

Bulletin

Number 66

July 2003



NSGGA Field Trips

Each person attending field meetings does so on the understanding that they attend at their own risk. The NSGGA has Public Liability Insurance Cover for field and indoor meetings, but Personal Accident Cover remains the responsibility of participants.

Please note: A field fee of £ 2.00 is charged for members and £ 4.00 for non members on day field meetings.

13 July: Clitheroe Leader: Alan Diggles OUGS

We will walk through the Carboniferous in the Ribble Valley and Pendle Area followed by a visit to Clitheroe Castle and the Castle Museum.

Meet at 10 30 am at Salthill Quarry trail (OS map sheet 103, GR SD 759 427 left off the A59 signpost to West Bradford and heavy goods access to industrial estate, take the first turning on the left into the industrial estate that is in the quarry).

If you are interested in going by minibus please complete the reply slip and send a cheque, there are a few seats left but hurry to avoid disappointment - please contact Janet Fairclough with your £12 (£10 minibus and £2 field fee).

20/21 Sept: Dorset Weekend Leader: George Raggett OUGS

A weekend away on the 'Jurassic' Coast. Please note revised date.

Accommodation: Coverdale Guest House, Woodmead Road, Lyme Regis, ET7 3AB.

Cost: £40 per person per night for dinner, bed, breakfast and packed lunch.

Please complete the reply slip and send it with a cheque for £ 35 per person made payable to NSGGA (a refundable deposit of £25 and a field fee of £10).

ROOMS REMAINING: THERE IS ONLY 1 DOUBLE ROOM AND ROOM FOR 1 ADULT MALE WILLING TO SHARE SO DON'T DELAY.

For more information about the field trips please contact either
Janet Fairclough ☎ 01782 641812 Email: jfair1sc@ntlworld.com or
Carol Fereday ☎ 01782 713227 Email: carol@burnett40.freemove.co.uk

Winter Lecture Programme

All talks to be held in the School of Earth Sciences and Geography, Keele University and all are on Thursday nights.

9 October 2003 , 7.30pm start

The dynamic evolution of desert dune environments: is the answer blowing in the wind?

Dr. Nigel Mountney (Keele University)

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

13 November 2003 , 7.30pm start Third Professor Cope Memorial Lecture

The mineralogy of Wales - insights into a diverse treasure

Dr. Richard Bevins (National Museum of Wales)

There will be a buffet meal in the Department before the talk, please look out for booking details.

11 December 2003 , 7.00pm? start Christmas Social

including: *A glimpse of Gondwana geology*

Gordon Hillier (NSGGA)

There will be a buffet meal in the Department before the talk, please look out for booking details.

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.

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 look out for booking details.

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.

Geowatch (Geology for children)

Forthcoming events for your diary:

- **29th July 2003** **Newcastle Library** **11 am to 3 pm** *
 - A parents and children activity day. Geowatch will be doing fossil casting, take your own fossil home and paint it. Try your hand at identifying rocks, fossils and minerals inside "feely bags".
 - **9th August 2003** **Potteries Museum Hanley** **10 am to 4 pm** *
 - A "Dinosaur Day". There will be lots of activities, including Dinosaur face painting, make your own Dinosaur Mobile, Make your own Dinosaur mask, Drive a remote controlled dinosaur, handle dinosaur bones from the Isle of Wight (dinosaur island), dinosaur mazes and a quiz.
 - **20th August 2003** **Apedale Country Park** **10 30 am to 4 pm** *
 - Newcastle and North Staffs Play Council fun day. Geowatch will be doing fossil casting, take your own fossil home and paint it. There will be many other activities, contact Newcastle Borough Council Leisure Activities Committee for details of the play schemes in your area.
 - **11th October 2003** **Potteries Museum Hanley** **10 am to 4 pm** *
 - A "Magic of Minerals Day" including all sorts of experiments for the children to do and exhibits for them to handle.
- * **We will need help for all of these events. Can you help us please? If so please ring Carol or Mike Fereday on 01782 713227 or e-mail on carol@burnett40.freeserve.co.uk**

Rockwatch

Annual Family Activity Day at the National Stone Centre, Wirksworth, Derbyshire

Sunday 27 July, 11.00am - 3.30pm

Join Rockwatch and ESTA for their annual visit to the National Stone Centre in Wirksworth, Derbyshire

- Follow a geological discovery trail hunting for exotic fossils from an ancient sea floor and for minerals in the surrounding rocks
- Test your skill building a dry stone wall
- Pan for precious gems
- Make your own fossil replicas

Bring a picnic or eat at the café. No prebooking required. Price: £4.00

Rockwatch members free only with a valid membership card

For further details of this event and about Rockwatch membership contact: Rockwatch at the GA, Burlington House, Piccadilly, London W1J 0DU

Telephone: 020 7734 5398 or e-mail: rockwatchatga@btinternet.com

Articles

Dolomere, L. 2003 **

Life and Environment in the Cheshire Basin 250/225 Ma - Talk by David Thompson on 12 Feb 2003.

