

THE GEOLOGICAL SOCIETY OF GLASGOW

Registered Scottish Charity No. SC007013

President: Dr Brian Bell BSc (Hons) PhD

www.geologyglasgow.org.uk

November 2015

158/2



A view is from the island of Sanday, looking south towards Rum. The sea-stack, Dun Beag, comprises a near-vertical contact between boulder conglomerates and basaltic lavas of the Skye Lava Field. This is the topic of the GSG December 2015 Meeting when Dr Brian Bell, the retiring President will address the Society.

In this newsletter:

- Lectures for December and January
- AGM papers

Lecture meetings

All lectures are held in the *Gregory Building, University of Glasgow, Lilybank Gardens, Glasgow G12 8QQ* (unless otherwise noted). Meetings commence at 7.30 pm.

Thursday 10th December 2015

AGM and Presidential Address

Dr Brian Bell, (University of Glasgow)

Palaeogene magmatism in the British Isles: recent advances and current thinking

Brian will outline the current understanding of the magmatism that occurred in the British Isles during the Palaeogene period. He will present field observations, together with geochemical and geophysical data, to explain the nature of the volcanic and intrusive activity in this spectacularly diverse magmatic province and set it in the wider context of the North Atlantic Igneous Province, which developed prior to and during the initial stages of ocean floor spreading

Brian is stepping down as President of the Glasgow Geological Society after his 3-year tenure and the Society is very grateful for his leadership over this period. Brian believes that the natural laboratory for the Earth Sciences is in the field, and so that is where most of his research starts, and where he trains and enthuses future generations of Earth Science students. Much of his research has involved the Palaeogene lava fields in the North Atlantic Igneous Province, in NW Scotland, the Faroe Islands and in Greenland - attempting to understand the complex interplay between volcanism, sedimentation and tectonism. At present more money is spent exploring the volcanic prone NE Atlantic Margin for oil and gas than anywhere else in the UK. Brian is a recent recipient of the Edinburgh Geological Society Clough Medal.

Thursday 14th January 2016

Dr Jim Morrison, (GSG Meetings Secretary 1990-2015)

Jim has been Meetings Secretary for the Society for 25 years - a mammoth undertaking for which the Society is hugely indebted. Jim will present a personal review of this quarter century of meetings and lectures which he has been involved in organising. This included Sessions 133 to 157 along with parts of Sessions 132 and 158. He intends to preface his comments on the lectures with some reflections on his own route into geology and his association with the society.

Thursday 11th February 2016

Joint Celebrity Lecture with Edinburgh Geological Society.

Professor Stephen Hesselbo, (Cambourne School of Mines)

A full summary of Stephen's lecture will appear in the next newsletter.

Field Excursions 2016

Knapdale

Date: Saturday, 16 April 2016 - Monday, 18 April 2016

Leader: Dr Iain Allison (University of Glasgow)

The middle Dalradian Argyll group rocks are well exposed on coastal sections in Knapdale and the Tayvallich peninsula. Here the metamorphic effects are low and sedimentary structures can easily be seen in the deformed rocks. The rocks are folded on a variety of scales from metre to many kilometres scales. The relationships between bedding and the tectonic fabrics is very well displayed and the relationship between layer thickness and fold wavelength can be demonstrated.

There is a wide variety of rock types present in this area. Massive pebbly sandstones are found adjacent to well-cleaved phyllites which were formerly mud rocks. Limestones, now converted to marble, are present and towards the top of the stratigraphic section the pillow lavas of the Tayvallich volcanics occur. Not all of the magma reached the surface and many sills occur within the sedimentary sequence. These dolerites are now chlorite-epidote greenstones and often form the high ground.

This excursion will examine the rocks in the Kilmory Bay – Point of Knap section and on the west side of the Tayvallich peninsula.

We would like to have an indication of interest in this trip; so if you would like to join it, or wish to have further details, please e-mail the residential excursion secretary, Katerina Braun restrips@gsocg.org

Pricing and other Information

The price will be announced when the numbers are known and the accommodation arranged. We will travel by private car, and accommodation will be B&B in the Knapdale area (3 nights). Travel arrangements will be made when the numbers are known and the accommodation arranged.

Other Field Excursions

Details of the trip to Northern Ireland in September 2016 (postponed from May 2015) will be included in the next newsletter.

A day excursion on 25th June 2016 to Siccar Point has been provisionally arranged. Full details in the spring newsletter along with the other day excursions that are currently in the planning process.

News and Topical Articles

Fossil Grove

The state of the Fossil Grove continues to be of concern to the Society.

The AGM of the Trust was held on the 16th November and agreed the appointment of Walter Semple as a Trustee representing the Society in place of Iain Allison who has resigned. At the meeting it was confirmed that Glasgow Life (ie the Glasgow Museums service) does not wish to be financially involved and therefore the proposed Heritage Lottery Bid for a new building is on-hold until some form of new partnership and business plan can be formulated.

The Society, in conjunction with other partners, is to undertake a feasibility study to assess whether a bid for UNESCO world heritage status could be undertaken.

For more information contact Margaret Greene at sgg@gsocg.org

Shetland and North West Highlands Geoparks gain UNESCO recognition



On November 17th, UNESCO – the United Nations Organisation for Education, Science and Culture – announced a new programme that creates UNESCO Global Geoparks. This is the first new UNESCO programme to be established in over 40 years and puts the Global Geoparks, which formerly operated with UNESCO’s informal support, alongside UNESCO’s World Heritage Sites in status.

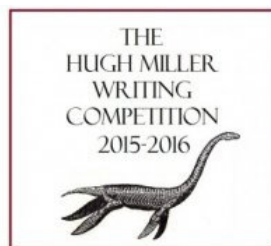
Seven geoparks in the UK have been granted UNESCO recognition under the new programme. Two of these, Geopark Shetland and North West Highlands Geopark, are in Scotland. The others are English Riviera, North Pennines, Forest Fawr, GeoMôn and Marble Arch Caves.

