

THE GEOLOGICAL SOCIETY OF GLASGOW

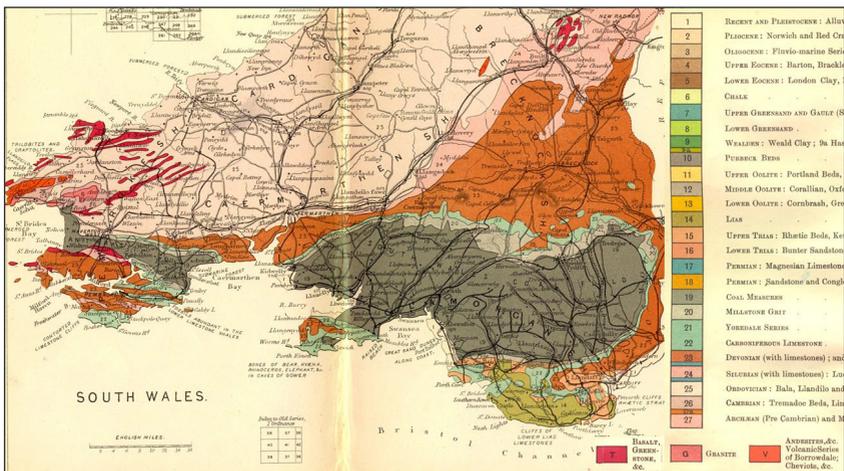
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President: Dr Brian Bell BSc (Hons) PhD

www.geologyglasgow.org.uk

September 2015

158/1



Victorian Geological Map of South Wales: the topic of the GSG November 2015 Meeting of the Society when Professor John Cope of the National Museum of Wales will deliver the T. Neville George medal lecture.

In this newsletter:

- Introduction to new session's lecture series
- Lectures for October and November
- In Memoriam: Brian Bluck

Introduction to the GSG Lecture Programme 2015

Session 158 opens with someone who is very familiar to many members. **Dr John Mendum** has been a stalwart of BGS Edinburgh for many years and has made an enormous contribution to the study of geology in the Highlands and Islands of Scotland. We are fortunate that he has agreed to speak to us and remind us how the present level of understanding was achieved and where he thinks it may develop from here.

Professor John Cope, formerly of the University of Cardiff and now at the National Museum of Wales, is an eminent palaeontologist who has been selected as this year's awardee of the T. Neville George Medal. At our November meeting, he is going to discuss redrawing the geological map of South Wales using a scenario of a mapping project for an extramural class – something familiar to many of our members.

December as usual brings the AGM and since **Dr Brian Bell** is demitting the office of Hon President it will be accompanied by his Presidential Address, where he will entertain and stimulate us with material from his work on the Palaeogene (Tertiary as was) igneous activity in the North Atlantic Igneous Province.

2016 is another leap year, but speakers have not been leaping in to fill the January slot and so I have decided to inflict myself on the membership with a personal review of the quarter century of meetings and lectures with which I have been involved. This included Sessions 133 to 157 along with parts of Sessions 132 and 158. I will preface my comments on the lectures by some reflections on my own route into geology and my association with the society.

As well as the TNG lecture, it is our “turn” to host the Joint Celebrity Lecture with Edinburgh. We are fortunate to have been able to persuade **Professor Stephen Hesselbo** of the Cambourne School of Mines to speak to us. Stephen is a prominent palaeontologist of the Jurassic who will tell us about competing cyclic influences on Jurassic Earth history, with a particular emphasis on the carbon cycle and the formation of black shales.

Dr Davie Brown is a weel-kent face. In 2015, with his colleague Daniel Koehn, he accompanied a group of GU students to East Africa in a student-led expedition. In Tanzania, they investigated a tuff ring at Embalulu Sekenge which interacts with lavas and faults of the East African Rift as well as the highly unusual carbonatite volcano of Ol Doinyo Lengai. Davie and Daniel and some of the group will give us a presentation on their findings.

Recent decades have seen an increasing awareness of the relatedness of the geosphere and biosphere over the past 4 billion years. **Professor Tim Lenton** of Exeter University will talk about three “revolutions” that have been involved in this and will extend this to what may be the fourth revolution being caused at the present time by humans.

The session will close in the normal fashion with Members' Night which I expect to be as successful as it usually is. I hope you all enjoy the session's entertainment!