Newsletter of the Shropshire Geological Society May 2003

A review of a talk given to the SGS tracing the historical background to the discovery and interpretation of body and trace fossils in terms of palaeoenvironmental reconstructions

Tresise, G. 2003 **

George Morton, Henry Beasley and Triassic footprint classification

Proceedings of the Geologists' Association 114 pp. 129-138

A review of the first attempts to classify fossilised footprints, particularly those from Storeton Quarry, near Birkenhead

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

Why should we protect the Geodiversity of Staffordshire?

How many of you know of the Staffordshire Geodiversity Action Plan (SGAP)? The SGAP seeks to promote the geology and

geodiversity of Staffordshire through education and community events and the management of sites designated as Regionally Important Geological and Geomorphological Sites – or RIGS for short.

You might ask what 'actions' can we actually do to help promote geodiversity and why is geodiversity itself so important? If you look around at the variety of plants and animals in the immediate environment and then walk anything ranging from a few metres to several kilometres, you may notice the landscape changes, often quite dramatically. This is in a large part due to the underlying soils and geology – or the geodiversity of the landscape. The key elements of Staffordshire's landscape are what SGAP is setting out to protect and promote through a series of representative and also unique sites in the county.

There are 70 RIGS locations in Staffordshire, some of which are already actively managed as part of Nature Reserves, but equally there are many overgrown and poorly known locations that have so much to offer to both geologists and general wildlife enthusiasts. Many can be found on existing footpaths, but are so overgrown or poorly identified as not to be noticed. The SGAP aims to redress this.

The chance to help with the conservation of RIGS not only helps with the SGAP, but also provides opportunity to view and learn about Staffordshire's outstanding landscape. Conservation 'actions' can involve anything from vegetation and scrub management to the creation of pathways and guided trails.

Another key part of the 'actions' within the SGAP is to promote an understanding of the part that geology and geomorphology play in the modern day environment. This promotion is carried through a programme of events in differing parts of the county. Events to date have varied from a 'Geodiversity Rocks Quiz' and fossil casting at Cellarhead Environment Centre to a guided tour of the geology at a working quarry in Croxden! Events for this July – October include more quarry visits, guided walks and activities. Up-to-date details and dates are posted on the SGAP website at www.sgeoap.org.uk or below.

If you are interested in helping with the conservation of RIGS locations or assisting at an event for the SGAP, please contact Laura Cox, the Geodiversity Officer for Staffordshire, on 01889 880120.

Laura Cox

Staffordshire Geodiversity Action Plan: Programme of Events

- **26 July 2003 - The Loynton Moss Geology Quiz** will be held as part of The National Bog Day at the SWT Loynton Moss Nature Reserve, on Saturday 26th July. There will also be a guided geological tour of the reserve. Loynton Moss Nature Reserve (OS Landranger map 127, Grid Ref: SJ 788 243) is off the A518 Newport/Woodseaves road. Call 01889 880120 for further information
- **2 August 2003 - The Staffordshire Rocks Quiz** will be held as part of The Summer Festival at The Wolseley Centre, on Saturday 2nd August. The Wolseley Centre is in Wolseley Bridge near Rugeley. Call 01889 880100 for further information.
- **17 August 2003 - The SGAP and Cannock Chase AONB Rocks Quiz** will be held as part of The Summer Festival at Shugborough Estate, on Sunday 17th August. The Shugborough Estate is within Cannock Chase AONB. Call 01889 882613 for further information.
- **30 August 2003 - The Staffordshire Rocks Quiz** will be held at the Potteries Museum, on Saturday 30th August. The Potteries Museum is on Bethesda Street, Hanley, Stoke-on-Trent. Call 01889 880120 for further information.
- **31 August 2003 - 'A Walk Through Time'** will take place at Cannock Chase, on Sunday 31st August. The walk will start at Satnall Hill Quarry (OS Explorer 244, Grid Ref: SJ 983 208) at 14.00. Call 01889 880120 for further information.
- **September/October 2003 - Guided Tours at 2 quarries.** Details have yet to be confirmed.

