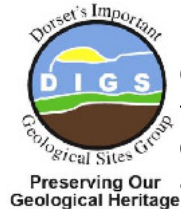


A Word from the Editor . . .

Welcome to the final 2018 issue of the GeoConservationUK newsletter. I am grateful to its contributors who, with my own gleanings from various newsletters and web-pages, should provide some insight into the diversity and commitment of our membership in maintaining and promoting the UK's geoh heritage. The contributions from the *Berkshire Geoconservation Group*, *DIGS* and *Geoconservation Staffordshire* indicate the physical effort and professionalism of our volunteers. Equally, *GeoSuffolk*, the *Cambridgeshire Geological Society* and the *Edinburgh Geological Society* show our willingness to work with kindred bodies. The range of events and interpretative provision, by the likes of the *Black Country Geological Society*, *Bedfordshire Geology Group*, *Cumbria GeoConservation* and the *Warwickshire Geological Conservation Group* show our willingness to educate a wider audience. The *Somerset Geology Group* indicate how we might involve younger members starting out in their geological and conservation careers. However, if we are to attract new individuals to, and public support for, our work, we must communicate all this effort, activity and enthusiasm to a wider audience than geoconservationists and earth scientists - so, feel free to distribute **GEONEWS** to your colleagues, friends and even families! Whilst I'm looking forward to our first 2019 issue, let me wish you a happy and fulfilling New Year.



Summer 2018 DIGS Activities

On 6th August, seven members spent some three-and-a-half hours at Todber, working on two Jurassic geosites. At these Corallian age Todber Freestone and the (Trigonia) Clavellata Beds are exposed due to previous limestone quarrying activities.

One of the sites, Church Close, was part of a Dorset County Council Depot developed after quarrying ceased. Now it is part of some small business units. DIGS works in co-operation with the site owner who kindly permits pre-arranged visits. An east-west section in the area behind the business units, shows up to two metres of the Clavellata Beds dipping to the east, with a hard flaggy limestone above a hard, massive, bluish-grey shelly limestone; beneath this, a friable oolitic sand rests on the undulating surface of the Todber Freestone. Up to three metres of the Todber Freestone is visible, in three to four beds of cream, hard, massive cross-bedded oolitic limestone; the individual beds are separated by thin friable oolitic sand, and have been weathered along the joints to produce a zig-zag outline on the face.

The Church Close site conservation work involved clearing vegetation obscuring the main quarry faces (see next column, top left) to make their beds easily visible to visiting field parties (see next column, middle right).

Autumn 2018 issue



The other site, Birds Quarry, was formerly a Hanson's pre-mixed concrete depot; it is now awaiting redevelopment. It has rock faces at right-angles (see below left, top), allowing their detailed

three-dimensional study. It is one of a complex of quarries which constitute the type section of the Todber Freestone. It shows over thirty metres of fin-grained oosparite limestone (see top



left) containing scattered bivalve and coral fragments. It is false-bedded, with a massive cross-bedded unit dipping to the north-east. Above the Todber Freestone lies the lowest part of the Clavellata Beds.



The record photos of the clean-up (see bottom left & below) shows something of the scale of the clearance work involved!

Alan Haliday
(Chair, DIGS)





Hogmoor Field – a muddy field or a periglacial feature? Watch this space...?!!

Hogmoor Field is a Local Geological Site in Berkshire, designated because of the water-filled hollows which have the appearance of being potentially pingo type features. Berkshire Geoconservation Group wished to learn more about the subsurface profile of these so carried out a day of field investigation in June 2016. The results of this survey were interesting and it has been decided to carry out further investigation.

The site, which lies close to the M4, contains several, often water-filled (*see below*), depressions; these might



relate to periglacial conditions and be the remnant formation of pingo-type features. Having collapsed, they have left left several depressions with a slight raised rim, consistent for a pingo. The features have survived because the land is not suitable for agriculture, due to its mostly water-logged nature, and is hence undisturbed.

A pingo is a dome-shaped hill formed in a permafrost area when the pressure of freezing groundwater pushes up a layer of frozen ground. Pingos may be up to 90 metres high and more than 800 metres across and are usually circular or oval-shaped. The core, which may be only slightly smaller than the pingo itself, consists of a mass of clear ice. Modern pingos occur in the continental tundras and are generally restricted to latitudes of 65° to 75° N.

The site lies at the southern end of the Sulham Gap. It is believed that during the Last Ice Age (Devensian) the River Kennet flowed north through this lowland area to join the River Thames at Pangbourne. The Kennet now joins the Thames on the eastern side of Reading. Biostratigraphical evidence from the nearby Woolhampton area to the south-west, shows that the climate at the time of diversion was much colder than today (that is, Younger Dryas/Loch Lomond Stadial) and permafrost was present, although shortly afterwards there was a dramatic rise in temperature as the Holocene interglacial commenced.

In June 2016, The group surveyed the field using a Leica

total station (*see below*) and also performed some geophysics with passive seismic (Tromino recorders) and ground-penetrating radar. The preliminary survey indicated that there were some layers consistent with the



potential feature being a pingo and the group have now decided to hire a dynamic probing rig to investigate further. The rig percussively drives a sacrificial steel cone into the ground using a mechanised drop hammer. Blow counts are recorded per 100 millimetres of penetration into the ground; the blow count profile can then be used to indicate the nature of the ground conditions and soil profile present. It is hoped to complete say five or six probes to a 10-metre depth in the day. The probes can be taken deeper if wanted – around 60 metres total probing can be done in a day. Hopefully, the results will tie in well with the previous investigations and show that the features really are periglacial and further add to our knowledge of the Local Geological Site, together with the behaviour of the River Kennet. So watch this space to find out about one of Berkshires more unusual sites!

Lesley Dunlop (Chair, Berkshire Geoconservation Group)



WGCG
Hidden wonders in the
landscape of Warwickshire

Warwickshire Gleanings

The Warwickshire Geological Conservation Group has arranged a lecture series over the autumn and winter:

19th September 2018: "Doctors in Geology" (*gentleman medical personalities from the 19th C. history of geology*) - Dr. Albert Benghiat;

21st November 2018: "The Secret life of your Mobile Phone" (*the geological make-up of a typical i-phone*) - Dr. Andrew Bloodworth (BGS);

16th January 2019: "The Wren's Nest" (*its geology and Unesco Geopark application*) - Graham Worton (Curator at Dudley Archive);

20th February 2019: "Swimming Plesiosaurs and Flying Dinosaurs; Palaeontology at Wollaton Hall, Nottingham" (*including references to Chinese dinosaur discoveries*) - Dr. Adam Smith;

20th March 2019: "Analysing the Skeleton of a King" (*isotope studies on the remains of Richard III, and the light this throws on the diet and lifestyle of a medieval monarch*) - Prof. Jane Evans (BGS).

