

# Bulletin Number 68 January 2004



## Winter Programme

The evening meetings are on Thursday  
and held in the School of Earth Sciences and Geography, Keele University

### 15 January 2004, 7.30pm start

#### *Forensic Geophysics*

Dr. Nigel Cassidy (Keele University)

There will be the opportunity for Members to join Nigel for a meal at the Chancellors Building before the talk. Contact Dorothy Wright for details.

### 12 February 2004, 7.30pm start

#### *The day the Earth caught fire*

Professor Andy Saunders (Leicester University)

A talk about large igneous provinces

There will be a buffet meal in the Department before the talk, please fill out and return the [booking form](#) with this issue if you wish to join the meal.

**Saturday 20 March Fieldtrip to John Moores University, Liverpool to see Liverpool GA's 'William Smith' map, followed by "Rock around Liverpool" - a guide tour of the Building stones of Liverpool. Leader Hilary Davies, start at 11.00am at the University. Details from Elizabeth Hallam: 01260 275616**

### 25 March 2004, 7.30pm start **AGM** and Chairman's Address including: *The ocean floor on land and under the sea*

Dr. Peter Floyd (NSGGA Chairman)

Please note the unusually late date.

For more information about the evening meetings  
please contact NSGGA Secretary - Dorothy Wright 01782 721576

## NSGGA Event Day - The rock beneath our feet

**Saturday 24 April 2004, at The Potteries Museum & Art Gallery, Hanley, Stoke-on-Trent**

Aspects of the Geology of Staffordshire and the industrial application of local rock materials

Main items will possibly include:

- Carboniferous to Trias simplified stratigraphic column with - illustrations and text on environments and their development (including paintings of past and present local environments) - interactive demonstrations to highlight different aspects - rock samples for children to handle - maps of the local geology and environmental issues
- Rock and fossil identification (bring your own specimens for identification and/or comment etc)
- Children's activities (using GeoWatch approach) Carboniferous fossil casting, Staffordshire Geology "cut and paste" jigsaw
- Industrial utilisation of local geological formations (limestone, salt, water, coal, clay).
- Details on local RIGS and Staffordshire Wildlife Trust, Local Geodiversity aspects, Brown End quarry.

**Offers of help** on the day and further ideas to **Peter Floyd**, Craddocks Moss Cottage, Heighley Lane, Betley, Crewe Cheshire, CW3 9AZ ☎ 01270 820334 or email: floyd.pa@virgin.net

## Field Trips Diary Dates 2004

- **Sunday 18 April Goyt Valley and Shining Tor**  
Leader: Dr Fred Broadhurst  
10.00am start at Goyt Moss, Car park, grid ref:SK 018 716
- **Weekend 7/8/9 May Watchet** (with Essex Group)  
Leader: Dr Eric Robinson  
See separate [flyer](#) for further details and booking requirements
- **Saturday 22 May 'Rock -around -a- Quarry'**  
Launch by the Staffs. Wildlife Trust of the new visitors facilities at Brown End Quarry nature reserve, near Waterhouses
- **Sunday 27 June Wrens Nest**  
Leader: Dr David Ray  
10:30am start at the main car park on Wren's Nest Hill. Itinerary: Look at the main rock types and discuss environments of deposition, faunal associations and preservation potential, followed by some fossil collecting. Plus a possible visit to some of the caverns (definite numbers required)
- **Sunday 18 July Skipton Area**  
Leader: Dr Neil Aitkenhead  
Itinerary: Skipton Moor via a minibus or coach trip, as this is a linear walk
- **August - To be arranged**
- **September - Date to be arranged - Northwich field monitoring site and Salt Museum**  
Leader: Dr Nigel Cassidy  
Start at Keele University Earth Science Department for an introductory talk on the regional geology, followed by a mini bus to Northwich

**Field Secretaries: Elizabeth Hallam and Eileen Fraser**

**For further details about any field trips please contact Elizabeth Hallam at 49 Birch Road, Congleton, Cheshire CW12 4NN ☎ 01260 275616 or email: k.hallam@virgin.net**

## Geowatch

This is my last report concerning Geowatch activities. With Carol's support I have organised the activities since August 2000 and over this period I have built up a collection of items that belong to the NSGGA.

These include fossil replica moulds, geological time boards, posters and pictures depicting life in the different time periods, magnifying glasses, a volcano model, dinosaur and planets mobiles, plate tectonics jigsaws, rock kits and a selection of fossils, scissors, Plasticine, glue pots, spreaders and glue, an art carrier, a small library of books, two banners and a whole host of other items. At present they are stored at our home and can be borrowed by any member. If you would like a copy of a comprehensive list please let us know.

Carol and I would like to thank all those who have helped us over the last three years. We will do our best to help others in the future.