Laura Cox (contact at Staffs. Wildlife Trust ☎ 01889 880120)

Extractive Industries

Kevin Quarry, a limestone quarry on the Weaver Hills near Cauldon, is temporarily closing due to the economic situation. The owners, Tarmac Central, have given no indication as to when it would be brought back into business. Powders and coating plant operations at the quarry continue. (from Leek Post & Times 16.4.2003)

Talk and Field Trip Review - Telford and The Wrekin Area 6 April 2003

Two members of the NSGGA joined a total group of about 21 for an introductory talk followed by a trip to the Wrekin.

The excellent talk by leader Liz Etheridge, indicated, the rocks of Wrekin are 667-566 Ma; the oldest are the Primrose Hill schists and gneisses. They are much weathered and metamorphosed and the history and relationships are difficult to interpret as the area has been subject to regional metamorphism and is much faulted and folded.

The Wrekin, comprises of layers of acid volcanic lavas and ash some 1500 m thick The lavas are viscous quartz-rich rhyolites, showing flow banding (except The Ercall)

Some eruptions involved lava flows, others were violent and explosive: the position of the originating volcanoes is not known.

At some time after consolidation the lavas and tuffs were folded and basic igneous rocks intruded (dolerites)

The paleo-history of the area begins in the Pre-Cambrian, when the Wrekin volcanics were formed and southern England was at approximate latitude of 60° south and separated from N.E. England and Scotland.

Tectonic subduction and Andean – Cascade type volcanism, affected the area. Around 560 Ma, a micro continental collision event causes the folding seen that is present. This event caused the igneous intrusions, which cut through the Wrekin and surrounding areas. The intrusions were both basaltic and granitic in composition, The Ercall granophyres are the largest igneous intrusion in the area.

The Pre-Cambrian, Rushton Schists are mainly quartzite schists and their relationship to the Uriconian rocks is concealed and they are much weathered.

The early Cambrian period, is represented by a world-wide (eustatic) sea level rise, this led locally, to erosion of the existing land and deposition of a beach conglomerate and ripple-marked sandstone. During the Cambrian period the sea gradually deepened and the sediments became finer – the Lower Comley (glaucopitic) Sandstones and Lower Comley Limestones.

In the Ordovician the sea deepened further and sediment became finer-grained, more silty than sandy and it loses its glauconite – indicating a deeper marine environment.

At the end of the Ordovician, there was an increase in tectonic activity and in Maddocks Quarry a basic sill was intruded. In other parts of Shropshire, volcanoes became active again.

With the Silurian, the shallow Iapetus Sea between the north and south of England closed and Shropshire moved further north into tropical latitudes. The Kenley Grits of the Llandovery Series is characterised by the brachiopod *Lingula* – indicate a shallow /intertidal zone while the Pentamerus beds characterised by *Pentamerus oblongus* (known locally as the “government beds”) indicate the conditions were still marine. These are succeeded by the Hughley Shales (or Purple Shales) with deeper marine brachiopods and were followed by coral patch-reefs – Wenlock Edge consists entirely of these patch-reefs.

The Devonian is absent in the Wrekin area but can be seen at the base of the Cleve Hills.

The base of the Carboniferous is marked by an unconformity which cuts both Ordovician and the Silurian and contains sandstones, limestones and coal which encouraged industrial activity, especially iron making. Basaltic lava flows indicate the area was still tectonically active during the Carboniferous.

The plains to the north west side of the Wrekin are characterised by bright red Permian soils, Shropshire was part of the super-continent Pangaea and the latitude and climate were similar to the present Sahara

Further north, the Triassic is represented by Sherwood Sandstones and there is a small patch of Lower Lias capping Berrow Hill

The legacy of the Ice Age was to round the hills and flattened the plains. There have been a number of cooling periods in the last 2 million years, however, the focus is mainly on the last Ice Age which of 10,000 years ago and covered the Wrekin.

Two glaciers converged across the North Shropshire Plain – leaving thick layers of glacial drift. Melting and retreat left enormous lakes and it is thought a massive outflow from the glaciers (or lakes) formed the Ironbridge Gorge. Glaciers re-routed the Severn by blocking its original course. Glacial deposits created the resources for sand and gravel extraction.