The lectures are usually held at 7.30 p.m. in St Francis Church Hall, 110 Warwick Road, Kenilworth, CV8 1HL; from 7.00 p.m. tea / coffee and biscuits are available.

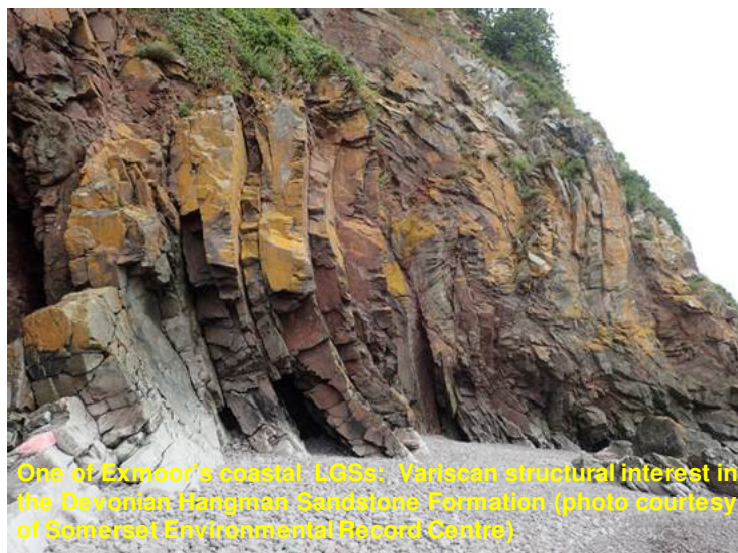


News from Somerset Geology Group - Review of Local Geological Sites

In April we welcomed Leanne Butt as the new manager of the Somerset Environmental Record Centre (SERC). We were also able to advertise for, and recruit, two SERC-based student volunteers to assist with the project this summer; Wesley Harris and Louis Warnes are both graduates in geology from different courses at Cardiff University. Our second field season of this joint project with SERC has therefore progressed very well, with Wes and Louis assisting with site visits and form completion for Local Geological Sites (LGS) in the Exmoor National Park and Quantocks Area of Outstanding Natural Beauty not covered in Year 1.

Louis has now moved on to start a hydrogeology MSc, but we are very lucky to still have Wes helping us this autumn. Leanne has been updating SERC's procedures, including risk assessment requirements for the site visits. We have also developed our induction from last year, so that we are now achieving a much greater degree of completion of the desk work. Our priority this year is to complete coverage for Exmoor and the Quantocks (and ideally the whole of the western part of Somerset), but there is still considerable desk work needed to complete the review process for those sites that were visited in Year 1.

In May we held a first meeting of SERC's new LGS Panel, which includes local planning authority representation, for a first batch of twelve sites from Year 1. We



One of Exmoor's coastal LGSs: Variscan structural interest in the Devonian Hangman Sandstone Formation (photo courtesy of Somerset Environmental Record Centre)

have, therefore, now established a *modus operandi* for the complete review process – and it is becoming increasingly clear, that the scale of work is a much larger task than we originally envisaged, with, for example, time needed to identify full references to relevant geological literature (to provide a robust evidence base for

each site); and for SERC to identify and contact land owners/managers in advance of the site visits.

The project is also revealing considerable potential to liaise with managers and landowners to encourage conservation work and/or interpretative material as a follow-on. Garry Dawson arranged a scrub clearing session by the South West Region group of the Open University Geological Society for the Clatworthy reservoir LGS owned by Wessex Water, while Phil Parker has been assisting Exmoor National Park with geological information for its nature trail at Tarr Steps National Nature Reserve.

Wendy Lutley (Coordinator, Somerset Geology Group)



Cambridgeshire Gleanings

The Cambridgeshire Geological Society (CGG) has again arranged a varied series of autumn and winter lectures and events; for example:

Monday, 10th September 2018: "*Discovering Geology: from rivers to rocks and fens to fossils*" - an informal evening with short talks, getting up close with rocks, fossils and Mesozoic plants and hearing from local experts. It will also be an opportunity to join or renew CGS membership.

Monday, 8th October 2018: "*Feathered lives - the fascinating world of dinobirds*" - Franziska Norman (CGS);

Monday, 12th November 2018: "*An exhibition of Ice Age Cambridgeshire*" A look at the wonderful new Ice Age display in the Sedgwick Museum - Dr. Douglas Palmer (Sedgwick Museum);

Monday, 10th December 2018: "*Bob Dylan and the Bone bed: A sideways glance at the Rhaetic (aka Penarth Group) exposed in Aust Cliff, S. Gloucestershire*" - Reg Nicholls (CGS);

Monday, 14th January 2019: "*Ediacaran microfossils*" - Peter Adamson (PhD student, Cambridge University);

Monday, 11th February 2019: "*Close encounters of the third (geological) kind....*" - Steve Thompson (exploration geologist);

Monday 11th March 2019 "*The explosive history of the Galapagos Archipelago*" - Matthew Gleeson (PhD student, Cambridge University).

All lectures are held in The Friends Meeting House, 91-93 Hartington Grove, Cambridge, CB1 7UB; doors open at 7.00 p.m. and they start at 7.30 p.m.. In addition to the lectures, CGG hopes to arrange at least a couple of field trips; details can be had of these, when available, and also the lectures from the Programme Secretary, Franziska Norman, at info@cambsgeology.org.

"Beyond the limestone belt - still, that is to say, moving away from London - the large majority of churches are built of sandstone of one kind or another, New Red, usually soft, and Millstone Grit being the most frequent." *The Shell Book of English Villages*, Michael Joseph, (1980).