Jim Morrison.

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 8th October 2015

Dr John Mendum, (British Geological Survey, Edinburgh)

Problems of Highland geology, past and present.

The application of tectonic concepts developed both in Scotland and different parts of the world has strongly influenced the interpretation of the geological structure of the Scottish Highlands for at least 170 years. Escher von der Linth first mapped thrusts and “overfolds” in 1841. Lapworth recognised cataclasis and mylonitisation along thrust planes in 1882-3, and Bertrand introduced “nappes de charriage” in 1884. Bailey, in a series of papers between 1910 and 1940, took alpine terminology and ideas as the basis for his tectonic interpretation of the Grampian Highlands. This talk will look at the nature and origins of the major fold and thrust nappes that have been defined in the Highlands, ranging from the Moine Thrust Belt to the Highland Border, focusing at how such structures were recognised and defined. It will discuss what mechanisms of generation and emplacement have been proposed, their consequences, and what problems still remain in their interpretation.

Thursday 12th November 2015

The T. Neville George Medal Lecture

Professor John Cope, (National Museum of Wales)

Redrawing the geological map of South Wales.

A keen Swansea extramural class in the mid-1970s demanded more field-work. A geological mapping project was suggested, but had to be suitable for beginners and within an hour's drive. The area finally selected was south of Carmarthen where the 1 inch Geological Survey map showed Ordovician Arenig Series unconformably overlain by Old Red Sandstone. Both had several formations and there were also some Ordovician igneous rocks. Initial mapping of the basal ORS unconformity then progressed into the Ordovician outcrop, proving the Survey succession incorrect. A series of totally unexpected stratigraphical and structural results ensued together with many exciting new fossils.

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.

A full summary of Brian'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

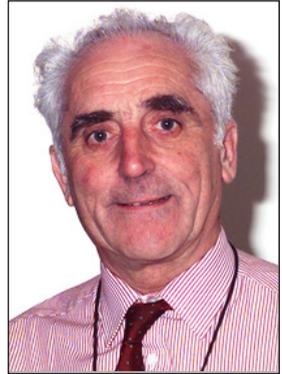
Details of a probable trip to Northern Ireland in September 2016 (postponed from May 2015) will be included in a future newsletter. We are planning future trips to Cumbria and Angelsey and we are also looking at the possibility of running some mid-week day excursions.

In Memoriam

Brian John Bluck, BSc, PhD (Swansea), DSc (Glasgow), FGS. Born 29th August 1935. Elected FRSE 1981. Died 19th June 2015

Brian Bluck was born on the 29th of August 1935 into a working class family living in Pyle, near Bridgend, South Wales. Brian's father was a miner and a rope-smith at Newlands Colliery, South Wales, and was a great influence on his early education. After studies at Bridgend County Grammar School and at Cardiff Technical College, he was initially attracted towards politics.

However, growing up amongst the coal mines and the fossiliferous Carboniferous limestones of South Wales, Brian was drawn towards geology and he applied to University College, Swansea for a place in their Geology Department. After a "difficult" interview, he was accepted onto the geology course and graduated in 1958. Professor Frank HT Rhodes (Head of Department), and Dr Dick (RT) Owen were a great influence on him in Swansea and encouraged Brian to take a scholarship for a PhD on the South Wales coal measures, under the supervision of Dick Owen and Gilbert Kelling. Brian undertook the field mapping for the project with characteristic panache on a Villiers motorbike. This study proved to be the initial step in Brian's path to become one of the UK's foremost sedimentologists. Frank Rhodes then suggested he applied to the University of Illinois for a postdoctoral research post, a position that he took up in 1961, the year he married Mary. Working with Albert V Carozzi and Paul Potter, Brian studied Devonian carbonates and phosphates in Indiana and alluvial fans in Nevada, further extending his sedimentological experience. He returned from America on a NATO Post-Doctoral Research Fellowship at University College Swansea in 1962 to study the Triassic redbeds of South Wales. A post for an assistant lecturer came up at the University of Glasgow, and he was appointed by Prof T Neville George, who provided much advice on lecturing and publishing research. That position was turned into a lectureship in 1965 and Brian obtained a scholarship from the British Council for a sabbatical at universities in Amsterdam and Utrecht, where he further enhanced his sedimentological education. On his return to Glasgow, he rose through Senior Lecturer and Reader to be awarded a DSc in 1985 and was appointed Professor of Geology in 1989. After his retirement, he was appointed Emeritus Professor of Sedimentation and Tectonics, initially within the Department of Geography and subsequently to an Honorary Senior Research Fellow position in the merged School of Geographical and Earth Sciences.