Major faulting has had a considerable effect in bringing more ancient rocks into prominence.

Field trip: For the field trip we were given the good advice to ask, frequently, the questions, where are we? And what is it?

In the pre fieldwork talk, we were reminded that at the Wrekin, there are three major, different igneous rock types represented:

1) Rhyolites- pink to purple in colour, often banded, which may contain small crystals up to 1 mm. – which weather to a pale pink. 2) Tuffs – grey, green and dark purple in colour, very fine-grained, with occasional small crystals in thin layers, and a flinty fracture and 3) Dolerites - mafic, basic, fine grained, which were injected violently, possibly along fault lines. They have chilled margins when in contact with the country rocks.

These are unconformably overlain by Cambrian ortho-quartzites with a basal conglomerate clearly visible in the Ercall Quarries.

Prior to the ascent of the Wrekin, many took a lunch time visit to Ercall Quarries, which was valuable in relating these rocks, to those of Lawrence Hill Quarry and on through the Wrekin itself. In the first left hand quarry of The Ercall, we observed rhyolites, some of which are amygdaloidal and, with more difficulty, a narrow dolerite dyke to the right. Further into The Ercall, and with our backs to the slickensided Comley Sandstone, we had an excellent view of the pink granophyre flanked by unconformable white and rippled, Cambrian, Wrekin Quartzite.

The ascent of the Wrekin, along the main track, initially found dark fine-grained dolerites, which were very weathered and somewhat crumbly. Very shallow gullies suggested that this had weathered differentially.

We next encountered the white and sugary ortho-quartzite of the Wrekin Quartzite, scrutiny of which was much improved by the gentle use of a toothbrush (which I carry for just such situations). The eye suggested that this was rippled, touch tended to confirm this.

Progressing further, the track was over distinctive pink to purple banded-rhyolites, which have taken a high polish by the passage of many feet.

Beyond the wooded area, we encountered a distinct change in rock type, with outcrops of a grey, dull, fine-grained rock – the tuffs

These were followed by a return to banded rhyolites, which were significantly lighter pink in colour when weathered.

Near to the Iron Age fort, a small layer of the rhyolites appeared broke and re-welded with the banding of the pieces set at different angles – auto-breccia.

The summit gives excellent views of the surrounding Permo-Triassic plains to the northwest, the Palaeozoic to the southeast, and the latter part of the journey looks back to The Ercall which is much quarried

On return to the base, and having thanked our hosts, the two members of the NSGGA proceeded to short visit to Maddocks Quarry where several examples of *Dictyonema flabelliforme* were found, mostly as fragments. We took a look at the basic sill - described as camptonite or albite diabase before returning home

An enjoyable, informative day with a friendly welcoming, group, especial thank must go to Liz Etheridge of the Shropshire Wildlife Trust.

John Parton

Field Trip Review Snowdonia 27 April 2003

17 intrepid geologists and 5 visitors who had obtained details of the trip from the NSGGA website, braved what promised to be a wet and windy day on a field trip led by our Chairman Peter Floyd.

Leaving Keele we travelled by minibus in the capable hands of Malcolm Wright.

The weather turned out to be incredibly windy but we had no rain at all, Janet Fairclough was very relieved as she feels as

responsible for the weather just as much as the other arrangements.

On arrival at the starting point near Llyn Ogwen Peter gave us a pep talk on the health and safety aspects of the day.

The geological information hand out that he had prepared was very detailed and we all had the opportunity of reading it whilst travelling to Snowdonia in the minibus.

We visited 6 localities where Peter explained the different aspects associated with the volcanism in the area dating back to Caradocian (458 – 450 Ma). We examined a variety of volcanic lithologies and the associated stratigraphy and had an opportunity to see the effects of glaciation on the adjacent landscapes.

Everyone enjoyed themselves and Peter and Malcolm were presented with a bottle of wine at the end by way of a thank you from everyone.

Mike Fereday

Field Trip Review Central South Wales 17/18 May 2003

Saturday 17th May dawned, we had hoped bright and early but the sound which we thought was sizzling bacon in the kitchen turned out to be torrential rain on the conservatory roof of the Maes y Gwernen Hotel, our home from home for the next two days. Not daunted, we set out with leader Dr Geraint Owen in high spirits for our first view of South Wales Geology.