A Summary of DIGS Activities in 2018

The DIGS (Dorset's Important Geological / Geomorphological Sites) group has a management meeting every two months to decide the programme of activity for the next period. We have around 60 sites spread across the county, chosen on the basis of their geological and geo-educational value. Chosen sites were away from the coast and not SSSI's. We carry out conservation work on the sites as and when necessary and also dependent on availability of labour! Some sites are working quarries, so they look after themselves. Other sites are former quarries and they do need regular attention, otherwise they become overgrown and the geological interest is obscured. Other sites are road cuttings.

We occasionally look after other sites and one of these is part of an SSSI on the northern outskirts of Weymouth (the Upwey cutting) part of the Bincome SSSI. Despite regular attention the site is deteriorating as the rock weathers. A couple of sites visits in early summer (30th May and 19th June 2018) were successful. During the summer we were contacted by a film company from Belgium (*Intfilms*) who were interested in filming our work (see report on pages 9 & 10). During their filming in the UK they had also visited the North-West Highlands, South Wales and Cheddar.

Another site we have worked on in the last six months (on 30th January and 14th July 2018) is Red Lane at Abbotsbury which exposes iron rich (chamosite) oolitic limestone from the passage beds between the Corallian and Kimmeridge Clay. The iron ore was exploited in Victorian times but was found to be too siliceous to be economic. The site was cleaned up, especially in July, in



preparation for a visit by a Rockwatch group (see below) during their annual Dorset residential event. The site is owned by the Ilchester Estate and we work in cooperation with them on this and another site at Evershot.

Occasionally, DIGS works outside of Dorset; it regularly carries out work at Vallis Vale (see below), the famous site



of de la Beche's unconformity, near Frome in Somerset. This important site is a SSSI but Natural England don't have the resources to carry out the necessary work and clearing up after the youth of Frome have partied there - as they did on 6th February of this year.

We are hoping, following the interest of one of our members, to designate a new site in Weymouth. The Rodwell cutting is on the former railway line, now part of a footpath / cycleway, between Weymouth and Portland. The cutting goes through the Corallian and is an interesting comparison with that exposed in the Fleet and Portland Harbour. A site meeting to assess the cutting was held on 3rd May 2018. Owing to local government reorganisation in Dorset there has been a delay in designating the site.

Another site which receives regular attention is at Wanderswell near Bridport (Jurassic Forest Marble). One of our members lives nearby and has carried out regular work on the site with the help of some of the Group; consequently, the site has dramatically improved over the past year.

So we are pretty busy thanks to the enthusiasm of a small but dedicated team.

Alan Holiday (Chair, DIGS)

A Welsh Snippet

Geoconservation-Cymru - Wales held an executive meeting at the Brecon Beacons National Park Visitor Centre at Libanus, outside Brecon, on 9th November 2018 to re-invigorate the project to create a Geodiversity Wales Action Plan; a report should appear in the next issues of GEONEWS.

Ken Addison



Cumbria GeoConservation

At the October meeting, held at Cumbria Biodiversity Data Centre's office in Carlisle, it was proposed that Audrey Brown should be made President of Cumbria GeoConservation (CGC) in recognition of her long service as Chair - unanimously agreed in her absence!

This year, two summer activities stand out; firstly the 'publishing' of our new web-site in late July and secondly our visits to the potential Local Geological Sites in the Westmorland Dales that were identified in Elizabeth Pickett's report for our Heritage Lottery Fund (HLF) project. The website still needs some work but now that it is actually up and running it is much easier to see what needs to be done; we plan to start amending the Master Spreadsheet very shortly, now that the autumn has begun and outdoor activities are less pressing. Despite efforts to get a redirection placed on the old Cumbria RIGS website this still hasn't happened, hence it would be helpful if every opportunity was taken to draw attention to the new web-site at:

https://www.cbdc.org.uk/cumbria_geoconservation_home/

Another important landmark was the formal unveiling in early October of the information board at Brown Howe (see below), carried out by Richard Leafe of the Lake



District National Park Authority, which body actually owns the quarry. Thanks are due to Chris Brown who actually affixed the board to the stone, generously donated by Burlington Stone and brought there from Kirkby quarry by Darren Woolcock. We were pleased that Elizabeth Pickett, the geological illustrator, and Marcus Byron, the designer, of the board were able to be there and also able to join us for lunch afterwards. The unveiling was the culmination of a lot of work by Sylvia, who also organised the unveiling - which went very well and was enjoyed by all who were able to attend. A brief report of the event was published in the regional newspaper, the *Westmorland Gazette*.

I should mention for the record, although it is not particularly interesting, that I responded on CGC's behalf to

a consultation document, on byelaws to provide additional protection to some SSSIs, produced by Natural England. I pointed out that the public would not back the protection of things it didn't know existed, hence the efforts through our web-site to raise public perception; further, that one way of drawing attention to a byelaw about a specific site would be for CGC to put it on the Site Data Sheet and/or on the map pop-up. I also sent a response to a DEFRA questionnaire on partnerships.

Various geosites have been visited this year; Sylvia and Peter Woodhead have been particularly assiduous in this regard. We do need to try to visit as many sites as we can, although this is a really major task. Sylvia visited Eycott in March - but since I am regularly there on Wildlife Trust work-parties and John Rogers regularly takes guided geological walks there - we have no fears about the site. Chris Thompson and I visited Yeathouse and Branthwaite back in March; the former is no longer evident and will be archived, whilst the latter is really only appropriate as a research site - as such, it will not be placed on the interactive map.

Various members, much supported by Noel Pearson, have visited potential new Westmorland Dales geosites. We couldn't have achieved much of what we did without his immense knowledge of the area, help and guidance. Formal designation of these sites will not be undertaken until we know the outcome of the bid for Phase 2 of our HLF project; should it be successful then we might be able to get help with the write-up of the sites. Visiting these sites in a group brought home to me how much more can be seen and noted when several pairs of eyes are looking! *John Lackie* (Chair, Cumbria GeoConservation)

Mary Stopes on your New £50 note . . .?!!

The Bank of England (BoE) announced in early November that the new £50 note will feature a prominent British scientist, with the public being asked for nominations. In addition to the Queen, it will include the portrait of an eminent late scientist. The BoE suggested that nominations can include anyone who worked in any field of science including astronomy, biology, biotechnology, chemistry, engineering, mathematics, medical research, physics, technology or zoology, the Bank said - seemingly they 'forgot' geology! Until mid-December, the public can offer suggestions on the BoE's web-site at: <https://app.keysurvey.co.uk/f/1348443/10fc/> .

