



# EDINBURGH GEOLOGICAL SOCIETY

Promoting public interest in geology and the advancement of geological knowledge

## Spring Newsletter 2024

### President's Update

Mark Wilkinson, EGS President,  
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Many of you will have used the excursion guides published by EGS, and these are an important mechanism for distributing geological knowledge amongst the society and the wider public. However, many of the guides are now old and going out of print. The very popular Lothian Geology was reprinted in 1996 from an original issue of 1986. Some of the excursions were originally published as far back as 1960. The language and terminology is dated, the excursions are illustrated with a few black and white photographs and suggest travel by bus services that often ceased to run decades ago!

Clearly, the time is ripe for revision. But how best to disseminate information in the 21st century? Brian Bell's excellent online field guide to 'The Geology of the Isles of Skye and Raasay' ([www.skyegeology.com](http://www.skyegeology.com)) could serve as a model, with fully illustrated excursions available as pdf downloads: which can be accessed in advance, useful for sites with no phone coverage. We are looking for volunteers to contribute to the revision of chapters for the Lothian, Fife and Ardnamurchan guides. Please contact me if you are interested.

The Lothian and Borders GeoConservation group are also revamping their popular leaflet collection. This involves selected reprints and a trial to make information more readily available online, particularly for phone users.

Finally, several of our long-standing Council members have served well beyond the call of duty, and we must find replacements if we are to continue to provide popular activities. The key positions we need to fill are the Excursions Secretary, the Lectures Secretary and the Honorary Treasurer. This isn't a new problem, it was highlighted by the then-President in the first issue of the Society's journal in 1867, and hasn't gone away. Please inquire if you can spare some time and enthusiasm!



### DATES FOR YOUR DIARY

Wednesday 10 April, 7pm  
**Yorkshire Geological Society**  
Online lecture about Westray, Orkney

11/12/13/14 April, 10am – 1pm  
**Edinburgh Science Festival**  
beach pebble events

Wednesday 24 April  
**Excursion: George Street and Edinburgh's West End**

6–9 May  
**Excursion: Garvellach Islands**

Wednesday 22 May  
**Excursion: Stockbridge to Dean Village**

Saturday 25 May  
**Excursion: Spireslack Surface Coalmine, East Ayrshire**

Wednesday 5 June  
**Excursion: Harlaw Reservoir to White Cleugh**

Saturday 8 June  
**Excursion: Hessilhead Quarry, Ayrshire**

Wednesday 19 June  
**Excursion: Skateraw, East Lothian**

Saturday 29 June  
**Excursion: Fast Castle and the Borders Coast**

Wednesday 3 July  
**Excursion: Comiston Springs**

Saturday 13 July  
**Excursion: Arbroath and Auchmithie**

Saturday 24 August  
**Excursion: Longniddry to Aberlady shore**

Saturday 7 September  
**Excursion: Canty Bay, East Lothian**

Saturday 21 and Sunday 22 September  
**Excursions: The Carboniferous Fife-Midlothian Basin**

### Latest news on the Radical Road

EGS has been working with other organisations to reopen the Radical Road in Holyrood Park. After our public meeting in December, an online petition was signed by 3,650 people. At a recent meeting, Historic Environment Scotland (HES) apologised for the poor communication and lack of action over the last 5 years.



HES are very certain of their legal right and obligation to close the route until the risk to users can be reduced; many people and organisations disagree, but trying to challenge this, for example with legal action, would probably take years.

However, HES have committed to take action to reduce the risk of rockfall, and then to reopen the Radical Road. Permanent closure is not on the agenda. The results of further geotechnical investigation work will be available soon. We then expect to meet again with HES to discuss the action required, and the timescale for this. Hugh Hall, the chair of HES, was very clear that he expected the Radical Road to reopen well before the Hutton Tercentenary in 2026.

Left: Salisbury Crags and the Radical Road. HES have committed to reopening this famous path. Photo: Angus Miller.

