



THE GEOLOGICAL SOCIETY OF GLASGOW

Newsletter - January 2024

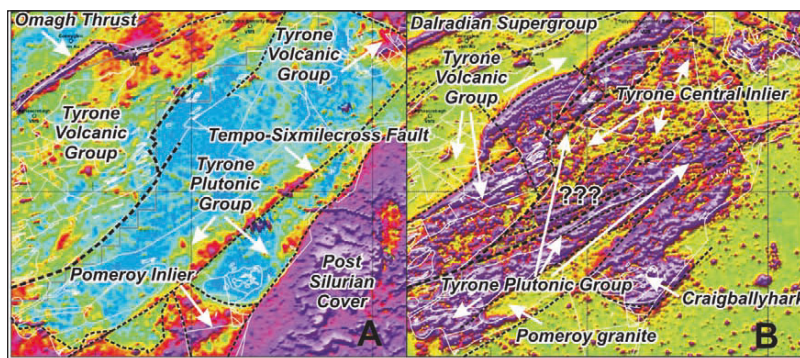
Lecture Programme

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 11th January 2024

Dr. 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 outriding 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

Dr Steven Hollis is Lecturer in Ore Systems at The University of Edinburgh. He completed his undergraduate degree at The University of Birmingham in 2007, before completing a MSc in Geochemistry at the University of Leeds in 2008. His PhD at the University of Southampton focussed on the Evolution and Mineralization of the Tyrone Igneous Complex of Northern Ireland. He then undertook postdoctoral positions at CSIRO in Western Australia on developing new exploration techniques for VMS deposits in the Yilgarn Craton of Western Australia, and at University College Dublin, Ireland, on the applications of clumped C-O and Pb isotopes to carbonate-hosted Zn-Pb deposits of the Irish Midlands.

Further reading

Hollis, S. P., Cooper, M. R., Roberts, S., Earls, G., Herrington, R., Condon, D.J. & Daly, J. S. 2013. Evolution of the Tyrone ophiolite, Northern Ireland, during the Grampian-Taconic orogeny: a correlative of the Annieopsquotch Ophiolite Belt of central Newfoundland? *Journal of the Geological Society, London*, **170**, 861-876.

Cooper, M.R., Crowley, Q.G., Hollis, S.P., Noble, S.R., Roberts, S., Chew, D., Earls, G., Herrington, R. and Merriman, R.J. 2011. Age constraints and geochemistry of the Ordovician Tyrone Igneous Complex, Northern Ireland: implications for the Grampian orogeny. *Journal of the Geological Society London*, **168**, 837-850.



Future Lectures

Thursday 8th February 2024 tbc.

Thursday 14th March 2024 tbc.

Thursday 11th April 2024 David Webster – “Neoproterozoic glaciation in Scotland and Ireland: The Port Askaig Formation”.

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>

A recording of the December lecture on plate tectonics can be found here: <https://youtu.be/nQGFjAl1asY>

AGM and SGM

The new constitution was unanimously approved at the SGM on 7th December.

Proposed Members of Council were approved unanimously. There are vacancies on Council for one further Ordinary Member, one co-opted Junior Representative plus one further co-opted member.

Draft minutes of these two meetings are appended at the end of this newsletter. The Proceedings booklet can be downloaded from the Society website [here](#).

Please could you email any edits or comments on the minutes to the Secretary sec@gsocg.org

Field Excursions 2024

Note that these are subject to change as the programme is developed, but these are some ‘save the dates’ for your diaries.

Booking forms will be made available via the website and WebCollect and in the February Newsletter.

30th April – Guided tour of the Glasgow Life Geology collection: Leader Ann Ainsworth, Curator of Geology

This small intimate guided tour of the Glasgow Museums Resource Centre (storage facility) near Nitshill in Glasgow G53 7NN, is an opportunity to see behind the scenes and view geology specimens not currently on display. Meet at 1.45pm. Limited to 10 members.

Own travel. There is free parking at the resource Centre or the venue is a 10 min walk from Nitshill train station.

10-13th May – Garvellachs: Leaders Tony Spencer and David Webster.

This residential field excursion to the Garvellach islands is now fully booked; however if you would like to go on the reserve list then please email sec@gsocg.org.

