



THE GEOLOGICAL SOCIETY OF GLASGOW

Registered Scottish Charity No. SC007013

President: Dr. Neil Clark

www.geologyglasgow.org.uk

April 2019

161/4



Photo: courtesy Lampert -
Gästefoto

Disko Bay, West Greenland. Come along to the lecture on 11th April to hear Iain Allison tell us about this wonderful place and the field trip he's planning for next year.

In this newsletter:

- Introduction from the new President: Neil Clark
- Lecture for April
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- Fossil Grove update and 3D model
- Geodiversity update

An Introduction from Neil Clark (President of the Geological Society of Glasgow)

My day-job is Curator of Palaeontology at The Hunterian museum in the University of Glasgow where I look after the fossil collections as well as undertaking research and promoting geological science more widely. Most palaeontologists are highly specialised, working on a particular group of organisms, however working in a museum setting allows me to be more diverse in my interests resulting in publications on subjects as wide ranging as shrimps, crinoids, bryozoans, conodonts, insects, and dinosaurs as well as amber and gold. I have a particular interest in dinosaur trackways and the Jurassic rocks of Skye, which is becoming more exciting as we discover more, not only on Skye but also on other islands as well as on the mainland of Scotland near Inverness. Much of what I work on is based



on the major contributions and discoveries made by amateur geologists and I would not have been able to do my job were it not for the passion of enthusiasts.

One of my passions throughout my career has been to promote geology in schools through enhancing the curriculum and promoting geology with the wider public through events, talks and publishing in popular magazines and books. The latest project was a live YouTube link to all primary schools in Scotland as part of the visit by Dippy the Dinosaur at Kelvingrove, where children were able to ask questions about dinosaurs and other environmental issues to a panel of experts. This will soon be available to everyone online.

As president, I aim to create better links between the various geological societies in Scotland and encourage younger members to join in. The Society will continue to provide an exciting range of talks and workshops on a wide range of interesting topics that will help members learn more about different aspects of geology. The Society is involved in a number of significant projects such as a new guide to the geology of the Glasgow area, Fossil Grove and the development of a Geology Trust. I am also beginning a discussion with our female members to ask how we can better celebrate the important contribution of women role models in geology.

It is a privilege to take over the role of President of the Society from Jim Morrison and it will be a challenge to fill his capacious hiking boots. I hope that we will be able to meet and chat about your interests at future meetings and remember to take part in 'Members Night' where you will have the opportunity to show, tell and ask about Geology with other passionate people in the Society.

Lecture meetings

All lectures are held in the *Gregory Building, University of Glasgow, Lilybank Gardens, Glasgow G12 8QQ* (unless otherwise noted). Meetings start at 7.30 pm. For more information contact the Meetings Secretary, David Webster: meetings@gsocg.org

Thursday 11th April 2019

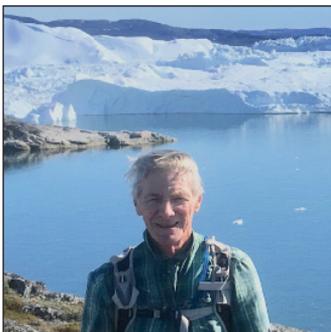
Dr. Ian Allison, University of Glasgow

The Geology around Disko Bay, West Greenland

Iain has been leading excursions to the NW Highlands for the Open University Geological Society for almost 20 years and on recent excursions he has considered other areas to visit where similar rocks could be seen. The Lewisian Gneisses of NW Scotland are part of the Laurentian shield of Archaean and Proterozoic basement gneisses which extend westwards across Greenland into Canada.

In Greenland there is a large area dominated by Archaean rocks akin to our Scourian gneisses which are cut by wide doleritic dykes equivalent to the Scourie Dykes. To the north of this Archaean block lies the Nagsugtoqidian belt of reworked gneisses of lower Proterozoic age which are akin to the Laxfordian gneisses. In addition, on Disko Island there occur thick sequences of basaltic lava and related rocks of Palaeogene age just like our Palaeogene volcanics along the western seaboard in Skye, Mull, Ardnamurchan etc. Thus, Disko Bay shows familiar rocks in a very unfamiliar setting. A group of 12 spent two weeks in the summer of 2018 in west Greenland, starting in the capital Nuuk, before heading north on the coastal ferry to a base in Disko Bay, Ilulissat. From there the group spent time in two communities, Qeqertarsuaq on Disko Island and Gasigiannuit in the south-east corner of Disko Bay.

