



Bulletin of the North Staffordshire Group of the Geologists' Association Number 106 : July 2013



SUMMER FIELD PROGRAMME 2013

Tuesday 23 July 2013 @ 14:00

British Geological Survey, Keyworth

Final Call : Spaces still available – email jr.reynolds1@virginmedia.com by July 19

Sunday 8th September 2013 @ 11:30

Bradgate Park, Charnwood Forest.

Booking form at the end of this bulletin.

Each person attending field meetings does so at their own risk. The NSGGA has public liability insurance through a GA insurance policy that also carries limited personal accident cover for members attending meetings or field trips. Non-members pay £2 to cover temporary membership giving them insurance cover. A field fee of £2 per head is normally charged for members and non-members to cover the leader's expenses.

Enquiries regarding field trips should be addressed to:

Steve Alcock, Longfields, Park Lane, Cheddleton, Leek, Staffs, ST13 7JS

Tel: 01538 360431 or 07711 501028

Email: steves261@aol.com

WINTER LECTURE PROGRAMME 2013/2014

Thursday 10 October 2013 at 19:30

Dr Richard Waller (Keele)

Skeiðarárjökull

Thursday 14 November 2013 at 19:30

Prof. Danielle Schreve (Royal Holloway)

The Thirteenth Wolverson Cope Lecture

Where the woolly rhinos roam: vertebrate faunal and environmental change during the last ice age

Thursday 12 December 2013 at 19:00

The Christmas Social

Thursday 9 January 2014 at 19:30

Keith Nicholls (Chester)

The Big Chill.....Life, death, and destruction, a story from the end of the Ordovician

Thursday 13 February 2014 at 19:30

Dr Sarah Davies (Leicester)

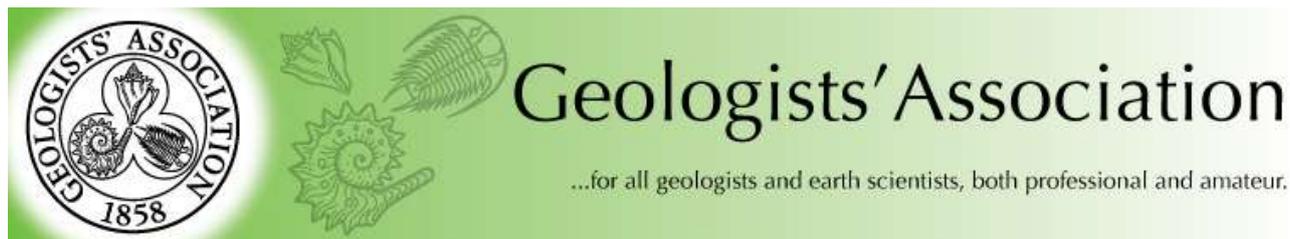
Rebuilding terrestrial ecosystems after the end-Devonian mass extinction: a major turning point in terrestrial evolution.

Thursday 13 March 2013 at 19:00

Dr Patrick Cossey

Annual General Meeting followed by
The Chairman's Address

Please Consider Joining The Geologists' Association



The North Staffordshire Group of the Geologists' Association (NSGGA) has been a proud Local Group of the national Geologists' Association since 1948. This Local Group status provides the NSGGA with many benefits such as cheap insurance cover for our field trips and lectures, no affiliation fee to the GA, free advertising space in the GA magazine and access to GA grants such as the Curry Fund.

However, in order to maintain this Local Group status the NSGGA is required to have at least twelve members who are also members of the GA. Examination of our records shows that we have exactly twelve members of the GA so consequently should any of these memberships lapse then the NSGGA would lose its coveted Local Group status and consequently the increased costs of affiliation and insurance would have to be passed on to all NSGGA members.

If you are not already a member of the GA (and our records suggest that some of you think that you are, and are actually not members) the NSGGA would be very grateful if you would consider becoming a member of the GA as well as the NSGGA.