Brian was awarded the Geological Society of London Lyell Fund in 1981, the Royal Society of Edinburgh Keith Medal in 1981, the Saltire Society Scottish Science Award for 1991, and the Edinburgh Geological Society Clough Medal in 1999-2000. He was a member of the editorial board of the Journal of Sedimentary Petrology, and Editor of the Scottish Journal of Geology and the Transactions of the Royal Society of Edinburgh.

Brian's research was impressively wide ranging but was built around an understanding of the 3D structure, texture and geometry of a range of different sedimentary deposits and their link to the broader scale tectonic environment. This work was always based upon meticulous field observations. Much of his initial research focussed on modern sedimentary processes. After studying the response of different shaped clasts to the waves on beaches in South Wales he moved on to propose a novel mechanism for the interaction of grain shape and flow turbulence from detailed observations in river systems in Iceland and Scotland. His derived models of sedimentation were based on insightful and wonderfully clear documentation of the structure of the deposits. At the same time he was studying the Palaeozoic Old Red Sandstone, a sequence in which he identified some of the same structures observed in the recent deposits, leading to inferences of depositional processes from which it was a natural progression to study sediment provenance in ancient environments.

Brian was an early user of novel combinations of isotope dating techniques in collaborations with geochemists at the Scottish Universities Research and Reactor Centre (now SUERC) to establish the sources and origins of the clasts in the conglomerates. This eventually led him to identifying an ancient volcanic-plutonic arc sited in the Midland Valley of Scotland, the presence of which required a fore-arc basin that was found to be missing. From a comparison with North America and Greenland he showed that the metamorphic rocks of Scotland were out of place and suggested they were exotic, derived from the elsewhere and only entering into Scotland late in the Caledonian Orogeny. From these data coupled to seminal research on the rocks of the Ballantrae complex, he was able to show that Scotland comprised small fragments of crust, or terranes, brought together by strike-slip faulting. He helped recognise that the Old Red Sandstone in Scotland was composed of several pull-apart basins some of which were partly covered by the incoming Dalradian block. These studies of crustal terranes required the integration of many different branches of geoscience and brought a fresh and intellectually stimulating line of thinking to many aspects of Scottish Geology, moving away from the "fixist" views that had dominated up to then. Brian's unique and wide ranging record of published research is testament to his ability to successfully bring together information at all geological spatial and temporal scales.

In the later stages of his career, Brian once again combined his sedimentological and tectonic expertise in research on the development of the Kapvaal Craton in South Africa, acting as a consultant for De Beers. This entailed looking at the behaviour of the craton with respect to the Orange River and the sediment it produced along its tract and the Namibian coast. Using detailed analysis of the coastal and river terrace deposits along the Orange and Vaal rivers. Brian confirmed that the coastal processes had been very active for a long time and that most of the sand discharged by the Orange has been transported along the coast and blown on-land thus making an extreme wave-dominated delta. The uplift of the craton took place in Late Cretaceous and early Tertiary times when a proto-Orange cut through the younger sediments of the cover to finally erode into the basement and deliver coarse durable clasts to the coast. These studies have refined understanding of the drainage evolution in southern Africa and are highly

influential in the search for alluvial diamond deposits along the west coast of Africa.

Brian was a brilliant, popular, innovative and stimulating lecturer always generous with his time and his thoughts, and eager to help explain his subject to students. He was firmly committed to teaching in the field, but equally at ease lecturing on plate tectonic theory to first year students, or instructing final year honours students in the minutiae of sedimentology. He had a special ability to enthuse others and many professional geologists were initially converted into geoscience by his teaching. Brian was at the leading edge of research linking surface processes to deeper geology and through the clarity of his thinking in cross discipline areas, and as a consequence of his charm and political astuteness, he was pivotal in ensuring the highly successful merger of the disciplines of Earth Sciences and Geography into a single School at the University of Glasgow. The many hundreds of enthusiastic and talented Earth scientists that have graduated, and will graduate, from the University of Glasgow since that merger are perhaps his most impressive and lasting academic legacy.