Might I boldly suggest, with women grossly under-represented on our bank-notes, that we nominate the eminent palaeobotanist and women's health and rights campaigner Marie Charlotte Carmichael Stopes (1880-1958)?

Tom Hese





The Festival of Geology

The Geologists' Association (GA) held its annual celebration of geology at University College, London on 3rd November. This is always a great opportunity to meet up with colleagues from near and far, browse various stalls and marvel at the enthusiasm of both help-



ers and children in the Rockwatch area. This year, it was good to see several students from Imperial College (*below left*) happy to be covered in paint, glue and plaster on the fossil casting, prehistoric diorama (*below right*) and other



craft-related activities - clearly much appreciated by the young participants! For the sake of the UK's geosites we need to encourage such engagement. As a movement we need to foster such enthusiasm and offer opportunities for geology students to be welcomed, involved in, and rewarded for their geoconservation work - that might mean we have to look at the nature and timing of our activities. It was, therefore, pleasing to exchange such welcomed views with colleagues from several GCUK member groups at their stands; for example Bob & Caroline Markham from Geo-Suffolk / GeoEast and Lesley Dunlop from the Berkshire Geoconservation Group (*respectively, below, top left and right*).



It was also good to see stalls by the likes of the Oxfordshire Geology Trust, the London Geodiversity Partnership, the History of Geology Group, and various book stalls - which latter added to the weight of my shoulder bag. As always, I avoided purchasing geological specimens - can't decided if its an ethical or parsimony matter! Meanwhile, I missed several interesting lectures and the chance to look at some Moon rock.

Tom Hese



A Busy Autumn . . .

The Black Country Geological Society (BCGS) held a number of field trips in the summer and autumn. One of these, on Saturday 21st July, was a joint meeting - led by Andy Harrison - with the OUGS (West Midlands Group) to the Severn Valley Country Park (SVCP) at Alveley in Shropshire. Its aim was to explore the Park's geology and industrial heritage. The Park straddles the Severn Valley (*see below*), at the bottom of which and flowing

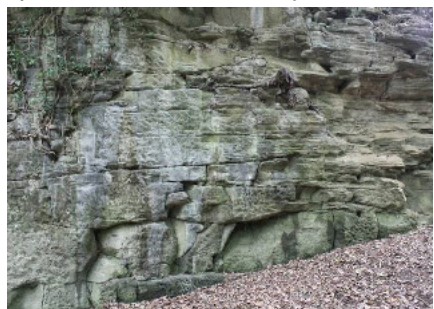


north-south is the River Severn, parallel and to the west of which runs the Severn Valley Railway. The Park sits on the steep terraced slopes - which provide numerous habitats - such as woodland, meadows, pools, streams and river banks - of the Severn Valley. The Alveley Industrial Estate, on the north-east corner was, until the late 1960s, the location of the Alveley Colliery.

The undulating landscape and valley (and the Severn's course) are due to retreating Devensian ice sheets. Meltwater, silt, sand and gravel carved and constructed the River Severn's present course and defining river terraces. The Upper Carboniferous sandstone (of the Alveley Member - formerly Keele Beds and the Halesowen Formation - formerly the Highley Beds) bedrock exposed at the surface unconformably overlies coal bearing rocks; these Middle Carboniferous Pennine Coal Measures and the sandstones make up the northern end of the Wyre Forest Coalfield.

Occurring on the western side of the river, the older Halesowen Formation is mainly made up of cross-bedded greenish-grey micaceous sandstone. The overlying younger Alveley Sandstone actually grades into the Halesowen Formation, which also contains thin interbedded mudstone, 'Spirorbis' limestone and thin coal bands. These rocks are well represented in local buildings and exposures in Stanley Quarry adjacent to Highley Station. Both sandstones indicate fluvial deposition over low-lying flood plains during the late Carboniferous. However, given the colour difference, the Alveley Sandstone was probably deposited under more exposed and arid conditions than the Highley Sandstone. Earth movements have tilted the bedrock west to

east, approximately 8° - 12°, and vertically displaced the rocks along numerous north-south and east-west trending faults. The Alveley and Highley Sandstone were quarried, as at Stanley (*see below*), from medieval times



for building stone and grind-stones. The River Severn, and later the Severn Valley Railway, provided useful transport links north to Bridgnorth and south to Worcester - these sandstones can

be seen in many buildings, walls and some bridges.

The Middle Pennine Coal Measures comprise alternating layers of grey and black mudstone, shale, coal, buff sandstone and orange-red ironstone. These rocks are unexposed *in situ* but are found on the Park's former colliery waste tips. They were mined from the early 1800s the late-1960s. Stanley Colliery, adjacent to Highley station, was the first to open in the area in about 1804; it, along with the sandstone quarries, was exhausted around mid-Victorian times.

When the Severn Valley Railway arrived in 1862, mining saw a renaissance and the Stanley shaft was re-sunk to some 279 metres in 1878. By the mid-1930s, the mine was inefficient and the workings gradually moved to the Alveley site, with production starting there in 1938. Due to the dipping bedrock, the Alveley shaft was sunk to around 350 metres. The main coal horizon worked at both collieries was the Brooch Coal. Highley Colliery eventually closed in 1940, whilst Alveley Colliery lasted until 1969. The Railway had closed in 1963.

The abandoned mines and Railway left a legacy landscape of perceived industrial desolation. However, in 1965, a group of local train enthusiasts formed the Severn Valley Railway Society; for the next 19 years they restored the Railway between Kidderminster and Bridgnorth. The Highley and Alveley Colliery sites were derelict until 1986, after which Shropshire and Bridgnorth Councils began their reclamation. Their spoil heaps were regraded and drainage installed to make them stable, trees and shrubs were planted and visitor facilities constructed. The completed Severn Valley Country Park opened in 1992. Today, council wardens and an army of volunteers maintain it, running numerous events at a great place to see wildlife and, of course, some geology!

Meanwhile, the Society's usual varied events programme continues with:

Saturday, 1st September: Field Meeting "*Titterstone Clee Hill (joint meeting with OUGS WM)*" - Andrew Jenkinson (Shropshire Geological Society).

Monday 17th September: Indoor Meeting "*Geological Highlights of South Devon*" - Alan Clewlow.