From the mists our first locality came into view on a nasty bend in the road. This was Craig Derlyn east, a very good exposure of the Farewell Rock, a thick sandstone near the base of the Coal Measures, beyond which it was "farewell" to any more coal or ironstone!!! Here the rocks dipped south as we were on the northern limb of the syncline of the South Wales Coalfield. Channelling in the sandstone was clearly visible, indicating that the sediment was an alluvial floodplain deposit, on top of which the Coal Measures swamps developed. As the grey mist lifted slightly we could just see a grey hillside to the south of grey rocks exposed in a dirty grey opencast coal site.

A short crawl brought us to Craig Derlwyn north, with exposures of grey shales and ironstone nodules. The site is important as the *Gastrioceras subcrenatum* marine band is exposed. This marks the base of the Coal Measures. Several members found fragments of marine fossils, but shales are difficult to conserve!! The site was an economically important one for the ironstone nodules, made of siderite [iron carbonate], and used in the early days of iron smelting in South Wales.

We passed several exposures of gritstone as we went down the succession, stopping at the summit of the road next to quarries in the Carboniferous Limestone. Here the black limestones have been faulted to the east, against the gritstones by the Cwmllynfell Fault. They were hard and rich in marine fossils, notably corals, brachiopods, gastropods and crinoids. An unusual feature, aided by the plentiful supply of rain, was the presence of tufa deposits on the surfaces over which the water ran. These carbonates were leached out of the waste material from lime-burning. To the west of the fault, in the gritstones, we trudged along a sandy and muddy track strewn with boulders to an outcrop of sand, mud and boulders!! A story was told by Geraint about deep weathering in a hot, humid climate. Strange that it should remain on the top of a hill whilst under attack by subsequent weathering and erosion!

At the next wet car park further north, with views said to be spectacular, we passed down the succession to the very hard quartz conglomerate of the Upper Old Red Sandstone. This bed can be traced in crags along the escarpment of the Black Mountain.

There is only so much water even modern fabrics can repel and so somewhat drenched we repaired for lunch at Carreg Cennen Castle. Our bedraggled little group took up residence in the loft of the castle tea-rooms where copious cups of coffee and community body heat dried our sodden outer and under wear. Not for long however.



THIS IS WHERE YOU GET THE MOST FANTASTIC VIEWS.

After lunch from an equally wet car park we trudged up to Carreg Cennen Castle. This is sited on the top of a crag of Carboniferous Limestone, faulted on both sides against Old Red Sandstones. These are part of the Carreg Cennen Fault/Llandyfaelog Disturbance, which can be traced north-eastwards towards Church Stretton. The views were truly awesome, well worth the climb and we were glad to be defending rather than attacking the castle.

At Cwar Glas Quarries, near Pont ar Llechau, we delved into the Silurian. The steeply-dipping sandstones and shales revealed layer upon layer of spectacular ripple marks and a typical array of Silurian marine fossils. Rumour had it that there were trilobites to be found!!

The final locality of the day was Penwyllt, a recently-disused quarry in the Carboniferous Limestone, topped with Namurian Basal Grit. Apart from the interesting

geology, this was a key site for industrial archaeology. Of note there were remains of eight beehive kilns used to make silica bricks for furnace lining and many odd bricks were scattered about the site. The rain had let up, only to be replaced by a howling gale!! Bath beckoned!!

Back at the hotel we were treated to superb food and the genial kind of evening we now expect from field trips with much humour and extremely good company.

The second day dawned threateningly, and so the planned climb up Cribarth was thankfully abandoned! It was replaced by an impromptu visit to Henrhyd Falls, a spectacular waterfall, capped by the Farewell Rock, faulted against the shales of the Lower Coal Measures. This is a SSSI, conserved for the extensive sequence of Coal Measures rocks exposed in the river section.

The abundance of rain over the previous days made the walk behind the curtain of water an experience to remember. The walk back up to the car park was a gasper!!

At Craig y Didnas several interesting features were seen. Between two parallel faults caused by the Vale of Neath Disturbance a crag of steeply dipping Carboniferous Limestone is exposed and has been much quarried. The Mellte and Sychryd Rivers have excavated along the line of the faults to produce parallel gorges. Tight folding can be seen in places, caused by the same Disturbance. The Basal Grit has been mined for silica for many years, ending in 1964, and this site has much industrial archaeology to add to its interest.

A **sunshine** lunch was enjoyed by all those left as some people had to leave early due to varying commitments and travel arrangements.