Mike Fereday

## Articles

King, C., Fleming, A., Kennett, P. & Thompson, D. 2003 \*\*

Can you believe everything you read? What some science textbooks say about Earth Science  
*Teaching Earth Science* 28 pp.8-13

NSGGA members take a critical look at some popular geological misconceptions that are published in textbooks

\*\*Copies available for reference by prior appointment at The Potteries Museum & Art Gallery - 01782 232323

## Obituary - Geoff Cox

Many members of NSGGA will be particularly sad to hear of the death of Geoff Cox on 1st November 2003 at the age of 76. Geoff was a well-known mining engineer, working in mining and mineral process operations in countries all around the world over a career that spanned several decades. But for us in NSGGA he will be remembered as the owner of Ecton and its historic copper mines. Over many years thousands of students of varied types and ages have had the unique experience of a day at Ecton - many of them privileged to hear Geoff's own inimitable version of the story of Ecton, told with his irresistible enthusiasm, until some years ago he was forced by illness to leave this task to others. NSGGA have had several trips to Ecton in the past, and have

maintained group membership of the Ecton Hill Field Studies Association for the past ten years, but it is sad to record that access to the mine has not been possible since the foot-and-mouth episode put a stop to student courses.

For anyone wishing to know more about Geoff's work in industry and education, an article by David Thompson published in *Geoscientist* in 1991 (vol. 1 no. 5) provides a detailed picture of Geoff's work for education.

The future of Ecton is uncertain. There is tremendous goodwill from a number of high-profile organisations, but the problems are daunting. However, with the historic and scientific importance of Ecton now being recognised by organisations such as English Heritage, English Nature, and The National Trust, not forgetting the Peak Park itself, the omens for Ecton seem reasonably promising. A successful long-term future for Ecton as an educational resource would be a fitting memorial to the life and work of Geoff Cox.

Alastair & Zoë Fleming

## News of Members

Jonathan O'Dell has signed a contract to work on the Barapukuria Coal Mine Project and left for Bangladesh in late December for several months. He has therefore stepped down from his roles on NSGGA committees and sub-committees, as well as finishing his Cheshire RIGS contract a couple of months early. He passes on his best wishes to all the Members who know him and hopes to see us all again sometimes later next year.

## Extractive Industries

On 3 December 2003, the *Leek Post & Times* reported that concrete product manufacturer *Dale Crete* of Leekbrook is seeking consent to work aggregate at Captain's Barn Farm near Weston Coyney (SJ949455). The proposed working is just over a kilometre to the east of the Triassic sand and gravel exposures at Park Hall Country Park. Extracted aggregate would only be used by *Dale Crete* and a part-time working of about 2 weeks in every 4 was envisaged to meet demand.

## John Myers Fund and Awards

On the 2004 subscription renewal form, members will see a request for donations to the John Myers Fund.

John Myers was a founder member of NSGGA, and in his memory an award of £100 is made each year to one final year undergraduate from Keele University and one from Staffordshire University, with runners up receiving £20. For the past six years John Myers' daughter, Ann Myatt, has provided the prize money and the Group is indebted to her for her generosity.

In 2003 Matthew Stringfellow (Keele University) and Alistair Macdonald (Staffordshire University) were awarded the Winners Medals and a cheque for £100 each. Beth Dean and Sarah Mills (Keele University) and Heather Oatridge and Andrew Thornton (Staffordshire University) were each presented with a cheque for £20 as runners up.

The medals and engraving are paid for from normal NSGGA funds and a sum of money from earlier donations is held in reserve in the Group's account, in readiness for the time when Ann Myatt feels unable to continue her financial support.

On behalf of your committee I would ask you to consider giving a donation to the fund when you renew your subscription.

Mike Fereday Chairman JM sub committee

## Report on the meeting of Geologists' Association Local Groups and Affiliated Societies at Burlington House, London on 7 November 2003

About twenty representatives attended this annual event, mainly from SE England and several members of GA Council. The latter included Clive Bishop, former resident of Penkhull, student of John Myers and retired deputy Director of the Natural History Museum. He sends his regards to NSGGA.

### 1. Insurance

Austin Lockwood requested that more details of the GA's Zurich Insurance cover be provided to Groups. There was uncertainty as to whether property was covered, including computers and the William Smith Map owned by the Liverpool Geological Society. Sarah Stafford to investigate. Non-members and children are covered for meetings and field trips.

### 2. Field Leader Database

Seventeen names have been submitted to date. More are needed & should be sent to Sarah ASAP.

### 3. Health and Safety

John Crocker reported on a standardised risk assessment form to be included in the next GA Circular. The leader would complete the form and all participants would be given a copy. There was discussion on the need to sign on at the start and sign off at the end of a field meeting. Groups were reminded of the need for First Aid and mobile phones. Austin Lockwood reminded Groups that the Ravensbourne GS & Russell Society had already circulated a health and safety document.