Saturday 6th October: Geoconservation Day "*Portway Hill Quarry*";

Monday, 1st October: Indoor Meeting "*Catastrophic Volcanoes*" - Sebastian Watt;

Saturday 3rd November: Geoconservation Day "*Wren's Nest*"

Monday 19th November: Indoor Meeting "*Abberley & Malvern Hills Geopark*" - Georgia Jacobs;

Saturday 1st December: Geoconservation Day "*Saltwells Local Nature Reserve*";

Monday 10th December: Indoor Meeting "*Members' Evening*".

Indoor meetings are held in the Abbey Room, Dudley Archives, Tipton Road, Dudley, DY1 4SQ, usually from 7.30 p.m. for 8.00 p.m. start.



Suffolk Coast and Heaths Geoconservation

GeoSuffolk has been working with Suffolk Coasts and Heaths (SCH) AONB volunteers to refresh some of the Crag pits scattered throughout the heathlands of coastal Suffolk. These 'windows on the past' are a valuable part of the landscape here and clearing vegetation and talus ensures their survival into the near future. It also makes them more accessible.

For example, Neutral Farm Pit SSSI (*see below*) in Butley, has had several visits by geological field parties to study its Red Crag since it was cleared last winter. The Norwich Crag pit at Westleton Common, cleared in 2015, has public access and Geo-Suffolk is designing and producing an explanatory



Copyright: Dudley Miles

panel for visitors to this County Geodiversity Site. SCH AONB is organising two more geological work parties this winter. The first is at the Red Crag pit in Butley Forest (a County Geological Site with public access) on 4th December 2018. The second is at a Red Crag pit in Alderton on 5th February 2019. Anyone can join in and it's an excellent physical work-out. However, you do need to register with the AONB – see their web site at:

<http://www.suffolkcoastandheaths.org/volunteering/volunteering-learn-more/work-parties/>

for more details. You can volunteer to do as much or as little as you wish, or, indeed, are actually capable!

Caroline Markham

GeoConservation Staffordshire Site Clearance Event at Hulme Quarry, Stoke-on-Trent.

A small but select group of GeoConservation Staffordshire (GCStaffs) volunteers met with Andrew Campbell, the City of Stoke-on-Trent's Countryside Team Leader responsible for Park Hall Country Park and Hulme Quarry National Nature Reserve for their annual site clearance event on Saturday 10 November. The main eastern face of Hulme Quarry, which exposes Triassic Chester Formation pebbly conglomerates and cross-bedded sandstones,



is becoming overgrown with brambles and gorse (see left); the volunteers continued clearance work on this face started two years ago, having last year worked on the fault exposed in the northern part of the quarry. The face is now much more visible (see left).

Andrew informed the volunteers of the good news that work is finally about to start on a brand new Visitors' Centre; the previous one, with

geology displays produced in collaboration with GCStaffs, was burnt down by arsonists seven years ago. It is hoped that the new building will also contain newly-prepared displays telling the Triassic story of the site and its surrounding area.

Jan Stimpson (Chair, GeoConservation Staffordshire)

Hull Gleanings - some interesting events

The Hull Geological Society (HGS) has arranged a series of varied meetings over the winter; for example:

Thursday, 18th October 2018: Evening Lecture "*Whatever happened to the Wolstonian? Chasing later Middle Pleistocene glaciations*" - Rodger Connell

Sunday, 18th November: Geology Walk in Northern Cemetery as a tribute to Ron and Jean Harrison - Mike Home (HGS);

Thursday, 22nd November 2018: Evening Lecture "*The Great Glen Fault Zone - Back and forth for longer than we thought*" - Dr. Eddie Dempsey (Hull University);

Thursday, 6th December 2018: Evening Lecture "*Women in Geology*" - Paul Hildreth;

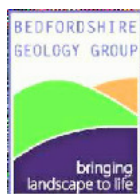
Saturday 5th January 2019: New Year Geology Walk and picnic at Withersea;

Thursday 17th January 2019: Evening Lecture "*Exploring Morocco's*

Palaeontological Riches" - Dr. Michael Oates;

Thursday, 21st February 2019: Evening Lecture "*The Quaternary record of the British Ice Sheet*" - Prof. Chris Clark (Sheffield University).

Lectures start at 7-30 p.m. and are usually held in the Cohen Building, University of Hull.



Clophill Old Church Wall

The Bedfordshire Geology Group (BGG) has developed an innovative approach to interpreting the geology of rural Clophill Old Church and its churchyard. After a long period of anticipation, the labour-intensive

work to restore the churchyard wall began in September when contractors Riverdale Stone Ltd. began taking apart the old wall prior to its reconstruction. Several stones had been robbed from the wall in the past and much of the remainder had been damaged and couldn't be reused; so, fresh replacement greensand boulders were delivered from the nearby Cainhoe Quarry.

The contractors began rebuilding the wall at its west end. The work, with lime-mortar taking much longer to dry than cement-mortar, progressed in fits and starts. The 'Wall of Geology' section, a simplified cross-section of Bedfordshire's solid geology, only began to emerge in early October. Several members visited the site and some tried laying the stones which proved to be much harder than it looked - the contractors looked on patiently and answered their questions! With some interruptions caused by the weather, the Riverdale craftsmen completed their work by rendering the 'sky' area on

2nd November (see right); the render will be painted when it has dried sufficiently and small panels, with rock names, will be affixed later. Work has already begun to compile information for the intended interpretation board to be set alongside the Wall.



It will introduce Bedfordshire's geology and include information about the wall's five main rock types - where they occur in Bedfordshire, and how they have affected the landscape, wildlife, farming and industry.

Especially thanks are due to those BGG members who have freely given of their time and expertise in the wall's building. The Group is extremely grateful to Tarmac Ltd. Landfill Community Fund, a grant from which is paying for a substantial share of the work and also to funds from the Heritage Lottery Fund. The Clophill Heritage Trust are due to 'open' the restored churchyard wall at their Remembrance Day in November service, but the Group's celebratory launch of the 'Wall of Geology' will be in some time in 2019 when everything is complete and more suitable weather has returned.



Geoconservation
Research

Geoconservation Research (GCR) is an international, open access and peer-reviewed journal funded by Islamic Azad University –Isfahan Branch.