Membership of the GA comes with many individual benefits too. Members receive free copies of the GA Magazine, both paper and electronic copies of the Proceedings of the Geologists' Association as well as a discount on GA Field Guides. Following the government axing of funding for much of the work of the Joint Nature Conservation Committee, the GA has stepped in to fund the on-line publication of Earth Heritage Magazine and the publication of the Geological Conservation Review volumes, the most recent being one on the Dalradian, plus proceedings of important conferences - the most recent being on Geoconservation. Members receive these as part of their subscriptions.

The GA organizes a series of geological lectures on the first Friday of the month (September to July) and, whilst these are given in London, they are available for all members to watch online. The GA also organises an annual Festival of Geology (an informative and fun day of talks, exhibitions and displays, as well as the chance to meet other geologists) and an extensive programme of field excursions in the UK and overseas, led by international experts. Student members may also apply for awards to support independent research projects (excluding standard mapping projects). Members have access to and borrowing rights from the library of University College London, including a wide range of geological maps.

Full, joint, student and associate memberships are available at www.geologistsassociation.org.uk/joiningform.html

SUMMER FIELD PROGRAMME 2013

British Geological Survey, Keyworth
Tuesday 23 July at 14:00
Leader: David Bailey

Meet at BGS Reception at 2.00 p.m.
 Grid Ref SK622317 Landranger Sheet 129.
 Directions: Follow the A 52 eastwards on the south side of Nottingham. At the A 606 roundabout turn right, signposted Melton Mowbray. After 4 km there is a dedicated right turn, signed BGS. As you enter the village BGS is on your left. Go past the back gate, turn left, then left. Stop at the barrier, turn left for the car park. Reception is on the right.



Image: BGS

See the following web pages for more info on visiting the walk or travelling to BGS:
<http://www.bgs.ac.uk/contacts/sites/keyworth/geologicalWalk/home.html>

An afternoon visit to the BGS Headquarters at Keyworth. A guided tour of their facilities should last for an hour or so followed by the opportunity to browse the new geology walk at your leisure (leaflet provided). Visit the Tesco-esque Rock Store (mind the fork-lift trucks), view type specimens, maps, field notebooks and other treasures, and see how virtual specimens are created for on-line use [Holo-types??]. The shop will be open till 5.

Final Call : Spaces still available – email jr.reynolds1@virginmedia.com by July 19 at the latest since the BGS require a list of visitors' names in advance.

Bradgate Park, Charnwood Forest.
Sunday 8th September 2013 at 11:30 a.m.
Leader: Dr Keith Ambrose

A joint field trip with the Stamford Geological Society. Leader: Dr Keith Ambrose.

Meet at 11.30 at the Hunts Hill car park [SK523116], the one nearest the Old John Tower. This is near the bottom edge of OS Landranger sheet 129

This is a visit to the geologically well-known Bradgate Park. Rocks of Precambrian age are well exposed along with the Cambrian Swithland Slate and the overlying Triassic Mercia Mudstones.

Localities to be visited include the Bradgate Formation at Old John Tower, the Sliding Stones Slump Breccia, South Charnwood Diorite, Stable Pit Quartzite, Swithland Slates and the Mercia Mudstones. Dr Ambrose will relate the rocks seen to modern environments and the plate tectonic setting.

About 7km walking with a few steep stretches.
 Keith will bring copies of BGS booklets for sale.

Please complete the booking form at the end of the bulletin **by August 15**, if you wish to attend.

Park Hall Geoconservation Day : Sunday 22 September 2013

Hulme Quarry SSSI & NNR (Park Hall Country Park), Weston Coyney, Stoke-on Trent

A chance to do some hands-on geoconservation at Park Hall Country Park for either a half or whole day on Sunday 22 September. If you haven't participated in this event before and you're 'up for a spot of site clearance' this is an event not to be missed.

Meet at the golf course depot building (SJ 927448) at Park Hall CP at 9.45am for the morning session (10am-12 noon) or at 12.45pm for the afternoon session (1pm-3pm). Simply turn up to either one of the 2 sessions or bring a packed lunch and stay for the whole day.