## Excursion Programme 2024

Our Excursion Programme includes full-day excursions on Saturdays and shorter Wednesday evening excursions, led by geologists with expert knowledge of the locality. Visit the EGS website at <https://www.edinburghgeolsoc.org/excursions/> for full details, and please read and take note of the Code of Conduct & Safety Guidelines. You must book in advance for all excursions, as numbers are limited for safety reasons. Please give your mobile number in case we need to contact you. Book online via WebCollect: [webcollect.org.uk/edinburghgeolsoc](http://webcollect.org.uk/edinburghgeolsoc).

This year, all our excursions are free of charge. EGS Council has agreed to subsidise the costs of the excursion programme, including coach hire for Saturday excursions that are difficult to reach by public transport. Please do not abuse the system by booking excursions and not turning up, or cancelling at short notice. You may deprive someone else of the opportunity. We will keep the booking system under review. You **must** notify David Graham, the Excursions Booking Secretary if you have booked an excursion and are not able to attend.

The Garvellach Islands excursion in May is fully booked, get in touch to join the waiting list. An additional weekend excursion may be arranged in September and will be publicised by email.

Angus Miller, Acting Excursions Secretary and David Graham, Excursions Booking Secretary  
[excursions@edinburghgeolsoc.org](mailto:excursions@edinburghgeolsoc.org)

### Saturday / Sunday Excursions

Saturday 25 May

#### **Spireslack Surface Coalmine, East Ayrshire**

**Leaders: Dr Graham Leslie and Mike Browne**

Spireslack is an abandoned surface coalmine at Glenbuck, an area with a long history of mining. The site preserves marvellous exposures of coal-bearing Carboniferous strata. The entirety of the Limestone Coal Formation is exposed in a one kilometre long, over 130 m thick section. Natural, clean and continuous exposures of these economically important strata are rare, and therefore the exposures at Spireslack give an opportunity to better understand the geology and structural evolution of this part of the Carboniferous within central Scotland. Coach excursion from Edinburgh.

Saturday 8 June

#### **Hessilhead Quarry, Ayrshire**

**Leader: Dr Katie Strang**

This excursion will examine rocks of the Lower Limestone Formation which are exposed in the now disused Hessilhead Quarry, North Ayrshire, which served the Lugton Lime Works. Historically, the Carboniferous limestones were of great economic importance in Scotland, and they have been utilised for various purposes, including for building, as a flux in industry and as an agricultural fertiliser. Although the main quarry is now flooded, there are still plenty of opportunities to see the limestone deposits and look for fossils among the old spoil heaps. The site is also a wildlife reserve and home to loads of great wildlife. Coach excursion from Edinburgh.

Petalodus tooth in limestone from Treane Quarry, adjacent to the Hessilhead Quarry. Photo: Katie Strang

Saturday 29 June

#### **Fast Castle and the Borders Coast**

**Leader: Prof Dorrik Stow, Heriot Watt University**

The primary aim is to examine and discuss deepwater depositional systems – Silurian turbidites and associated facies – well exposed in the Fast Castle area. Other features of interest include glacial features, geological structures and Devonian volcanics and sediments in the wider area. Coach excursion from Edinburgh.

Saturday 13 July

#### **Arbroath and Auchmithie**

**Leaders: John Taylor, Morag Smith and Robert Solley**

Starting at Whiting Ness near Arbroath, we will view the Devonian Upper Old Red Sandstone unconformably overlying the Lower ORS sequence, and trace this along the beach observing various sedimentary features and debris flows. We will then continue towards Carling Heugh Bay noting sedimentary features, fault orientations and geomorphological sites of interest. At Auchmithie we will visit the beach where conglomerates can be viewed in detail along with calcite and barytes fault fill. Coach excursion from Edinburgh.

