

———— THE ————
GEOLOGICAL SOCIETY
—— OF ——
GLASGOW

Registered Scottish Charity No. SC007013

President: Dr Brian Bell BSc (Hons) PhD

www.geologyglasgow.org.uk

February 2014

156/3



*Mafic enclaves in the Moor of Rannoch Granite (photo – Simon Cuthbert)
For more on this see the Topical Article on Page 5.*

Lecture meetings:

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

Thursday 13th February

Dr Peter Treloar (Kingston University)

Minerals - from mines to mountains

Minerals are more than just the building blocks of rocks. Analysis of their chemistry, their textures and of the solid and fluid inclusions contained within them will document the evolution of the rocks that host them. Modern analytical techniques now make possible the rapid collection of precise data that enable us to drill down into petrological and structural histories. In this talk I will use two case studies. In the first, mineralogy of metamorphic rocks from the High Himalaya of North Pakistan have allowed us to deduce precise geochronologically constrained Pressure-Temperature-Strain-Time paths for orogeny which leads to a discussion of rapid rates of regional metamorphism. In the second, mineral chemistries and textures together with fluid inclusion and stable isotope analysis of gold deposits from West Africa enable us to challenge the metamorphic fluid paradigm for orogenic gold deposits.

Thursday 13th March

Dr Rob Strachan (University of Portsmouth)

New interpretations of the Caledonian geology of Shetland

The Caledonian belt in Shetland comprises a superb west-east section from the supposed equivalent of the Moine Thrust to the Unst-Fetlar ophiolite, all documented in detail by the work of Derek Flinn and his research students. However, understanding of this northernmost part of the Scottish Caledonides has lagged behind in recent years in comparison with mainland Scotland. New geochronological studies have placed constraints on the depositional ages of major metasedimentary units and timing of orogenic events with implications for regional tectonic models.

Thursday, 10 April

Dr Simon Passey (University of Cambridge)

Continental flood basalts of the Faroe Islands and the opening of the North Atlantic (details to appear in the April Newsletter)

NB - Due to unforeseen circumstances, the date of Members' Night will be changed from Thurs 8th May to Thurs 15th May.

Summer Excursion Programme:

Day and evening trips – brief synopses:

Date & Time	Excursion	Leaders and notes
Saturday 12th April By private car Leaving Gregory Building, Glasgow University at 8.30	Cononish Gold mine near Tyndrum and then Glen Orchy. The party goes into the mine in 2 groups of 8, plus a talk about the exploration efforts of Scotgold. Then metamorphic and structural features in Glen Orchy.	Chris Sangster CEO Scotgold Resources Ltd NB - Limited to 16 participants
Saturday 21st June Leaving Gregory Building at 09:00	Pentland Hills Regional Park Geomorphology and glacial features. High Tea at the Flotterstone Inn Joint Excursion with EGS	Dr Richard Smith
Saturday 5th July Leaving Gregory Building at 09:00	East coast – Anstruther to Cellardyke Sedimentary structures and fossils of the Lower Carboniferous rocks of the Fife coast	Dr Colin Braithwaite
Saturday 19th July Leaving Gregory Building at 12 noon, finish 4 pm	‘Rock Around’ + Building Stones of the University of Glasgow We locate and identify 16 boulders that have been placed around the campus, and draw a simple geological map. We also investigate the building stones, using the recent publication.	Maggie Donnelly
Saturday 9th August Meet 10:00 hrs at SWT Loch Ardinning nature reserve, Mugdock.	Field skills day Mapping exercise at Loch Ardinning – exposure mapping techniques, outcrop description, use of smartphone apps and some geophysics – a new experience for Mugdock veterans and the basics for beginners!	Dr Simon Cuthbert
Saturday 23rd August Leaving Gregory Building at 09:00	Schiehallion and Strath Fionan Stratigraphy, metamorphic structures, minerals, the Schiehallion ‘Boulder Bed’. NB Trip will visit localities different to those of DACE/COS ‘Wed’ field trips in the Springs of 2010 & 2013.	Dr Ben Browne Maggie Donnelly

Excursions 2, 3, 4, & 6 leave from the Gregory Building, Lilybank Gardens at the times stated – please check the synopsis for details. Please note that a deposit is required for each excursion. I apologise for the increase in costs but the prices for coaches/diesel have gone up considerably in the last three years! Also, the trip to Schiehallion and Strath Fionan involves a longer day for the driver. The deposit is set at a level to recover the anticipated costs of the trip. In addition, please be aware that the balance of costs will be recovered by a small surcharge on the day of the excursion. Members who take their own vehicles will be asked to contribute towards the cost of the excursion.

To apply for these excursions please email me at daytrips@gsocg.org. I will then email you an Application Form with my contact details. Applications will be acknowledged by email.

Maggie Donnelly
GSG Day Excursion Secretary

Residential Excursion:

Fri 12th Sept to Mon 15th Sept. 2014

Banffshire Coastal Section – from Findochty to Fraserburgh.

