



# THE HIGHLAND GEOLOGICAL SOCIETY

Scottish Charity No. SC004427

## SEPTEMBER 2023 NEWSLETTER

Welcome to our latest newsletter with details of the forthcoming lecture programme and brief proposals for 2024 field trips – more on these will follow shortly.

But first there are two events coming up very soon:

**Saturday 30th September and Sunday 1st October:  
joint HGS and NW Highlands Geopark Stac Fada symposium.**

The symposium will take place on Saturday 30 September in Ullapool. The day will comprise presentations by researchers involved in the Stac Fada meteorite debate and plenary discussions, including a short presentation by Andy Moffat of HGS to stimulate the discussion. On the Sunday there is an optional field trip to the Stac Fada member at Stoer. There is still time to join - full details on the website:

<https://www.nwhgeopark.com/celebrating-an-impact/>

**Saturday 7th October: Rosemarkie Pebble Day 1030-1230.**

This is part of the Scottish Geology Festival organised by the Scottish Geology Trust. Karen Deans is co-ordinating other HGS volunteers and countryside ranger Marcia Rae to host a drop in event in which families and individuals are invited to collect pebbles from the beach and bring them along to our gazebo for identification. The gazebo is located by the beach café and we will have identification books and tools to help visitors learn a little bit more about their finds.

**Autumn/Winter lectures 2023/2024**

**A brief summary:**

All lectures start at 7.30 pm.

11th October 2023: Gavin Berkenheger - Galantas Gold exploration.

22nd November 2023: Gareth Carter BGS - offshore wind development.

6th December 2023: Noel Williams - Big Boulders in Scotland.

24th January 2024: Dr Elsa Panciroli - It's the Little Things: latest vertebrate fossil discoveries from Skye's lagerstätte limestone.

7th February 2024: Rachael Paul - Mining Cycle of the Cononish Gold Mine.  
Note that this lecture will be preceded by the AGM.

20th March 2024: Dr Davide Foffa - The Elgin Reptiles: new insights from digital technology.

All lectures are by Zoom, except for December. This lecture will be at Inverness Youth Hostel, and will be preceded by a meal to which all are invited. There will also be a Zoom option.

### **Details of lectures**

#### **Wed 11 October 2023 (Zoom), Gavin Berkenheger: An update on exploration at the Kerry Road Deposit, Gairloch.**

Gavin is a Qualified European/Chartered Geologist with 17 years of experience in mineral exploration. He has worked throughout the UK, Ireland and Scandinavia managing various projects for the mineral exploration sector. His claim to fame was assisting in the development of the Curraghinalt Gold Deposit in Northern Ireland from 1.1 to 2.7 million ounces. He also discovered a new gold deposit in the Republic of Ireland and has secured multiple investment deals for mineral exploration projects in Scotland. He has a wide range of experience outwith geology including business development, management, and community relations. Gavin is now a consultant geologist offering full mineral exploration programme services under his company Grid Surveys Europe Ltd.

#### **Wed 22 November 2023 (Zoom), Gareth Carter, BGS: Geo-constraints and challenges to offshore wind development in Scotland.**

Gareth is a Senior Marine Geoscientist and BGS Lead in Marine Renewables, with a background in geological hazards and engineering geology. Key areas of work include undertaking marine geohazard assessments to de-risk offshore infrastructure developments for the renewable energy sector, and seabed surface and subsurface (seismostratigraphic) mapping in relation to foundation design for offshore structures. Since joining BGS in 2013 he has been heavily involved in offshore infrastructure projects across the UK Continental Shelf (UKCS), from desk study phase through to aiding with foundation design for wind turbine generators (WTGs) and subsea cable corridor selection. Gareth has worked on several offshore wind farm (OWF) development sites across the UKCS. As part of the wider project GeoTeam, he contributes to the integration of geological, geophysical and geotechnical datasets to construct the ground model, ultimately contributing to WTG foundation selection and design.

#### **Wed 6 December 2023 (At Inverness Youth Hostel in person, with hybrid Zoom option), Noel Williams: Big Boulders of Scotland – the work of the Boulder Committee 1872-84.**

Noel is a retired teacher, a keen walker and a founding member of the Lochaber Geopark. He is the author of *Exploring the Landscape of Ben Nevis and Glen Nevis: a walker's guide to the rocks and landscape of Ben Nevis and Glen Nevis*.

