

Bulletin

Number 83

October 2007



Diary Dates:

Thursday 11 October - *The Volcanic Geology and Bronze Age Minoan Archaeology of Santorini, Cyclades, Greece, Part 2*

Speaker: Dr Bob Roach

7.30pm start, School of Earth Sciences and Geography, Keele University

Local Heroes - Oil, The Potteries and the Works of Sir John Cadman

NSGGA organised events

celebrating 150 years of the Geologists' Association and 200 years of the Geological Society of London.

In conjunction with the University of Keele, the Potteries Museum & Art Gallery, the Apedale Mining Museum, Apedale Country Park and the West Midlands Regional Group of the Geological Society: more details are available by following the links at www.esci.keele.ac.uk/nsgga



Saturday October 20th, 2007 10.00 - 4.00 (£1.00 for children)

Rock around Staffordshire Childrens' Event: Potteries Museum & Art Gallery, Hanley
Activities will include a mock mining tunnel and a spoil heap mineral search

Sunday October 21st, 2007 (normal charges apply)

Rock around Staffordshire "Field trip" to the Apedale Heritage and Mining Museum, with underground tours and exhibitions of the region's geological heritage. Geo-tours of Apedale Country Park *Rock, Fire, Ice & Water* led by Drs Ian Stimpson & Peter Knight. (50p for adults)

Thursday 22 November

Oil, The Potteries and the Works of Sir John Cadman

Speaker: Professor Hugh Torrens (Keele University)

This is also the annual Prof Cope Memorial Lecture.

7.30pm start, Alan Gemmell lecture theatre, Huxley Building, Keele University

Thursday 6 December - *Christmas Social & buffet*

Including a talk on *Volcanoes in Ecuador and the Galapagos Islands* by Dr Peter Floyd.

7.00pm start, School of Earth Sciences and Geography, Keele University

see flyer for booking details.

For further information contact NSGGA Secretary **Eileen Fraser** ☎ 01260 271505

NSGGA Lectures Diary Dates for 2008

10 Jan 2008 - to be announced

7 Feb 2008 - Speaker Dr Derek Siveter on Cambrian soft body fossils of Chengjiang, China and the flowering of early animal life.

6 Mar 2008 - AGM and Chairman's Lecture with Elizabeth Hallam.

Articles

Cossey, P.J. 2007

New trail reveals hidden assets

Earth Heritage 28 summer 2007 pp.10-11

An article about the production of the Hamps and Manifold Geotrail by Staffordshire RIGS group members.

Reynolds, J.R. 2007

12 good reasons to get out of school

Earth Heritage 28 summer 2007 pp.12-13

Outlines the UKRIGS Education Project for 12 former aggregate sites including Park Hall and Apes Tor.

Ken Rout

Sadly we have to report that Ken Rout, a member of the NSGGA for about 30 years, passed away on Wednesday 28 June 2007. He would have been 82 a few days later and is survived by his wife Phyllis. The funeral was held on Thursday 5 July at Stafford crematorium; friends and representatives from the NSGGA attended.

Ken was born on 29 June 1925 in Clapham, London. He trained in electrical engineering and joined the Westinghouse company in Wiltshire in 1945. He and Phyllis were married in 1952 in Swindon and they eventually moved to Brocton, Stafford in 1968 when Ken joined GEC.

Ken was passionate about all aspects of natural history. In addition to his geological interests, he was a keen member of the Staffordshire Wildlife Trust and a warden at their Jacksons Coppice reserve near Eccleshall for many years. Ken was renowned for his sterling efforts at clearing rock exposures in the early days of the Brownend Quarry geological reserve.

Mike Fereday

Brian Holdsworth

Equally sad news is that that Brian Holdsworth, who taught in the Geology Dept at Keele between 1963-1993, died on Saturday 4 August after a long illness. A thanksgiving service was held on Tuesday 14 August at Woore church and was attended by former colleagues and friends.

