

Looking to the festive season...

Welcome to the third and final GCUK newsletter of 2022. As always I'd like to express my gratitude to its various contributors, with the usual caveat of asking for more of you to send in items of news about your groups by the next copy deadline. Its content reveals a rather limited picture of the many and varied activities and programmes offered by some of GCUK's 50 or so member groups. It also notes key consultations affecting geoconservation in England and Scotland. Thinking of the latter, the recollections of a major geoconservation conference held in 2003 reminds us of continuing themes in how we enact, support and promote geoconservation across the UK as a whole.

So, let's look towards the rest-break of the coming festive season whilst we plan the new year's activities programmes. In developing these we need to look towards expanding our engagement with broader communities and to attracting younger and involved geoscientists; undoubtedly, field-trips and outreach projects, especially around national and international events such as *GeoWeek* and the *International Geodiversity Day*, offer good prospects. Geotrails for pedestrians, particularly around towns and villages, can probably best encourage families to recognise the value of their local geodiversity and the need for geoconservation; they might well be surprised at how much of today's built environment lies over brickyards and sand and gravel pits - past buried geological treasures! Do treasure the festive break and get ready for the new year's... *Tom Hase*



Somerset Geology Group's Local Geological Sites Project

The Group largely completed by early summer its joint five-year project with the Somerset Environmental Records Centre (SERC) to review Somerset's existing Local Geological Sites (LGS). Its year 5 report records that in total it has reviewed 254 (234 in Somerset plus 20 in the Devon part of the Exmoor National Park) sites over the project's five years. There are now around 221 recognised in Somerset, with another 14 in the Devon part of the Exmoor National Park; this is slightly less than the original figures due to a few de-designations and amalgamations. The evidence base held by SERC for each LGS site is now much more comprehensive than previously and the full forms can be sent (or at least offered) to the

Autumn & Winter 2022 issue

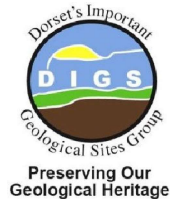
owner/manager where permission was granted for a site survey. Both the improved evidence and details held by more owners are big steps forward on the past situation. The Group held a final LGS Panel meeting, in November 2021, when all but one of the remaining sites for South Somerset were considered. The Group had been unable to recruit SERC-based graduate volunteers for a second summer, but its team of SGG-sourced SERC volunteers made great progress with the remaining LGS. A few final LGS (in Somerset West & Taunton and Sedgemoor Districts) were then reviewed by the Panel, via email, in March.

Wesley Harris, the Group's Local Geology Sites Project Officer, finished his two-day per week contract with SERC at the end of April; he had completed the bulk of the Post-LGS Panel processing stages needed at SERC. The only remaining task was that of emailing the last few forms to landowners, where they have granted permission for survey (or writing to offer to email them, where no email address is currently held). About 150 of these forms for the Somerset LGS have or will be sent (or offered); Leon DeBell, SERC's manager, undertook the task of organizing sending out the last few over the summer of 2022.

Identifying ownership and following up the initial approach proved a time-consuming task and SERC had limited resources for this; so, in many cases a line needed to be drawn. The review therefore had to be a desk study, with reconnaissance information where possible, where ownership could not be traced, or where a reply was not forthcoming. A good percentage of owners were contacted for Exmoor and other more westerly parts of Somerset, but in the case of South Somerset and Mendip districts about 50% of the LGS had to be reviewed as desk and reconnaissance studies only. In some instances, where for example there was a public footpath, this was quite adequate. In other cases, for example cuttings on active railway lines, assessment was by desk exercise only, but again these were often straightforward candidates for re-confirmation.

A final LGS Steering Group meeting for the project was held in February; however, it will meet again, in February 2023, to look at making the best use of the review information in the future and also how the Group might handle any potential new LGS. The Group will continue the LGS Panel, which will meet as and when necessary. By April 2023 there will be a new Somerset unitary authority with which to liaise. This replaces the current planning authorities of Mendip, Sedgemoor, Somerset West & Taunton and South Somerset; Exmoor National Park Authority will remain a planning authority in its own right. *Wendy Lutley* (Coordinator)





DIGS Autumn Update

The DIGS group continued to work through the summer and into the autumn with a variety of activities. The first of these was in late July when we attended an open day, with our display (below), at Horn Park Quarry near Beam-



inster. This site is an SSSI where the Inferior Oolite is exposed and is an important site when studying the Inferior Oolite in Dorset and a useful counter-

part to the exposure on the coast at Burton Bradstock / West Bay. The day was organised by Beaminster Museum. In early August we visited our Wanderswell site near Bridport to assess its safety following a major landslide (below) during early 2021. We decided that the southern exposure should be left as removal of debris is likely to result in further slips (related to the dip of interbedded Forest Marble limestone and clay strata). We therefore decided that we would concentrate on the eastern exposure for future conservation and that we will produce a display board summarising the geology and geomorphology of the site. The latter is quite active, as a small landslide (below) in April 2021 indicates.