More information can be found on the Open University Geological Society and Shetland News websites.

Hugh Miller writing competition

A competition for geology enthusiasts of all ages; closing date 18 March 2016

Testimonies of the Rocks: the Hugh Miller writing competition is inspired by the geological and landscape writing of Hugh Miller, 1802-1856, and organised by the Scottish Geodiversity Forum, The Friends of Hugh Miller and other partners.



Hugh Miller was self-taught and was a prolific creator of poetry and prose exploring and celebrating Scotland’s landscapes and the geology that makes them special. Entries from under 16s as well as from older enthusiasts (i.e. over 16s) are invited. The writing is to be directly inspired by the work of Hugh Miller and could take several different forms, for example, non-fiction, fiction or poem.

See details and rules at <http://www.scottishgeology.com/hughmiller>

Notices

Scottish Journal of Geology

This is a reminder that Geology Society of Glasgow members who are eligible to receive the paper version of the Scottish Journal of Geology now have free online access to the full content of the journal, including back issues, via the Lyell Collection. Full details about access can be found in the last Newsletter (available from the GSG website). If you have any problems with access to the Lyell Collection, please contact the Hon. Secretary, Simon Cuthbert sec@gsocg.org

Subscriptions

Thank you to all those members who have renewed their subscriptions for the current 158 Session.

A separate reminder note accompanies this newsletter for those who have yet to renew their subscriptions or who have still to update their bankers order to take account of the subscription increase that became payable from the start of Session 157. If you receive your newsletter by e-mail you will already have been sent a reminder of a missed or under payment by separate e-mail.

If you require to set up a Bankers Standing Order as your routine method for future payments (which is the Society's preferred arrangement), please notify the Membership Secretary. A form can be sent to you electronically or by post.

Annual subscriptions for Session 158 were due from 1 October, 2015 at the following rates:-

- 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 25, or full time undergraduates, or recent (4years) graduates : £6.25

Note that the Scottish Journal of Geology is only sent to Ordinary Members and to those Junior members who pay an annual supplement of £6.25.

Cheques, made payable to Geological Society of Glasgow, should be sent to the Membership Secretary unless a Bankers Standing Order has been signed. Please indicate the Member for whom payment is being made if not apparent from the cheque e.g. a cheque from 'Anyone' paying for a member 'Someone else'.

Address Changes

The Society maintains the only mailing list of Society members* and any changes should be sent by post or e-mail or communicated by telephone to the Membership Secretary.

* Labels for all mailings, including the Scottish Journal of Geology are produced by the Society from the membership record.

Gift Aid

Any subscription / donation made to a charity by an individual paying UK tax can be treated as a Gift Aid. This means that the Society can reclaim the tax you have already paid on amounts you pay to the Society as a subscription or donation. Currently we can reclaim 20p on every £1.00 paid, thus increasing the value of your subscriptions to the Society (e.g. we can reclaim £5.00 for a £25.00 subscription).

Many members have already signed up to Gift Aid which means that we have approximately an additional £800 pa available to support sponsorships that promote and spread interest in geology and geodiversity. Our thanks to those who have already signed up to Gift Aid.

If you are not currently signed up to support GSG through Gift Aid a form is available from the Membership Secretary. If you complete this form and return it to the Membership Secretary at the above address by post or by e-mail, this will enable the GSG to reclaim monies from HMRC. You do not need to do anything other than complete the form and return it to us.

Membership Card

Your card not only gives information on the lecture programme, but can also be used to provide proof of membership when necessary. To validate it you need to add your name and reference number. This number is printed on the mailing label used for this newsletter. The number will also be repeated on the label for the next newsletter or can be obtained from the Membership Secretary at any time by phone, e-mail or post.

When joining the University Library, proof of identity e.g. photo driving licence, passport, travel card, matriculation card (through an Adult Education Class) will also be required, in addition to the presentation of a membership card for Session 158.

Newsletter Send-out: By post or by e-mail?

Sometime after many of us joined the Society we began sending out the newsletter by e-mail to those who wished this (from Session 150). We feel sure also since that time many are now on e-mail that were not when they first joined. However unless you have since given us your e-mail address we can only send you the newsletter by post.

The development of the newsletter now incorporates colour pictures and electronic links to other areas of interest. The hard copy version of the newsletter does not offer these advantages. So if you would prefer the option of receiving the e-mail version, please e-mail the membership secretary. The added benefit to the Society is that this option will also save administrative time as well postage and reprographics costs.

New Members

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

Ms J Brookes	Isle of Harris
Mrs S Browne	Milngavie
Mr C A Kinloch	Bishopton
Ms A J Milligan	Glasgow
Mr S Vardy	Glasgow

Courses at the Glasgow University Centre for Open Studies

Geology in the Field

Wednesdays 10:00-13:00 from 20th April 2016 (6 meetings) Tutors: Dr Mike Keen, Dr Iain Allison, Dr Jim MacDonald, Dr Alasdair McGowan.

Field studies and examining rocks in the field are the basis of all geology. We will examine the geology and geomorphology of a series of areas within easy reach of Glasgow. You will be shown how to identify a range of rocks and geomorphological features within the landscape by experienced fieldworkers. There will be five full-day excursions by private car. Walking will generally be easy and no prior knowledge of geology needed. A short preliminary meeting will be held the week before to discuss field sites and travel arrangements. Daily field trips will be held 27/04/16 - 25/05/16

Death of oceans, birth of continents, makers of mountains: A guide to subduction zones.

Saturday 10:00-16:00 6th February 2016 (1 meeting) Tutor: Dr Simon Cuthbert

Subduction zones are belts of dangerous earthquakes and volcanoes marking the lines where the Earth's tectonic plates are destroyed. But it is also here, in the "subduction factory", where the continents are made. A lot of the geology we see is made at subduction zones. This one-day course introduces the causes of subduction, their seismic and volcanic activity, the types of rocks (often strikingly beautiful) created by it and the processes that create them.