John Winchester

Black Country Geological Society Diary Dates

Sunday 28 October 2007 (*Field meeting*): Whitmans Hill Quarry – Malvern Hills

Leader: Sue Hay (Woolhope Group). Whitmans Hill Quarry is administered by the Herefordshire and Worcestershire Earth Heritage Trust. It is mainly Much Wenlock Limestone with some rocks from the Ludlow Series. It was worked until 1990 and has some excellent exposures. It is also a haven for wildlife. The entrance to the quarry is in Storridge which is on the junction of the A4103 and B4219 GR:SO748484 and we will meet 10.30 – 11.00ish.

Monday 29 October 2007 (*Indoor meeting*): Caledonian Crystal Collecting

Spencer Mather is a member of the BCGS and a prodigious mineral/crystal expert. He will give an account of mineral scavenging amongst the remnants of the Caledonides. An entertaining evening is assured.

Monday 26 November 2007 (*Indoor meeting*): Members' evening

A pot pourri of contributions from our members. Bring along your specimens, pictures, maps and questions. Give a short talk; paint a picture; compose a poem; or even a song, extolling the importance of geology. To enable Gordon Hensman to produce a programme, please e-mail with your contribution gwjensman@aol.com

For further details contact:

Sarah Worton, BCGS Hon. Secretary, 158 Oakham Road, Oldbury B69 1QQ

☎ 01384 235946. email: sarah.worton@atkingglobal.com

Congratulations to Pat Callaghan

Chairman of the Staffordshire Wildlife Trust and NSGGA member Mrs Pat Callaghan was recently awarded the Christopher Cadbury Medal for services for the advancement of nature conservation in the British Islands.

National Trust Geology and Geological Collecting Policies

These policies have now been signed off and are available via the nature pages of the National Trust website:

http://www.nationaltrust.org.uk/main/w-chl/w-countryside_environment/w-nature/w-nature-geology.htm

This is the outcome of the original venture with NT, EN & UKRIGS hiring John Macadam to look into NT & Geoconservation in SW England. Lucy Cordrey (Nature Conservation Technician, Heelis) and Simon Ford (Nature Conservation Adviser, Wessex) have written to all groups involved to thank them for their helpful contributions.

The National Trust Geological Policy

This document sets out the National Trust's position with regard to its responsibilities in conserving the extensive geological heritage in its care.

It is stated that 'the Trust will take a long term, strategic and practical approach to caring for its geology and one that seeks to work with natural processes, wherever possible' and a set of twelve management principles are explained.

Useful appendices give a list of examples of National Trust geological sites and other relevant Trust policies.

The National Trust policy for the collection of geological materials (fossils, rocks and minerals)

This document acknowledges the importance of the collection of geological materials and sets out to address the issues involved with the increase in number of professional collectors and damage to sites. It also acknowledges that sites require different strategies depending on their vulnerability.

Eleven collecting principles are set out including the fact that 'the Trust is prepared to transfer the ownership of the recovered specimens to those collectors who follow responsible and safe geological collecting practices and record their scientifically important specimens at either the local museum, visitor centre or the Trust locally and nationally, as appropriate'.

In addition to this a further nine principles for collecting practices are set out. These points are abridged below:

- The Trust will permit collecting from *ex situ* loose and fallen material, particularly where it is at risk of damage or loss if not collected and/or where it can be justified on legitimate scientific or educational grounds.
- Permission from the Trust must be sought before any *in situ* excavation and removal of specimens takes place.
- Risk assessments and insurance papers must be prepared and discussed in advance with the Trust; and the Trust must be informed of progress with any excavations and advised when completed. Where possible, excavations should also be written up in a worthy journal.
- The Trust will consider taking legal action where this policy and any local codes of conduct for geological collecting or Trust Byelaws are clearly being ignored.
- Collection must not conflict with other conservation objectives, such as wildlife and archaeological interests.
- The Trust encourages the recording of important geological specimens, where such a service is available.
- The Trust expects collectors to be responsible for their own health and safety and to abide by local advice.
- The Trust expects collectors to use suitable clothing, safety equipment and tools.
- The Trust advises collectors to consult field guides, maps and the local visitor centre before setting out, and to take suitable materials for wrapping specimens and writing materials for recording information about them in order to preserve their scientific value.