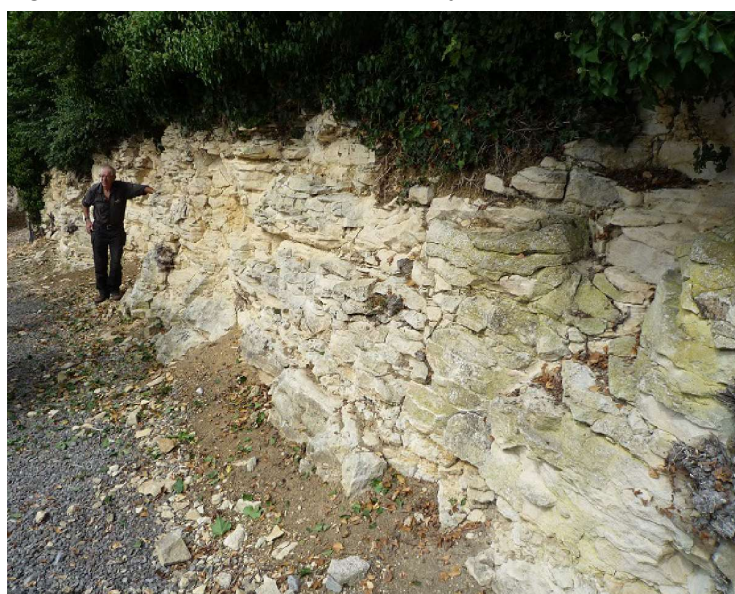


In late August we worked on our site at Holt Farm, Melbury Osmond where the Forest Marble is also exposed. The dry summer meant that relatively little clearance was necessary; however, the north-facing exposure (next column, top) had a good covering of moss that needed to be removed.

In early September we carried out work at the Church



Lane site at Todber where the Corallian is exposed. Again, the site (below) was relatively clear because of the



dry summer. We used the time gained to survey other sites in Todber and nearby Marnhull.

At one site, Birds Quarry, it is proving difficult to get the new owner's co-operation to carry out the necessary conservation work; it is the type section for the Todber Freestone. Whilst formerly owned by Hanson UK as a premix concrete depot, the new owner seems less interested in geoconservation. However, the Whiteways Hill site near Marnhull is in good condition. Our latest geoconservation activity was at our Hardown Hill site, at which the Upper Greensand is exposed, where we removed bracken, bramble and gorse. *Alan Holiday*

"So that", he said, pointing to a bulging green ridge running along the top of a hill next to the train, 'is the typical sort of landscape you get with sandstones from Coal Measures.'
'It's the same sandstone they used to build the cathedral', said Gary Phillips, as we pulled into Durham, with that tremendous view of the cathedral to our right. 'It's usually a dull buff colour but, in the chapel of Durham Castle, it's a lovely golden brown with a terrific watermark on it', on it he added, pointing towards the castle." (Harry Mount, 2012, p.27)



Some Meetings' Snippets (and there's space for more in future!)



GeoSuffolk and the Suffolk Coast & Heaths AONB Work Parties

GeoSuffolk has an article in *Earth Heritage Magazine* 57; entitled 'Working with our Suffolk Coast and Heaths AONB' it celebrates the contribution of the work parties to the conservation of our Suffolk geosites – see www.earthheritage.org.uk

The next management day with SCH AONB is scheduled for 15th November, 2022 at a Red Crag site in Alderton. We shall be removing vegetation and talus at this pit on private property. Anyone can join in and you just need to register with the AONB at 'Practical Conservation Tasks - Coast and Heaths AONB' (suffolkcoastandheaths.org).

Caroline Markham



Hull Geological Society Meetings

The remaining 2022 Zoom lecture meetings, all of which start at 7.30pm and for which booking is required, are: -

Wednesday, 9th November:- "Rocks Under Hull".

Wednesday, 16th November:- "Yorkshire, Lincolnshire and Norfolk coast erosion – compare and contrast" by John Connor.

Thursday, 15th December:- Quiz Night.



The Black Country Geological Society's Events Programme

The indoor meetings are normally held in the Abbey Room at the Dudley Archives, Tipton Road, Dudley, DY1 4SQ, at 7.30pm for 8.00pm start unless stated otherwise. The same timing applies to any online 'Zoom' meetings. Visitors are welcome to attend BCGS events but there will be a charge of £1.00. The remaining planned programme for the autumn and winter is:

Sunday, 6th November, 2022 (Geoconservation Day):- Saltwells Local Nature Reserve. Directed by Reserve Wardens and the Friends of Saltwells Nature Reserve. Meet at the Warden's Hut adjacent to the Nature Reserve car park (Grid ref: SJ 934 868) on Saltwells Lane at 9.45am for a 10.00am start. Wear old clothes, waterproofs and stout footwear. Please bring gloves and garden tools: hand brushes, trowels, loppers, secateurs, forks and spades if you have them. Either bring a packed lunch or hot food can be acquired from the Saltwells Inn adjacent to the car park. Finish at 2.30pm.

Monday, 21st November, 2022 (Indoor Meeting):- 'Bilston Stone Quarries - Digging up the Past'. Speaker: Graham Hickman (President of the GA and member of BCGS). Graham wrote about his family connections to these quarries in

December 2010 (*BCGS Newsletter* 204). Combining his genealogical and geological research, this talk will explore the geology where his ancestors dug a living for themselves, alongside the historical documents and evidence they left behind. [More information on our website.](#)

Saturday, 10th December, 2022 (Geoconservation Day):-

Portway Hill, Rowley. In collaboration with the Friends of Rowley Hills and the B&BC Wildlife Trust. Meet at St Brades Close (just off Tower Road) at 9.45am for 10.00am (Grid ref: SO 974 893); nearest postcode is B69 1NH. Directions: from Birmingham New Road (A4123) turn left on to Tower Road if coming from Birmingham, right if coming from Wolverhampton. Just after Bury Hill park, turn left onto St Brades Close. Wear old clothes, waterproofs and stout footwear, and bring gloves. Tools are provided but feel free to bring your own. Also, bring a packed lunch. Hot drinks provided. Finish at 1.30pm.

