



# THE GEOLOGICAL SOCIETY OF GLASGOW

## Newsletter - December 2023

### Lecture Programme

All lectures are held in Room 407 of the Boyd Orr Building (unless otherwise noted). **Note: Meetings commence at 7.00 pm.** Room 407 is on the 4th floor. We will record the lectures but not the Q&A and will not be offering a live zoom.

### Thursday 7<sup>th</sup> December 2023

Note: The Lecture will be preceded by the AGM and Special Members' Meeting

**Professor Craig Storey, University of Portsmouth**

### **"The onset of modern plate tectonics"**

Since the 1960s we have accepted the plate tectonic paradigm as being central to how our planet operates at the present day. However, there is much ongoing debate as to when plate tectonics began and how similar it was to the current observable mode. Hypotheses range from the Hadean to the Neoproterozoic and therefore span across profound changes in the Earth system, including atmospheric oxygenation and the proliferation of life.

*Craig studied geology at Oxford Brookes University and was awarded a PhD by the University of Leicester in 2003 for his research on eclogites in the Glenelg-Attadale Inlier in NW Scotland. Between 2003 and 2009 he carried out research at the Natural History Museum, the University of Brighton, the Open University and Bristol University. In 2009 he became a senior lecturer at the University of Portsmouth and has been professor of geology there since 2017.*



### Further reading

Dhuime, B. et al (2012). A change in the geodynamics of continental growth 3 billion years ago. *Science*, **335**, 1334-1336.

Palin, R.M. et al (2020). Secular change and the onset of plate tectonics on Earth. *Earth Science Reviews*, **207**, 103172.

Stern, R.J. (2005). Evidence from Ophiolites, Blueschists and ultrahigh-pressure metamorphic terranes that the modern episode of subduction tectonics began in Neoproterozoic time. *Geology*, **33**, 557-560.

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### Future Lectures

**Thursday 11<sup>th</sup> January 2024** Steven Hollis, University of Edinburgh.

### **"Closing the Iapetus Ocean: late arc and ophiolite formation in the Grampian Orogeny and implications for UK mineral potential and metal security"**

The Grampian Orogeny marks the first phase of the closure of the Iapetus Ocean in the British and Irish Caledonides during the Late Cambrian to Middle Ordovician. Widespread metamorphism and deformation of passive margin sequences resulted from the accretion of several arc and ophiolite complexes (and outlying microcontinental blocks) to the continental margin of Laurentia. These remnants of that now closed ocean extend across Scotland and Ireland, into Newfoundland and Quebec. The Tyrone Igneous Complex of Northern Ireland represents a young, structurally dissected c. 484-480 Ma ophiolite and c. 473-464 Ma volcanic arc. Extensive fieldwork, geochemistry, isotope analysis (Sr-Nd), and U-Pb zircon geochronology have provided us with a detailed understanding of its tectonic-magmatic evolution, and potential metal endowment. Equivalent sequences in the Newfoundland Appalachians contain some of the most metal-rich massive sulphide deposits globally. Exploration efforts in Co. Tyrone have revealed numerous encouraging occurrences of base (Cu-Zn-Pb) and precious (Au-Ag) metals crucial for the energy transition, and also occurrences of energy-critical metals (e.g. Co, Bi, Te). Parallels between the Tyrone Igneous Complex and the Ballantrae Ophiolite Complex will also be discussed in this presentation, highlighting the possible mineral potential of western Scotland.

## **Past Lectures**

A recording of the October lecture on Vikings and isotopes can be found here: <https://youtu.be/ZUtCfCZxP1o>

A recording of the November lecture on the Dalradian can be found here: <https://youtu.be/tnsw0mQu0zI>

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## **AGM and Special Members Meeting**

The Society's AGM will be held on Thursday 7th December at 7:00 pm immediately preceding the evening's lecture. The first part will be a 'Special' Meeting of the Society to vote on approval of the new Constitution. The new Constitution accompanies this newsletter as an email attachment – or it can be obtained from the Hon. Secretary.

This Constitution has been submitted to OSCR, the Scottish Charity Regulator, who have consented to the revised charitable purposes set out in Clauses 2 and 3.

This will be followed by the usual AGM.

Agendas and other papers are shown at the end of this newsletter and the accompanying Proceedings Booklet contains officer reports, field trip reports and obituaries.