Brian was a man of firm principles and never one shy away from controversy or difficult positions either in his academic or personal life. He was a committed vegetarian from the age of six, following a chance passing of the village butcher's shop he was taken aback by what he heard and saw. In an era where this was anything but the norm, Brian ate a lot of omelettes at that time. In some respects Brian was the archetypal Welshman, through his loves of music and rugby, but he was never more at home than when enthusing others in the geology of Scotland. Although his geological heartland migrated northwards through time, his geological influence was truly global through his many international friends and collaborators. His exceptionally broad scientific perspective was fostered by these links, and associated fieldwork in USA, Southern Africa, India, Iceland, Spain, Sweden, Canada and many places in Britain and Ireland.

Brian will be sorely missed by the many geologists that he influenced, whether through his inspirational teaching, his thought provoking research, or his infectious and joyous enthusiasm in the field. An enthusiasm that characteristically remained undimmed even by a Scarborough lifeboat crew's insistence that the class of students Brian was leading, having been cut off by the incoming tide, should abandon their geological examination of the cliff face rather than wait several hours for the North Sea to recede! His mischievous sense of humour will be fondly remembered by many, although in the rather unlikely event that Glasgow Earth Science graduates ever attempt to join a croquet club, the somewhat imaginative "rules" they learnt on field trips with Brian might need some significant revision.

Brian died quietly at his home in Old Kilpatrick on 19th June 2015. He is survived by his wife Mary, daughter Emma, son Tim and four grandchildren. He leaves a legacy as a talented and passionate geologist, an influential polymath, and a true gentleman. He had a rare gift of clarity of thinking, matched by a wide-ranging expertise that branched out in all directions from his sedimentological core. His infectious personality made science fun and his contribution to geoscience in Scotland has been immense. He will be remembered with considerable affection by all who knew him.

Tim Dempster

News and Topical Articles

Gregory Building Lecture Theatre

Council are undertaking a review of options for the lecture venue. We have an agreement in place for the next few years to stay where we are but the costs are ever increasing as the University strives to maximise letting income and recoup costs. Moving to another University building where we can share janitorial costs with other groups is an option as is moving away from the University altogether. Your views are important and we will undertake a consultation process with the membership in the future.

GSG Website

A considerable amount of content has been added to the website over the summer. The [Local Rocks section](#) has new articles on [Rock-forming Minerals](#) and [Metamorphic Rocks](#), both written by Emma Fairley, and there is a new [Fieldwork Code](#), prepared by Neil Clark, in the [Excursions section](#). There is also a new [Society Presidents page](#), prepared by Alan Owen, in the [About Us section](#). This contains a list of all the society's presidents since it was founded in 1858 and there are links from many of the entries to biographies on the [University of Glasgow Story website](#). The [society's proceedings](#) for sessions 153 (2010-2011) to 156 (2013-2014) are also now available in the [Membership section](#). The proceedings for subsequent sessions will be posted on this page as they are published. Check out the new Facebook page too.

Amazon Bookstore

At its meeting on 3/09/2015, the Society's Council decided to end the Society's affiliation to Amazon, and so the Amazon Bookshop and the link to the Amazon homepage have been removed from the website. This affiliation was originally set up to provide a service for members who wished to purchase books stocked by the Society's bookshop before they could next manage to one of the lectures. In addition, the society benefitted by receiving a small commission for purchases from Amazon made through the website. There are several reasons for the Council's decision to end the affiliation to Amazon. One is that Amazon has recently withdrawn its support for the facility that we used to set up our Amazon Bookshop, with the result that we would no longer have been able to update its content. Another is that the affiliation did not generate a lot of income. The total earned since we started the affiliation in 2011 is £145.36, and the income is currently running at about £25 per year. We would encourage members who would have used the Amazon link on our website to make their purchases through the [university bookshop](#) or their local bookshop instead.