Monday, 12th December, 2022 (Indoor Meeting):- Members' Evening and Christmas Social. This is our annual chance for members to share their geological experiences in a sociable atmosphere with a Christmas buffet provided by the Society. (*7.00pm for 7.30pm start*).

Monday, 16th January, 2023 (Indoor Meeting):- 'Jurassic Gems of the Yorkshire Coast'. Speaker: Liam Heringshaw.

Monday, 20th February, 2023 (Indoor Meeting):- 'Glacial Boulders at Wightwick Manor, Wolverhampton'. Speaker: Clive Roberts.

Monday, 20th March, 2023 (Indoor Meeting):- 'Celebrating the Origins of Animal Life: Building a UNESCO Global Geopark in Charnwood Forest, UK'. Speaker: Jack Matthews (Geoheritage Conservation and Interpretation Officer for the Charnwood Forest Geopark, UK). Charnwood Forest in Leicestershire is host to some of the oldest animal fossils in the world. This presentation will outline the internationally significant geodiversity of Charnwood Forest - including the outstanding ancient fossils - and the ways it has shaped the landscape, communities, and people of Britain's 'unexpected upland'.



WGCG
Hidden wonders in the
landscape of Warwickshire

A November Meeting

The Group's next indoor meeting, on Thursday 17th November at 7.30pm, is at the St Francis' RC Church hall at 110 Warwick Road, Kenilworth, CV8 1HL. Peter Gutteridge will be speaking (see *Poster on p.5*) about **'The NW Highlands Controversy'**.

A live Zoom broadcast will also be attempted: to participate in this please register using this link:

link: <https://us02web.zoom.us/join/8524282828>

After registering you will receive an email giving the link for joining the meeting.

If your group's not herein represented, do send in your...





Beyond the LGS Project

We have now largely completed our joint five-year project with Somerset Environmental Records Centre (SERC) to review Somerset's existing Local Geology Sites (LGS). The evidence base held by SERC for each LGS is now much more comprehensive and the full forms have been sent to the owner/manager where permission was granted for a site survey (approximately two-thirds of the total). Both the improved evidence and details being held by more owners are big steps forward on the past situation. We also now know that about half of the sites are in some type of public ownership.

Our review has been a very substantial project - roughly equivalent to a full-time post for six years (including the development year), with over two-thirds of the input being on a voluntary basis. Wesley Harris, our Local Geology Sites (LGS) Project Officer at SERC for the last three years, finished his two-day per week contract at the end of April - his role was also critical to the success of the project.

Our SGG *Update no.13* (May 2022) includes a final report on the review. It and the project area reports can be found on our web page on SERC's web site, where our previous *Update* issues can also be found, at: <http://wp.somerc.co.uk/specialist-groups/somerset-geology-group/>

In June we celebrated completion of the Review with a small gathering of those who had been actively involved from SGG as signed up volunteers with SERC. We were hosted by Somerset Earth Science Centre (SESC) and were pleased to be joined by four students from Oxford University, about to embark on a field mapping exercise in the Mendips.

We had an update from SESC on its educational work programme and visited Doulting Quarry in the afternoon. SESC is supported by a consortium of quarry companies in the Mendip area and we will want to coordinate closely with it in the future to support its educational work including the *Mendips Rocks* festival programme (see <https://www.earthsciencecentre.org.uk/>).

Our October meeting was held at the Alfred Gillett Trust (<https://alfredgilletttrust.wordpress.com/collections/>) in Street, where we contributed to consultation on its plans for a new museum, including a look at its geological collection. We have also been consulting our SGG network on priorities and opportunities for the coming years to best encourage geological conservation and associated interpretation and educational activities in Somerset.

We have identified a number of themes for potential activity in the future - although much will depend on our capacity; these are:

1. Continued partnership work on LGS with SERC.

Further review is a high priority for a few sites, as is monitoring - we need to establish a simple procedure to provide SERC with any updating or new information.

2. Practical conservation work. Clearing rock faces of vegetation and other debris is a high priority at a few LGS, with opportunities arising at others from time to time. For example, a quarry clearance (*next column, top*) at Great Wood, Quantock Hills, Somerset in May 2022.

3. Potential for educational use, interpretative material and activities to raise the profile of Somerset's geo-diversity. Our LGS Review area



copyright: Garry Dawson

reports flag up opportunities where interpretative material might be developed for individual LGS and for interpretative material on the geo-diversity of Somerset and Exmoor more widely. Back at the beginning of the review we also identified a need to build more contacts with those teaching geology in Somerset.

4. Liaison with conservation organizations and developing contacts with owners. This is a critical part of raising awareness of Somerset's rich geo-diversity.