Scopes are:

- Geoconservation in theory and practice
- Thematic scope of geoconservation projects
- Geodiversity and its scientific justification at national, regional and global scales
- Geoparks, practical aspects of identification, establishment, and enhancement
- Geological site maintenance and enhancement: practical aspects of geoconservation
- Museums: specimen-based geoconservation
- Geotourism: harnessing the interest of different interest groups
- Education, and how to engage and explain geoconservation sites

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e-journal

Geoconservation Research

ONLINE & OPEN ACCESS

for Readers and Authors

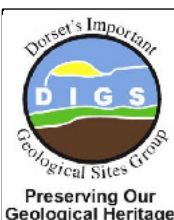
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Second Issue**



Geoconservation
Geodiversity
Geoparks
Museums: specimen-based
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Education
Geoconservation site
Geoheritage

Website: <http://gcr.khuisf.ac.ir/>

ISSN: 2588-7343



Autumn 2018 DIGS Activities

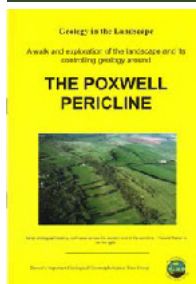
On 3rd September seven volunteers (*see below, left*) were involved in the clearance of vegetation, one of those necessary ongoing geoconservation activities, at Poxwell Quarry. This disused Jurassic limestone quarry exposes Portland Limestone and Lower Purbeck beds, for which DIGS has prepared a student task sheet - available at:

<https://www.dorsetrigs.org/wp-content/uploads/2013/03/Poxwell-Quarry-Exercise-For-Students.pdf>

There is also an explanatory information sheet available on the DIGS website at:

<https://www.dorsetrigs.org/wp-content/uploads/2013/03/Poxwell-Pericline-walk-text-Dorset-Eye.pdf>

Finally, there is a 'Geology in the Landscape' leaflet (*see top right*) linking this quarry to a walk around the Poxwell Pericline.



Some 15 metres of creamy chalky micrites of the Cherty Series and grey chalky pelmicrites of the Freestone Series can be seen in the quarry's faces. Midway through the Freestones lies a chert band. The basal Purbeck shows two well defined dirt beds. Fossil trees, bivalves, gastropods, ostracods, ammonites and sponge spicules can be found in the various beds. The great results achieved by the volunteers can be seen by comparing the 'before' (*see below, top*) and 'after' (*see below, bottom*) photo-record.



On 27th September, we had a conservation session at the Upwey road cutting, north of Weymouth. The cutting is not a DIGS site but part of the Bincombe SSSI. The rocks (*see next page, top left*) were exposed during the construction of the Weymouth (A354) Relief Road prior to the local



staging of the 2012 Olympic Games' sailing events. It is an important site because it exposes the boundary between the Jurassic and the Cretaceous (Portland and Purbeck Beds up to the over-

lying Wealden Beds). A film crew from Belgium were in attendance as we undertook yet more vegetation clearance and tidying up work. The rock face is a lot better exposed as a result of our efforts.

The crew (see right & below) were producing a documentary film on the relationship between people, geology and landscape. DIGS was contacted by them and we then helped Sofie Be-



noot and her crew on the day to see what we do for geoconservation. Following a preliminary visit, they then decided on using the Upwey Cutting as a means to explore their themes of

SOLID GROUND which:

- *Reflects on the relation of man and stone. Where do human time and geological time meet? Where do life and stone meet? What if the story ground we live on is not actual as stable as we think? What if it were to have a life of its own, and its very own story? And what if we can't see humanity as separate from the geological process but that stone and man are intricately joined?*
- *Is a whimsical essay-film, a journey in which the most diverse aspects things – from kidney stones to webcams in Antarctica, from astronauts' earstones to stone quarries in Palestine, from atom bombs to volcanoes in Iceland - are all interconnected.*
- *Wants to put our "Epoch" under the microscope. The film explores our now from the perspective of the deep past and the deep future, with stone as the messenger for all these ages.*

They had previously been to North-West Scotland and Cheddar Gorge; they were then going on to Bridport, Lyme Regis and South Wales. Altogether, it was a perfect day for both geoconservation and filming!

Alan Haliday (Chair, DIGS)

"Hutton's Unconformity" SSSI Promoted by Energy Company

A Scottish Site of Special Scientific Interest of global significance in the history of geology, has received a boost from UK oil and gas company Siccac Point Energy. Named after Siccac Point in the Scottish Borders, the oil and gas operator has formed a partnership with Edinburgh Geological Society to back its efforts to improve the visitor experience around the remote site.

Siccac Point Energy has provided funding for helpful information signage (see below) and 20,000 leaflets to increase awareness about the unique and important features of the site. The company is also exploring further opportunities to enhance the site with the Edinburgh Geological Society.



Neil Mackenzie, Bob Gatliff & Doug Fleming with one of the interpretation boards

Siccac Point is famous as the site where, in 1788, Edinburgh-based natural scientist James Hutton found the decisive evidence he sought for his 'Theory of the Earth' – the never-ending cycles of creation and destruction that shape today's landscape. This theory overturned the last vestiges of the Biblical account of a world shaped by the receding waters of a universal flood. Controversial in its day, Hutton's work is now a foundation stone in the science of geology.

Siccac Point Energy has provided funding to replace two interpretation boards and print 20,000 leaflets about Siccac Point and James Hutton:

<https://www.edinburghgeolsoc.org/publications/geoconservation-leaflets/>

Doug Fleming, Chief Financial Officer of Siccac Point Energy said "As an oil and gas company geology is at the heart of what we do. Hutton is an inspiring example of a scientist who followed the evidence and defied the conventional wisdom of the day. It's a great example for a young company and a fascinating piece of Scottish history to preserve and to continue learning from." Bob Gatliff of the Edinburgh Geological Society added "The support from Siccac Point Energy will make a tremendous difference to our plans to preserve and promote the area. Our long-term ambition is to do more to support the education and tourism potential at Siccac Point and this is a great first step in that direction."