There is plenty of car parking there and we can easily walk to the work areas. Note that the rangers will provide all tools and supervision. Volunteers just need to bring gloves, work boots, packed lunch, gardening clothes and wind- and water-proof clothing etc. Although Park Rangers will provide drinks in the golf depot at lunchtime you may well need other refreshing drink to hand while you are working - so best to bring another with you on the day .

We will be removing vegetation from in front of the SSSI rock faces within the 'main canyon' area. If time allows, we will also spend some time working on rock faces in one of the smaller former quarries, which also lies within the SSSI. The precise location(s) of the site clearance work will be defined by Park Rangers on the day. Unlike similar events organised recently by GeoConservation Staffordshire, this event is typically organised by Park Rangers. This event has in fact run very successfully for many years with the support of volunteers from the NSGGA and GeoConservation Staffordshire and members of the public.



Kidderminster Fm. at Park Hall : Image - Ian Stimpson

The geology as you might expect in an national nature reserve with a geological SSSI at its heart is simply outstanding (fluvial deposits of the Triassic Sherwood Sandstone Group with some spectacular sedimentary structures some excellent fault structures too - come and 'see' how those Triassic rivers flowed). If your interests lean more towards the environment, conservation or site management then this event is simply a classic - a celebration of good working practice with sensitive management of both geodiversity (rock and landscape features) and biodiversity (wildlife & habitats) interests alike. Always different and always good fun and there's no need to book. It would be good to see you there - the more the merrier!!!

NSGGA PHOTOGRAPHIC COMPETITION 2013

The theme for our first photographic competition is Geological Features and/or Landscapes (a simple but very broad theme). Entries in a digital format will be accepted via email to Ian Stimpson at i.g.stimpson@keele.ac.uk together with your details in the format specified below, to arrive by the 31 October, 2013 closing date. A 'judging panel' will select '12 best photographs', these to be presented at the Christmas Social where all attending will have the opportunity of voting for the eventual winner(s). A small prize will be awarded to the winner of the competition and to the runner up.



"Sexy Geology" from Marloes Sands by Ian Stimpson - ineligible due to excessive digital editing.

COMPETITION RULES

1. Entry restrictions: This year the competition is only open to NSGGA members and GeoConservation Staffordshire volunteers. The competition is not open to professional photographers. Entries cannot have either won a previous competition or been previously sold. Members of judging panel are excluded from the competition.
2. Electronic editing: Images may be cropped, enlarged and digitally enhanced to remove spots and scratches only but any further digital manipulation of images will be regarded as unacceptable.
3. Entry format: Digital images in jpg/jpeg format only. Images should have a minimum dimension of at least 500 pixels in either height or width but there is no maximum size.
4. Number of entries: Three maximum.
5. Entry submission: Images should be sent as email attachments to Ian Stimpson at i.g.stimpson@keele.ac.uk with the body of the email containing your details and your image details as set out below.
6. Judging: A judging panel of three (the NSGGA chairman, a representative from GCStaffs and one other invited person) will select the '12 best photographs' from anonymised entries. The competition winner(s) will be determined by participants (members, GCS volunteers and guests) voting at the Christmas Social. All attending the 'Social' will be eligible to vote at this meeting. Entrants (and family members of entrants) whose images have been 'shortlisted' as a potential winning entry will be barred from voting for their own entries (or those of family members). In the event of a draw the Chairman (or the Chairman's nominee) will have a casting vote. The judging panel reserves the right to exclude any entry they consider in breach of the competition rules. The judges' decision will be final.
7. Copyright matters. Entrants will retain copyright to their images but by entering them into the competition they grant permission for the NSGGA and GCStaffs to reproduce the photographs free of charge in/on any NSGGA/GCStaffs bulletin, website, calendar, geotrail or other publicity material. Due acknowledgement of the copyright holder (photographer 's name) will appear alongside any images used in this way.