At Porth yr Ogof we had a glimpse of a complex system of waterways on and in the Carboniferous Limestone cave system. Water from the River Mellte flows into a limestone cave with great gusto, particularly after the rain!! We followed on the surface along what was a former watercourse of this [or another] river. We were able to peer into swallow holes and at least hear the rushing water as it headed for the exit 250 metres further on. It gushed out in even greater volume, with the addition of water from underground tributaries. The floral tributes gave us a reminder that these are dangerous places.

Intrepid explorers voted to go on downstream to view the truly spectacular waterfall of Sgwd Clungwyn. This is but one of several waterfalls and rapids on the Mellte which are caused by faulting. The hard quartzitic sandstones of the Basal Grit are faulted against the softer Shale Group in a series of giant steps. Again, the wet weather provided the waterfalls with that extra drop for good measure and good photos.

A place to view Nature in all its geological glory and a time to reflect on Man's insignificance against the awesome power of the elements.

The final stop was the Brecon Beacons National Park Visitor Centre tea room, just before closing. The view of the Old Red Sandstone escarpment of Pen y Fan and Corn Du from the terrace lasted half an hour before the rains returned.

And so to another bath.

And so the conclusion of a wonderful weekend, excellent food and hotel accommodation and our thanks yet again to Geraint, who put up with the rain and teasingly "sarcastic" comments with his unflinching good humour. Thanks again to the ".." members of NSGGA and our friends from the Essex Group, who made the weekend so successful. Thanks yet again to Carol and Mike for all the assistance rendered to helping with the arrangements.

Janet Fairclough and John Reynolds

Silvermines - A little piece of geo-social history noted on a recent visit to the Irish Republic

Sporadic mining has been carried out hereabouts since Italian prospectors from Genoa and Florence came in 1289. In February 1642, during a rebellion twenty English miners, women and children were killed south of the village. The chief landowner at the time was John Mac Dermott of Dún Aille Castle in Garryard West, one mile west of here. Throughout the 19th Century, which included the Great Famine (1845-50), several hundred people were employed at Silvermines and Shallee. From 1950 small quantities of lead and zinc were mined at Shallee and Silvermines respectively, until closure in 1958. In 1968 Europe's largest base metal mine of lead and zinc ore officially opened by the Taoiseach Jack Lynch at Garryard. It employed 500 people until closure in 1982 by which time it had produced in excess of ten million tons of ore. Also at Garryard an open cast barytes mine operated from 1963 to 1993.

Erected by Silvermines and District Development Association, with support from Shannon Developments Millennium Awards Scheme. 2001

A plaque with this inscription together with a metal statue of a miner and a mining tub is to be found in the town centre of Silvermines, Co. Tipperary, Eire.

John Parton

Shropshire Geological Society

- **19 July** - Charles Darwin in Staffordshire led by David Thompson
- **2/3 August weekend** - Hawkstone Park and Follies Countryside Weekend
- **9 August** - Rocks of Wroxeter led by Roger White and David Pannett
for further details contact Gordon Hillier ☎ 01691 682484, or access the SGS website - www.shropshiregeology.org.uk

Manchester Geological Association

- **27 July** - Knutsford Building Stones & Cobbles led by Fred Owen
- **27 September** - Excursion in the Lancashire Coalfield led by Fred Broadhurst
for further details contact Jane Michael ☎ 01614 397692 or email jammyjane@aol.com

NSGGA - Next Committee Meeting

- **Thursday 11 September 2003 at 7.00pm**
in the School of Earth Sciences and Geography, Keele University

Staffordshire RIGS Group

- Vicki Shenton was elected as Chairman of SRIGS at the AGM of 17 June 2003. Other committee changes were that Laura Cox becomes the Secretary, Sue Lawley is now the Treasurer, and Colin Exley will act as Vice-chairman when necessary. The remaining committee posts are under review pending a decision on the role of the Group with reference to developments

associated with the Staffordshire Geological Action Plan (SGAP).

- Ken Rout, the retiring Chairman, was given a vote of thanks for all the hard work he has put into SRIGS over the past ten years.
- If you are interested in finding out what SRIGS is about and/or you are interested in the evaluation and ratification of potential Regionally Important Geological/Geomorphological Sites, please contact Vicki ☎ 01630 672881
- **Next meeting - Monday 14 July 2003 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 Frazer; Elizabeth Hallam;
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

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