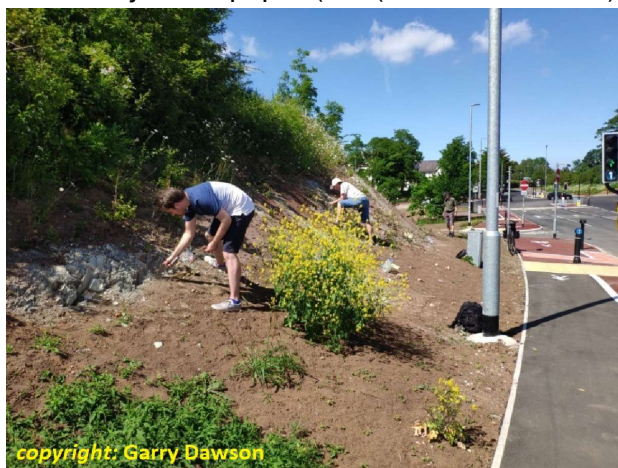
5. Planning. In April 2023 a new Somerset unitary authority planning authority will replace the current district and county planning authorities (with ENPA remaining a planning authority in its own right). We hope to ensure that new planning team is aware of the LGS review information.

6. Active quarries and restoration plans. It would be useful to develop relationships with quarry owners in some instances, for example where there may be a commitment to retain a quarry face in a reclamation plan.

7. Temporary exposures and new research &

8. Encouraging geological research.

Local Geological Sites provide opportunities for research in the future. Also, from time-to-time opportunities arise to document temporary exposures. Last year, for example, Garry Dawson spotted a new exposure (*below left*), at the M5 junction with the A358, of the North Curry Sandstone in Triassic strata; it has led to the publication of a new journal paper (see (Dawson *et al* 2022)).



copyright: Garry Dawson

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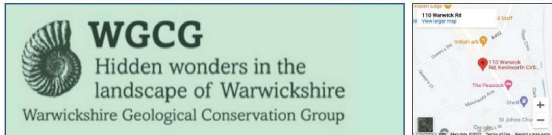
WGCG

Hidden wonders in the
landscape of Warwickshire


Promoting Those In-Person & Zoom Meetings

The Warwickshire GeoConservation Group has continued its indoor meeting programme into the autumn of this year. These meetings are promoted by emailed posters and often preceded by supplementary information. The audience appeal of the former can be gauged from:

On the web: <https://wgcg.co.uk> On Twitter: https://twitter.com/wgcg_uk

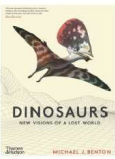


Evening Lecture Spectacular - dinosaurs in a new light



'Dinosaurs: New Visions of a Lost World'
by Prof. Mike Benton OBE, FRS, FRSE.
September 20 @ 7:30 pm – 9:00 pm

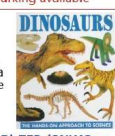
WGCG is delighted to host this evening lecture by Mike Benton, bringing some of his latest research on dinosaur appearance and evolution. Dinosaurs are not what you thought they were, or at least, they didn't look like you think they did. Rapid advances in technology and astounding new fossil finds have changed the way we visualise dinosaurs forever. This talk builds on Prof Benton's latest book 'New visions of a lost World', which is illustrated by acclaimed palaeoartist Bob Nicholls, to display the latest and most exciting dinosaur discoveries in vibrant colour. Bob Nicholls also produced the Mid-Triassic and Jurassic reconstructions for Warwick Museum, supported by WGCG.



Join us at:
St Francis of Assisi Church Hall,
110 Warwick Road
(Kenilworth main street),
Kenilworth
CV8 1HL
Ample car parking available

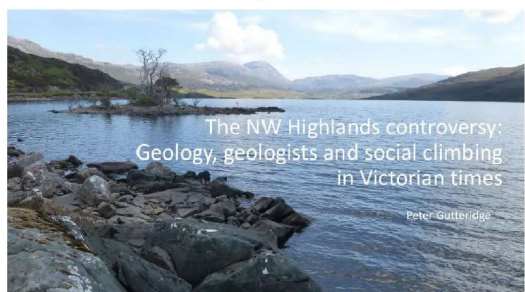
The talk will be given in person at St Francis of Assisi in Kenilworth. We will also attempt to share this on Zoom for those unable to make it in person. We will be trying out new mobile phone wireless technology and may incur technical hitches, therefore we recommend attending in person if possible.

Mike Benton is an award-winning professor of vertebrate palaeontology in the School of Earth Sciences at the University of Bristol. His extensive published work has concentrated on the evolution of Triassic reptiles, but he has also worked on extinction events and faunal changes in the fossil record. Mike has written many books on dinosaurs, including some for children and a non-specialist audience. A rhychosaur (*Bentonyx*) is named in his honour! He was appointed OBE in the 2021 Birthday Honours for services to palaeontology and community engagement.




On YouTube: <https://www.youtube.com/channel/UCf0fX05P2BstFBsj9NWQrw>
On Instagram: <https://www.instagram.com/warwickshiregwg>
On Facebook: <https://facebook.com/WarwickshireGeologicalConservationGroup>

WGCG evening talk Thursday 17th November at 7.30pm
at St Francis' Church Hall, Kenilworth and on Zoom




The NW Highlands controversy:
Geology, geologists and social climbing
in Victorian times
Peter Gutteridge

The NW Highlands of Scotland probably has the best scenery and geology in the world. You can find the oldest rocks in the British Isles, the first evidence of life, ancient landscapes carved out by pre-Cambrian rivers and beautifully exposed Lower Palaeozoic clastic and carbonate sediments. These all form part of a major fold and thrust belt on which the metamorphosed Moine schists were emplaced.




However, geologist Roderick Impey Murchison saw this as a conformable succession. It is worth asking the question, why did Victorian geologists so completely miss evidence that is so obvious to geologists today?

The answers lie in the state of geological science at the time, geopolitics and social climbing. Resolution of the Moine thrust controversy was a turning point in the history of geology gave us the foundations of the science of geology as we now know it.