As usual we will be electing members of the Society to the Council at the AGM (see paper later in this newsletter). The Council have made some proposals, however we are always seeking new members to help out with the running of the Society. If you are interested, then please get in touch with the secretary, David Webster [sec@gsocg.org](mailto:sec@gsocg.org), or come to the AGM and volunteer!

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## **Garvellachs Field Trip**

We are planning a field excursion to the Garvellach islands, to be led by Tony Spencer and David Webster from Friday 10 to Monday 13 May 2024.

The Garvellach islands expose a magnificent section of the glacial Neoproterozoic Port Askaig Formation. Although part of the Dalradian it is relatively undeformed and contains an extraordinary amount of glacial features including spectacular glaciotectonic 'rafts' as well as a sequence at the base recording the transitional onset of glaciation at the start of the Cryogenian - which is a prime candidate for a global 'golden spike' or GSSP. We will discuss the concept of snowball earth and assess how the succession here fits (or doesn't) with that model. We will aim to have one day on each of the three main islands in the archipelago.



Expressions of interest are invited by email, to the Hon. Secretary [sec@gsocg.org](mailto:sec@gsocg.org) by 5pm on Friday 15 December who can also supply further details. Only 10 places are available due to the size of the boats. After the 15th we will let people know if they have been successful in gaining a place, and if over subscribed, we will create an ordered waiting list of unsuccessful applicants, and add any further expressions of interest.

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## **Geo-natter**

These popular sessions continue at the Kelvin Hall from 13:30 to 15:00. Last sessions of 2023: 29 Nov & 13 Dec.

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## **Fossil Grove Funding**

Breaking News! Glasgow City Council has allocated a significant amount of money for essential repairs to the Fossil Grove. This is most welcome and starts the process of safeguarding the fossils and stabilising the building. Many thanks to everyone who has helped out with various outreach activities open afternoons which have helped demonstrate how much the local, international and geological communities value this very special place. More details to follow ...

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## **International VULCANA Symposium on Submarine Volcanology of the Canary Islands**

I am sure many members will be interested on this free 'hybrid' event scheduled for the 1st December. Many of our members accompanied Jim MacDonald on study tours to the Canary Islands, including, Lanzarote, Fuerte Ventura, Gran Canaria, La Palma and especially Tenerife.

The II International VULCANA Symposium on Submarine Volcanology of the Canary Islands, organized by IEO-CSIC and GeoTenerife, which will take place on December 1st in Santa Cruz de Tenerife. The event is completely free, prior registration in this [link](#).

## Scottish Journal of Geology

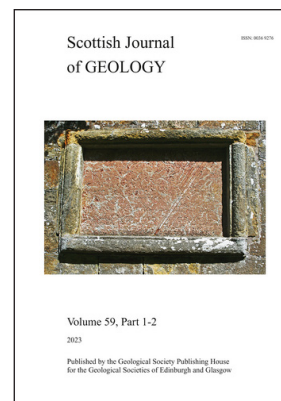
Scottish Journal of Geology Vol. 59, No. 1-2, November 20, 2023 is now available.

Contents and downloads (free for members) are available at <https://www.lyellcollection.org/toc/sjg/59/1-2>:

Also our President is a co-author of a new paper in the next volume of the Journal.

James O. Buckman, Simon J. Cuthbert, and Paul G. Polson, *Arthropleura* trackway (*Diplichnites cuithensis*) from the Carboniferous, Serpukhovian, Limestone Coal Formation, Clackmannan Group, Linn Park, Glasgow.

Download at: [https://www.lyellcollection.org/doi/10.1144/sjg2021-019?TOC\\_v\\_i&ref=d1351](https://www.lyellcollection.org/doi/10.1144/sjg2021-019?TOC_v_i&ref=d1351)



## News from Edinburgh Geological Society

### Radical Road Public Meeting on Sunday 3rd December



The Radical Road in Edinburgh's Holyrood Park has been a much loved walking route since 1822. In 2018, Historic Environment Scotland closed the route due to fears of rockfall. EGS is working with other organisations to hold a public meeting to explore the history and use of the Radical Road, and its importance to local people and visitors, walkers, geologists, climbers and historians. There will be short talks on the geology and history of the Radical Road, its use as a walking route and by climbers and wider issues of access. The meeting will be an opportunity to find out about Historic Environment Scotland's Strategic Plan for Holyrood Park, and discuss engaging with

this plan, and further action that can be taken to persuade Historic Environment Scotland to reopen the Radical Road.