COMPETITION ENTRY

Please copy the following text into the body of your email entry and complete with your details, your photograph details and send, attaching up to three photographs, to i.g.stimpson@keele.ac.uk with the subject "NSGGA Photographic Competition 2013" by 31st October 2013

Name:

NSGGA Member / GCStaffs Volunteer [state which]:

I understand that by entering this competition I retain copyright to the images but grant permission for NSSGA / GCStaffs to publish any photograph, with due attribution, free of charge.

Entry 1 : Title

Entry 1 : Location

Entry 2 : Title

Entry 2 : Location

Entry 3 : Title

Entry 3 : Location



A garnet within the Conquet Schists, from north of Pointe de St Mathieu, Brittany, France.
Ineligible due to excessive digital editing & published elsewhere. Image : Ian Stimpson

Field Excursion Report - Monsal Trail, Derbyshire - Saturday, 13 April 2013

Leader - Eileen Fraser

The season's field excursions got off to a great start in April with Eileen Fraser's visit to Monsal Dale. The purpose of the visit was to examine some spectacular sections of the Carboniferous along a newly opened section of the Monsal Trail from Headstone Cutting to Monsal Dale - and to learn something of the evolution of the Derbyshire Platform over 330 million years ago when the area lay close to the equator in warm tropical seas. We were not to be disappointed!

Following a brief introduction overlooking the beautiful Wye Valley at Monsal Head the assembled group of twenty (a good mix of members and friends) set off at a cracking pace for Headstone Cutting, with a brief stop off *en route* at Little Longstone Church to consider the use of local stone in the construction of walls and buildings.

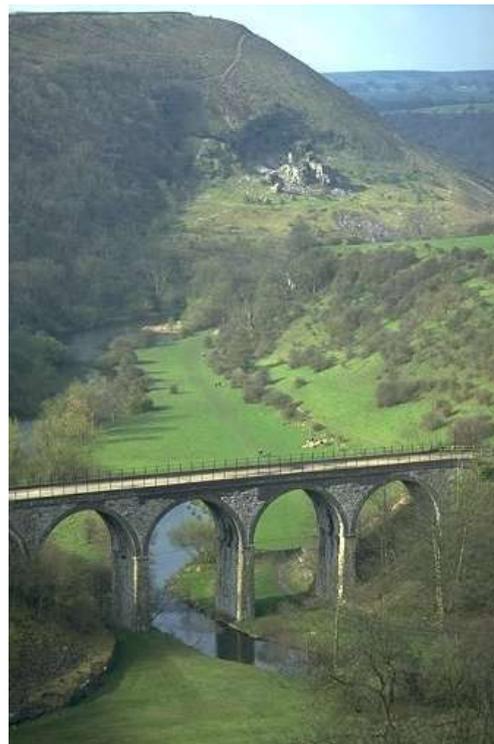


Figure 1 : The River Wye, Hobs House landslip and viaduct, Monsal Dale. Image: Patrick Cossey

At the cutting Eileen provided some fascinating insights into the history of the old railway that once ran between Buxton and Bakewell (a section of old London to Manchester route built in the 1860s). It has 8 tunnels and several viaducts and it closed in 1968 as part of the Beeching cuts. It has been subsequently converted to a popular tourist trail. Just how popular this trail had become we were soon to find out as examining the rocks, without fear of collision with either pedestrian, cyclist, dog or horse, became a perilous task.



Figure 2 : Imaginative site interpretation with Janet Osborn and John Smallbridge dancing to the Monsal Trail Blues in Headstone Cutting. Image: Patrick Cossey

After a short talk about the general geology of the area we walked east down the minor road towards Little Longstone; stopping at the small Church to examine the sandstones of the Namurian (late Mississippian) and the abundant fossils in the Dinantian (mid Mississippian) limestone from which the church is built.

At the bottom of the hill we took the footpath across the fields to the south. At the field wall we turned round to see Longstone Edge behind the village. Here mines for galena and fluor spar can be found and some comments were made on the E-W faulting along this ridge which enabled the minerals to be deposited. We also noted the difference in the topography here due to the move from

the limestones of the Dinantian up into the base of the Namurian and the overlying glacial tills draped over the bedrock. Moving progressively westwards and stratigraphically down sequence along the trail fine sections of the Longstone Mudstones and Eyam Limestones (Ashford Beds) were examined as we approached Headstone Tunnel.