25th May – Pentland Hills: Leader Gary Hoare

Setting off from the Carlops carpark we will visit the Deerhope burn area where we will examine fossils dating back to the Silurian period. There will be a chance to see and/or collect a few sample fossils including trilobites, brachiopods, nautiloids, corals and crinoids.

Travel: 16 seat Minibus leaving Molema building 8.30am returning around 6pm

15th June – Innellan, Dunoon: Leader Keith Torrance

On this excursion we will look at the relationships between the Dalradian metamorphic rocks of the Highlands, the rocks associated with the Highland Boundary Fault, and the younger sedimentary fill of the adjacent Midland Valley. All these rocks are present in coastal exposures within a relatively short distance on the SE Cowal coast around Innellan.

Travel: Coach leaving Molema building 8.30am returning around 7pm

6th July – Spireslack, near Glenbuck: Leaders Graham Leslie & Mike Brown.

A visit to Spireslack and Mainhill Wood surface coal mines to examine spectacular exposures of Carboniferous strata on a scale not seen anywhere else in the United Kingdom.

Travel: 16 seat Minibus leaving Molema building 9.30am returning around 4.30

7th September – Dunure beach pebble event: Leader Neil Clark.

A chance to bring the family along to a fun day out examining beach pebbles and learning more about the geology of this Ayrshire coastal location.

More details to follow.

Member Survey

A reminder that we are running a Member Survey and we would love to hear your views on the running of the society. We would be most obliged if you could find the time to complete the on-line survey by mid-January if you've not already done so.

https://qualtricsxm36wbb2svn.qualtrics.com/jfe/form/SV_bDANbgYJnPnysHY

Fossil Grove Funding

Glasgow City Council have granted £450,000 towards 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 and open afternoons.

Here is a link to a clip from the STV news

<https://youtu.be/PCBo2yxEIJ8>



Scottish Journal of Geology

A reminder that, as a trial, we have arranged a small print run of a full-colour edition of Volume 59 Part 1 & 2 (published November 2023). This will cost £10, including postage, and it will be distributed in January. If you wish to reserve a copy, please do this via WebCollect by Monday 8 January.

Any questions or problems you can contact Gary Hoare books@gsocg.org

Geology Bites

Two new editions for you to enjoy!

Mahesh Anand on “What Human Return to the Moon Means for Lunar Geology”. Link [here](#)

Susan Brantley on “Earth’s Geological Thermostat”. Link [here](#)

If you attended or watched the recording of the lecture by Craig Storey last month you might be interested in a previous episode of geology bites where Pete Cawood discusses the origins of plate tectonics. Link [here](#)

Hugh’s News

Issue 55 of Hugh’s News - a special edition celebrating the publication of a new, revised edition of Hugh Miller’s *The Old Red Sandstone* is attached to the email. This has involved a huge amount of work by its editors, Dr. Mike Taylor and Professor Ralph O’Connor and is a wonderful testimony to Hugh Miller. The Friends of Hugh Miller urge you to buy yourselves a copy - details of a Friends discount on Page 8.

Some of you may have heard the delightful news that *The Old Red Sandstone* book was the winner of the Research category in Scotland’s National Book Awards last week. Needless to say, we are all absolutely thrilled, and would like to extend our congratulations to both the editors, Michael Taylor and Ralph O’Connor!



Charles Lyell Workshop

Two-day workshop, 8-9 February 2024, University of Edinburgh

In 2020, the University of Edinburgh acquired for the nation the Notebooks of the distinguished geologist and earth scientist Charles Lyell (1797-1875).

The purpose of the Workshop is to bring together researchers, museum curators and others with an interest in the life, work, and collections of Charles Lyell, to learn more of the Lyell materials held in Edinburgh, to explore how best to connect the disparate holdings of Lyell’s specimens and texts, and to consider future research possibilities on Lyell’s work and world.

Numbers are limited so registration is essential. The final date for registration is 19 January 2024.