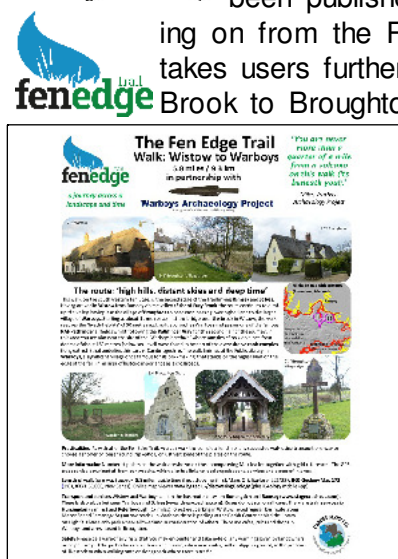
The Edinburgh Geological Society is also working with heritage organisations and universities on plans to mark the three-hundredth anniversary of James Hutton's birth in 2026; they also wish to see as an opportunity to celebrate his legacy in subjects including agriculture, meteorology and, of course, geology.

Angus Miller



New Fen Edge Trail Walk

The next walk leaflet for the Fen Edge Trail, from Wistow to Warboys, has been published (see below, left). Continuing on from the Ramsey to Wistow walk, it takes users further up the valley of the Bury Brook to Broughton and onto the 'highlands' of Huntingdonshire, completing the Ramsey to Warboys part of the Trail. It starts the small, picturesque village of Wistow and continues to the large, historic village of Warboys. The theme of the walk is 'high hills, distant skies and deep time' and, intriguingly, our quote for this part of the Trail is 'You are never more than a quarter of a mile from a volcano on this walk (its beneath you!)'. Gradually, the landscape reveals an 'ice-age' past as well as tales from deep below you to the skies above. The trail leaflet can be downloaded from the Fen Edge Trail website (www.fenedgetrail.org).



The next walk, from Swaffham Bulbeck to Reach, will be issued in a few weeks. Several other walks are under development and will be available next year. If you are not already involved in the Fen Edge Trail - and perhaps are able to contribute information on local history, landscape, farming, wildlife or culture or you could help with designing one of the walks - and would like to be, please contact the Society at www.cambsgeology.org.

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In Victorian Footsteps . . . by bike!

Fancy a geotrail with a difference? Why not, literally, get on your bike? A new cyclists' geotrail, based upon two late-Victorian Geologists' Association pedestrian field excursions, has just been published for Luton as part of series for Bedfordshire and Hertfordshire - two more will follow before Christmas. It covers a route, mainly on dedicated cycle paths, from Luton and Dunstable towards Leighton Buzzard looking at various Chalk geosites and associated archaeological, ecological and historical railway sites. It's designed to be both printed and displayed on a smartphone (see right) / tablet PC. Its pdf file is available from the author (email:- t.hose123@btinternet.com). Hard copies will soon be in a Dunstable information centre. *Tom Hose*



Do We Tell Anybody Else about . . . ?

In reviewing for several journals I am annually disappointed when I see so few UK submissions. This is surprising when there is clearly so much geoconservation and geotourism effort (of which but a fraction is reported to the editor of GEONEWS!) undertaken in the UK. Just occasionally a UK paper appears in the now well established journal, *Geoheritage* (see right). Perhaps we in GCUK should be looking at putting together a thematic set of papers for a 2019 special issue for it?



A new journal, *Geoconservation Research* (see right and pages 9 & 10), was launched earlier this year. Pleasingly, two of the seven papers in its first issue were UK case studies - on northwest England and the Isle of Wight. With 'geoconservation in theory and practice' and 'geological site maintenance and enhancement: practical aspects of geoconservation' as two of its key themes it seems the ideal vehicle to showcase GCUK best practices. As it's now seeking papers for the next issue, I cast down the gauntlet to fellow GCUK members to get writing. Why not look at your group's history, methodology and achievements as the paper's basis? *Tom Hose*



Is Funding Alone the Real Issue . . . ?

ProGEO, the international not-for-profit geoconservation body is celebrating its 25th birthday. Appositely, from GCUK's experience, its President's 2018 report notes: "... in many European countries the status of geoconservation is still somehow gloomy. The economic crisis has hit hard ... and this had a strong impact on the capacity to develop real geoconservation work. Practical geoconservation is based on public policies and public organisations; when public administration shrinks, it is obvious that public policies will be affected... National conservation agencies have been experiencing strong budget cuts and staff shortening, and hence their priorities do not cover geoconservation, which constitutes a serious obstacle to the activity of ProGEO members in these countries and leading to difficulties in recruiting new and younger members... the activity of ProGEO is highly dependent on voluntary work by its members and on their capacity to attract funding..."

Of course, not everything we do requires lots of, or any, funding. However, it's easy for geoconservationists, like university academics, to focus on what will be funded (typically printed matter and outdoor panels) rather than on what actually engages young audiences. Preparing on-line geotrails (setting aside the necessary knowledge, some self-funded fieldwork and excellent software skills), liked by the young just takes one's time. *Tom Hose*

Scottish Geoconservation Report for 2018

Currently and somewhat depressingly, only two of our geoconservation groups are particularly active, namely *Lothian & Borders* and *Strathclyde*. *GeoHeritage Fife* and *Tayside* are still active but in need of a boost from new volunteers and, in the former case, involvement from the Council! *Strathclyde* can report the completion of a geodiversity audit for North Lanarkshire with 60 sites proposed as Local Geological Sites.

Most of these are within listed LBS and so are effective immediately. Sites are also being reported to Renfrewshire, Inverclyde and North Ayrshire Councils in small numbers from time to time. *Strathclyde* are also active in the long running saga to upgrade the fabric, conserve the under threat fossils and make better use of the world-renowned Fossil Grove SSSI/GCR Site in Victoria Park, Glasgow. This includes attending business meetings and taking part in Doors Open Day events there and elsewhere.

Lothian & Borders now have 30 appropriately recognised Local Geological Sites in Edinburgh, all covered by the new local policy and plan. The Edinburgh Geological Society web-site has useful pages about the sites. These sites are now being monitored using the standard monitoring report. West Lothian Council is also following a similar route for promoting their 40 sites.

The great news this year is that we have active volunteers in the Borders Council area and sites are now being surveyed by folk who have lots of experience garnered in Yorkshire. *Lothian & Borders* continues to be involved in Edinburgh University's School of Geosciences Outreach projects. A geology walk leaflet on Hopetoun Foreshore and booklet on Edinburgh Castle Rock were completed and published with funding from the Edinburgh Geological Society (EGS), with the former also partly funded by a private donation. Both of these were published also as pdf documents on the EGS website. The James Hutton and Siccar Point leaflets, recently out of print, have been re-issued after minor revisions - their printing was funded by Siccar Point Energy. Approximately 10,000 of these leaflets had already been distributed since 2005 and 2015 respectively, quite a contrast.