Saturday 24 August (joint excursion with the Geological Society of Glasgow)

#### **Longniddry to Aberlady shore, East Lothian**

**Leader: Dr Mark Wilkinson, University of Edinburgh**

The shoreline from Longniddry Bents to Aberlady Point exposes Carboniferous sedimentary rocks intruded by the Gosford Bay Sill. Cyclic sedimentation is well demonstrated, considered to represent the normal sequence of events in a subsiding delta. Periodically the trees growing on the deltas died and were covered by the sea, before the next influx of mud and sand shallowed the water sufficiently for another forest to establish itself. A typical cycle has an upward sequence of marine limestone, shale, sandstone, seatearth, coal, marine limestone.





Saturday 7 September

### **Canty Bay, East Lothian**

**Leaders: Dr Tom Challands, Stephen McDonald, Alison McInnes, John Wrench**

'Romer's Gap' was considered to be a hiatus in the fossil record of tetrapods in the Lower Carboniferous. The recent TW:eed project demonstrated a high diversity of tetrapods and other vertebrate groups in this time period.

This trip visits a new vertebrate fossil site at the very end of Romer's Gap. Canty Bay preserves the uppermost Ballagan Formation dominated by semi-arid flood-plain sediments punctuated by conglomerate-filled channels. An active landslip situated next to the Drift café has recently exposed further flood-plain mudstones and siltstone yielding numerous vertebrate 'bone beds'. The sections represent a dynamic sedimentary environment with a vertebrate fauna that is providing insight into this key stage of vertebrate evolution.

Saturday 21 and Sunday 22 September

### **The Carboniferous Fife-Midlothian Basin**

**Leaders: Victor Heme de Lacotte and Chester Davies (Keele Uni PhD students), and Dr Louis Howell (Capricorn Energy)**

Four linked excursions over two days at sites around the Carboniferous Fife-Midlothian Basin. These will explore the strata and sedimentology of the Leven-Midlothian syncline on either side of the Forth, in Fife on Saturday and East Lothian on Sunday. We will carefully examine key changes and translate our findings into interpretation of the offshore seismic data, with opportunities to learn the rudiments of stratigraphical logging. Informal post-fieldwork discussions can continue over refreshments.

## **Wednesday Evening Excursions**

Wednesday 24 April, 7pm

### **George Street and Edinburgh's West End, Edinburgh**

**Leader: Andrew McMillan**

Continuing the examination of the building stone geology of the First New Town, this excursion includes the western half of George Street and parts of the West End. This will serve as a recce for a new booklet to be published by the Lothian and Borders GeoConservation group.

Wednesday 22 May, 7pm

### **Stockbridge to Dean Village**

**Leader: Beverly Bergman**

We will walk from the bridge in Stockbridge village along the Water of Leith through the steep rock-cut gorge, examining the bedrock stratigraphy, several dykes, building stones and two historic medicinal wells. The route includes several bridges, each of which has a story to tell. We will consider the role that the Water of Leith played in Edinburgh's heritage, and how this was influenced by the geology.

Wednesday 5 June, 7pm

### **Harlaw Reservoir to White Cleugh**

**Leader: Richard Smith**

From Harlaw we will go past the Harlaw Reservoir, looking at interbedded sandstones and mudstones of the Lower Carboniferous Ballagan Formation, then crossing Kinnesswood sandstones to Black Springs and on to the flank of Black Hill microgranite, which is related to the volcanic rocks of the Pentland Hills. We continue to the meltwater channel at White Cleugh.

Wednesday 19 June, 7pm

### **Skateraw, East Lothian**

**Leader: Angus Miller**

There are fine exposures of Carboniferous limestone at Skateraw, similar to those at nearby Barns Ness. The Blackhall Limestone in particular is very accessible and includes interesting small-scale tectonic features. There is also a well-preserved lime kiln. An underlying coal and seat earth are also exposed in places.



The Blackhall Limestone at Skateraw, East Lothian. Photo: Angus Miller.

Wednesday 3 July, 7pm

### **Comiston Springs, south Edinburgh**

**Leader: Ken Hitchen**

We will visit the location of the four main Comiston Springs – the source of the water for Edinburgh's first ever clean water supply in 1676. The water was collected at the Comiston cistern building before being piped to the 'Old Town'. We will learn how to recognize and plot the route of the original 1676 pipeline under the eastern slope of Braidburn Valley Park and the suburbs of south Edinburgh.