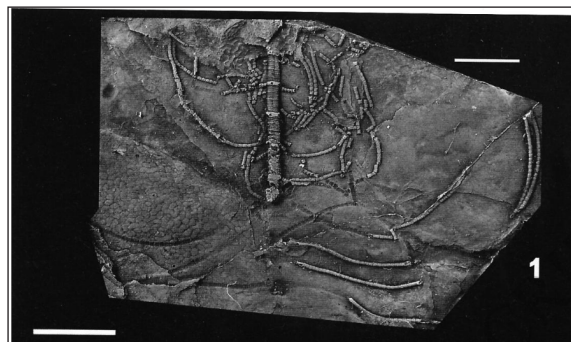
<https://www.eventbrite.com/e/working-with-charles-lyell-workshop-tickets-768328851277>

Recent papers on Scottish Geology

Wellman, C.H., Lopes, G., McKellar, Z. and Hartley, A., 2024. Age of the basal 'Lower Old Red Sandstone' Stonehaven Group of Scotland: The oldest reported air-breathing land animal is Silurian (late Wenlock) in age. *Journal of the Geological Society*, **181**, pp.jgs2023-138. Open Access <https://doi.org/10.1144/jgs2023-138>

Donovan, S.K., 2023. Functional morphology of the stem in the Lower Palaeozoic crinoid *Macrostylocrinus* Hall from Scotland. *Scottish Journal of Geology*, pp.sjg2023-021. (see Fig)

<https://doi.org/10.1144/sjg2023-021>



Down to Earth

January extra [here](#)

Scottish Geology Trust News

Membership Survey

If you are a member of the SGT then please remember to take the membership survey, which will help the Scottish Geology Trust to understand its membership and make sure it is meeting your needs, as well as gaining some insight into how we can increase our membership numbers.

It is a short online survey, which should only take about 7 minutes to complete. It'll run until January 8th. You can find the survey here - https://qualtricsxmghk92pjf4.qualtrics.com/jfe/form/SV_07HEpI2hj9FHiYK

SGT Geosites Project - Pilot Phase Great Success

Geosites Project

There was a productive and enthusiastic review meeting for our Geosites Project in Inverness on the 20th November, hosted by NatureScot.

The Geosites initiative aims to build up a map and database of sites in Scotland that are designated as important for geology and geomorphology. The meeting marks the completion of the pilot phase of the project, with participants from across the UK, many from the Highlands and Aberdeen.

Participants included our trustees, and of course, the dedicated volunteers who have been working to fill in the Geosites database. This has involved adding information about GCR sites (Geological Conservation Review) - localities recognised for their important geological features – and visiting them to take photos and add notes about their accessibility and state of conservation.

Rachel Wignall, geology advisor for NatureScot, spoke at the event. She praised the work, saying it was “already one of the most productive and useful geoconservation projects I know of.” She outlined how the database would be useful to her team, particularly photographs, which can help them assess the condition of features of interest. “People are much more likely to care about and look after things that they know about and understand...the engagement of volunteers on projects like this is of vital importance, and is a worthwhile aim in itself.”

The project was launched five months ago, and the data gathered and made available so far has been impressive. Publications associated with the featured Geosites are in the process of being converted into more easily accessible digital versions. SGT trustee and treasurer of the Geological Society, Keith Myers, said, “it’s about access and understanding, not just for geologists, but for the wider public who are interested in geology and geoscience. For me, this is the really important thing about this project.”

Take a look at the database (work in progress!) here: <https://geosites.scottishgeologytrust.org>

To become a volunteer on this project, contact Angus Miller: angus@scottishgeologytrust.org



Draft Minutes of the Special General Meeting and Annual General Meeting of Session 165

Held on Thursday 7th December 2023 at 7.00pm.in Room 407 at the Boyd Orr Building, Glasgow University.

Special General Meeting

The Special General Meeting was called to consider, and if thought fit, to pass the following resolution:

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

39 Members were recorded as attending. John & Vivienne Christison attended via Zoom. The meeting was accordingly quorate. Apologies were received from David & Jaqueline Hamilton, Iain Allison, Bill Gray and Beverley Bergman.

Walter Semple briefly explained the process by which the new constitution had been drawn up, including thanking members for their feedback, in particular Ian Veitch, Ian Millar, Bob Alexander, Bill Gray and Iain Allison.

One month's advance notice of the SGM had been given in accordance with the Constitution.

The resolution was approved unanimously.

Annual General Meeting

1. WELCOME

The President welcomed all present.