**Abstract:** Noel will describe the instigation and working of the Boulder Committee set up in 1872 to describe the properties and locations of glacial erratics. Over 12 years the committee submitted 10 reports totalling 555 pages mentioning that the largest boulder was found near Loch Killesport estimated to weigh a massive 2770 tons.

**Wed 24 January 2024 (Zoom), Dr Elsa Panciroli: It's the Little Things: latest vertebrate fossil discoveries from Skye's lagerstätte limestone.**

Elsa is an alumna of the University of the Highlands and Islands, completed her masters at the University of Bristol, and her PhD joint between National Museums Scotland and the University of Edinburgh. She is now a research associate at National Museums Scotland and was a Leverhulme Fellow and EPA Cephalosporin Fellow at the University of Oxford. She is the author of two popular science books, *Beasts Before Us* and *The Earth*, with a third forthcoming, all of them on themes in natural history, evolution and biology. She has also written for newspapers and magazines and appears regularly on radio and television.

**Abstract:** Fossil discoveries from the Kilmaluag Formation on the Isle of Skye are revealing new information about the origin and evolution of multiple small vertebrate animal groups. The Kilmaluag Formation represents a Middle Jurassic freshwater lagoon environment, dated to approximately 166 Ma. Discoveries made in these limestones over the last decade include early salamanders, small reptiles, and mammals, many of them among the best-preserved skeletons from this time period in the world. Work led by Dr Panciroli on the mammal fossils has revealed new information about mammal growth and development in the Jurassic, and the foundations of mammal physiology as we know it today.

**Wed 7 February 2024 (Zoom), Rachael Paul: Mining Cycle of the Cononish Gold Mine. Note that this lecture will be preceded by the 2024 AGM commencing 6.45 pm with an expected finish time around 7.15 pm.**

Rachael is a chartered Geologist who studied at St Andrews University and Camborne School Mines, and has worked in exploration, resource estimation, open-pit and underground mining geology. Career highlights include mapping/structural modelling in the sedimentary host copper-belt DRC, gold exploration in the Sierra Nevada Mountains USA, being selected as one of the top 100 Woman in Mining 2022 and returning home to continue career at Cononish gold mine in Tyndrum.

**Abstract:**

An overview of the geology and mining at Cononish Gold Mine in Tyndrum with Scotgold, including regional geology, surface exploration, underground diamond drilling, grade control modelling and mining methods.

**Wed 20 March 2024 (Zoom), Dr Davide Foffa: The Elgin Reptiles: new insights from digital technology.**

Dr Foffa is a postdoctoral researcher in Paleobiology in the Department of Geosciences at Virginia Tech (USA) and the University of Birmingham. His research is funded by an Independent (Global) Fellowship (Marie Skłodowska-Curie Action by the European Commission Research Executive Agency). Prior to arriving at Virginia Tech, Dr Foffa was a postdoctoral fellow at the National Museums Scotland. He completed a PhD at the University of Edinburgh, a MSc in Palaeobiology at the University of Bristol, and a BSc in Geological Sciences at the University of Pisa (Italy).

**Abstract:** After Davide was awarded funding from the Royal Commission of the Exhibition of 1851 he has been using scanning techniques to study fossils found in Triassic rocks of the Lossiemouth area around 100 years ago. He will include results of research into reptiles such as *Erpetosuchus* and *Scleromochlus* and show how modern techniques can help unravel the mysteries of these ancient animals.

### **The 2024 Field Trip programme**

**Self-led week in Girvan area.** The committee is looking at possibilities in April, probably 13th to 20th April because the tides are favourable then.

**Don Stewart: Glen Tilt.** In 2023 Don led a trip for the Aberdeen G S looking at the rock exposures that influenced James Hutton's thoughts on the age of granitic rocks that he found intruded into the country rock in Glen Tilt. Ann was present on this trip and thought it would interest our members and Don agreed to provide the same field trip for our members. We are currently in touch with Atholl Estates to arrange access for cars to the glen and it is hoped that this will take place in May 2024.