Testimony of the Rocks Voyage 2015

In a follow-up to the highly successful tall-ship cruise "Following the Cruise of the Betsey" last year, the Brixham Trawler "Leader" was once again host to a voyage inspired by Hugh Miller, called "Testimony of the Rocks - Journeys Through Time". The theme was based around journeys through geological time linked to human journeys through landscapes and seascapes, centred on the Atlantic Islands of Argyll and the Firth of Lorne. The project was led by Dr Joyce Gilbert, an independent consultant

in environmental education, and was facilitated by the Scottish Geodiversity Forum. I joined the voyage as resident geologist. The Geological Societies of Glasgow and Edinburgh sponsored three young geoscientists to join the crew for an inspirational, multidisciplinary experience, and we were fortunate to find three enthusiastic and multi-talented shipmates, Andrew Law (Tayside Biodiversity Partnership), Dyfan Roberts (Cardiff University, Geology) and Jack Gillespie (University of Edinburgh, Geography). We sailed from Oban on 20th June and visited Mull, Jura, Shuna, Oronsay, Colonsay, the Garvellachs and Luing. Leader again proved to be a great platform for a geological journey, but we also got stuck into the hard physical work of a traditional sailing vessel. The other invited participants gave fascinating insights into the intimately connected culture, history, archaeology and landscape of the Atlantic Islands through stories, music, art and ecology as well as geology and geomorphology. During the voyage a good deal of creative activity took place, including video and sound recording (see <https://vimeo.com/132918394>), watercolour painting and music, and at each landing point we made an excursion that mixed geology with all the other stories of Journeys Through Time that the places revealed. We finished with a very well attended public event at the new Atlantic Islands Centre on Luing that included a ceilidh with contributions from the crew, the local community and the Scottish Centre for Geopoetics. Alastair and Zoe Fleming of the Lochaber and Argyll Geodiversity Group (affiliated to the Society) have been leading figures in the establishment of the Atlantic Islands Centre, which is well worth a visit! The project team wishes to thank the Society for its support and, particularly, the unique experience it enabled for the sponsored young geoscientists. I wish to thank team members Kenny Taylor (ecologist, writer and broadcaster), Elisabeth Pickett (geological artist and designer), Kate Langhorn (Gaelic student and musician), Caroline Paterson (Edinburgh Geological Society), Bob Pegg (traditional musician and storyteller), Emma McLachlan (media student and film-maker), Sarah Hughes (sculptor and visual artist) and Nikki Kane, Gillian Hind and Jenna Corcoran (visual artists). Special thanks go to Joyce Gilbert for her hard work in organising and fund-raising for the project. We are already making plans for another voyage next summer where the outcomes of the two Leader voyages so far could be toured around the inner Hebrides using the boat as a peripatetic exhibition platform. Maybe you could join us? Watch out for announcements....

Simon Cuthbert

Stonescapes

An exhibit of artworks by artist Malize McBride is on show at the Birnham Arts Centre, Birnham, Perthshire until the end of September. Malize uses geological themes in her work. She was a member of the "Bedrock Walk" in July 2013, part of the Stories in the Land project run by the Royal Scottish Geographical Society and the Speygrian Trust. Entry to the exhibit is free of charge.

Glasgow Museum Resource Centre

The geology collection of the Resource Centre contains some 62,000 specimens, many of which are Scottish. Ann Ainsworth, the Curator, invites anyone with an interest in researching items in the collection to get in touch with her and she would make arrangements. Ann.Ainsworth@glasgowlife.org.uk

Fossil Grove

The state of the Fossil Grove continues to cause anxiety - various plans have been mooted but so far to no avail and the facility continues to deteriorate. The GSG Council are reviewing all the options and if any member has views, opinions, ideas or would like to participate in any campaign that Council may recommend then please get in touch with Margaret Greene at sgg@gsocg.org

The future for adult learning courses at Glasgow University

A message from Dr Mike Keen: You may have read in the local papers about proposals to cease giving courses for adult education in the Earth Sciences, Life Sciences, Astronomy, Physics, computing, literature and film courses at the Centre for Open Studies at Glasgow University. These proposals were accepted by the University Court late in June.

You may also have received a copy of the brochure for 2015-16, either in print or via email, and seen that there are several courses advertised for the Earth Sciences (see details in this newsletter) I have been in touch with the director, Stella Heath, and she has stated that providing they are financially viable, these courses can run. So this is a plea for you to enroll. This is likely to be the last year for geology in adult education at Glasgow. I have put forward a case for continuance, citing our excellent enrolment numbers, but this has not met with any positive response. If you are planning to enroll for any of the courses please do this sooner rather than later – the decision on whether courses will run will be taken at an earlier stage than has happened in the past.