A good deal of time was spent hunting for fossils in the Longstone Mudstones and those with particular good eyes (or imagination) were richly rewarded with the discovery of a diverse marine fauna of brachiopods (chonetids, spiriferids and lingulids) and ostracods. This suggested that these were the transitional beds near the top of the limestone series and this may have been a ramp facies with fossils falling into deeper anoxic muds and using the stratigraphic log produced by F Wolverson Cope we were able to place ourselves in the Ashford Beds P2 horizon at the top of the Dinantian. Fruitful discussions were also had about the likely origins of peritidal laminites and slump structures seen in the Eyam Limestones; these largely concerning the possible roles of sea-level change and localised tectonic activity.

We continued to walk west along the Trail walking up dip (c. 5° to the East) examining the beds on either side and noted that the limestone beds were now up to a metre thick but with shales and mudstones between which looked very unstable. This was confirmed as we walked into Headstone Cutting as the sides of the cutting have tall columns of bricks supporting the limestone beds. The incompetent beds between have been cut back by erosion. Here we could examine the beds between the brick supports and could see cross-bedding, slump structures, wedging out, disseminated chert, volcanic ash bands and highly laminated coloured sediments of the Headstone Laminates.



Figure 3 : Rampart supports to the Eyam Limestones in Headstone Tunnel cutting. Image: Patrick Cossey

Eileen then described how the differing bedrock characteristics and engineering properties of the bedrock had influenced their design and construction. She then led us into the gloom of the dimly lit tunnel and we hoped the engineers had got it right! This tunnel which is 487m long was built in 1860's by navvies using hand tools.

Emerging safely from the tunnel on to the Headstone viaduct participants were met by glorious views of the River Wye carving its way down the valley from Cressbrook in the north-west to Fin Cop in the west. But our attention was then drawn back to the rocks at the tunnel entrance. Evidently we had entered a different world.



Figure 4 : Chert in the Monsal Dale Limestones at Headstone Tunnel. Image: Patrick Cossey

Here were limestones that contained corals and chert in abundance quite different from those previously seen. These were the Monsal Dale Limestones, the oldest of the formations to be seen on the day's excursion. Lively debate about the origin the chert ensued - this following your Chairman's assertion that (based on detailed fabric evidence) the chert was most likely the result of secondary (diagenetic) alteration of the pre-existing limestone - and of course everyone agreed!!

However the presence of chert hinders the quarrying of limestone, although at one stage the massive chert beds at Homebank were quarried and crushed to be used in the potteries industry. We talked about methods of transportation to Newcastle and Cheddleton via the turnpike roads and then using the Cromford Canal to the Potteries when it opened in 1793. Later, when the Derby to Matlock railway opened in 1849 and extension to Bakewell in 1863 there was an expansion in the chert industry. Eventually road transport took over from rail.

We walked a few metres further onto the Viaduct which crosses over the River Wye 15m below. A glacial story is shown here as the valley is quite wide and Lake District erratics have been found at Chatsworth. It is thought that it was not covered by the last glaciers from the Devensian but it may have been part of meltwater channels. We talked about conditions in the Peak District during this time with tundra conditions, freeze-thaw and scrubby vegetation. The river makes a 90o bend to the south here and the Wye may represent a superimposed river system arising from a later Period (Permo-Triassic). There is evidence of valley glaciers in Matlock Dale and possible river capture by the River Derwent resulting in the diversion of the River Wye. It is also difficult to see bedrock in the valley as it is covered in drift material; at Lathkill Dale the bedrock is 15m below the surface. To the South we could see some outcrops on the side of Fin Cop. These are at Hobs House landslip which we hoped to visit later in the day.



