



EDINBURGH GEOLOGICAL SOCIETY

Promoting public interest in geology and the advancement of geological knowledge

Spring Newsletter 2021

Since our last newsletter we have been through another lockdown, greatly alleviated by a fantastic online winter lecture series. But as the days lengthen I know it is time to look outside once more. Our Excursions Secretary, Ian Kearsley, has been busy assembling the excursions programme, outlined in this newsletter, that we can all hopefully take advantage of – even if numbers need to be restricted or some of the arrangements change at short notice. Examining rocks and fossils first hand is the *raison d'être* of geology, and we can once again indulge in exploring esoteric nooks and crannies in search of interesting geological tit-bits of information. I, for one, am greatly relieved!

In the last newsletter I encouraged everyone to explore the geology of their local surroundings, and I still do! But we now have the opportunity to expand our range and get to those localities that we have longed to visit for quite some time now. Take up your hand lens, don your walking boots and go out and explore our wonderful geoheritage – but please do so with care and caution.

Finally, I would like to welcome Angela Mathis and Patrick Condon as new members of EGS Council. We still have a vacancy for minutes secretary. If you are able to take on this straight forward role, taking minutes at 5-6 meetings per year, please get in touch. Many thanks to Neil Mackenzie who has been filling the role alongside his secretarial duties.

Tom Challands, EGS President, president@edinburghgeolsoc.org



DATES FOR YOUR DIARY

Wednesday 9 June, 7pm
Excursion: Eddleston Water

Wednesday 23 June, 7pm
Excursion: Cramond Island

Saturday 3 July, 10am
Excursion: Charlestown, Fife

Wednesday 7 July, 7pm
Excursion: Bavelaw, Pentland Hills

Saturday 17 July, 10am
Excursion: Yellow Craig and the Weaklaw Vent

Wednesday 21 July, 6pm
Excursion: Joppa Shore

Saturday 31 July, 10.30am
Excursion: Gasswater Barite Mine

Wednesday 4 August, 7pm
Excursion: Arthur's Seat and Salisbury Crags

Saturday 14 August, 10.30am
Excursion: Arbroath to Auchmithie

Wednesday 18 August, 7pm
Excursion: Wardie Shore

Saturday 21 August, 10.30am
Excursion: Dob's Linn

Saturday 11 September, 10am
Excursion: Seafeld Shore, Kirkcaldy

18-19 September
Weekend Excursion: Northumberland Coast

Saturday 9 October, 10am
Excursion: St Baldred's Cradle

1 September – 17 October
Scottish Geology Festival
www.scottishgeologytrust.org/festival/

Looking to 2050 – how will climate change affect Edinburgh?

In the run up to the UN Climate Change Conference (COP 26) in Glasgow in November, EGS is keen to engage the general public in considering how we mitigate and adapt to climate change in the Edinburgh area. By 2050, there are likely to be obvious effects of increased sea level and coastal erosion, more rainfall and flooding, and rising groundwater. Meeting the Scottish Government target to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 (at the latest) will also change Edinburgh. How will we generate electricity, heat our houses and travel around the city? In what ways might the city and the surrounding landscape adapt to reduce carbon emissions?

Tuesday 6 & Wednesday 7 July, 10.30am & 2.30pm Edinburgh 2050 – how will climate change affect our city? Outdoor events for Edinburgh Science Festival – book at www.sciencefestival.co.uk

Wednesday 6 October EGS Public Lecture at Dynamic Earth Look out for details in the autumn newsletter.



A recent project aims to reduce flood risk and restore the Eddleston Water in the Scottish Borders by river re-meandering, tree planting and the creation of new wetlands. Find out more on the first evening excursion of the year, details on page 2.

Excursion Programme 2021

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 www.edinburghgeolsoc.org/excursions/ for full details, and please read and take note of the Code of Conduct & Safety Guidelines. Due to Covid-19 restrictions we are not running a coach for Saturday excursions. Please follow Scottish Government advice on car sharing.

You must book in advance for all excursions, as numbers are limited for safety reasons. Book online via WebCollect: webcollect.org.uk/edinburghgeolsoc. There is a charge of £5 per person for Saturday excursions, which is payable when booking. No charge for Wednesday evening excursions.

You must notify David Graham, the Excursions Booking Secretary if you have booked an excursion and are not able to attend – otherwise you may prevent someone else from enjoying the excursion.

Ian Kearsley, Excursions Secretary & David Graham, Excursions Booking Secretary
excursions@edinburghgeolsoc.org



Eating lunch and hunting for fossils at Blairskaithe quarry, 2019. Photo: Ian Kearsley.

Residential Excursions

18-19 September 2021

Weekend Excursion: Northumberland Coast

Leader: Ian Kille

This weekend field trip will explore the Carboniferous sedimentary sequences of the North Northumberland coast at Howick and Cocklawburn. We will explore these rocks to understand how the Early to Middle Carboniferous palaeogeography developed in this region, including a look at the fossil assemblages to be found in them. We will also examine how the strata developed through syn-depositional tectonics as well as the later Variscan influence on the area, including the magmatism that created the iconic Whin Sill. The trip will also give an opportunity to explore the area's geodiversity, including its rich industrial heritage.