The reorganisation of COS has been finance driven – they still have a large deficit. Many of the staff will be leaving and several of those that you may have had contact with in the past will no longer be there. It is all very sad and I will personally miss people I have come to know over the years.

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/>.

Lochaber Geopark

If you are in the Fort William/Glencoe area then do check out the geological information about the 'Geopark'. There are 8 'geotrail' leaflets available and 20 or so geological information boards - there are two new ones at Glen Roy and a new one on Eigg. Roybridge also has the 'Darwin's Rest Geopark Centre' (and Cafe) - well worth a visit!

For more information go to : www.lochabergeopark.org.uk

New Geotrail in Lanarkshire

BGS are beginning a project with the Clyde and Avon Valley Landscape Partnership (supported by the Heritage Lottery Fund) to develop a geotrail. The 'Shaping our Landscape' Geological Trail project is seeking information on people's favourite local

geological sites to help shape a geological trail in the Clyde and Avon valleys.

The fertile land of the Clyde and Avon valleys, its wealth of coal and stone, and its picturesque river landscapes are the products of over 300 million years of Earth history. Residents and visitors alike will be able follow the trail to explore the region's rocks, landforms, mines and quarries - discovering the ancient coal swamps, vast ice sheets and powerful rivers that have shaped the land and the local communities.

Beginning in August 2015, part 1 of the project focusses on a geological audit by BGS to identify and characterise the important geological features within the CAVLP area. In part 2, interactive resources will be developed to enable young and old alike to explore the geological story of the Clyde and Avon valleys.

Donna Marshall, CAVLP Programme Manager, said: "We really hope that people of the Clyde and Avon valleys will get involved in this project. This represents a unique opportunity to get involved in developing a new trail which will interpret the area. Local residents are, of course, best placed to help us shape this trail project with local geological knowledge of the landscape. This valley has been shaped by nature to create a unique mosaic of geological features and we'd like to help more people share in experiencing and appreciating the fantastic geology of the area."

By sharing knowledge of geological features and geoheritage sites within the Clyde and Avon valleys area, residents can contribute to the geological audit and help shape the geological trail.

For more information go to www.clydeandavonvalley.org

SNH - Sharing Good Practice Event - "A world class visitor attraction-Scotland's landscape fashioned by geology"

This event will be held at Battleby Centre on Wednesday 25th November 2015. Cost £40. It has been organised by Scottish Natural Heritage in partnership with Visit Scotland, Scottish Tourist Guides Association and the Scottish Geodiversity Forum and is for anyone involved in sharing Scotland's landscape with visitors, in particular those who deliver tourism services such as: Blue Badge guides; bus and other tour operators; wilderness-ecotourism experience providers; rangers; visitor centre, tourism business and property managers; and those involved in offering outdoor pursuits.

Scotland's Geodiversity is a world-class resource and has huge potential to enrich the visitor experience and encourage more visits. This event will explore what's currently on offer, and how the sector might develop and expand. This event will encourage partners to get involved in implementing Scotland's Geodiversity Charter, and highlight the economic benefits of a greater awareness of geodiversity.

For more information and booking details see the Sharing Good practice programme at: <http://www.snh.gov.uk/policy-and-guidance/sharing-good-practice/events/>.

For further information contact sgp@snh.gov.uk

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

Rates are as follows:

Ordinary Membership	£25	Includes Scottish Journal of Geology
Associate Membership	£12.50	Eligible to those over 60, or spouses of Ordinary Members, or members of the Edinburgh Geological Society.
Junior Membership	£6.25	Eligible to those under 25, full time undergraduates, or recent (4 years) graduates. Scottish Journal of Geology is available on payment of a £6.25 supplement.

Method of Payment

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'.

Members who currently pay by cheque

Please note that the membership card enclosed with this newsletter indicates our expectation that you intend to renew your membership subscription for Session 158. If you currently pay by cheque then please remember to send in your subscription to the Membership Secretary for Session 158 at the address below.

Membership Secretary: Dr. R. A. Painter, e-mail: gsgmemsec@ntlworld.com

If you would like to make future payments by Bankers Standing Order (**this is the preferred method of payment from the Society's point of view**), please advise the Membership Secretary when you send in your cheque for this session. We will send you a Bankers Standing Order form so you can arrange to make future payments via your bank. Alternatively you can download a Bankers Standing Order form from the GSG website and forward the completed form to the Membership Secretary at the above address.

