a brief introduction telling those present about John Myers and his work for geology in the area. Ann Myatt, John Myers' daughter, presented the medals and cheques to the winners and runners-up.

3-year Single/Dual Honours

Winner: Helen Doherty for her "Cantabrian Mountains Mapping Project"

Awarded a cheque for £150 and the John Myers' Medal.

Runner up: Michael Kelly

Awarded a cheque for £50.

4-year MGeoscience

Winner: Alanna Juerges for her work on "Evaluating Magnetics as a Forensic Geophysical Technique to locate Clandestine Burials"

Awarded a cheque for £150 and the John Myers' Medal.

Runner up: Edward Anderson

Awarded a cheque for £50.

I would like to express my thanks to the assessment panel and once again to Ann and Terry Myatt for their continued generosity.

Mike Fereday

West Midlands Regional Group of the Geological Society

Richard Fortey lecture

"Dry Storeroom No 1 – Behind the Scenes at the Natural History Museum"

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On Tuesday 13th May Richard Fortey, President of the Geological Society of London visited the West Midlands Regional Group and presented his talk entitled "Dry Storeroom No 1, The Secret Life of the Natural History Museum".

He has just retired after having worked behind the scenes at the Natural History Museum for 35 years and has written a new book with the same title (ISBN 978-0-00-720988-0).

The Natural History Museum has tens of millions of specimens and is a reference library for the whole world. He told many amusing anecdotes, one of which was about two members of staff who named a group of slime mould eating beetles after George Bush and members of his administration. *Agathidium bushi*, *A. rumsfeldi* and others. Apparently George Bush rang them to say "how honoured he was to be so immortalised in the names of beetles".

In the early days of collecting specimens they were preserved in alcohol then later in formaldehyde. Much later it was found that formaldehyde destroys the DNA of the specimen so if you want to preserve your DNA drink alcohol and not formaldehyde.

During the Second World War Geoffrey Tandy, as expert on cryptogams or marine algae was drafted to Bletchley Park as the civil servant responsible didn't know the difference between cryptogams and cryptograms (codes). However Tandy was able to salvage some valuable documents recovered from a sunken German U-boat by using the same technique used for preserving seaweed. The code was broken.

It was a fascinating talk and well worth the trip to Birmingham University.

Mike Fereday

NSGGA - Next Committee Meeting

- **Thursday, 25th September at 7.00pm** **Please note that this is a revised date**
in the School of Earth Sciences and Geography, Keele University

Staffordshire RIGS Group

For details about the Group and meetings, contact:

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Executive Committee (honorary):

Dr. Colin Exley; Terry Jones; David Thompson; Ted Watkin.

Honorary Life Member: Ann Myatt

Executive Committee (elected):

Dr Lloyd Boardman; Dr Peter Floyd; David Osborn; Janet Osborn; Don Steward;

John Reynolds.

Executive Committee (co-opted):

Dean Rigby (Keele Geol. Soc), Nick Hulley

Why not visit the NSGGA web pages: www.esci.keele.ac.uk/nsgga