Figure 5 : Fault with slickensided surface in the Monsal Dale Limestones.
Image: Patrick Cossey

Further 'treats' seen along the trail included a submarine channel filled with stacked brachiopods shells (limestone turbidite), a prominent slickensided fault plane surface and the Putwell Hill mineral vein (formerly worked for the lead ore galena and Monsal Dale Spar for stucco for houses from the calcite gangue minerals) and the Upperdale Coral Band one of several coral biostromes recorded in the Monsal Dale area.

Following lunch on the old Monsal Dale station platform, those that still had the legs sallied forth on what was supposed to be an easy hike up to Hob's House to see the famous landslip and the Hobs House Coral Band, arguably the finest to be seen anywhere in the Peak District (if only somebody knew the right path!). This is a spectacular with limestone blocks, part of the Monsal Dale Limestones resting on the Shacklow Wood lavas which provided the slippage plane for the landslip.



Figure 6 : The Hobs House Coral Band. Image: Patrick Cossey

A brief discussion then followed, about the origin of features seen and of the development of the Brigantian sequence (Monsal Dale Limestone / Eyam Limestone / Longstone Mudstone) within a small intraplatform basin (Ashford Basin). Eventually and late in the day, the threat of rain brought matters to a close and the party returned happily to base with grateful thanks being expressed to our intrepid leader for a great day out. What a smashing start to the field season!

Patrick Cossey & Eileen Fraser

John Myers Medal & Prize 2013

The following students were presented with the John Myers' Awards by Vick Tunstall on behalf of the NSGGA at the Keele University Graduation Ceremony on July 10.

Winner: Lewis Whiting (Medal and £150 prize) Runner-up: Sam Eckford (£50 prize)

Other Societies

Black Country Geological Society

Indoor meetings are held at Dudley Museum & Art Gallery, St James's Road, Dudley

Saturday 20 July @ 10:30

The Building Stones of Worcester [field meeting] -
Andy Harrison

More details at www.bcgs.info

East Midlands Geological Society

Indoor meetings are held at lecture theatre B3, Biology building at the University of Nottingham

Sunday 21 July (tbc)

Building stones in local churches [field meeting] –
Albert Horton

Saturday 10 August (tbc)

Monsal Dale [field meeting] – Peter Gutteridge

More details at www.emgs.org.uk

East Midlands Regional Group of the Geological Society

Indoor meetings are held at BGS, Keyworth

Tuesday 10 September

The Geology Walk at BGS (evening meeting)

More details at [www.geolsoc.org.uk/en/Groups and Networks/Regional Groups/East Midlands](http://www.geolsoc.org.uk/en/Groups%20and%20Networks/Regional%20Groups/East%20Midlands)

Liverpool Geological Society

Indoor meetings are held at James Parsons Building, Liverpool JMU, Byrom Street, Liverpool, L3 3AF

More details at liverpoolgeologicalsociety.org.uk

Manchester Geological Association

Indoor meetings are held at the Williamson Building, University of Manchester

Saturday 10 August (tbc)

Earl Sterndale / Parkhouse Hill / Chrome Hill –
Jane Michael

More Details at www.mangeolassoc.org.uk

North West Regional Group of the Geological Society

Indoor meeting held at Williamson Lecture Theatre, Manchester University, Oxford Road, Manchester

More details at [www.geolsoc.org.uk/en/Groups and Networks/Regional Groups/North West](http://www.geolsoc.org.uk/en/Groups%20and%20Networks/Regional%20Groups/North%20West)

Shropshire Geological Society

Indoor meetings are held at The Shire Hall, Shrewsbury

Saturday/Sunday 20/21 July

Geological Extravaganza at Secret Hills Discovery Centre. Advance booking recommended (from Laura Harvey laura.harvey@shropshire.gov.uk)

Thursday 15 August (evening)

Bishops Castle town building stones – Andrew Jenkinson

Tuesday 20 August (morning)

Quatford and the adjoining Geopark Way. –
Andrew Jenkinson

More details at www.shropshiregeology.org.uk/SGS/SGSintro.html

Warwickshire Geological Conservation Group

Indoor meetings are held at The Lammas Room, Hill Close Gardens, Bread and Meat Close