This talk will cover aspects of the Archaean and lower Proterozoic gneisses and, on Disko Island, their cover of Palaeogene volcanics but also the impressive glacial scenery and culture in west Greenland. A Society field trip is being planned to Disko Bay in 2020.



Following a post-doc at the University of Western Ontario, Iain came to Glasgow 40 years ago to join the Department of Applied Geology of the University of Strathclyde. In 1989 the department closed and staff and students joined the department in the University of Glasgow to form the new Department of Geology and Applied Geology. Most of his research focussed on the NW Highlands in the Moine Thrust Zone and the unconformity of the Cambrian rocks on the Lewisian gneisses although there was brief research project based on the southern coastal area of Yemen. When the department was reorganised into Earth Sciences, he joined the Science Faculty Office and became the Principal Adviser of Studies for the final years of employment and has now been happily, and busily, retired for 7 years.

Background reading:

Campbell, Nancy. (2015): *Disko Bay*, Enitharmon Press
Glassley, William. (2018) *A Wilder Time*, Bellevue Literary Press
Henrikson, Niels: *Geological History of Greenland*, GEUS 2005

Thursday, 9th May 2019**Members' Night**

Short presentations by members of the Society. Members' Night is an opportunity for Society members to give short presentations or displays about their own interests and adventures in geology.

There is currently only one presentation planned thus far - so a few more would be welcome.

Mathew Statis (the Junior Rep on the Council) has been working with Tony Spencer on the Garvellachs and will present some results of the new mapping and sedimentological work.

If you are interested in presenting in any format then please contact the Hon Secretary, Walter Semple, by email at sec@gsocg.org.

Summary of Residential Field Excursions 2019

Full details were included in the February newsletter. Further information and booking forms are available from the Residential Excursion Secretary, Maggie Donnelly, email restrips@gsocg.org

Islay**April 26th – April 29th 2019****Leader: David Webster**

Please note that this excursion is fully booked. Please contact Maggie Donnelly to go on the waiting list.

The Geology of Anglesey**September 22nd - September 27th 2019****Leader: Dr Chris Arkwright**

This is a 5-night trip with 4 days in the field.

The trip is now almost full so if you wish more details please email Maggie Donnelly.

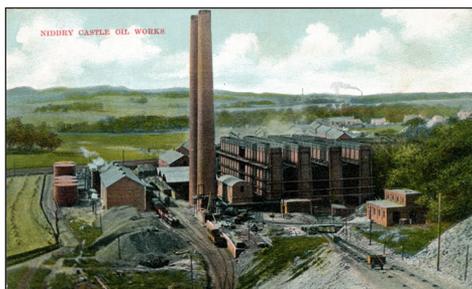
Summary of Day Excursions 2019

Full details were included in the last newsletter and are on the society's website, however for more information and a booking form please contact Roy Bryce, email daytrips@gsocg.org Mobile 07932 768367

Saturday 1st June: Oil Shale & Mining Museums Visit

Leader: Dr Iain Allison

Leaving Gregory Building at 9:00, returning at 16:00, travelling by coach



Saturday 22nd June: Blairskaithe Quarry

Leader: Dr Neil Clark

Joint Excursion with the Edinburgh Geological Society.

Leaving Gregory Building at 9:00, returning at 19:00, travelling by coach

Saturday 6th July: St Abbs Head

Leader Dr Con Gillen

Leaving Gregory Building at 9:00, returning at 19:00, travelling by coach

Saturday 27th July: Ballantrae

Leader: Dr Con Gillen.

Leaving Gregory Building at 9:00, returning at 18:00, travelling by coach

Saturday 17th August: The Northern Lake District

Leader: Dr Simon Cuthbert

Leaving Gregory Building at 9:00, returning at 21:00, travelling by coach

Saturday 7th September: Dalry & Saltcoats

Leader: Dr Colin MacFadyen.

Leaving Gregory Building at 9:00, returning at 18:00, travelling by coach

News and Topical Articles

A Scottish Geology Trust

Scotland's Geodiversity Charter has established itself as a national reference point for geology in Scotland. It is the work of the Scottish Geodiversity Forum under the imaginative and energetic leadership of Angus Miller. Its successive versions have been produced with minimal resources and a great deal of voluntary effort. The success of the Forum in this and other ventures have had the consequence that the Forum has reached the limit of its resources. If its work is to continue it will need to establish a sound financial basis and the means to realise the aims of the Charter at national level.