Peter Gutteridge
As a carbonate sedimentologist I have worked on carbonate systems from all parts of the geological column throughout the world. I did my first degree at Leeds, which had a strong structural emphasis at that time. Consequently we all learned about the geology of the Moine thrust on numerous lectures and field trips to NW Scotland. I have been back there many times since I was a student and this lecture offers a new perspective on an old controversy.



They are certainly a good model for other groups to adopt. It is to be hoped that the audiences were impressed by the undoubted quality of the lecture presentations. *JAH*

9. Bibliography on the geology of Somerset. Our former secretary, the late Hugh Prudden, produced a comprehensive bibliography of publications on Somerset's geology up to the year 1997 (available as a PDF on our web page below the *Updates*) and we are looking for someone to help update this.

10. Museum collections and encouraging projects on the history of geology in Somerset. We realized, for example, in the early stages of the LGS Review, that there may be specimens held in museums from individual LGS, but this was beyond our capacity to explore further then.

11. Nature Recovery Areas and other consultations. We are encouraging the inclusion of LGS and geological SSSIs within the forthcoming Local Nature Strategy/ Nature Recovery Areas in Somerset.

12. Encouraging projects on local building stone. See <https://swheritage.org.uk/historic-environment-service/built-heritage/traditional-building-stone-research> for work that has been carried out in Somerset to date.

Reference: Dawson *et al* (2022) "A new exposure of the North Curry Sandstone Member (Dunscombe Mudstone Formation,

Mercia Mudstone Group: Carnian, Triassic), near Taunton, Somerset (UK): The location of Charles Moore's vertebrate specimens resolved." *Proceedings of the Geologists' Association*. [In press and available on-line from 11th July 2022].

Garry Dawson & Wendy Lutley

Scottish Fossil Code consultation

There is a consultation open until 17th November on the proposed updates Scottish Fossil Code. I think it is important to respond to this especially if you think about how it may relate to doing any field work in Scotland.



Do particularly think about how it might affect you if you were thinking of doing any in the future.

As responsible geoconservationists our opinions are relevant. The link to the consultation is at: <https://www.nature.scot/landforms-and-geology/protecting-our-geodiversity/codes-researchers-and-collectors/scottish-fossil-code>

Lesley Dunlop

If your group's not herein represented, do send in your...





Programme and a New Book

Monthly talks, held on the second Monday of the month, run from September to June each year. They are now held, starting at 7.30pm (with the doors opening at 7.00pm) at the new venue of the St. Andrews Centre in Histon, near Cambridge (directions at

<http://www.standrewscentre.org.uk/contact-us/how-to-get-to-us/>).

Non-members are charged a £3.00 admission fee. The remaining talks for this year are:

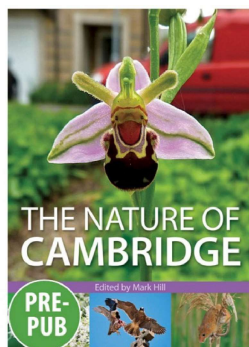
14th November, 2022:- *Natural Hazards turning into*

disasters by Dr. Ekbal Hussain, British Geological Survey. Globally, two thirds of deaths arising from natural hazards in recent decades were caused by geological hazards. But how and why do natural hazards turn into disasters? In this talk I will explore this question through the lens of one particularly troublesome hazard: earthquakes. The death toll for a given earthquake magnitude (and mechanism) will depend on geographic location, the social vulnerability of communities and the quality of the building stock. This talk will compare and contrast global trends in earthquake fatalities and aim to extract common themes that exacerbate the impact of natural hazards, and consider where and why these turn into disasters.

12th December, 2022:- *Paleoclimateology from Snowball*

Earth to Anthropocene by Dr Colin Summerhayes, Scott Polar Institute. This explains how greenhouse gases and temperatures varied through time, giving us alternating periods of warm 'greenhouse' climate and cold 'icehouse' climate over the past 800 million years. It explains how it is that Antarctica was once covered by subtropical forests, and why ice sheets did not cover it until 34 million years ago. It also explains the origins of the global Ice Age of the past 2.6 million years, explores the roles of the Sun and of the Earth's orbit in controlling past climate change, and provides a past natural analog for today's unnatural global warming. The past is the key to understanding the future.

Meanwhile, a new book, *'The Nature of Cambridge'*, has just been published. It has been produced by several volunteers who, over a period of five years up to 2019, recorded the wildlife of the city. as part of the 'NatHistCam' project. The Society was pleased to have been approached to contribute the geology and landscape section. This gives the background to a comprehensive account on the city's biodiversity. This is surprisingly rich and in many ways due to its mostly unknown geodiversity arising from its location on the southern edge of the East Anglian Fens, at the base of the Chalk hills and in the valley of the River Cam. For more information on the book and the project itself visit (at <http://www.cambsgeology.org.uk/nature-of-cambridge>) the Society's website.



A RIGS Conference Recalled

It's hard to believe that almost 20 years have gone by since the 'VIth UK RIGS Conference' held 23rd-26th October, 2003. Based at Oatridge College, at Ecclesmachan near Edinburgh, it was ably organised by Mike Browne and his colleagues from the Lothian & Borders RIGS Group. It examined in a time of greater optimism than today, some still relevant issues as can seen in the main

programme (left).