Information about how to contact the Centre for Open Studies for information about courses and enrolling is available here: <http://www.gla.ac.uk/study/short/contact/>.

Events from other geological societies

Edinburgh Geological Society www.edinburghgeolsoc.org

9 December 6.30pm Fellows' Night & Social Evening. BGS, Murchison House, Edinburgh

This meeting, close to the anniversary of the foundation of the Society, is a chance to meet other members informally, with a series of short talks given by members, followed by a wine (or soft drinks) and cheese reception. Admission to the Reception will be £6, payable on the night.

Programme:

Mike Browne/Graham Leslie- 'Geology in 3D - Spireslack'

Caroline Paterson - 'Testimony of the Rocks'

Isla Simmons/Rachel Whitty - 'Volcanic Monitoring in Iceland'

Richard Smith - 'Long Excursion to Norway'

13 January 2016, 7.30pm Dr Stephen Brusatte, University of Edinburgh
Scotland's Jurassic Park: The Isle of Skye and New Fossil Discoveries by the PalAlba Group

27th January, 7.30pm Hamish Johnston, great-great-grandson of Professor Matthew Heddle (1828-97)

Matthew Forster Heddle, Mineralogist, Mountaineer and former EGS president

Aberdeen Geological Society www.aberdeengeolsoc.org.uk

3rd December: Paul Bishop (University of Glasgow). Knickpoints: Messengers in the Landscape.

17th December (Christmas Lecture and Party)

Ben Kneller (University of Aberdeen). Sedimentation in Blue Water.

11th February 2016: Bob Holdsworth (University of Durham). Fractured Reservoir Characterisation using onshore Lewisian and Devonian analogues in NW Scotland

Highland Geological Society www.spanglefish.com/highlandgeologicalsociety

9 December Adventures of a Baby Geologist in Hawaii - Rhona Fraser (HGS)

13 January The Work of Matthew Foster Heddle – Hamish Johnston

17 February The Inverness Museum Geological Collections – Cait McCulloch Curator (Collections Engagement), Inverness Museum & Art Gallery. NB: this event will be held at the Inverness Museum, commencing at 2.00PM

Westmorland Geological Society www.westmorlandgeolsoc.co.uk

January 20th 2016 Dr John Nudds – School of Earth Atmospheric and Environmental Sciences, Manchester. Dinosaur Embryos

Articles for the Newsletter:

We would like to include short topical article(s) in each Newsletter. If you have news of a recent event or discovery, opinions on geological matters, or wish to let people know about aspects of geology in the Glasgow area or the wider world, then please send your article to the Hon Secretary.

Dr Simon J Cuthbert, Honorary Secretary,

The Geological Society of Glasgow,

∕ School of Science, University of the West of Scotland,
Paisley Campus, Paisley PA1 2BE

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**Geological Society of Glasgow
Annual General Meeting
Thursday 10th December 2015**

Agenda

1. Welcome
2. Apologies
3. Minutes of the Annual General Meeting of Session 156 held on Thurs 11th December 2014
4. Reports
 - a. *President's report*
 - b. *Meetings Secretary's report*
 - c. *Day Excursions report*
 - d. *Residential Excursion report*
 - e. *Library report*
 - f. *Publications Officer's report*
 - g. *Proceedings Editor's report*
 - h. *Scottish Journal of Geology Editors' report*
 - i. *Website report*
 - j. *Membership Secretary's report*
 - k. *Strathclyde Geoconservation Group*
 - l. *Geodiversity: Argyll and the Islands*
 - m. *Treasurer's report*
5. Nominations and Election of Office Bearers:
6. AOCB

Item 3: Minutes of previous AGM

Draft Minutes of the Annual General Meeting of Session 157 held on 11th December 2014

WELCOME

The President, Dr Brian Bell, welcomed all present

APOLOGIES

No apologies were intimated.

MINUTES

The minutes of the AGM of Session 156 which was held on 12th December 2013 (as opposed to the date listed in the agenda), were approved and passed unanimously.

REPORTS

The President went through the reports of the various office bearers, copies of which had been sent out to members by email prior to the AGM.

The reports were as follows:-

- The President's report
- Meeting Secretary's report
- Saturday Excursions report
- Residential Excursion report
- Library report
- Publications Officer's report
- Proceedings Editor's report
- Scottish Journal of Geology Editor's report
- Website report
- Membership Secretary's report
- Strathclyde Geoconservation Group
- Geodiversity: Argyll and the Islands
- Treasurer's report

The President asked for any comments on the reports. Dr I Allison commented on the financial situation of the Society, which, despite the increase in room charges, is very healthy. He suggested that in accordance with the charitable aims of the Society more investment should be invested in promoting the Society and geology in general. The Treasurer pointed out that funds had been made available to the publishing of Neil Clark's book on Scottish Gold, on funding a student on the Cruise of the Betsey and on SGG; money has also been spent on updating the website, an outreach tool of the Society.

The President invited any other comments on reports to be directed to the appropriate author; Dr Allison asked that any such comments be minuted; no further comments have been expressed.

NOMINATIONS AND ELECTION OF OFFICE BEARERS

The list of offices coming up for election with nominees, proposers and seconders had appeared in the billet. These were approved by the members present; an additional three ordinary members are required. Mr R Diamond was nominated as an ordinary member; proposed By M Cummings and seconded by M Donnelly.

UPDATE OF THE WEBSITE

In addition to the published report Mr W Gray presented a short illustrated synopsis of the upgrade of the website. He drew members' attention to a few innovations. The slide show on the home page can now be views on tablets and mobile phones. There is a new section on Local Rocks prepared by Emma Fairley; some articles are still to be completed. The accompanying map is interactive with the pins corresponding to all areas where it is hoped to have excursion itinerates. Dr J MacDonald is at present updating the excursion sites on Arran. Bill asked for comments and feed back on this and any aspect of the website; details of the email address can be found on the 'contact us' page of the website.

There being no further business The President introduced the evening's speaker Dr Jim MacDonald who took us on a guided tour through the geology of Namibia.