The party will be based in Berwick, meeting there on the Friday evening and spend two full days in the field. If you are interested in joining this excursion, contact the Excursion Secretary Ian Kearsley who will provide additional information and advise when bookings will be taken. Places will be limited to around 10 and once booking opens, will be allocated on a first come basis.

10-16 May 2022

Long Excursion to the Isle of Man

We intend to run the Long Excursion to the Isle of Man (originally planned for May 2020) in 2022. The leaders will be David Quirk and David Burnett, and the provisional dates, to fit in with the tides, are Tuesday 10 to Monday 16 May 2022 (five days in the field plus travelling there and back).

14-21 May 2022

WGS/CGS Excursion to Anglesey

There are a few places available for EGS members on the excursion to Anglesey organised by Westmoreland and Cumberland Geological Societies and led by Graham Leslie. Expressions of interest to Susan Beale c/o Ian Kearsley.

Saturday Excursions

Saturday 3 July, 10am to 3pm

Charlestown, Fife

Leader: Katie Strang

The main aim of this excursion will be to look at the history of the lime industry in Charlestown and the importance of the local geology to its success. The principal seam worked in Fife was the Blackhall Limestone of the Lower Limestone Formation. As well as its economic importance, the Blackhall Limestone also contains a rich and diverse fossil assemblage.

Saturday 17 July, 10am to 3pm

Yellow Craig and the Weaklaw Vent, East Lothian

Leaders: Angus Miller, David Stephenson, Brian Upton

This excursion will look at two contrasting sets of volcanic rocks: an earlier sequence of Lower Carboniferous welded ignimbrites and lava flows, part of the Garleton Hills Volcanic Formation, which is cut by a late Carboniferous vent at Weaklaw. This vent contains lava splatter and volcanic bombs containing ultramafic xenoliths that have been pervasively metasomatized by carbonic fluids. We will visit both sets of volcanic rocks and explore the wider context of the area's volcanic activity and later alteration.

Saturday 31 July, 10.30am to 5pm

Gasswater Barite Mine, East Ayrshire

Leader: Graham Leslie

This excursion was cancelled last year so we are pleased to be able to offer it again. Barite mineralisation has been worked in the past at a number of locations in the western part of the Midland Valley. This excursion will examine the setting and nature of the mineralisation at Gasswater mine: a series of NW-SE trending trenches and other mining features on the northeast bank of the Gass Water, East Ayrshire. Mining took place there between 1920 and 1964. The workings and spoil heaps will be examined to determine the style and associations of the mineralisation.

Saturday 14 August 10.30am to 4pm

Arbroath to Auchmithie

Leader: Al McGowan

Again, this planned excursion was cancelled last year. We will follow the coastal trail starting from the car park in Arbroath north eastwards to Auchmithie. The focus will be on Upper and Lower Devonian sandstones and conglomerates, and their interaction with coastal erosion to produce a spectacular suite of geomorphological features.

Saturday 21 August, 10.30am to 4pm

Dob's Linn, near the Grey Mare's Tail, Dumfries and Galloway

Leader: Tom Challands

This excursion will visit the world famous Ordovician-Silurian Boundary Stratotype and the graptolite fauna associated with this globally important section.

Saturday 11 September, 10am to 3pm

Seafield Shore, Kirkcaldy

Leader: Ian Kearsley

The aim of this excursion will be to examine the Lower Limestone Formation, the Limestone Coal Formation and igneous intrusions on the shore between Seafield Tower and Tyrie breakwater. We will consider the various limestone beds and their fauna also evidence for sill emplacement and structural features.

Saturday 9 October, 10am to 3pm

St Baldred's Cradle, East Lothian

Leader: Fiona McGibbon

This excursion offers excellent exposure of Lower Carboniferous sedimentary rocks intruded by alkaline igneous rocks – sill, plug, dykes – including some ash with evidence of phreatomagmatic activity and other textural features. The trip offers a good opportunity to bring together the regional geological story.

Wednesday Evening Excursions

Wednesday 9 June, 7pm to 9pm

Eddleston Water, Scottish Borders

Leaders: Al McGowan and John Preston

A look at the work of re-meandering the Eddleston Water, a tributary to the River Tweed. River restoration work is being undertaken to explore natural flood management tools. This active geodiversity site (and possible new SSSI) is an impressive demonstration site that is very accessible.

Wednesday 23 June, 7pm to 9pm

Cramond Island, Edinburgh

Leader: Angus Miller

Cramond Island is formed from a dolerite sill that dips to the west. The dolerite is analcime-bearing olivine dolerite (teschenite) similar to that at Corstorphine Hill. We will see clear evidence of glacial erosion and survey the wider landscape and islands.

Wednesday 7 July, 7pm to 9pm

Bavelaw, Pentland Hills

Leader: Richard Smith

Explore the landscape and bedrock geology in an area of the Pentland Hills south of Balerno. Starting at Threipmuir, the excursion follows a glacial drainage channel through Silurian-age sedimentary rocks and past the micro-granite of the Black Hill.