Sunday 3rd December 2023, 2pm – 4pm (Doors open and refreshments from 1:30pm)

Greyfriars Charteris Centre, 138/140 Pleasance, Edinburgh, EH8 9RR

please book in advance [www.edinburghgeolsoc.org/radical-road-public-meeting/](http://www.edinburghgeolsoc.org/radical-road-public-meeting/)

## Geology Bites

The latest episode is on banded iron formations with Clark Johnson, Emeritus Professor in the Geoscience Department at the University of Wisconsin-Madison.

Oliver writes “During a recent trip to Australia, I was fascinated by the towering exposures of banded iron formations along the walls of canyons in Western Australia and especially the diversity of structures within them, from sub-mm scale up to meter scale. And while I knew they formed as a result of oxidation of dissolved iron in seawater, I did not know that biological processes may have been responsible for the oxidation in seawater under oxic or anoxic conditions as well as later reduction during compaction of the iron formation sediments on the seafloor. I learned that and more from my conversation with Clark Johnson”.

Get the podcast at <https://www.geologybites.com/clark-johnson>



## ‘The Pulse of the Earth’ at the Hunterian Museum and Art Gallery

Book now for this upcoming event taking place in the Hunterian Art Gallery on Saturday 2nd December from 5 -7pm. We'll be joined by geographer and lecturer Adam Bobbette, artist Ilana Halperin and anthropologist Zeynep Oğuz who'll be looking at the politics of volcanoes, cosmology, theories of the earth, and what it means to be human.

Tickets on Eventbrite [here](https://www.eventbrite.com)

## Geological Society of Glasgow

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

[@geolsocglasgow](https://www.instagram.com/geolsocglasgow)

President: Simon Cuthbert [pres@gsocg.org](mailto:pres@gsocg.org)

Secretary: David Webster [sec@gsocg.org](mailto:sec@gsocg.org)

## **THE GEOLOGICAL SOCIETY OF GLASGOW**

### **Notice of Special General Meeting to be held on Thursday 7th December 2023 at 7.00 pm in Room 407, Boyd Orr Building, University of Glasgow.**

Notice is given of a Special General Meeting of the Society to be held on Thursday 7th December 2023 at 7.00 pm in the Boyd Orr Building, Room 407, University Avenue, University of Glasgow, Glasgow G12 8QQ for the consideration and if thought fit passing of the following Resolution:

#### **RESOLUTION**

“To adopt in place of the Constitution of the Society a new Constitution in terms of the Draft Constitution attached to this Resolution.”

*Note: In terms of clause 38 of the present Constitution, in order to be passed this resolution requires the agreement of two thirds of the members present at the meeting and entitled to vote.*

David Webster  
Honorary Secretary.

Date 7<sup>th</sup> November 2023

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# **THE GEOLOGICAL SOCIETY OF GLASGOW**

## **Annual General Meeting of Session 165**

To be held on Thursday 7th December 2023 at 7.00pm.

in Room 407 at the Boyd Orr Building, Glasgow University.

1. Welcome
2. Apologies
3. Approval of Minutes of the Annual General Meeting of Session 165 held on Thursday 8<sup>th</sup> December 2022.
4. President' and Officers Reports
6. Accounts for the year ended 30th September 2023.
7. Nominations and Election of Office Bearers, Ordinary Council Members and Independent Examiner
9. AOCB

## THE GEOLOGICAL SOCIETY OF GLASGOW

Minutes of the Annual General Meeting  
held on Thursday 8th December 2022 at 7.00pm.  
in Room 407 at the Boyd Orr Building, Glasgow University.

### 1. WELCOME:

The President welcomed all present. He spoke to his Report published in the Proceedings. He thanked members of Council whose contribution had enable the Society to maintain a high quality of output during the Session despite the challenges of the pandemic.

### 2. ATTENDANCE:

32 participants were recorded as attending. Apologies were received from Gary Hoare, Mina Cummings, Beverley Bergman, Jim MacDonald, Austen Brown.

### 3. MINUTES

The minutes of the AGM which was held on 9<sup>th</sup> December 2021 had been distributed with the newsletter. These were approved unanimously.

### 4. ACCOUNTS FOR THE YEAR ENDED 30<sup>TH</sup> SEPTEMBER 2022.

The Treasurer presented these Accounts with Notes. They had been independently examined by Brian O'Neill. The Accounts were approved unanimously.