Item 4: Reports

a. President's Report

This session, the Society has a membership of 356, which includes 20 new members. Eight evening meetings took place on the second Thursday of each month from October 2014 through to May 2015. Speakers were: Dr Peter Treloar (Kingston University); Dr Graham Leslie (BGS, Edinburgh); Dr Jim MacDonald (University of Glasgow); Professor Zoe Shipton (University of Strathclyde); Dr John Winchester (Keele University); Dr Ian Williamson (formerly of BGS, Nottingham); and, Dr Laura Evenstar (University of Bristol).

Our day excursions ran from July through to September 2015 and included the following day trips: July – Rosneath & Loch Long (Dr Iain Allison); July – The Arrocher Igneous Complex (Dr Chris Burton); August – Fife Coastal Path (Emma Fairley); August – Field skills at Loch Ardinning (Dr Simon Cuthbert); and, Fossil hunting at Trearne Quarry (Joint with the Geological Society of Edinburgh, Dr Al McGowan).

The Strathclyde Geoconservation Group (SGG), a sub-committee of the Society's Council, has continued to promote geology in the wider community, investigating a number of new sites as well as continuing work on others. Two other sub-committees, Geodiversity: Argyll and the Islands and Geodiversity Dumfries and Galloway, are also making progress and have investigated a selection of new sites. Members of the Council continue to attend Steering Group meetings for the refurbishing of the Fossil Grove building in Victoria Park. Progress continues to be slow due to a lack of funds, although the Trustees hope to submit a Heritage Lottery Fund bid, possibly in 2016. Funding continues to be provided by Glasgow City Council for any urgently required repairs to the roof and other parts of the building. Visitor numbers were good for the summer 2015 season. Our Society is a member of the Scottish Geodiversity Forum, which includes Geoparks, Museums, SNH, BGS, Geoconservation Groups, other Geological Societies and interested groups/individuals. The aim of the Forum is to promote Scotland's Geodiversity and its value in education, community involvement and health, tourism and the wider economy.

On our website we have a Local Rocks feature, which illustrates the geology of the western part of the Central Belt of Scotland: a very useful portal to some marvellous (geological) localities. A Guide to the Geology of Islay (by Webster, Anderton & Skelton) was published in 2015; details of this book and other publications available from the Society bookshop are available on our website. Our website is under continuous development and upgrading thanks to Bill Gray and I invite you to explore its many useful features and data resources.

Brian Bell

b. Meetings Secretary's Report

February 2014 flood victim Peter Treloar made it to Glasgow from Kingston University this time on 9 October to open Session 157 with his postponed talk on minerals – 'from mines to mountains'. Mountains are something we associate with BGS Edinburgh

stalwart Graham Leslie from his extensive works in the Scottish highlands. This time, on 13 November, hills were replaced by coasts and Caledonia by Mona when he gave us a whole new perspective on Anglesey – “its accretion and tectonic amalgamation”.

On 11 December, our AGM was accompanied by a beautifully illustrated talk by clarinet-playing (though not on this occasion!) past-President Jim MacDonald. Namibia is not a place that many can claim intimate knowledge, but Jim showed that it is more than the scarily-named Skeleton Coast.

Mid-decade, otherwise known as 15 January 2015, opened with Zoe Shipton from Strathclyde University giving a very clear exposition of the ins and outs (as it were) of fracking in “UK Shale gas: frack on, frack off or frack well”. Well, frack me!

John Winchester, formerly of Keele University, is perhaps best known to us for his work on metamorphism in the Scottish highlands, but has long had an interest in the Palaeozoic ‘assembly’ of mainland Europe. On 12 February, he talked about “Recognition and origins of accreted terranes.” Some of these terrane boundaries have little in the way of topographic expression.

Ian Williamson, long-term collaborator of President Brian Bell essayed to persuade us that the early Palaeogene lava fields of NW Scotland are NOT “monotonous piles of old, cold and very boring basalt”. His examination of the variety of rock types and structures present convinced me at any rate. Ian is veritable mountain goat and gets to places, for example on the south coast of Mull, so vertiginous that I for one felt in need of a lie down!

At the risk of being accused of sexism, it was charming – at least for this old ‘gentleman’ - to be addressed by a second geologist of the female persuasion when Laura Evenstar talked to us. She was accompanied from Bristol by her baby daughter, Autumn – a first for the Society, I believe. Laura’s spectacular photos showed us the Atacama Desert and its gigantic mineral extractions – we have indeed been taken to some exotic locations this session!

The session’s meetings closed on 14 May with Members’ Night and its interesting and varied programme of talks and demonstrations by various members of the Society. We thank them most warmly.

Jim Morrison

c. Day Excursions report

04/07/15 Rosneath Peninsula, Dr Iain Allison; 16 participants.

25/07/15 Arrochar Igneous Complex, Dr Chris Burton; 19 participants.

08/08/15 St Monans Coastal Walk, Emma Fairley; 15 participants.

15/08/15 Loch Ardinning Nature Reserve, Dr Simon Cuthbert; 8 participants.

05/09/15 Trearne Quarry, Dr Al McGowan; 14 participants.

Our first outing of the new season was to inspect various outcrops on the coastline of the Rosneath peninsula. The weather was generally fine and much enjoyed by the

midges who also gathered when we grouped together for excellent descriptions of the local geology from Dr Iain Allison. We moved between several locations by bus as well as short walks along the seashore. A change of bus company to Abbey Coaches this year was I believe well received as I chose to increase comfort levels at a small increase in cost.

Our second excursion involved considerably more walking as we left the bus at the Inveruglas Visitor Centre and meandered up Glen Loin gaining an understanding of the Arrochar Igneous Complex. The weather was dry and sunny right up to the final outcrop we examined at which point a gentle rain kept us cool for most of the return journey back down the glen. I have walked in this area several times so it was especially interesting for me to gain an understanding of how the landscape was shaped over the millennia. Many thanks to Dr Chris Burton for providing this information in his usual genial manner.