Warwick, CV34 6HF

Saturday 27 July @ 10:00-16:00

Rock & Fossil Funday ay Coombe Abbey Visitors Centre

Saturday 3 August @ 10:00

A (magical?) mystery tour of Geological sites in south Coventry. Meet: Mitchell Avenue, Canley

Wednesday 21 August @ 19:00

Stoneleigh Road section (Bromsgrove Sandstone) and Sandiacre garden (another mystery!). Meet: Sandy Lane, Kenilworth

More details at www.wgcfg.co.uk

West Midlands Regional Group of the Geological Society

More details at [www.geolsoc.org.uk/en/Groups and Networks/Regional Groups/West Midlands](http://www.geolsoc.org.uk/en/Groups%20and%20Networks/Regional%20Groups/West%20Midlands)

Western Institute of Mining and Minerals

Indoor meetings are held at the William Smith Building, Keele University

More details at www.iom3.org/wimm

NSGGA - Next Committee Meeting:**Thursday 5 September @ 19:00**

In room WS1.44, the William Smith Building, Keele University

Contacts List: NSGGA Committee 2013-14**Chairman: Dr Patrick Cossey**

22 Heath End Road, Alsager, Cheshire, ST7 2SQ. Tel. 01270 872002

e-mail: patrick.cossey@yahoo.com**Vice-Chairman: David Osborn**

Stretton, 2 Croyde Place, Meir Park, Stoke-on-Trent, ST3 7XD. Tel 01782 396692

email: david.d.osborn@talktalk.net**General Secretary: Eileen Fraser,**

47 Longdown Road, Congleton, Cheshire CW12 4QH Tel. 01260 271505

email: fraser@fraserco.co.uk**Treasurer: Brenda Kay,**

9 Copthorne Drive, Audlem, Crewe, Cheshire, CW3 0EQ Tel. 01270 811650

email: r.peter.k@gmail.com**Membership Sec.: Gerald Ford,**

Woodville, Tower Road, Ashley Heath, Market Drayton, Shropshire TF9 4PU Tel.

01630 673409 e-mail: gford@btinternet.com**Speakers Sec.: Diane Lawrence,**

9 Brickfield Close, Hixon, Stafford, ST18 0NY Tel. 01889 207195

e-mail: diane.lawrence1@gmail.com**Field Sec.: Steve Alcock**

Longfields, Park Lane, Cheddleton, near Leek ST13 7J

Tel. 01538 360431 or mobile 07711 501028

e-mail: steves261@aol.com**GeoConservation Staffordshire Liaison Officer: Dr Ian Stimpson,**

Geography, Geology & the Environment, Keele University Tel. 01782 733182

e-mail: i.g.stimpson@keele.ac.uk**Bulletin Sec.: Dr Ian Stimpson,**

Geography, Geology & the Environment, Keele University Tel. 01782 733182

e-mail: i.g.stimpson@keele.ac.uk**Executive Committee** (honorary):

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

Honorary Life Member: Ann Myatt**Executive Committee** (elected):

Dr Lloyd Boardman; Dr Stuart Egan; Janet Osborn (Minutes Secretary); Vicky Tunstall (John Myers Awards);

Executive Committee (co-opted):

Don Steward, John Reynolds; Sophia Hunt (Keele GeoSoc).

NSGGA web pages: www.esci.keele.ac.uk/nsgga

NSGGA Fieldtrip to British Geological Survey Booking Form

Tuesday July 23, 2013 at 2 p.m.

Leader: Dr David Bailey

Meet at BGS Reception at 2.00 p.m. Grid Ref SK622317 Landranger Sheet 129.

Directions: Follow the A 52 eastwards on the south side of Nottingham. At the A 606 roundabout turn right, signposted Melton Mowbray. After 4 km there is a dedicated right turn, signed BGS. As you enter the village BGS is on your left. Go past the back gate!!. Turn left, then left. Stop at the barrier, turn left for the car park. Reception is on the right.