### 5. REPORTS

The President referred to the reports of the various office bearers, copies of which had been sent out to members in the Proceedings prior to the AGM. The reports were as follows: -

The President's report

Meeting Secretary's report

Membership Secretary's report

Treasurer's report

Day Excursions report

Residential Excursion to Ardnamurchan report

Residential Excursion to Snowdonia report

Website report

Library and Publications report

Strathclyde Geoconservation Group

Scottish Journal of Geology Editor's report

The President asked for questions. The following questions were asked.

Why were meetings no longer in held in the Molema Building?

*The largest expense for the Society was the cost of holding evening meetings in the Molema Building. This was mainly due to the cost of providing a janitor after hours. The University did not wish to continue this but had recognised the close link with the Society and had offered us use of a lecture theatre at the Boyd Orr building free of payment. The Council decided to accept it.*



Did the Constitution allow for meetings to be held on line?

*There was no provision for online meetings in the Constitution. It was an open question as to whether this was necessary. The Council was minded to change the legal form of the Society to a Scottish Charitable Incorporated Organisation. If this happened, it would provide for online meetings*

Social gatherings after lectures were an important part of the Society's activity. Might a location be found for meetings where we could reinstate these social gatherings, even though we had to pay for it?

*In a show of hands requested by the President, a large number of members present indicated their wish to reinstate social gatherings after lectures.*

## 6. NOMINATIONS AND ELECTION OF OFFICE BEARERS

The list of officers coming up for election with nominees, proposers and seconders had appeared in the newsletter.

<b>POSITION</b>	<b>NOMINEE</b>	<b>PROPOSER</b>	<b>SECONDER</b>
HON SECRETARY	DAVID WEBSTER	SIMON CUTHBERT	IAN MILLAR
LIBRARIAN	GARY HOARE	ROY BRYCE	IAN MILLAR
ARCHIVIST	MAGARET ANDERSON	WALTER SEMPLE	SIMON CUTHBERT
PROCEEDINGS EDITOR	DAVID WEBSTER	WALTER SEMPLE	CAMPBELL FORREST
NEWSLETTER EDITOR	DAVID WEBSTER	WALTER SEMPLE	CAMPBELL FORREST
RESIDENTIAL EXCURSIONS	ROY BRYCE	SIMON CUTHBERT	DAVID WEBSTER
WEBMASTER	BILL GRAY	SIMON CUTHBERT	ROY BRYCE
ORDINARY MEMBER	JOHN GUERRIER	SIMON CUTHBERT	BILL GRAY
	ROBERT ALEXANDER	IAN MILLAR	NEIL CLARK
	MAGGIE DONNELLY	IAN VEITCH	MAGARET ANDERSON
	WALTER SEMPLE	ROY BRYCE	NEIL CLARK
	LINDSAY SMITH	DAVID WEBSTER	WALTER SEMPLE
SJG EDITOR	COLIN BRAITHWAITE	NEIL CLARK	SIMON CUTHBERT
INDEPENDENT EXAMINER	BRIAN O'NEILL	IAN VEITCH	WALTER SEMPLE

## 7. OTHER BUSINESS:

There was no other business.

Assistant Professor Quentin Crowley of Trinity College Dublin then delivered a lecture on the subject of "Radon in the Environment".

Prepared by Walter Semple on 9<sup>th</sup> December 2022.



# THE GEOLOGICAL SOCIETY OF GLASGOW

## Proposed Council Members

**AGM 7<sup>th</sup> December 2023**

<b>Officer and Nominee</b>	<b>Proposed by:</b>	<b>Seconded by:</b>
President: Simon Cuthbert	D Webster	N Clark
Secretary: David Webster	S Cuthbert	I millar
Treasurer: Ian Veitch	W Gray	G Hoare

<b>Vice Presidents</b>	<b>Proposed by:</b>	<b>Seconded by:</b>
Vice President: Neil Clark	S Cuthbert	D Webster
Vice President: Maggie Donnelly	I Veitch	C Forrest

<b>Ordinary Members:</b>	<b>Proposed by:</b>	<b>Seconded by:</b>
1. Ian Millar	J Guerrier	B Alexander
2. Gary Hoare	L Smith	B Alexander
3. Bill Gray	D Webster	S Cuthbert
4. Campbell Forrest	I Veitch	N Clark
5. Bobby Alexander	M Donnelly	I Millar
6. Lindsay Smith	G Hoare	W Gray
7. John Guerrier	C Forrest	M Anderson
8. Margaret Anderson	S Cuthbert	G Hoare
9. VACANT		

Co-opted Junior Member:

Vacant

Co-opted Members:

SGG chair (currently Margaret Greene)

One Vacancy

Total 17.