This development has emerged at the same time as a recognition of a need for a voice and a resource base for geology in Scotland. There is an evident need for support for the abundant areas of geological interest in Scotland. At least this needs appropriate availability of information about sites, access to sites and conservation of sites for the benefit of visitors in general and not limited to geologists. Education in geology for young people has become a neglected area. A recent imaginative initiative for introducing young people to geology through the Geobus project run by St Andrews University has been discontinued for lack of financial support.

The establishment of Geoparks, some of them in areas of sparse population, has made clear the need for increased financial resources and a stronger voice for geology in dealing with government. Projects need to be developed in collaboration with local communities.

A response to this state of affairs is being created to continue the work of the Forum and build on the work of existing organisations. Representatives of the Geological Societies, Universities, Geoparks, Museums, Government, and the British Geological Survey met in Stirling in February and agreed to set up a new Scottish Geology Trust. Work on this is in hand and will be considered at a further meeting in May. A further report will follow that meeting.

Walter Semple

Fossil Grove Update

Historic Environment Scotland (HES) has just published a new 3D digital model of Fossil Grove allowing users to explore the city's ancient forest from a unique perspective.

The interactive model has been created through a combination of 3D laser scanning and photogrammetry. This process involves taking hundreds of overlapping images which are then combined to create a 3D model, enabling users to explore the site in detail from a range of different angles. As well as allowing a new way to explore the site, the digital model will also play an important role in protecting Fossil Grove for the future.

HES has been working with The Fossil Grove Trust and Scottish Natural Heritage (SNH) to ensure the long-term conservation of the fossils.

Click on the picture, or access the model on-line at:

<https://sketchfab.com/3d-models/fossil-grove-victoria-park-glasgow-011bf3a1dc9a44e1b32fcad518f283df>



Sarah Hamilton, conservation scientist at HES, said: *“Fossil Grove is a unique geological gem, and we’ve been working with partners over the past few years to support efforts to conserve and protect the site with the service and expertise of our Conservation Science and Digital Documentation teams. Recently, water penetration into the Victorian building that houses the fossils has caused discolouration and decay to some of the exhibits. We have undertaken 3D laser scanning and mineralogical analysis to help gain a better understanding of the site and these issues. As well as being a fantastic tool for interpretation, this new digital model is going to be of huge value to our work at Fossil Grove, as it’s allowing us to access even more detailed base information to create our risk map of the surface condition, which will help inform where we focus conservation efforts.”*

Andy MacGregor of SNH said: *“This is a wonderful example of how modern technology can bring the ancient past to life and help to reconnect people with what was going on in their backyard hundreds of millions of years ago. It is amazing to experience the Carboniferous forest floor as an almost tactile plaything, but this not just fun: the 3D modelling is an invaluable tool to help us study the fossils and, most urgently, conserve them for the enjoyment of future generations.”*

The model can also be accessed via the new Fossil Grove website and also on Facebook. The pages also contain up-to-date information about opening times, events, background geology and updates on the progress of the conservation efforts and the future of the building. Try out for the new Earthcache - link on the website

Guided Tours as part of Geoweeek: Sat 11th May 12-4

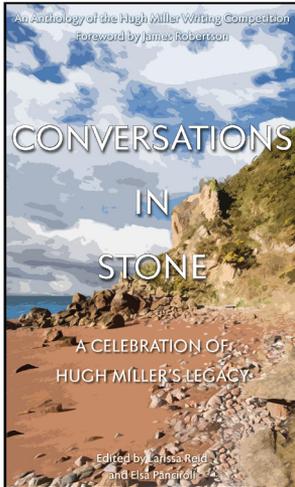
For more information see:

www.fossilgroveglasgow.org



Frame from one of four new time-lapse cameras setup to monitor water ingress

New Book: Conversations In Stone: A celebration of Hugh Miller's legacy.



"Nature is a vast tablet, inscribed with signs... and becomes poetry in the mind when read." – Hugh Miller

A four-day wedding in Stonehaven ends with a toast from a fossil-collecting bus driver. The first 'king' of Scotland scampers through the lush Jurassic undergrowth, in search of a feast. Hugh Miller walks the streets of Cromarty, his pockets stuffed with hammers, hunting the ghosts of ancient fish and drowned fathers.