See the following web pages for more info on visiting the walk or travelling to BGS:

<http://www.bgs.ac.uk/contacts/sites/keyworth/geologicalWalk/home.html>

Meeting overview: An afternoon visit to the BGS Headquarters at Keyworth. A guided tour of their facilities should last for an hour or so followed by the opportunity to browse the new geology walk at your leisure (leaflet provided). Visit the Tesco-esque Rock Store (mind the fork-lift trucks), view type specimens, maps, field notebooks and other treasures, and see how virtual specimens are created for on-line use [Holo-types??]. The shop will be open till 5.

Please complete and return by July 19 at the latest as the BGS require names to: -

John Reynolds (excursion co-ordinator) jr.reynolds1@virginmedia.com

Or post to John Reynolds, 18 Gardiner Drive, Longton, Stoke-on-Trent. ST3 2RQ

Any queries please contact by e-mail or on 01782 327068

I would like to attend the field trip to the BGS on Tuesday 23 July 2013

Name(s): _____

Home Telephone: _____

Mobile Telephone: _____

Address: _____

Email address: _____

Name and details of person to be contacted in case of emergency during the trip:

Name: _____

Contact Number: _____

NSGGA Fieldtrip to Bradgate Park, Charnwood Forest Booking Form Sunday 8 September 2013 @ 11.30

Leader: Dr Keith Ambrose

**Meet at 11:30 at the Hunts Hill Car Park (SK523116)-the one nearest to the Old John Tower
(This is near bottom edge of OS Landranger sheet 129)**

Meeting overview: This is a visit to the geologically well-known Bradgate Park. Rocks of Precambrian age are well exposed along with the Cambrian Swithland Slate and the overlying Triassic Mercia Mudstones. Localities to be visited include the Bradgate Formation at Old John Tower, the Sliding Stones Slump Breccia, South Charnwood Diorite, Stable Pit Quartzite, Swithland Slates and the Mercia Mudstones. Dr Ambrose will relate the rocks seen to modern environments and the plate tectonic setting.

About 7km walking with a few steep stretches.
Keith will bring copies of BGS booklets for sale.

Please return the booking form to:

Steve Alcock (Field Secretary) as soon as possible, either by e-mail (steves261@aol.com), or by post to Steve Alcock at Longfields, Park Lane, Cheddleton, Leek ST13 7JS.

Any queries please contact Steve by e-mail or on 01538 360431 or 07711 501028.

Please return the form by August 15, 2013 at the latest.

I would like to attend the field trip to the Bradgate Park on Sunday 8 September 2013

Name(s): _____

Home Telephone: _____

Mobile Telephone: _____

Address: _____

Email address: _____

Name and details of person to be contacted in case of emergency during the trip:

Name: _____

Contact number(s): _____

Remember to renew your NSGGA membership for 2013

NSGGA Membership Form 2013



Fossils, Rocks & Minerals
Summer Field-Trips
Winter Talks
Site Conservation
Regular Newsletters

Name.....

Address.....

.....

.....

Postcode..... **Telephone**.....

e-mail address

Would you be willing to receive your Bulletins by e-mail yes no

- | | | |
|--------------------|--------|--------------------------|
| Ordinary (Full) | £13.00 | <input type="checkbox"/> |
| Family * | £15.00 | <input type="checkbox"/> |
| Retired/Unemployed | £10.00 | <input type="checkbox"/> |
| Student ** | £ 3.00 | <input type="checkbox"/> |

John Myers Award Fund*** contribution of £.....

* For insurance purposes, please list the names of all members of the household to be included:

** Students please name your **full-time** course:

Cheques should be made payable to the: "**NSGGA**" and sent to:
Gerald Ford, NSGGA Membership Secretary,
Woodville, Tower Road, Ashley Heath, Market Drayton, Shropshire TF9 4PU
Telephone 01630-673409 **e-mail** gford@btinternet.com

For our records, are you currently a member of the national GA ? yes no

*** Two John Myers Awards (together with runners up) are presented annually to students at Keele University who produce the best piece of coursework in the view of the independent NSGGA awards committee.