Our third trip involved the most travel as we all bussed through to the Fife coastal resort of St Monans. Fellow council member Emma Fairley very kindly agreed to lead this expedition and I can only say that her clear explanations and bountiful knowledge belied the fact that this was her first outing as a geological tour leader. We gained some background knowledge about St Monans itself then set off for a generally level walk around three miles down the coast. The weather was glorious and frankly we would all have had a wonderful day out even without the geology! The day was rounded off nicely by a visit to a farm shop for some ice cream as we awaited the bus coming to pick us up and take us back to Glasgow.

Our fourth trip took a different format as it was a field skills course delayed from last year's programme. This required close tuition so the smaller numbers meant that we did not hire a bus but instead travelled to Loch Ardinning near Mugdock by private car. Dr Simon Cuthbert explained how the early geological mappers painstakingly created the maps we still use today and then also showed us how to use some of the stunning software available free on smartphones that can hugely simplify the task of accurately recording field observations. Another dry sunny day continued our run of good luck with the weather in a Scottish summer.

Our final trip this year was a joint excursion with our friends from the Edinburgh Geological Society. Although many of our members have been to Trearne Quarry in the past, the sheer quantity of fossils available to view meant that it was well worth a revisit for those that knew it and was an absolute delight for those visiting it for the first time. Dr Al McGowan informed us of the geological history of the rocks in the quarry, and GSG member Gary Hoare who lives nearby and visits the quarry regularly was incredibly knowledgeable in identifying the many varied fossils that were drawn to his attention. Yet again we were lucky enough to enjoy a dry and sunny day for our excursion and finished the day off by a visit to "The Canny Man" near Lugton for an excellent High Tea.

My policy this year was to charge a deposit on booking an excursion and then add an additional charge on the bus to ensure that the society broke even on the cost of each trip. This of course means that the attendees took a risk on the overall cost of the trip, but as this did not cause any problems I am aware of, I intend to carry on with

this method of payment next year. Many thanks to those who came along to learn a little more about our surroundings and enjoy a sociable day out with their fellow GSG members.

Roy Bryce

d. Residential Excursion report

The planned residential trip to Northern Ireland in September 2015 was postponed until 2016.

Katerina Braun

e. Library report

The Society's library has, over the session, both grown and has had to accommodate our journal collection within the same space. The journal collection has, hitherto, been stored separately - but a requirement by the School of Geographical and Earth Sciences for more laboratory space has prompted the move. However, this does mean that key journals are now immediately available in our library and can be borrowed at any time.

Acquisitions

Over fifty new books have arrived this session, including a large number from the collection of the late Professor Brian Bluck. The range of titles and subjects is large including a number of excursion guides (Shetland; South Wales; Falkland Islands; Nova Scotia/New Brunswick), BGS district memoirs (Scotland), sedimentological texts, and palaeontological works. The British Geological Survey continues to provide us with up-to-date geological maps of the whole of the UK, including new versions of the 1:50 000 sheets for Crianlarich and Killin, the former filling a long-standing gap in coverage. At other scales are the William Smith 1815 Geological Map (Facsimile) and the NERC Geological Map of Britain Bicentennial edition.

All the Society's maps are available for loan and can be used in the field. Those planning excursions next summer (or for the hardy even sooner) should consult the Librarian on meeting nights (in the Society's Library) where the relevant maps can be provided.

Chris Burton

f. Publications Officer's report

The bookshop has had another busy year, slightly complicated by some reorganisation of the store room where our books are housed. We have been able to provide several new books for members and they have all sold very well. The availability of the Guides to the Geology of Madeira and Gigha via the web has also continued to attract orders from throughout the UK and from abroad. These sales account for about half of our overall sales and a large part of our profits of over £600 for the year.

My thanks to Bill Gray for patiently teaching me how to manage the web selling part of the system.

Mina Cummings

g. Proceedings Editor's report

The proceedings for session 156 were distributed a little later than usual but gave, as always, due to the reports of the Council officers, a comprehensive picture of the work of the Society for the year 2013-2014.

This included an excellent programme of evening lectures and a varied selection of field trips including a trip based on a teaching schedule around the University grounds and a week end trip to Banffshire. For all of these trips I am indebted to the members who provided reports and photos sharing the experience with those who could not be present.

It has been decided by Council that the proceedings should be uploaded to the website and this has been done for sessions 153 to 156.

They can be viewed at <http://geologyglasgow.org.uk> where a notice has been posted indicating how the proceedings can be accessed. My thanks to our webmaster Bill Gray for uploading and managing these PDFs

Mina Cummings

h. Scottish Journal of Geology Editors' report

Unlike some previous years 2015 has seen sufficient submissions for us to produce two full issues for volume 51 with a wide range of topics covered. The most popular papers have been "Ichthyosaurs from the Jurassic of Skye", that exceeded all expectations in the number of hits it received on the web-site, "Mating trackways of a fossil millipede" and a controversial review paper on the "Neoproterozoic to Mid-Devonian evolution of Scotland". Our impact factor is creeping up, and over 5 years is now a respectable 0.870, due to a large extent to our greater exposure online in the Lyell Collection and GeoScience World.

Our more observant readers will already have noticed changes in format that we hope make papers more attractive to readers and authors. In the coming weeks we will be moving to a new online submission and review system that should keep authors and editors better informed of the status and progress of submissions. We would still like to see greater numbers of submissions and remind members and others that we have a system of mentoring for those unused to submitting scientific manuscripts, including students and amateurs.

This year has seen the departure of two long-serving members of the Board. After several years serving as secretary to the Board Al McGowan has resigned, to be replaced as Palaeontological specialist by Breandán MacGabhann, and Rob Duck, after many years of service, is retiring as Quaternary specialist to be replaced by Martin Kirkbride. We are grateful to both of these for their service to the Board and the membership of our two Societies.