This new book was launched on 2nd March 2019 at the Kelvingrove Art Gallery and Museum in Glasgow, and celebrates the enduring legacy of one of Scotland's most prolific Victorian-era scientists, Hugh Miller (1802-1856). The book comprises the winning prose and poetry entries from the Hugh Miller Writing Competition, along with a foreword by Scottish author James Robertson, and essays by leading writers including Robert Macfarlane (The Lost

Words, The Wild Places, Landmarks), BBC Wildlife contributor Kenny Taylor, renowned geologist Bob Davidson, MBE, and many more. The publication has been made possible by the generous support of the Scottish Geodiversity Forum, The Friends of Hugh Miller, Edinburgh Geological Society, the Andrew Tannahill Fund for the Furtherance of Scottish Literature at the University of Glasgow and Scottish Natural Heritage.

A self-taught geologist with a fascination for Devonian fish fossils, Hugh Miller is also widely recognised for his role as a founder of the Free Church of Scotland and editor of the Witness newspaper in Edinburgh. His cottage in Cromarty, the Black Isle town of his birth, is a popular visitor attraction. Miller wrote several popular geology books, and was responsible for introducing Victorian society to the rich stories of Scotland's culture, landscapes and fossils.

Larissa Reid, organiser of the Hugh Miller Writing Competition and volunteer with the Scottish Geodiversity Forum and The Friends of Hugh Miller charity, says *"We were inspired to compile this book by the unique, high quality entries we have received for the writing competition since it began in 2015. This publication is a testament to Miller's determination to enthuse others about Scotland's geoheritage."*

"The beautiful writings in this book confirm that Miller's inspiration as scientist and chronicler of the natural world is very much alive, and they validate our own efforts to sustain his legacy," adds Martin Gostwick, Secretary of The Friends of Hugh Miller charity.

Hugh Miller (1802-1856) was a self-taught pioneering Scottish geologist, folklorist and social campaigner. He began working life as a jobbing stonemason, and went on to achieve great acclaim as a national newspaper editor, church reformer and best-selling author on geology.

His life and work are presented in the Hugh Miller Museum and Birthplace Cottage in the Black Isle town of Cromarty. In 2014 and 2015, two sailing journeys with crews of geologists, writers, musicians, geographers and other talented people took place in the islands of Scotland's west coast in homage to Hugh Miller. The first Hugh Miller Writing Competition (2015-2016) produced a wide variety of beautiful prose and poetry inspired by Scotland's geology and Miller himself; a true testament to the enduring legacy of Miller himself.

Hugh Miller was a prodigious writer, editing the Witness newspaper in Edinburgh from 1840 until his death, and publishing many books including his important contributions to Scotland's geology: The Old Red Sandstone (1841), Footprints of the Creator (1849), The Testimony of the Rocks (1857), Sketch-book of Popular Geology and The Cruise of the Betsey (1858).

Online orders via the Edinburgh Geological Society's website: <https://www.edinburghgeolsoc.org/publications/geological-excursion-guides/#conversations-in-stone>

Scottish Geodiversity Forum

The Scottish Geodiversity Forum held its AGM recently, and the main topic of discussion was the setting up of a new Scottish Geology Trust (see earlier article)

The Scottish Geodiversity Forum promotes Scotland's geodiversity, and seeks to influence national and local policies.

It is the Scottish national forum for geoconservation groups, Geoparks and other organisations, and interested individuals. The Forum promotes the role and value of geodiversity in education, community involvement and health, the development of tourism and the wider economy. The Forum published Scotland's Geodiversity Charter in 2012. For more information see: www.scottishgeology.com



The Forum is holding a training day on Local Geodiversity Sites on Saturday 27 April 2019, times 12 noon - 4.30pm approx at the Birnam Institute and the Hermitage, Dunkeld. There's already had a great response to this training day, aimed at volunteers who would like to get involved in identifying LGS in their area, and Local Authority planners who would like support in enhancing recognition of geodiversity in Local Development Plans and Biodiversity Action Plans. This will be an informal day to facilitate discussion between interested parties, and involve a visit to a potential LGS to get hands-on practice in assessing the geodiversity value of a local site. Let Angus Miller know if you'd like to come along, email chair@scottishgeodiversityforum.org

Strathclyde Geoconservation Group

SGG are hosting a Family Activity Day on **Saturday 6th April** as part of the events and activities associated with the visit of Dippy to the Kelvingrove Museum. This will be held in the Education Centre of the Museum from 11am till 4 pm.