Exploring the North West Highlands UNESCO Global Geopark. When planning your summer travels, don't forget the excursion guides on the EGS website, available to EGS members at reduced prices and postage-free with the UK. Image: Barbara Clarke.

Wednesday 21 July, 6pm to 9pm

Joppa Shore, Edinburgh

Leader: Robert Gatliff

This popular excursion will look at the Upper Limestone Formation, Passage Formation and Lower Coal Measures (Carboniferous) sequence exposed along the shore between Eastfield and Joppa. The strata are on the western limb of the Midlothian syncline with several well exposed faults.

Wednesday 4 August, 7pm to 9pm

Arthur's Seat and Salisbury Crags

Leader: Angus Miller

This excursion will explore the rocks of the Arthur's Seat vent, including volcanic breccia and intrusions, and the dolerite of Salisbury Crags. These two rocky edifices complement each other and perfectly illustrate the contrast between two types of basaltic igneous rock – extrusive and intrusive. As a final bonus we will visit one of the youngest rocks in Edinburgh – a dyke that cuts through the Crags near the Cat's Nick.

Wednesday 18 August, 7pm to 9pm

Wardie Shore, Edinburgh

Leader: Tom Challands

For those who missed out last year this is another opportunity to visit an area of north Edinburgh which has been a favourite with geologists and paleontologists since the early 19th century. The excursion will explain the recent work done at Wardie and view a new information board installed by EGS and the Scottish Wildlife Trust.

Recent grants awarded by the Society

In the last year, although fieldwork has been severely disrupted by the Covid-19 pandemic, EGS has continued to offer grants to support research and further the aims of the Society. Recent grants include:

£1000 to Urban Good CIC to support production of the first edition of the Edinburgh Urban Nature Map – find out more at <https://www.urbangood.org/products/edinburgh-urban-nature-map>

£420 to Kerstin Wright to study Si isotope variability in the Archaean crust in North West Scotland.

£420 to Angela Turner, for analysis of glacial till to determine the glacial history and associated relict landscapes of the south-west Pennines and the Cheshire Plain.

Update on the Scottish Geology Trust

The new Scottish Geology Trust is making good progress on a range of initiatives. Bob Gatliff and Angus Miller are working with the James Hutton Institute to discuss ways of promoting Siccar Point with a range of organisations; there has been a very positive response from the local community around Cockburnspath. Groups have been formed to enable the University sector, those interested in geology in education and Scotland's Geoparks to work more closely together. Planning is underway for the next Scottish Geology Festival in September and October, which will have a wide range of in-person and online events, including a series of family beach events around the country. While there has been some



good success with fund-raising, it is a very difficult environment for a new charity and the Trust relies on membership and donations. Please support and get involved in this important work by becoming a member – www.scottishgeologytrust.org/join-us/

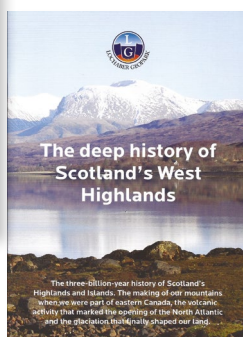
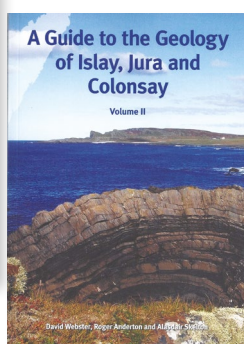
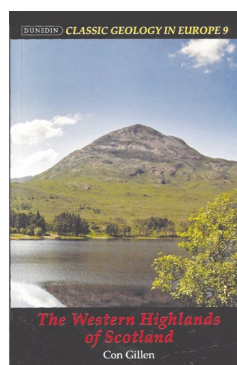
Contact: Katie Strang, SGT Secretary secretary@scottishgeologytrust.org

New books and old, postage free to EGS members

Two recently published titles are now available to purchase by EGS members from the EGS website www.edinburghgeolsoc.org/publications/geological-excursion-guides/. David Webster's new book, *A Guide to the Geology of Islay, Jura and Colonsay* can be purchased at £12/copy (RRP £14.99) and its recently updated companion volume *A Guide to the Geology of Islay* is available at similar terms.

The new publication from Lochaber Geopark *The deep history of Scotland's West Highlands* is available at £4, and we still have a few copies remaining at £16 of Con Gillen's *The Western Highlands of Scotland* (RRP £19.99).

All of these and our many other geological excursion guides, mostly at 20% reduction from RRP, will remain postage-free to EGS members resident in the UK until sales can resume at our Grant Institute lectures once more.



Geologists' Association conference comes to Edinburgh 15-17 October 2021

EGS is helping to host the rearranged GA Annual Conference in Edinburgh, with a full day of talks at Surgeon's Hall on Saturday and field trips on the Sunday morning. On the Friday afternoon there will be a guided tour of the geology section at the National Museum, and in the early evening a reception at the Playfair Library with a display and update on the research on the Lyell collection of notebooks and correspondence. There will be a conference dinner on the Saturday evening. Further details at geologistsassociation.org.uk/conferences.

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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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