Scotland's Geodiversity Charter was refreshed for 2018-

2023 and it now has 88 signatory organisations.

Meanwhile, various organisations are getting together to discuss the development of a Scotland-wide umbrella charity that can raise funds for local groups, Geoparks and key geoconservation sites. *Mike Browne & Angus Miller*

Geologists in the News for . . .

In recent weeks a couple of geologists have made the national and international news for rather unfortunate reasons. The first gentleman, caught out on the north Yorkshire coast near Port Mulgrave in late-October, could so easily have made it into the 'obituaries column' were it not for the prompt action of some fishermen and the emergency services - he had to be airlifted off the beach. Whilst out on a fossil collecting trip he was unfortunate enough to be trapped in mud up to his waist following a landslide. Fortunately, fishermen came to his rescue near the cliffs and he was rescued within an hour after a joint operation by the local coastguard, ambulance, police and fire services.

The second unfortunate individual perhaps doesn't deserve too much sympathy. His exposure to a dangerous environment had nothing to do with fieldwork, although there is a vague connection with the north Yorkshire coast. Whilst literally nothing to do with fishermen, in more than casually trawling the internet for well-exposed bodies he introduced malware to the US Geological Survey's computer servers. The pornography-surfing employee seemingly visited 9,000 plus pornography sites on his laptop, down-loading pictures and malware along the way, including saving them to a USB stick and his (not so!) smartphone; the malware then found its way onto the Earth Resources Observation and Science Center's network. Perhaps, when he was discovered, he really did hope the ground would open up and swallow him!



Tom Hose

"One advantage of crawling downwards at less than walking speed was that the beauties beneath were gradually unfolded. The sparkling blue sea, a grand stretch of steep cliff with a fine headland, and a warm inviting stretch of sand.

When we reached the foot we could see it all. On the right, the long curve of cliff and the beach, and on the left the exquisite little village sprawled on the hillside with a jumble of rocks leading from the lowest house out to the lapping waves." *James Herriot's Yorkshire*, Michael Joseph (1979).

GeoConservationUK 2018 AGM Report

The Annual General Meeting of GeoConservationUK (GCUK) was held in the Aston Webb Building at the University of Birmingham on Saturday, 20th October 2018. The decision to hold the Meeting alongside the Geologists' Association conference on the 'Geology of Mordor' appears to have worked since, with ten (other than Committee) members present, it was one of the best attended AGMs in recent years!

Unfortunately, personal commitments meant that the Chair, Lesley Dunlop was unable to attend, and our Treasurer, Alan Cutler, chaired the meeting in her stead; this, consequently, meant that there was no report from the Chair. Alan presented the Honorary Treasurer's report and noted that GCUK currently has 51 members; it also made a small surplus for the last year of £400, with the total reserve now being just over £19,000.

The Scottish Geoconservation report was read out and there was particular interest in the proposal for a charity with public membership subscriptions and fund-raising to make Scottish geoconservation activities sustainable going forward. It was felt that, like with the Geodiversity Charter, Scotland is leading the way and the rest of the UK might wish to copy this idea.

The issues surrounding the web-site were raised. Whilst critical information, such as executive committee membership recently has been updated, much of the web-site is out-of-date and in need of modernisation. This is particularly important as the web-site should be the main communication vehicle with the public and also member groups. The Secretary, Ian Stimpson, said he would migrate the web-site to new hosting in spring 2019, slimming the site down to the essential components which could be more easily maintained; these would be things such as what GCUK does, contact details for the executive and member groups, and perhaps the showcasing of a favourite site from each group.

Ian Stimpson noted a couple of potentially related concerns from member groups. There are a significant number of Geoconservation Review (GCR) Sites where the intention to later designate these as Sites of Special Scientific Interest (SSSI) has not been followed through, mostly due to lack of funding for the bodies responsible for designating them (Jonathan Larwood, of Natural England, noted that there were about 150 such GCR sites and that the last geological SSSI was designated about two years ago). This leaves many important geological sites without any statutory protection. As a stop-gap measure these sites could be designated by Local Groups as Local Geological/Geomorphological Sites (LGSSs). However, following the demise of the Aggregates Levy Fund (ALF) that used to fund site condition monitoring and site management planning, expertise

and experience in site designation, monitoring and management has drastically diminished.

He, therefore, proposed a one-day Continuing Professional Development (CPD) course in 'Geoconservation Site Designation, Management and Planning'; this would train members of Local Groups in these areas and would also be useful training for Local Planning Officers to attend for them to gain a better understanding of geological sites as part of the planning process. The course could be run in a variety of locations across the UK by GCUK members, but he proposed to host an initial course at Keele University where there is local geoconservation expertise, available teaching facilities and a geological site within a few hundred metres for practical application of the theory. It was hoped that the CPD Course would be supported and endorsed by GCUK; also, accreditation from the Geological Society of London would be sought for the recording of CPD.

It was suggested that when sites are designated or reviewed, they could be given a 'star rating' for their suitability for educational use or visits by the general public and this could then be used to promote the most suitable sites. Some site designations are for scientific merit, the material might be of a fragile, rare or sensitive nature, and some sites not on publicly accessible land, hence we might not want to particularly promote them. Where the site designations are old, and the site has degraded irretrievably beyond use, these sites could be de-designated.

The meeting concluded with the election of Alan Holiday (a DIGS member) to the GCUK executive.

Jan Stimpson (Secretary, GeoConservationUK)

"Celebrating the Centenary of Geological Society Female Fellows"
20th-21st May 2019

HOGG conference at Burlington House, London

The conference welcomes proposals for research papers or poster presentations on the historical contribution of women in geology. Please send abstracts to Prof. Cynthia Burek and any enquiries to the convenors:

- Prof. Cynthia Burek - c.burek@chester.ac.uk
- Dr. Bettie Higgs - b.higgs@ucc.ie
- Veronica Cubitt Holmes - veronicacubitt@hotmail.com

Copy for the next issue of GEONEWS, due out in April 2019, must be with the Editor by 20th March 2019 at the very latest.



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

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