Leaders: **Dr John Mendum**, BGS, and **Dr Con Gillen**, University of Edinburgh.

We will look at the stratigraphy and structure(s) of the Appin, Argyll and Southern Highland Groups of the Dalradian Supergroup sequence, the Old Red Sandstone and the major basic and ultrabasic intrusions of the Northeast Grampian Highlands. We will be investigating folds, metamorphic rocks and metamorphic minerals such as kyanite, staurolite, sillimanite etc., and will see the effects of the Portsoy Lineament and the outcome of some interesting new research.

Accommodation – B&B in Banff/Macduff area.

Travel – probably by private car, in order to keep costs to a minimum.

We would like to get 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** (restrips@gsocg.org).

Topical article:

Stories in the Land

In July last year a motley group of walkers set off from Dalwhinnie on a five-day trek across the central Scottish Highlands – the Bedrock Walk. Our destination was Glen Nevis. Our route took us along the old Thieves’ Road, a remote defile once used by raiders from Lochaber to plunder the rich lands of Moray, but our steps also stitched a story from the fabric of deep time as we passed through the very heart of the Grampian mountains, linking two great landforms of the Pleistocene glaciation – Ben Alder and Ben Nevis – and weaving our way through the roots of the Palaeozoic Caledonian orogen. The walk was a joint initiative of the Royal Scottish Geographical Society (RSGS) and the Speygrian Educational Trust and was part of an RSGS Heritage Lottery Fund project called “Stories in the Land” led by RSGS’s inspirational Education Officer Joyce Gilbert. The project encourages people to become collectors, creators and tellers of old and new stories inspired by the Scottish landscapes and the people who have lived and worked within it. The walk took the form of a roving conference; a diverse group of geoscientists, artists, writers, dramatists, educators, conservationists whose common bond was a fascination with geology, a love of walking in wild landscapes and a passion for the stories and images that they inspire. Led by Speygrian’s Jean Langhorne we shared, learned, collected and created along the way, exploring the many kinds of narrative that the landscape holds and inspires.



Ben Alder and the Bealach Dubh (Photo – Simon Cuthbert)

We started among the roots of the great fountain of folds that define the mega-architecture of the Grampian orogen, passing over the upturned ends of the tough

Grampian Group psammites around Loch Pattack and the Culra Bothy. As the slopes of Ben Alder and Sgor lutharn (Hell's Peak) closed in around us, it was easy to imagine hearing the ghosts of the Lochaber men cursing just beyond the mist as they hurried their four-footed spoils through the grim glacial breach of the Bealach Dubh. We trudged down Strath Ossian, pausing to watch an eagle soaring over soft schists above the armchair amphitheatre of Coire a Charra Bhig, to admire a waterfall polishing up a pink-veined gneiss and to imagine life in an old stone cottage now gently decaying into the rushes. Crossing the eastern "thumb" of the great fist of the Moor of Rannoch Granite we arrived footsore at the Loch Ossian Youth Hostel. Joined here by new friends on a soft misty morning we swung west past Loch Treig and, as the sky cleared, strode up along the sparkling Abhainn Rath, its clear waters spilling over dykes of pink porphyry. Now crossing the strike of the strata we passed over the watershed into Glen Nevis where the bleached ribs of the Appin Group quartzites flanked the mountainsides. Ahead, the grey andesite crags of Ben Nevis' alpine North Face loomed over the perfect curve of Carn Dearg's arête; in the day's shimmering heat, they never seemed to get any closer, but late in the afternoon we squeezed through the gap between the red granites of Ben Nevis and Mullach nan Coirean and finally quenched plutonic thirsts in the bar of the Ben Nevis Inn.

As we walked, camped and sat on our packs for the occasional well-earned rest we mused upon what stories, history, music and sounds are 'held' or inspired by the rocks and landforms: How was the landscape made? How does the geology determine what flourishes upon it? Why had the Thieves' Road become an important route? What part had been played by human culture, even in this remote fastness? What does time mean in such a context, and what pasts and futures might we imagine for the places we were moving through? As "resident" geologist it was my task to demystify and create order out of the fragmented patterns in the outcrop and tell creation-sagas, ably helped by geographer Bill Taylor; but the most rewarding aspect of this journey for me was the flood of new insights into ways of perceiving geology and landscape as I saw it anew through the eyes and imaginations of my wonderfully creative fellow walkers. Their work arising from this journey was shown at the Stories in the Land Exhibition at the Scottish Storytelling Centre, Edinburgh in October 2013 and at the Scottish Geodiversity Forum 'Sharing Good Practice' event at SNH Battleby, on 17th December 2013, and will hopefully inspire today's youngsters to engage with our Highland landscapes and make stories of their own.