Many activities are planned which will cater for all ages. These include making badges and playing a giant game of snakes and ladders – (or paths and ski trails!) This is associated with the Scottish Geodiversity Forum’s project ‘51 best places to explore Scotland’s Geology’. For more information on this go to www.scottishgeology.com/best-places/.

There will be a few quizzes: identifying rocks, naming the dinosaur and a special Dippy quiz with surprise prizes.

Link here to the event <https://www.list.co.uk/event/1151394-geoconservation-family-activity-day/>

We hope to have the help of Sarah Arkley from BGS who aims to bring along a fascinating array of rocks samples as well as a fossil-rubbing tray and possible gold panning!

There will also be a chance to make your own ammonite out of clay and many other activities. There be information on the geology around Glasgow and further afield.

All this depends on the help of a number of people, so we are hoping that many members of the Society will come along and not only take part but stay a little and help.

The work of the Group continues: a new leaflet for the Necropolis is nearing completion and work on sites in Renfrewshire and North and South Lanarkshire as part of these Councils geodiversity audits is ongoing.

Please email Margaret Greene for more information margaretgreene@btinternet.com

Ted Tremlett

We are saddened to note the death on 25th February 2019 of Ted Tremlett, aged 92 years who was the Society President from 1982-1984. He was a lecturer at the Geology Department and was elected an Honorary Member of the Society in 2005 (proceedings for session 148, p.11). His research interests were varied, but mostly related to the Caledonian Orogeny in North Wales and Ireland including volcanism and micropalaeontology.

The full notice in the Knutsford Guardian is as follows: DR WALTER EDWARD “TED” TREMLETT On 25th February 2019, peacefully in hospital and of Knutsford. Ted, aged 92 years, the beloved husband of the late Sheila, father of Catherine and grandfather of Henry & George. Funeral service and committal will take place at Macclesfield Crematorium on Tuesday 19th March at 11:20am. Family flowers only please, donations if wished for Macmillan Cancer Support.

Selected Publications:

Tremlett, W.E (1959) The structure of the Lower Palaeozoic rocks of the Arklow district (Ireland). Quarterly Journal of the Geological Society, 115, p17-40

Tremlett, W.E (1962) The geology of the Nefyn-Llanaelhaiarn area of north Wales. Geological Journal 315, p 7-176

Tremlett, W.E (1964) The geology of the Clynnog-fawr district and Gurn Ddu hills of Northeast Llyn. Geological Journal, 4, p207-223

Downie, C., & Tremlett, W.E (1968) Micropalaeontological evidence on the age of the

Clara group (south-east Ireland) Geological Magazine, 105, p401-401

Tremlett, W.E (1965) The geology of the Chwilog area of southeastern Lleyn (Caernarvonshire) Geological Journal 4, p435-448

Tremlett, W.E (1972) Some geochemical characteristics of Ordovician and Caledonian acid intrusions of Lleyn, North Wales Proceedings of the Yorkshire Geological Society, 39 p33-57

Tremlett, W.E (1963) Stress Chronology of the Mid-Paleozoic Orogeny of the British Isles. The Journal of Geology, 71 p793-800

Tremlett, W.E (1970) The Caledonoid faults of northern Lleyn (north Wales), Geological Magazine, 107, p235-247

Tremlett, W.E (1997) Geochemical variation in the Penmaenmawr intrusion (North Wales), Geological Journal, 32, p173-187

Dippy's visit to Glasgow

Ann Ainsworth would like to pass on her thanks to everyone for being so willing and enthusiastic about participating in the Local Societies Day at Kelvingrove on 16th Feb. The Society may like to know that we've had over 257,000 visitors to Kelvingrove over the first 6 weeks that Dippy has been with us. More than any other venue had for the whole duration of its time with them.

Geoweeek 2019



GeoWeek is a new BGS initiative that aims to promote 'active geoscience' via a nine-day 'week' of fieldwork activities taking place across the UK between 4 and 12 May 2019.

GeoWeek seeks to introduce as many members of the public to geoscience as possible, mainly through outdoor activities such as urban, rural or coastal fieldwork.