### 4. Rockwatch

Susan Brown reported that Rockwatch was alive and well and had had a very successful year & thanked everyone who had helped in any way. A new innovation was that residential field meetings had been held, attended by children and parents. Local Groups were asked to let the Rockwatch office know if they put on any events for children, so that the widest publicity could be given to all events.

### 5. Curry Fund

Susan Brown reported that £25,000 was available annually to distribute to geological causes. The GA were looking towards funding projects bringing geology to the General Public. Funding is not restricted to GA Members or Local Groups & Affiliated Societies. The guidelines and application forms are on the GA website. Up to £200 is available for LG & AS to plan displays for the GA Reunion in Cardiff on 6th November 2004.

### 6. GA Promotions

A wide-ranging discussion on promoting geology was held. JR reported on what ESTA & ESEU does on the education side for

children and teachers, ranging from the Working with Rocks and Working with Soil packs for Year 3 to the courses for teachers and trainees given by the ESEU facilitators at Secondary level.

#### **7. Reunion 6 November 2004, Cardiff**

This follows the plan for the Annual Reunion to move out of London every three years. Liverpool 2001 was a great success. ESTA/NSGGA had a display stand. Following the Liverpool pattern Friday 5th will likely be the date of the meeting of LG & AS, with Sunday 7th for field trips. Details in the next GA Circular. *?Possible bid for Curry money for display??*

#### **8. Younger Members**

The West of England Group raised the topic of how to retain youngsters beyond their Rockwatch years. Mention was made of children sparking a geological interest in their families. Some parents did evening classes & others went on to do Open University Courses. Mentoring of younger members was to be encouraged, especially on field trips. Youngsters often increased their knowledge about geological topics through websites.

#### **9. GA as a repository**

Brent Group wondered if the parent GA could act as a repository for slides and talk notes. There was no space available in the office archival material could be deposited in the local area museum, library or record office.

#### **10. GA reduced subs for OAPs**

Brent floated this idea, but was not considered a realistic option.

#### **11. New Field Meetings Officer**

David Bone has indicated his wish to give up this task. A volunteer is urgently need to take up the post next May.

#### **12 AOB**

There was a discussion on the need for speakers to bring their own data projectors if they were giving a power point presentation. Borrowing/ loaning one for an evening is often difficult. Many speakers bring back-up OHPs, but these can be expensive to produce. The Proceedings Editor is willing to accept reports of field meetings undertaken by Groups. As 180 is the capacity of the lecture theatre in Burlington House, some lectures have to be ticket-only. A revised list of Speakers is being produced by Sarah, after the Geological Society pulled out of the venture.

John Reynolds & Elizabeth Hallam

## **Staffordshire Local Geodiversity Action Plan**

The Staffordshire Local Geodiversity Action Plan is being developed with the aid of a grant from English Nature (EN) through the Aggregates Levy Sustainability Fund (ALSF). The Geodiversity Officer developing the plan is based at the Staffordshire Wildlife Trust headquarters at The Wolseley Centre, near Rugeley. The plan itself is termed the Staffordshire Geodiversity Action Plan (SGAP) and provides a framework for geoconservation in Staffordshire.

The key aim of the SGAP is the protection and promotion of the geodiversity of Staffordshire. The objectives relating to this focus on practical means of delivering the overall aim and allow for the setting of targets in key areas against which both progress and effectiveness can be measured. The objectives of the SGAP are:

- **Partnership and Involvement**
- **Evaluation and Geo-audit**
- **Conservation and Management**
- **Education and Site Use**

In order to better understand the structure and approach of the SGAP is in necessary to review the geodiversity of Staffordshire and the current situation with regards to geoconservation. There are some 70 sites already designated as Regionally Important Geological and Geomorphological Sites (RIGS) and a further 13 SSSIs designated for their geological importance. The county also has an active RIGS group (Staffordshire RIGS – or SRIGS), which, in various forms, has overseen the selection and designation of the current range of RIGS.

The solid geology of the county comprises sequences from the Triassic Sherwood Sandstone and Mercia Mudstone Groups in the central and southern areas, with Carboniferous coal measures, gritstones and limestones in the north. There are also minor exposures of Cambrian volcanics in the southeast and Tertiary dykes crossing various parts of the centre and west of the county.

There is also a strong industrial heritage across much of the county dating from the industrial revolution, with significant coal mining and quarrying, together with the historically important clayware and ceramics around Stoke-on-Trent. Modern deposits from recent fluvial and glacial action have also left large quantities of sands and gravels that are worked for aggregates in various parts of the county. All of these activities have provided for a strong link between communities and their surrounding environment, with particular emphasis on the extraction of coal, limestone, clays and aggregates.

With respect to the industrial links between community and earth heritage\*\* there are a number of opportunities for geoconservation and also a number of threats – the amelioration of which is one of the targets within the SGAP, and key to its presence.