Colin Braithwaite

i. Website report

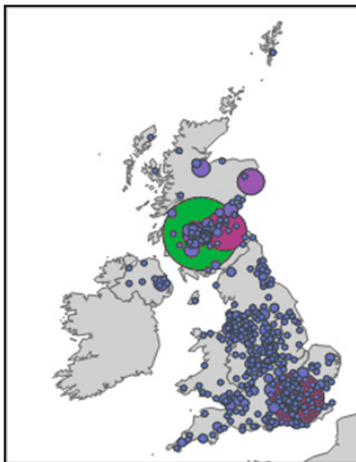
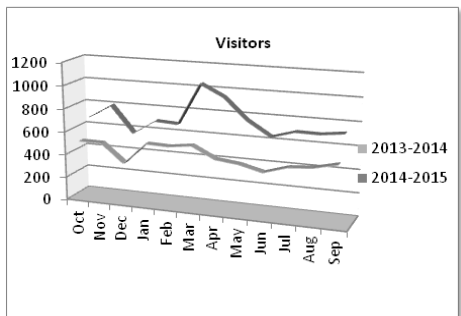
In November 2014, a substantial upgrade to the website was carried out. This involved many small improvements, and two major changes.

There is a new Local Rocks section, containing a beautiful geological map of the extended Glasgow area prepared by the society's website coordinator Emma Fairley. This map contains pins providing links to descriptions of 12 of the best geological sites in the area, and excursion itineraries for the sites are provided. Three of these itineraries, for sites in Arran, have been freshly prepared by Jim MacDonald, and other new itineraries are in preparation. The Local Rocks section also contains new articles about minerals, rocks and fossils.

The website is also now more compatible with mobile devices. In particular, the image rotators on the Home page and the Geoconservation pages now display properly on tablets and smartphones.

Since the upgrade, further new content has been added to the website, including a page listing all the presidents of the society since its inception in 1858, with links to biographical details.

Since the website's launch in January 2011, the number of visits per session has steadily increased. In Session 157 there were 8911 visits to the site, an increase of 20.7% over the total for the previous session (7385). The number of visitors, as opposed to visits, was 6494, an increase of 23.8% over the previous session's total (5344). The chart shows the number of visitors each month for Sessions 157 (2014-2015) and 156 (2013-2014).



The increase in visits reflects increased traffic both from the UK and from abroad. The number of visits from the UK increased from 5548 in Session 156 to 6317. Outside the UK, the three most productive countries were the USA with 723 visits (389 in the previous session), Australia with 176 (131) and Germany with 157 (88). Within the UK, Scotland accounted for 3768 visits (3142 in Session 156), England for 2394 (2298), Wales for 83 (45) and Northern Ireland for 66 (59)

The map shows the amount of traffic from cities within the UK. Glasgow was the most productive city, with 1773 visits (1461 in the previous session), followed by London with 899 (814) and Edinburgh with 581 (489).

Apart from the homepage, the most popular pages were the new Local Rocks page (4.0% of pageviews), the Excursions page (3.7%) and the Lectures page (3.3%). The Membership, Bookshop and Events pages all had 2% or more of pageviews. By far the most productive source of traffic to the website was Google, which was responsible for 4779 visits (3948 in the previous session), but the next most productive was direct logons to the website, which produced 1922 (1789) visits. Bing produced 253 (192) visits and Yahoo 167 (91). The majority of the remaining visits resulted from referrals from other websites. As in Session 156, the most productive source of referrals was visitscotland.com, which produced 352 visits (231 in Session 156). The referrals from scottishgeology.com (165 this session compared to 136 last session), the Edinburgh Geological Society website (100 compared to 96) and the Geological Society of London website (51 compared to 48) were all up from the previous session. Facebook produced 83 referrals, considerably fewer than the 194 in the previous session.

The society's Facebook group now has 880 followers, which represents a dramatic increase compared to this time last year, when it had around 160 followers. The reasons for the decrease in direct traffic from the Facebook page to the society's website are unclear.

As Webmaster, I am responsible for the day-to-day running of the website. Two other Council members, Neil Clark (Web Consultant) and Emma Fairley (Website Coordinator) assist with the development of the site, and Emma looks after the society's Facebook page. In addition, Maggie McCallum has recently taken on the task of looking after the Geoconservation section of the site. I am grateful to all three for their enthusiastic support. I also wish to record my thanks to Maggie Donnelly for the valuable guidance she provided while chairing the website working group over the past three years.

The website requires a continuing input of news items and event details to keep it fresh and topical. I am grateful to society members who have provided such material in the past and encourage all members to continue to send relevant articles and information to: web@gsocg.org.

Bill Gray

j. Membership Secretary's report

	At end Session 157 (30 Sep 2015)	At end Session 156 (30 Sep 2014)
Honorary Members	6	4
Ordinary Members	269	275
Associate Members	68	64
Junior Members	13	10
TOTAL Members	356	353
New Members	20	14
Memberships Closed	17	19

Overall membership numbers in Session 157 were little changed from the previous Session 156. The new members joining rate in Session 157 was a little lower than the long term average but higher than in Session 156.

There was a slightly lower number of memberships closed (memberships are closed either by resignation, non-payment of fees or death) than in Session 156

Robin Painter

k. Strathclyde Geoconservation Group

The office bearers have not changed and Margaret Greene remains chairperson, David Hamilton as Treasurer and Barbara Balfour as Secretary. Maggie McCallum is in charge of the website and Margaret Anderson in charge of archiving. Two new members have joined this year.

The SGG Action Plan was updated for November 2014 –November 2015.

Leaflets/Booklets:- “Building Stones of Glasgow” - The Geological Society of Glasgow gave £350 towards producing this booklet. It has mainly been distributed to the City Chambers, GOMA, and several libraries around the Glasgow area and has proved popular. “Dumbarton Rock” and “Building Stones of Glasgow University” continue to be distributed. “Dumbarton Rock”, “Balmaha”, “Fossil Grove” and Geoparks are now linked to the Visit Scotland website.