Members who currently pay by standing order

If you have an existing Bankers Standing Order payment should happen automatically on 1st October, though there are still some members who have not notified their bank to update their existing Bankers Standing Order. This means these members are not only in part arrears for the last session's subscriptions (157), they are now likely to be in arrears for the current session (158) as well. If you are one of these members there will be an additional note with the newsletter mailing to draw this to your attention. Please correct your payments as set out in this additional note.

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

The enclosed 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:

Mr K Borland	Moodiesburn
Dr A Grant	Glasgow
Dr S Rice	Largs
Mr D McGinnigle	Dumbarton
Mr T Mackay-Champion	Clathy
Miss A Wylie	Glasgow
Ms L Burke	Glasgow
Mr A Zhyzhyn	Glasgow

Courses at the Glasgow University Centre for Open Studies

Introducing Geology

Tuesdays 19:30-21:30 from 29th September(10 meetings) Tutor: Dr Simon Cuthbert

Geology is the study of our planet, Earth. Earthquakes, volcanoes, climate, rivers, glaciers and life have all shaped the Earth during its 4.5 billion year history. We will examine these processes with examples from around the globe and you will get to explore the intricate and beautiful world of rocks, minerals and fossils. Scotland has some of the most diverse and accessible geology in the World, and you will see many examples in our classes. By the end of the course you should have achieved the basic skills to start exploring geology yourself.

The geology and rocks of North America

Thursdays 14:00-16:00 from 1st October (20 meetings) Tutor: Dr Mike Keen

North America has a huge variety of geological features, ranging from the Maritime Provinces with their close similarities to Scottish geology, to the Precambrian Canadian Shield with the oldest rocks so far known on earth, and then to the tectonically active Western Cordillera. The course will be a systematic study through geological time, including descriptions of the National Parks such as Yosemite, Grand Canyon, and Yellowstone.

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

Evolution of the Earth, life and environments

Wednesdays 19:30-21:30 from 30th September(10 meetings) Tutor: Dr Ben Doody

This is one of a pair of linked courses in Earth Science and is a modified version of the existing full-time undergraduate Earth Science module 1Y. The other course is Introduction to the Composition and Structure of the Earth. The two courses run in alternate years and can be taken in any order. Students who complete both of these courses will be eligible to progress to level 2 Earth Science courses subject to achieving satisfactory grades. This course covers geological surface processes, climate, economic and environmental geology, fossils, geological maps, and the geological history of Britain during the past 3,500 million years.

Exploring the Earth's Interior

Saturday 10:00-16:00 7th November (1 meeting) Tutor: Dr Gordon Curry

This course provides an overview of the techniques used to investigate the Earth's interior, and a summary of the current state of knowledge about processes deep within the Earth that have a direct impact at the surface (including earthquakes, volcanoes, plate tectonics, natural resources). The course will be computer based and together with short talks you will investigate how geophysical techniques are used to determine the location of earthquakes.

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

14 October Prof. Euan Clarkson University of Edinburgh The Cambrian Alum Shales of Scandinavia and their extraordinary faunas

28 October Dr. Adrian Hall University of St. Andrews Glacial erosion of oldlands

11 November Dr. Nick Schofield University of Aberdeen Topic to be confirmed

Aberdeen Geological Society www.aberdeengeolsoc.org.uk

no information to date

Highland Geological Society www.spanglefish.com/highlandgeologicalsociety

4 November - Exploring Chile's volcanoes - Quetrupillán and Llaima - Dr Dave McGarvie, Open University in Scotland

Westmorland Geological Society www.westmorlandgeolsoc.co.uk

23 September Fire on Earth: an intimate history Professor Andrew Scott – London University. This is a Joint Lecture with the Cumberland Geological Society and is held at Queen Elizabeth Grammar School, Penrith, CA11 7EG (NY 512297) at 7.30 pm

21 October Professor David Siveter - Univ of Leicester The Herefordshire Lagerstätte

18 November Professor Stuart Monro - Dynamic Earth Edinburgh. James Hutton and Scotland's Time Lords

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,

e-mail: sec@gsocg.org