The first annual conference north of the border (the previous five requiring long south-easterly migrations of Scottish geoconservationists) couldn't have picked a better location and generally weather, even if the midges were still flying. Unfortunately, its being held over the Scottish half-term pre-

Friday 24 th October	
Breakfast	08.00-08.30
Session 1: Welcome: Ken Addison, Chair UKRIGS	09.00-09.15
Formal Opening: Jo Thomas. Provost of West Lothian Council	09.15-09.30
Keynote Address: Prof Aubrey Manning	09.30-10.00
RIGS in Scotland: John Gordon SNH	10.00-10.20
Coffee	10.20-10.40
Session 2: What we want from RIGS	
Education and RIGS: Hamish Ross, SESEF	10.40-11.00
Scottish Tourist Guides and RIGS: Con Gillen, Centre of Life-long Learning, Edinburgh Univ	11.00-11.20
Scottish Workshop	11.20-12.30
Lunch	12.30-13.30
Field visits: 1. Binny Craig RIGS or 2. Witch Craig Wall, and Petershill and East Kirkton RIGS	13.30-17.00
Evening Meal	18.00-19.00
How to do it Workshop (Craig Slawson, Alastair Fleming)	19.30-20.30
Bar	20.30-23.00

Saturday 25 th	
Breakfast	08.00-08.30
Session 3 RIGS groups working together: Elaine Tilson, UKRIGS Project Officer	09.00-09.30
Application of LGAPs to Scotland: Cynthia Burek Cheshire RIGS	09.30-10.00
Staffordshire LGAP: Laura Cox, Staffs RIGS	10.00-10.30
Coffee	10.20-10.40
Warwickshire's Geological Audit: Jon Radley, Warwickshire Museum	10.40-11.10
National Trust Geology Project: John Macadam, Cornwall RIGS	11.10-11.35
Geological Audit of North Pennines: Charlotte Vye, BGS	11.35-12.00
Lunch	12.05-13.00
Edinburgh Field visits: 1. Calton Hill or 2. Holyrood Park...	13.00-16.00
AGM at British Geological Survey..	16.00-18.00
Buffet and tours of BGS; shop open 17.00-19.00 (Return to Oatridge)	19.00-22.00

Sunday 26 th	
Breakfast	08.00-08.30
Session 4: What we need from /what we have to offer to UKRIGS; with Coffee	09.00-10.30
Field Excursions: 1. Stirling University and Bridge of Allan; 2. Barns Ness (East Lothian)	10.30-15.00

cluded most of those involved in education in England & Wales from attending; consequently, attendance was lower than usual, but still respectably in the upper 50s.

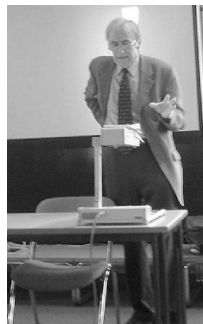
Thursday: the Evening 'Warm Up'

For those who booked in before the conference proper started David McAdam (Lothian & Borders RIGS) introduced the varied delights of the local geology. His slide presentation - in which some RIGS members looked rather younger and less expansive - reminded us of the sheer detail in several of the superb images that projected slides have compared with the usual "PowerPoint" presentations so at the time much beloved by countryside management professionals!

Friday: A Packed Morning and Afternoon Field trips

Following Ken Addison's (UKRIGS Chair) opening remarks, Jo Thomas (Provost of West Lothian), alluding to his personal mining past expressed a welcome commitment to geoconservation. Aubrey Manning (next page, top left) then gave the opening keynote address. This was followed by





beautifully illustrated presentations from John Gordon (Scottish Natural Heritage) on RIGS north of the border and Hamish Ross on Education and RIGS issues. Con Gillen (Centre for Lifelong Learning, Edinburgh University) regaled us with his stunning images, even using "PowerPoint", and extensive knowledge of Scottish geology in the field; he also covered a really outstanding example of good practice in how Scottish geology was being presented in an innovative way to help tourist guides better inform their clients.

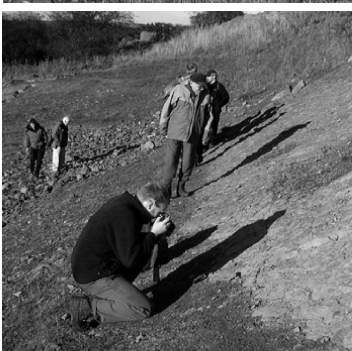
After lunch some energetic delegates walked up and beyond Binney Craig, a crag and tail structure in the venue's grounds. Those (foolishly as it turned out) seeking something less energetic took to minibuses, via the Scottish Korean War Memorial, for a short climb to Witch Craig wall (*below left*), an innovative interpretative feature, and East Kirton Quarry (*below right*) (home of

BGS) who outlined the North Pennines AONB project. Finally, John Macadam (National Trust Geology Officer) examined geosites' presentation.

After lunch, minibuses took delegates either to Calton Hill or Holyrood Park. Naturally, as those on the latter trip, ably led by Angus Miller of "Geowalks", reached the ancient volcano's most exposed location rain made a timely appearance! In drier but overcast conditions a good roadside exposure of vent agglomerate was seen. By the time Hutton's famous section (*right*) was reached some blueness had returned to the sky. Unfortunately, vandals had used the interpretative panel as portable bbq base. Then, it was off to the BGS's Murchison House for the AGM, 'behind the scenes' tours and a buffet.



"Lizzy"); they knew they'd chosen wisely when Concorde noisily sped overhead on its farewell flight! At Petershill quarry *in-situ Gigantoproductus sp.*, beautifully exposed on recently cleared bedding planes (*right*), and the limestone reef itself with its large *Dibunophyllum* corals were seen.