## **Earth science courses at the Centre for Open Learning, University of Edinburgh**

The Centre for Open Learning, based on Holyrood Road in Edinburgh, has a long tradition of teaching introductory classroom and excursion courses in Earth science. Term 3 starts on 15 April, and includes the following field trip courses:

### **Earth Science Field Trips with Fiona McGibbon**

Tuesdays from 16 April, 6 weeks

#### **Palaeontology in the Field: Pentlands with Tom Challands**

Wednesday 19 June, 10:30am – 4pm

#### **Palaeontology in the Field: Wardie Shore with Tom Challands**

Wednesday 26 June, 10am – 1pm

Look out also for a range of classroom, online and excursion courses in the next academic year, starting in late September.

Full details here: <https://www.ed.ac.uk/studying/short-courses/subjects/other-subject-short-courses/science-nature>

## Yorkshire Geological Society online lecture: The Great Orcadian Lake in the island of Westray – David Leather

Wed 10 April, 7pm

EGS members may be interested in joining this webinar providing an overview of recent work describing the lacustrine cycles, their sedimentology including fossils of early fish, a look at the palaeoclimate and flower fault structure with implications for our understanding of how the area evolved during the Middle Devonian. Register at: [www.yorksgeosoc.org.uk/events](http://www.yorksgeosoc.org.uk/events).

## Beach Pebbles at the Edinburgh Science Festival

Thu 11 – Sun 14 April, 10am to 1pm

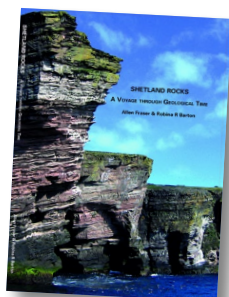
EGS is running four events on local beaches for this year's Science Festival, inviting people to come and explore beach pebbles, and find out about the stories hidden in every pebble. We'll discover an amazing variety of different types of pebble, find out where they come from and what they tell us about Scotland's geology. We'll also explore why the beach looks the way it does, and how it might change in the next few decades with climate change. All welcome!

Events take place at Wardie, Cramond, Portobello and North Berwick – find out more at <https://edinburghgeolsoc.org/science-festival/>. We are looking for volunteers to support these enjoyable and engaging events. You don't need any particular geological knowledge, it is really useful to have extra hands to welcome people and give out information. To find out more please get in touch with Angus Miller on 0131 555 5488, [promotion@edinburghgeolsoc.org](mailto:promotion@edinburghgeolsoc.org).



## New book on Shetland Geology

Shetland Geological Society have published the first comprehensive account of Shetland's geological story, complete with a gazetteer of key sites. The new book, by Allen Fraser and Robina Barton, is available by mail order for £24.49. Contact [info@shetlandgeolsoc.org](mailto:info@shetlandgeolsoc.org)



## New geosites map – [geosites.scottishgeologytrust.org](http://geosites.scottishgeologytrust.org)

How well would you do in a round about Scotland's Geological Conservation Review sites in a pub quiz? Over the last 5 decades, thousands of sites have been surveyed and described in a systematic study of the best of Britain's geology. For the first time, full details of most of the 880 GCR sites in Scotland are now easily available, on a new map published by the Scottish Geology Trust. This is a work in progress, volunteers are adding useful information and the project will expand later this year to include Local Geodiversity Sites, but it already is a really useful resource and you are bound to find sites of interest that you did not know about. And more volunteers are welcome, get in touch with the Scottish Geology Trust to find out more.



Drone shot of kettle holes at the Littlemill Fluvioglacial Landforms GCR site, just off the A9 near Daviot. Photo: Alan Thompson.

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The Edinburgh Geological Society is a friendly and informal organisation with a wide range of members of varied backgrounds and interests, united in an interest in rocks and the science of the Earth. This newsletter is published in September and March, with details of our lectures and excursions programme.

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