2. ATTENDANCE

39 Members were recorded as attending. John & Vivienne Christison attended via Zoom. The meeting was accordingly quorate. Apologies were received from David & Jaqueline Hamilton, Iain Allison, Bill Gray and Beverley Bergman.

3. PREVIOUS MINUTES

The minutes of the AGM of Session 164 which was held on 8th December 2022 had been distributed with the newsletter. These were approved unanimously.

4. REPORTS

The President briefly summarised the key points and achievements of the previous year and 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.

5. ACCOUNTS FOR THE YEAR ENDED 30TH SEPTEMBER 2023

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

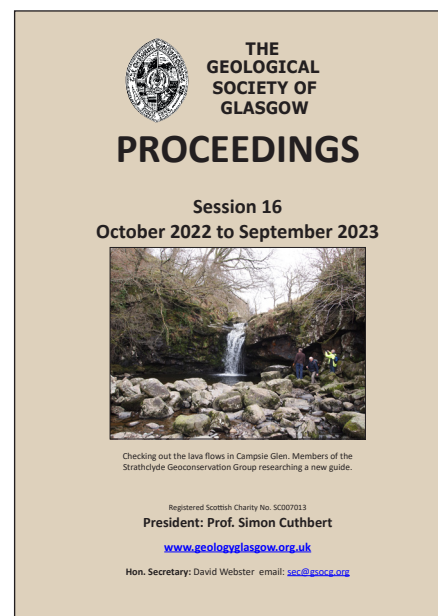
6. NOMINATIONS AND ELECTION OF OFFICE BEARERS

The list of officers coming up for election with nominees, proposers and seconders had been published in the newsletter. The proposals were accepted unanimously.

Officers:	Proposed by:	Seconded by:
President: Simon Cuthbert	D Webster	N Clark
Secretary: David Webster	S Cuthbert	I Millar
Treasurer: Ian Veitch	W Gray	G Hoare

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

Ordinary Members:	Proposed by:	Seconded by:
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.

The appointment of Brian O'Neil as independent examiner for the next session was approved unanimously.

7.OTHER BUSINESS:

A question from the floor concerned the security of data in the new webcollect system. It was noted in reply that the system was a third-party application running on the internet and that webcollect had up-to-date security procedures in place.

An extract from their website is shown below:

Security

Keeping your information secure is critical and we take that responsibility very seriously. Our servers are housed not in some vaporous internet cloud, but firmly on the ground in a very secure facility in the M4 corridor. The building is managed by top-flight datacenter specialist who has a strong focus on physical security and stability of power and network infrastructure. We house and maintain our own servers in this building, complete with with 24/7 monitoring and redundant, encrypted offsite back-ups. So your data is well protected, and stored entirely under our control within the UK.

All personal, including any card, details are fully encrypted with 256 bit SSL encryption. We are fully compliant with Payment Card Industry standards (PCI DSS) and are a registered Data Controller under the Data Protection Act. We will not share your members' information with any third parties, except for the limited purpose of processing payments. We will not contact your members for marketing purposes, ours or anyone else's. We will never display advertising on your club pages, except for a small WebCollect logo. Please see our privacy notice for detailed information.

WebCollect has been providing membership management solutions to Clubs and Societies since 2010. WebCollect is owned by Open Brackets Limited, which has been providing e-commerce solutions to the retail industry for over 15 years. WebCollect brings together ()pen's expertise in online payment systems, software and security, together with the management's personal passion and knowledge for clubs and how they are run.

WebCollect prioritises security and is an early adopter of new security related innovations, standards and practices. Just some examples are "HTTPS everywhere" and "HSTS", as described here. Just one effect of being a leading company in this field, is that WebCollect earns the highest possible rating on the respected, independent Qualys SSL Labs Server test, an A+.

Money paid by your members to your organisation using WebCollect, is never paid to WebCollect directly. Depending on the payment methods you choose to use, the funds pass either directly to your bank account (bank transfer, cash, cheque or credit/debit card) or via one of our third party payment providers: Paypal, GoCardless or SagePay.

Geological Society of Glasgow

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

[@geolsocglasgow](#)

President: Simon Cuthbert pres@gsocg.org

Secretary: David Webster sec@gsocg.org