Lynn Hunt

Report - Lake District field trip: Day 2, Sunday 29 April 2007

On Sunday the group drove from Shap Wells over to Coniston via Kirkstone Pass, finally stopping in the parking area at the end of the Walna Scar trackway, just west of Coniston.

The main objective was to examine some of the volcanic rocks of the Borrowdale Volcanic Group (BVG) and view the boundary with the Coniston Limestone Formation (uppermost Ordovician – Ashgillian). The upper part of the BVG here is largely composed of various tuffs with minor lavas and ignimbrites, all of which we were able to observe in detail.

After a 2 km walk along the Walna Scar trackway we headed north towards Coniston Old Man climbing up to the crags above the path just south of Cove Hut. The crags are composed of the BVG Tilberthwaite Tuffs which dip at about 30° to the south and thus, under the Silurian sediments that occur in the Banishead quarries just visible in the valley below. The well-bedded volcanics are dominated by fine- to medium-grained lithic tuffs of andesitic and acid composition. Of particular interest were the sedimentary structures, including slumping and trough down-cutting that testified to the instability of the submarine volcanic slopes after initial deposition. It is likely that explosive volcanic eruptions would trigger the down-slope migration of partly consolidated tuffaceous material on the margins of the volcano. We then walked to Torver Beck bridge and again saw evidence of similar sedimentary slumping, together with grading, in the well-laminated Yewdale Tuff Formation. Good examples of cleavage-bedding relationships were also seen with variable refraction dependant on grain-size.

Walking down the steep banks and crossing Torver Beck provided a challenge to some members, although at the lunch stop by the stream we were rewarded with an excellent view of a columnar jointed ignimbrite. Close examination showed eutaxitic texture, although flattened pumice fragments (fiamme) were relatively scarce. From the opposite bank and looking down stream we observed (but didn't examine) the massive sediments of the Coniston Limestone Formation (very little good limestone) and the Silurian Brathay Flags.

Before heading up to the main Walna Scar trackway we stopped at a small outcrop with crude columnar jointing that proved to be the basal section of a lithic-rich ignimbrite, possibly part of the same eruptive sequence seen in Torver Beck gorge. A further small, white-weathering exposure of ignimbrite was also seen to the north of the trackway which displayed excellent eutaxitic texture. It appears that at the top of the BVG explosive acidic volcanism with the formation of pyroclastic flows were interspersed with the "background" air-fall tuffs of more andesitic composition.

We stopped at two small exposures provided by cuttings in the Walna Scar trackway, although due to the very fine-grained and massive nature of the rock there was some discussion as to their origin. It was finally decided (after finding some microphenocrysts) that they represented lava flows of andesite and basalt. However, as neither the top nor bottom of the "flows" were observed they could have been sills being apparently concordant with the regional dip.

Walking back to the car park along the Walna Scar trackway we crossed over the BGV-Coniston Limestone boundary and observed their juxtaposition in the excellent exposure provided by Timley Knott. Here steeply inclined (to the south) well-bedded Longsleddale Formation and Applethwaite Formation rested on the coarse bedded tuffs and agglomerates of the BVG.

We covered considerable ground, both up and down(!), but were blessed with excellent weather, wonderful views and geology that provided an insight into the depositional processes of late-stage BVG island arc volcanism.



Slumped andesitic and acidic lithic tuffs, near Cove Hut



Columnar jointed ignimbrite, Torver Beck gorge

Peter Floyd

Inaugural Professorial Lecture - Chris King

6.00pm, Wednesday 3 October, Westminster Theatre, Keele University

NSGGA member Professor Chris King will be giving a lecture entitled:

Communicating Science: interactive Earth science for teachers, pupils and the public

all are most welcome to attend, for more information contact Chris - c.j.h.king@educ.keele.ac.uk

NSGGA - Next Committee Meeting

- **Thursday 15 November at 7.00pm**

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 (elected):

**Lloyd Boardman; Peter Floyd; David Osborn;
Janet Osborn; John Reynolds; John Winchester**

Executive Committee (co-opted):

Ellie Hooper (Keele Geol. Soc), Nick Hulley

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

Produced for the NSGGA at The Potteries Museum & Art Gallery, Bethesda Street, Hanley, Stoke-on-Trent ST1 3DW