#### **SGAP Objectives**

The primary objectives of the SGAP fall under four main headings, we will see how each of these provides for key targets to be set in order to achieve the overall aim of the protection and promotion of the geodiversity of Staffordshire. The conservation and management aspects are best taken in conjunction with each other.

##### **1. Partnership and Involvement**

The involvement of a wide range of users, and potential users of RIGS sites is fundamental to the SGAP. This is fostered through the active use of sites for educational benefit across all age ranges and the bringing together the owners and users of sites. Two-way communication is of prime importance in such circumstances, such as negotiating site access and the management of sites.

##### **2. Evaluation and Geo-audit**

The SGAP take a holistic approach to geoconservation, recognising that as geodiversity fundamentally underpins biodiversity the two must work in tandem in order to best support the natural world. The evaluation of RIGS locations involves scoping for educational and community use that forms another key target area within the SGAP. Links are also to be developed with the Staffordshire Biodiversity Action Plan as RIGS sites often provide for specialist habitats.

### 3. *Conservation and Management*

In promoting the use of key sites, especially those with open public access, it is important to consider the sustainability of activities in the context of geoconservation. The core of the conservation and site management targets of the SGAP lies in the involvement of the site owners or their representatives. Given the number of RIGS and SSSI's in Staffordshire a few key sites have been selected based on their educational value and accessibility. These sites form the foundation for a series of planned geo-trails to be introduced in the medium term.

### 4. *Education and site use*

The primary 'use' of RIGS is educational – either in the schooling sense, or through learned societies and interest groups. Through management plans it is hoped to agree access arrangements to all RIGS locations. However, often by their very nature few sites are suitable for all school group visits (risk of rock falls, cliffs, deep ponds etc.). The structure of the SGAP does help to highlight those sites which are particularly suitable for school visits and also to provide an 'index' of sites for university visits.

### **Stratigraphy**

The SGAP provides an accessible reference framework within which the individual stratigraphic units found in Staffordshire are shown in the context of factors such as their depositional environment, tectonic setting, structures and geological history.

The stratigraphy of the county is outlined and the representation of RIGS detailed in such a way as to provide a graphical key where the geodiversity of the county can be seen and the key features of RIGS are highlighted. The geological history of the major formations is detailed to provide background information, although the SGAP is not seeking to be a definitive text on the geological history of Staffordshire. The fundamental information is provided in context and the reader/user directed to more detailed references for further information.

Economic geology is also used to provide a link between stratigraphic units and their use in the county, such as building stones, the history of coal mining and The Potteries. This link helps to forge a relationship with the landscape and Natural Areas against which further targets are set to provide representation of sites that are geologically important whilst also being of interest in terms of their industrial heritage.

### **Natural Areas**

Natural Areas as used to provide a local and regional focus on the landscape and the geologically significant features within it. The characteristic features of each of the Natural Areas that are found in Staffordshire are presented for reference and targets set against common objectives within each:

- *Promotion of Earth Heritage*
- *Protection of resources*
- *Planning and development*
- *Geo-audit / GCR coverage*

### **The SGAP will be published in January 2004.**

Should you wish to obtain a copy of the SGAP or would like further information on the SGAP, please feel free to contact the Geodiversity Officer, **Laura Cox**, on telephone: **01889 880100** or Email: [lcx@staffswt.cix.co.uk](mailto:lcx@staffswt.cix.co.uk)

\*\* Earth Heritage is taken to mean all geological and geomorphological features and characteristics that comprise both the natural and man-made elements within the environment.

## **Subscriptions 2004**

Please find the [subscription renewal form](#) associated with this Bulletin and return for prompt payment.

It all helps to keep the Group alive and well.

# Happy New Year to you all

## NSGGA - Next Committee Meeting

- **Thursday 22 January 2004 at 7.00pm**  
in the School of Earth Sciences and Geography, Keele University

## Staffordshire RIGS Group

- **Next meeting - Monday 19 January 2004 at 7.30pm**  
at the Staffs. Wildlife Trust offices, The Wolseley Centre, Wolseley Bridge, Stafford ST17 0WT  
Contact Laura Cox at the SWT for details ☎ 01889 880100

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### Executive Committee (honorary):

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

### Executive Committee (elected):

**Laura Cox; Mike Fereday; Eileen Fraser;  
Jonathan O'Dell; John Reynolds; John Winchester.**

### Executive Committee (co-opted):

**Janet Fairclough; Alastair Fleming; Ken Rout;**

in addition a representative from the Staffs. University Geol. Soc. and the Keele Geol. Soc. is invited to attend committee

**Why not visit the NSGGA web pages: [www.esci.keele.ac.uk/nsgga](http://www.esci.keele.ac.uk/nsgga)**