SGG Website:- Maggie McCallum’s training on management of the SGG website by Bill Gray, Webmaster, is now complete and will enable MMCC to keep the website up to date etc.

East Renfrewshire Council and Glasgow:- ERC are reprinting the Rouken Glen leaflet including a map and corporate logos, with Heritage Lottery Fund support. MG has been asked to supply photographs for the leaflet. The Local Development Plan for East Renfrewshire is now finished and printed with geodiversity mentioned. The Glasgow LDP has gone to committee and there are no changes to geodiversity boundaries.

North Lanarkshire:- Members of the North Lanarkshire Group (Mike Browne and Paul Carter, PC) of the SGG had success with North Lanarkshire Council as the Geodiversity Action Plan is being included into the Biodiversity Action Plan. The group are continuing to assess sites, having submitted the majority with some still to assess. PC continues to promote geoconservation with a ‘rock’ show, geowalks and talks and his leaflets, “Cumbernauld Rocks” and “Kelvin Valley Rocks” continue to be popular.

Activities/Meetings etc :- SGG now have a ‘area’ beside the book shop at alternate Geology Society meetings of the session, also including the AGM and Members’ Night. The area comprises a trifold board with SGG propaganda and information on it, and free SGG leaflets and booklets. A member of SGG is usually nearby to answer any questions.

Margaret Greene (MG) led four walks taken from the “Building Stones of Glasgow” booklet. In March, she led the University of the Third Age Edinburgh branch geology group round Glasgow buildings. In conjunction with Doors Open Day, (having led a practice run with 5 participants in August) she led two groups, on 15th and 19th

September. Both walks were fully booked and proved very popular.

Dr Iain Allison reported on his attendance at the Scottish Diversity Forum on 22nd November 2014 in Edinburgh.

MG attended a number of Scottish Geodiversity meetings including the AGM and Fossil Five Poll result on 24th March 2015.

In August, 10 participants from the SGG had an extremely interesting visit to the geology collection at the Glasgow Museums Resource Centre. Ann Ainsworth, Curator of Geology, Glasgow Museums, gave excellent (and enthusiastic) information on a number of the 62,000 specimens in the collection. The group was very impressed with the collection under Ann's guardianship.

Fossil Grove:- SGG continue to be *very concerned* about the fate of Fossil Grove. Over the last year, no attempt has been made to maintain the building and damp is apparent, computer and lights malfunctioning despite the stalwart efforts by the rangers employed during the season. What is even more worrying is the fact that nobody appears to be taking responsibility for the Fossil Grove and no moves have taken place regarding the rehousing/modernisation of the building that was discussed in public earlier in the year. More leaflets are also required.

SGG Future Projects:- A new booklet about the Glasgow Necropolis is being discussed. It is thought there is enough material and knowledge of the stones to make one worthwhile. The Necropolis is already on the Glasgow tourist route.

East Dunbartonshire would like to set up a geowalk. Bob Diamond from the Geology Society will be attending a meeting to discuss this and then he is to report any information to SGG.

SGG are considering a downloadable booklet on the pillars in the GOMA.

SGG will be investigating the possibility of a display board in the popular Mugdock Country Park pointing out geological features e.g. Dumgoyne, quarries etc.

Margaret Greene

I. Geodiversity: Argyll and the Islands

The 2014 AGM for GAI was held on Monday 8 December 2014, at Wetherspoons, South Pier, Oban. The standard business was completed.

The roadside geology trail remains on the group's agenda, but current efforts are being focused on the Building Stones Town Trail in Oban in conjunction with the Oban U3A Geology group. A little further research on individual buildings has been done, and the GAI group will be asked soon to cross-check the first drafts for the material produced so far, including drafts entries for 6 buildings out of a potential 25.

The U3A geology group undertook field excursions to the North West Highlands and to Gigha in the summer. In addition a joint meeting of the Oban U3A and Edinburgh U3A Geology groups was held in September to hear a talk by Roger Anderton on the recent research done on the underwater geology in the Firth of Lorn.

We were unable to attend the SGF conferences in 2015 due to diary clashes. Hopefully we will be luckier in 2016. We still await the promised best practice guidance from the 2014 Write Right conference.

Alastair Fleming

m. Treasurer's report

The Income & Expenditure Account and the Balance Sheet at 30 September 2015 are shown on the following pages.

A significant proportion of members have failed to pay the 25% increase of our membership subscription which has so far yielded a 19% increase in subscription income.

During the course of last year money was collected to fund the Conoco-Phillips prize. ConocoPhillips contributed £1250 to fund prizes for the five years 2014-2018. Our sister societies of Edinburgh and Aberdeen each contributed £83.33 to fund the prize for 2014 to this we added £83.34 and the sum of £1500 has been allocated to a restricted fund making £500 available for the 2014 prizes. A prize of £400 was awarded and this year the three societies again jointly contributed £250. The fund was drawn down £150 to make up the £400.

The publishing costs for the Moine Guide were shared on a 50%/25%/25% basis between the National Museums of Scotland and the Geological Societies of Edinburgh and Glasgow who own the distributed stock in these proportions and pooled profits are shared accordingly. Stock reporting is unreliable but last year end was reported as 107 volumes at per item cost of £8.52. Sales have been poor so I propose to devalue the reported closing stock of 105 volumes to £5.00 per item.

Moine Guide (25% of total)

Closing stock	131.35
Revenue	<u>171.10</u>
Closing Assets	302.35
Opening stock Value156	<u>228.00</u>
Profit	<u>74.35</u>

In House Publications

Opening stock 157	3915.63
Add Publications purchased	<u>1471.29</u>
Stock available for sale	5386.92
Deduct Closing stock 156	<u>3889.53</u>
Stock assumed sold	1497.39
Receipts	<u>2120.86</u>
Gross profit	575.08
Less Expenses	<u>50.40</u>
Profit	<u>573.07</u>

Room Hire for lectures has been renegotiated at an inflated rate for next year but fixed for three years during which it will be necessary to consider the possibility of alternative accommodation.