A local event, using the new Earthcaches, is planned for the Fossil Grove on Saturday 11th May. Check out the Geoweeek website for other events: www.bgs.ac.uk/geoweeek/home

Glasgow Guide

Work is starting on the new Glasgow Guide, this will be a collaborative effort from a number of Society Members, both professional and amateur. We are looking for more volunteers to visit sites, take some pictures, GPS readings and check the existing descriptions. If you fancy helping out please contact Bob Diamond (Publications Officer). Other publications in the pipeline are a revised Gigha Guide and new guides to Skye and Mull. Future plans include guides for the Loch Lomond & Trossachs NP and Ayrshire.

Notices

Subscriptions

The annual membership fees of the Society for this session (161) which began 1st October 2018 are as shown below. The annual fee became payable on that date.

We encourage those few who have yet to make their annual subscriptions for the current session (161) to do so.

The membership fees for the Society are as follows:

- **Ordinary Membership** (including Scottish Journal of Geology): **£25**
- **Associate Membership** (available to those over 60, or spouses of Ordinary Members, or members of the Edinburgh Geological Society): **£12.50**
- **Junior Membership** (available to those under 21, or full time undergraduates, or recent (4 years) graduates : **£6.25**. (Junior members who pay a £6.25 supplement will also receive the Scottish Journal of Geology.)

If you require to set up a Bankers Standing Order (which is the Society's preferred arrangement) as your routine method for future payments (payment for the next session's membership falls due on the 1st October), please notify the Membership Secretary, who can provide you with the appropriate form to arrange this with your bank.

Alternatively you can download this form from the membership section of the Society's website and follow the instructions given there.

Address changes: The Society maintains the only mailing list of Society members. If you are changing your postal address or your e-mail address, do not forget to let the Membership Secretary know by post, e-mail or telephone. Otherwise newsletters and SJG mailings will go astray.

Those who customarily pay by cheque can send a cheque payable to the Geological Society of Glasgow at the address below:

The Membership Secretary: Campbell Forrest, email: memsec@gsocg.org

New Members

We extend a warm welcome to the following new members:-

Victoria Yaneske

Simeon Brown

Daryl Sawyer

Robert Bower

Events from other geological societies

Edinburgh Geological Society www.edinburghgeolsoc.org

Wednesday 24 April 2019, 7 pm Corstorphine Hill Leader: Ken Shaw

Wednesday 1 May 2019, 7 pm Around Castle Rock: a Geological Walk Leader: Andrew McMillan, Lothian & Borders GeoConservation

Wednesday 8 May 2019, 7 pm Hopetoun Shore – joint excursion with Botanical Society of Scotland Leader: Angus Miller, Lothian and Borders GeoConservation and David Chamberlain, Botanical Society of Scotland

Wednesday 5 June 2019, 7 pm Geology of Craiglockhart Hills Leader: Richard Smith

Wednesday 19 June 2019, 7 pm Pavement Palaeontology Leader: Alistair J. McGowan, BioGeoD

Wednesday 17 July 2019, 7pm Binny Craig Leader: David Stephenson

Wednesday 21 August 2019, 7pm Cockenzie Leader: Alistair J. McGowan

Aberdeen Geological Society www.aberdeengeolsoc.org.uk

11th April- Andrew MacMillan - Building Stones of the Highlands and Islands

Highland Geological Society www.spanglefish.com/highlandgeologicalsociety

13th to 18th April - The Isle of Eigg, Self-led

9th May - The Stac Fada impact ejecta deposit and the Lairg Gravity Low: Evidence for a buried Precambrian impact crater in Scotland, Dr Mike Simms, National Museums NI. NB this is a talk to be held at the NWHG Rock Stop, Unapool at 7.30PM

10th to 13th May - Assynt, Professor Ian Parsons, Lochaber Geopark

16th June - Building Stones of Inverness, Andy Moffat, HGS

21st July - Glen Feshie, David Jarman, HGS

25th August - Kintail and Rattigan, Andy Moffat & David Longstaff, HGS

9th October - Dinosaurs and Ice, Alison Tymon

6th November - An introduction to the glaciation of the Inverness area, Jon Merritt, BGS

11th December - Giant zircon crystals from the Scottish Lewisian: new insights from old rocks, Dr John Faithfull, Hunterian Museum, University of Glasgow

The Geological Society of Glasgow

Hon. Secretary: Walter Semple email: sec@gsocg.org

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