The evening workshops on the 'GeoConservation' site-recording software and how to present geological phenomena (an especially memorable activity on graded bedding involved filling and shaking bottles) were noteworthy for their audience participation; sessions well handled by Craig Slawson and Alastair Fleming respectively.

Saturday: RIGS Work, Field Trips and the AGM

The day began with Elaine Tilson (UKRIGS Project Officer) examining RIGS groups' current and future activities. She was followed by Laura Cox (Staffs RIGS) and Cynthia Burek (Cheshire RIGS) exploring Local Geodiversity Action Plans. The Jon Radley (Warwickshire Museum) covered Geological Audits; a theme picked up by Charlotte Vye

Sunday: Closing Session and Two Field Trips

In the conference's last session, chaired by Mike Browne, the "Development Strategy for the RIGS Movement in Scotland 2003-2006" was discussed; raised issues focussed on the best ways to conserve and promote sites, especially how to engender community involvement. Field trips to Barns Ness or Stirling were then run. The latter examined a copper mine at Mine Wood and Wolf's Hole set in Devonian conglomerate beds of volcanic pebbles and cobbles. The mine workings (*right*), due to the mineral wells they developed, had led to the Bridge of Allan becoming a fashionable spa town. A thick river sandstone sequence, showing superb cross-bedding features, was seen in some quarries significant to vertebrate palaeontology; they were the source in the mid-19th century



of armoured fossil fish, *Cephalaspis* and *Pteraspis*, as well as dressed stone for many of the Bridge of Allan's fine houses. The final morning visit examined a superb example of the spheroidal weathering of a lava flow. The views along the route were magnificent, much helped by the exceptionally fine and clear weather - especially liked by the local midges! In the late afternoon, the grounds of Stirling University were visited to examine quite impressive cliffs representing a late-glacial shoreline. Finally, after a short climb, Lower Devonian flow-banded lavas at the western edge of the Ochil Hills were examined. The day was rounded off with a magnificent golden sunset dramatically casting its effect over the northern hills - a perfect ending to a memorable conference. *Tom Hase*



Geodiversity as Part of Nature Recovery: Making the Case.

Nature recovery and geodiversity

Nature Recovery and establishment of a Nature Recovery Network (NRN), delivered in a large part through the development of Local Nature Recovery Strategies (LNRS), is now established as the Government's primary means of delivering nature conservation in England, see the government's 25 Year Environment Plan, the Environment Act 2021 and Nature Recovery Network - GOV.UK (www.gov.uk).

With a clear focus on nature recovery there are real opportunities for geodiversity as a fundamental element of nature. Geodiversity will both benefit from and contribute to the four aims of the NRN including the enhancement of designated sites, improving landscape resilience and, most importantly, reinforcing the geological diversity of our landscapes, and enabling us to better connect with nature. In detail, the four aims are to:

- enhance sites designated for nature conservation and other wildlife-rich places - newly created and restored wildlife-rich habitats, corridors and stepping stones will help wildlife populations to grow and move;
- improve the landscape's resilience to climate change, providing natural solutions to reduce carbon and manage flood risk, and sustaining vital ecosystems such as improved soil, clean water, and clean air;
- reinforce the natural, geological, and cultural diversity of our landscapes, and protect our historic natural environment;
- enable us to enjoy and connect with nature where we live, work and play - benefiting our health and well-being.

Furthermore, the Purple Horizons Nature Recovery Pilot Project, provides an example of where geodiversity has been fully integrated into nature recovery already benefiting geodiversity and biodiversity — if it can be done here, it can be done in other places too.

Checklist to assist in the inclusion of geodiversity within nature recovery

- 1) Is there any recognition of geodiversity as part of nature within the strategy, plan or project?
- 2) Is the strategy, plan or project holistic and integrated with the conservation, recovery and promotion of geodiversity included within the scope of the plan, its objectives or the actions being taken?
- 3) Is the presence of Local Geological Sites, geodiversity SSSIs and NNRs, and where appropriate UNESCO Global Geoparks/World Heritage Sites recognised and included?
- 4) Is the designation of geodiversity features and management of geodiversity sites identified as a means of enhancing nature?
- 5) Is the importance of naturally functioning geomorphological features and processes recognised and promoted?
- 6) Are designated geodiversity sites being used to help recover biodiversity, and biodiversity sites being used to help enhance/recover geodiversity?
- 7) Are local geodiversity/geoconservation groups and bodies involved in the scoping and delivery of the plan?
- 8) Is geodiversity being used as a means of engaging with local communities, e.g., in promoting understanding of dynamic environmental change such as on coasts and rivers, in relation to climate/environmental change over time, or in making links to industrial/cultural heritage, especially in urban areas?
- 9) Are sources of geodiversity evidence being used in planning and delivering nature recovery?
- 10) Are there clear conservation and recovery outcomes for geodiversity arising from the proposed delivery plan?
- 11) Are the outcomes in terms of the conservation/recovery of geodiversity being assessed?

Making the case for the inclusion of geodiversity and geoconservation in LNRS or specific nature recovery projects may be challenging, especially given that most partners setting priorities will have different aims and ob-

jectives. With this in mind, the following thoughts and checklist might be useful in making the case for the recognition of geodiversity in nature recovery and for an approach that delivers for all of nature in an integrated way.

Why is geodiversity relevant to nature recovery?