**Prof Rob Strachan** has offered to lead us on a 4 day excursion to the **North of Scotland**. The programme is as follows:

Thurs 20 June 2024: Meet at Tongue Hostel where we will be based.  
Friday 21 June - Moine Thrust Zone at Eriboll  
Saturday 22 June – Moine/Lewisianoid/ORS rocks around Tongue  
Sunday 23 June - ditto around Bettyhill/Torrisdale Bay  
Monday 24 June - Moine rocks /Strathy Complex/ORS around Kilmory/Strathy/Portskerra (at which point folk would presumably disperse southwards or stay on the north coast if desired).

We are currently arranging accommodation at the hostel or campsite for participants. Please have a look at the website <https://www.tonguehostelandholidaypark.co.uk> as we will be asking for bookings before the end of October.

**Prof Peter Scott: Cromarty and Nigg** – date to be arranged probably August/September.

### **Items of interest and geological websites**

#### **Scottish Geology Festival 2023**

The festival this year will run from the 1st September until the 7th October with a very full programme of lectures and field trips. <https://www.scottishgeologytrust.org/festival/>

HGS is contributing the Rosemarkie Pebble Day on 7th October - see above.

## Friends of Hugh Miller

<https://www.thefriendsofhughmiller.org.uk/latest-news>

The 5th Nigel H. Trewin Memorial Lecture. 5th October, 6:30pm at Aberdeen University, Meston Building Lecture Theatre 1. Speaker: Dr Clive Rice, University of Aberdeen: The Cerro Rico de Potosi, Bolivia: The world's largest silver deposit.

A Zoom link can be sent on request to [chair@thefriendsofhughmiller.org](mailto:chair@thefriendsofhughmiller.org).

Further information in the Friends of High Miller magazine:

<https://web-cdn.org/s/1252//file/Newsletters/HN54-Aug-2023.pdf>

## Scottish Geology Trust (SGT) Geosites Pilot Project: Scottish Geological Conservation Review (GCR) sites

Scotland has over 1000 GCR sites that are designated as important for geology and geomorphology at a national or local level. The Scottish Geology Trust's Geosites project aims to build a map and database for all these sites, to encourage greater awareness and conservation. Recently SGT was awarded £1500 from the GA Curry Fund that has enabled the pilot project to go ahead this summer. Geosites project volunteers, including a number of HGS members, are adding information and photographs about individual sites to the new SGT Geosites website created by Daniel Burgess of the BGS:

<https://geosites.scottishgeologytrust.org/>

This shows a map of all the GCR sites in Scotland and by clicking on a particular site you can get brief information about it, with optional more information, which usually contains a link to the GCR volume containing details about the site.

You can choose particular categories of GCR or tick the "Show photographs" box to see where volunteers have added new photographs. There will be a meeting in Inverness in November for volunteers and others to discuss the project. This is quite a big project and we are constantly giving feedback to Angus Miller at SGT, to Daniel about the website and to Rachel Wignall at NatureScot, in order to improve the website and the quality and usefulness of the information in the database.

If anyone wants to get involved please let a committee member know and we'll gladly accept you onboard! You would be very welcome to join a party visiting a GCR site.

## Refreshed NatureScot Scottish Fossil Code

Over the last few years Colin MacFadyen of NatureScot has led a team of volunteers, including members of Elgin Museum, to update the Scottish Fossil Code. This was had a re-launched in August. See <https://www.nature.scot/doc/scottish-fossil-code-1>

## "The Shear Zone" YouTube channel

**Professor Rob Butler**, University of Aberdeen, has been very busy putting together a highly impressive series of over 222 instructional geology videos, many from Scottish locations, in "The Shear Zone" YouTube channel. These videos cover a wide range of topics and generally last around 20 minutes. They are highly recommended.

<https://www.youtube.com/channel/UCIUyjr1yPCZQWYI9cJCO1mA/videos>

**Geologists Association: Geology from your sofa**

<https://geologistsassociation.org.uk/sofageology/>

**Palaeocast podcasts:**

<https://www.palaeocast.com/category/mesozoic/>

**The Scottish Geology Trust**

<http://www.scottishgeologytrust.org/>

**Other Scottish Geological Societies:**

**Aberdeen Geological Society**

<http://www.aberdeengeolsoc.org.uk/>

**Edinburgh Geological Society**

<https://www.edinburghgeolsoc.org/>

**Glasgow Geological Society**

<https://geologyglasgow.org.uk/>

**Open University Geology Society**

<https://ougs.org/>

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