Society funds were used to sponsor by £750 another educational expedition similar to last year's "Voyage of the Betsy". This time it was to commemorate the publication of "A Testimony of the Rocks" by Hugh Miller. An expedition by Glasgow University Undergraduate to the carbonatite volcano Ol Doinyo Lengai was supported by £1000

Half the cost of upgrading the website was born last year the remainder was paid this year. This exercise may need supplementing every three years or so.

It has been our policy to cautiously underestimate the balance sheet value of investments. In a recently very volatile market the face value of these fell by about 2% during this year but retaining the same balance sheet figure still cautiously undervalues this by approximately 8%.

Ben Browne

THE GEOLOGICAL SOCIETY OF GLASGOW

Income and Expenditure Account for year ending 30th September 2015

			Session 157		Session 156
			2014 - 2015		2013 - 2014
Income					
1. Subscriptions	Note 1				
Received during year less refund			7,023.14		5936
Deduct paid in advance this year			-92.50		-120
Add received in advance last year			<u>120.00</u>	7,050.64	<u>80</u> 5926
2. Investment Income					
Dividends			580.43		558
National Savings			<u>267.40</u>	847.83	<u>398</u> 956
3. Gift aid					
				1,059.93	1064
4. Conoco-Phillips prizes					
		ConocoPhillips 5yr contribution	0.00		1250
		Transfer from Conoco-phillips fund	150.00		
	Note 2	Edinburgh GS	83.33		83
		Aberdeen GS	<u>83.33</u>	316.66	<u>83</u> 1416
5. Publications					
		In house net profit	573.07		502
	Note 3	Moine Guide net profit	<u>74.35</u>	647.42	<u>257</u> 759
6. Saturday excursions					
		net profit	81.57		-26
7. Week end excursions(none this year)					
		net profit	0.00		44
8. Donations (coffee collections)					
			227.31		280
9. Miscellaneous income					
			25.42		25
10. Received in error from Eth Zurich					
			570.62		
Total income			10,827.40		10892
Expenditure					
1. Meetings incl speakers expenses, etc					
			625.77		500
Meeting Secretary expenses					
			717.30		676
Room Hire					
	Note 4		<u>3,268.80</u>	4,611.87	<u>3132</u> 4308
2. Publication and postage of Proceedings					
			542.21		578
3. Strathclyde Geoconservation					
			100.00		350
4. Sponsorship					
		Scottish Geodiversity Forum	125.00		
	Note 5	Testimony of the Rocks Expedition	750.00		
		Oi Doinyo Lengai Expedition	<u>1,000.00</u>	1,875.00	1510
4. Library and Down to Earth					
			455.00		480
5. Affiliation fees					
			90.00		40
6. Insurance					
			201.52		198
7. Conoco-Phillips prizes					
			400.00		0
8. Website					
		Maintainance	383.98		318
	Note 6	Upgrade	<u>1,186.80</u>	1,570.78	1187
9. Admin costs - postage, stationery, etc					
		Hon Secretary expenses(Newsletter)	250.37		216
		Membership Secretary	711.04		514
		President & VP	0.00		54
		Treasurer	<u>55.03</u>	1,016.44	24
11. Refund to Eth Zurich					
			570.62		
Total expenditure			11,433.44		11281
Deficit			-606.04		Deficit -388

THE GEOLOGICAL SOCIETY OF GLASGOW

Balance Sheet as at 30th September 2015

	Session 157		Session 156	
	2014 - 2015		2013 - 2014	
Members' Funds				
Balance as at 30/09/2014	61,574.66		62898	
Surplus/(deficit) for the year	-606.04		-388	
Devaluation of Book Stock			-262	
			-673	
Members Fund as at 30th September 2015		60,968.62		61574
Restricted Funds				380
				1500
Total Funds		62,698.62		63454
Represented by				
Current assets				
Cash at Bank				
Royal Bank of Scotland	4,709.52		4,972	
National Savings	3,705.41	8,414.93	3,438	8,410
Cash in hand				
Publications sales officer	67.39		0	
Membership Secretary	0.00		486	
Hon Secretary	-372.07		-122	
Meetings Secretary	0.00		-5	
Treasurer	-2.03		0	
President/VP	307.12	0.41	307	666
National Savings Income Bond	12,000.00		12,000	
Current Valuation of investments	38,355.00	50,355.00	38,355	
Stock of Publications				
	In house			
	Moine Guide			
	3,889.53		3,915	
	131.25	4,020.78	228	4,144
Total Assets		62,791.12		
LESS LIABILITIES				
Subscriptions paid in advance	92.50			
Total Liabilities		92.50		
Net assets		62,698.62		63455

The financial statements were approved on by the Trustees and signed on their behalf by

Signed as approved by the Trustees

President

Dr B Bell

Signed by the Independent Examiner

Ian Anderson

Dr Ian Anderson

Item 5: Council Elections

The offices that have come up for election are listed here along with the proposed nominations:

Position	Nominee	Proposed by	Seconded by
President	Jim Morrison	B Bell	S Cuthbert
Vice President~	Brian Bell		
Meetings Secretary	David Webster	B Browne	W Gray
Librarian	Chris Burton*	B Bell	R Bryce
Minutes Secretary	Margaret Greene*	R Painter	M Cummings
Website Coordinator	Emma Fairley*	W Gray	M Greene
Editor of SJG	Brian Bell*	D Brown	C Burton
Editor of SJG	Colin Braithwaite*	S Cuthbert	C Burton
Ordinary Member	David Brown*	B Bell	C Burton
Ordinary Member	Maggie Donnelly	B Browne	S Cuthbert
Newsletter Coordinator#	David Webster	M Cummings	J Morrison
Junior Representative	David Muir	B Bell	D Webster
Independent Examiner	Ian Anderson*	B Browne	M Cummings

Notes

~ A retiring President automatically becomes a Vice President.

* Denotes existing retiring postholder willing to stand again

Denotes new post agreed by Council