- Geodiversity is: 'The natural range (diversity) of geological (rocks, minerals, fossils), geomorphological (landforms, topography, physical processes), soil and hydrological features, including their assemblages, structures, systems and contributions to landscapes'. This is clearly an integral part of nature and the aim of 'Nature Recovery' is to recover 'nature'.
- England's geodiversity is extremely rich and of great importance for science, education, recreation and tourism.
- It is a product of natural processes operating in the past as well as those shaping our landscapes at present. It provides the only record we have of past environmental change and the evolution (and extinctions) of life on Earth.
- Geodiversity underpins and defines the character and distribution of our wide range of varied and locally distinctive landscapes, the nature and distribution of habitats, species and land use, and the cultural, social, and industrial identity and character of different parts of the country. It provides the 'stage' on which our wildlife and cultural heritage 'perform'.
- Geodiversity, like all elements of the natural environment, is subject to a range of threats, many of which arise from anthropogenic activity. Action to conserve, recover and enhance geodiversity will enrich nature and nature recovery.

What does good look like?

- Geological features and static geomorphological landforms are protected, visible and both physically and intellectually accessible;
- Geomorphological processes such as coastlines, rivers and mass movement are functioning naturally and helping support biodiversity;
- Geodiversity site series, including UNESCO sites, SSSIs, NNRs and Local Geological Sites, are recognised, conserved and recovered;
- Geodiversity and its relationship with landscape, ecology and cultural heritage is being used to help local people protect, understand, interpret and engage with nature, environmental change and cultural history;
- Where appropriate, geodiversity features are helping to support wider ecological nature recovery (e.g., through geomorphological processes and bare rock) and ecological features on biodiversity sites are, in turn, contributing to the conservation and recovery of geodiversity;
- 'Nature Recovery' strategies, plans and projects are holistic and integrated, conserving and recovering all of nature.

What are the benefits of including geodiversity in nature recovery?

- A more integrated holistic approach to nature recovery;
- A strong narrative for connecting, 'past', 'present' and



'future', and the opportunity to use geodiversity to engage with and connect local communities with nature;

- Engagement and interaction with the geodiversity/geoconservation community, tapping in to their evidence and expertise;
- Increased conservation and recovery of geodiversity through taking opportunities on existing biodiversity features and sites;
- Increased conservation and recovery of biodiversity through taking opportunities on existing geodiversity features and sites.

Getting involved

Local Nature Recovery Strategies (LNRS) are one of the main mechanisms for setting out priorities for nature recovery. It is anticipated that there will be around 50 county-based LNRS covering the whole of England, which will be developed through local partnership and collaboration. To become an NRN Delivery Partner and bring geological expertise, advice and time please contact Natural England's NRN Partnership Team at:

NDPNaturerecovery@naturalengland.org.uk

Colin Prosser (Natural England)



MEETINGS and CONFERENCES

All HOGG meetings and conferences are held virtually, unless stated otherwise, until further notice; they and other events are offered at a discounted registration fee. Of course, for HOGG members, admission to all online meetings is free. Associates and guests are welcome to attend meetings for a small admission charge. Registration is via 'Eventbrite' where an outline of each event can be found. An exclusive HOGG members' link for each online meeting is emailed out to members. The currently planned programme is:

Thursday, 20th October, 2022:- Unlocking Lapworth's Archive with Rachel Brown (Project Archivist, Lapworth Museum of Geology, University of Birmingham).

Tuesday, 22nd November, 2022:- HOGG AGM - followed by a talk to mark the bicentenary of the publication of the classic and influential book '*Outlines of the Geology of England & Wales*' by Conybeare and Phillips, with Dr. Leucha Veneer.

Thursday, 16th February, 2023:- Arthur Young and the first geological maps of Norfolk and Suffolk with Dr. Peter Riches.

Thursday, 16th March, 2023:- Geology, Photography and Institutional History in the Godfrey Bingley Archives - an intimate relationship between geology and scenery with Dr. Rebecca Jarman (University of Leeds).

Thursday, 20th April, 2023:- Overrating the exactitude: the role of geodesy in Alfred Wegener's arguments for continental drift with Dr. Andrew Hopkins.

Tuesday, 15th to Friday 18th August, 2023:- Aspects of the history and progress of geology in Ireland. HOGG Conference (1 day) Trinity College; Dublin; Field Meeting (3 days) in Dublin area. Conv-



nors: Dr Patrick Wyse Jackson & Dr Bettie Higgs; Conference Chair, Duncan Hawley.

Call for papers:- submission of Title, Author and Abstract (250 words) to Patrick Wyse Jackson at: wysjcknp@tcd.ie

It is worth noting that the HOGG web-page is a good starting point, and has several useful links, for anyone interested in following up a history of geology topic: <https://www.geolsoc.org.uk/Groups-and-Networks/Specialist-Groups/History-of-Geology-Group/Online-Resources>

"Granite tors are icons of endurance, riding out millions of years of erosion when softer surrounding rocks are washed, blown and cracked away to reveal the last stones standing. The word 'tor' is a survivor of linguistic weathering itself, as it's one of a small number of Celtic words in modern English. These outcrops are common on moorland hilltops: Dartmoor and Bodmin Moors have over 200 granite tors between them." (Dominick Tyler, 2015, p.12)



Copy for the next **GEONEWS** issue, for Autumn & Winter 2022, must be with the Editor by **13th March, 2023 at the very latest!**



This newsletter is published by **GeoConservationUK** and is sponsored by **Rockhounds Welcome!**

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