For more details of the Stories in the Land project and the participants in the Bedrock Walk see Volume 41 of Earth Heritage Magazine, downloadable at <http://www.earthheritage.org.uk/download.html> or the Links section on the GSG website. Here you can also find out about another exciting Stories in the Land roving conference to be held this September – a celebration of Hugh Miller's *Cruise of the Betsey*, sailing through the Small Isles on the Victorian Brixham trawler *Leader*.

Simon Cuthbert

Notices:

New Council Members elected AGM 13th Dec 2013:

President	Dr Brian Bell
Vice President	Miss Margaret Donnelly
Vice President	Mr M Pell
Vice President	Dr Ben Browne
Treasurer	Dr Ben Browne
Membership Secretary	Dr Robin Painter
Meetings Secretary	Dr Jim Morrison
Minutes Secretary	Mrs Margaret Greene
Librarian	Dr Chris Burton
Archivist/Assist	Mrs Margaret Anderson
Proceedings Editor	Ms Mina Cummings
Publications	Ms Mina Cummings
Residential	Ms Katerina Braun
Day Excursions*	(vacant)
Publicity (General)	Dr. Robin Painter
Webmaster	Dr Bill Gray
Web Consultant	Dr Neil Clark
Website Coordinator	Miss Emma Fairley
Junior Members' rep	Mr Scott Jess
Strathclyde Geoconservation Chair	Mrs Margaret Greene
Editors of Scottish Journal of Geology	Dr Colin Braithwaite Dr Brian Bell
Ordinary Members	Dr David Brown Miss Allison Drummond Mr Walter Semple Dr David Webster (2 vacancies)
Independent Examiner	Mrs Beth Diamond

* Please note that Council is still seeking a *Day Excursions Officer* to organise our short field trips. This is an important rôle in the Society – geology is, after all, a field science! If you would like to take up this post you will have the everlasting gratitude of all of us, but especially Margaret Donnelly, who is doing this job as well as being a very active vice president! We also have two vacancies for Ordinary Members of Council. If you are interested in any of these positions, please contact the Hon. Secretary Simon Cuthbert, or Margaret Donnelly.

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.

Subscriptions & Membership:

Thank you to all those members who have renewed their subscriptions for the current Session. **May we please encourage those few who have so far overlooked their renewal to do so as soon as possible - thanks.**

It was agreed at the AGM last December that, unfortunately, the annual membership fees for the Society will be increased. This is due to the increasing costs being incurred by the Society in lecture room hire, postage and website fees. Rates will be as follows:

<i>Ordinary Membership</i>	£25	Includes Scottish Journal of Geology
<i>Associate Membership</i>	£12.50	Eligible to those over 60, or spouses of Ordinary Members, or members of the Edinburgh Geological Society.
<i>Junior Membership</i>	£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.

The new membership fees will begin to apply in Session 157, and will therefore become payable from 1st October 2014. We will send a further reminder to members renewing their subscriptions in the next newsletter, so that these can be made at the increased rate. We will include a form that members who pay by standing order can send to their bank requesting an amendment to their current standing order arrangement.

Any queries regarding the above can be addressed to **the Membership Secretary, Dr. R. A. Painter by e-mail at gsgmemsec@ntlworld.com**. *If you need to send anything by post (e.g. cheques for membership fees) please request the postal address for membership business in your e-mail enquiry.*

New Members:

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

Mr D R West

Glasgow

Bookshop:

The Society's bookshop stocks a large selection of geology-related books, maps and pamphlets. It is open to browse and make purchases after the winter lecture meetings. Selected titles are listed in the Society website (<http://www.geologyglasgow.org.uk/bookshop/bookshop/>). Most of the books in this list can also be purchased from www.Amazon.co.uk through the website's customised Amazon bookshop. If you want to purchase a book that is not on the list, or any other item that Amazon sell, you can help the Society by making your purchase from the Amazon home page using the link from the Bookshop page. The Geological Society of Glasgow is a participant in the Amazon EU Associates Programme, an affiliate advertising programme designed to provide a means for sites to earn advertising fees by advertising and linking to Amazon.co.uk. Each purchase that takes place through the customised Amazon bookshop or the link to the Amazon home page generates a commission of approximately 5% of the sale price (excluding VAT) for the society. Further information is available from GSG Council Member Bill Gray (books@gsocg.org).

Courses at the Glasgow University Centre for Open Studies:

<http://www.gla.ac.uk/courses/openstudies/>

- *Scottish gold* - John Faithfull and others - 10.00-13.00 Saturday 8 March 2014 (one meeting).
- *Geology in the field* – Chris Burton & James MacDonald - 10.00-13.00 Wednesdays from 23 April 2014. Introductory meeting + 5 full day excursions.
- *Geological study tour to south east France* - Judith Lawson and Mike Keen (spring 2014; dates to be announced, contact COS to be placed on mailing list).

Events from other geological societies:

Edinburgh Geological Society

For information about the lecture and excursion programme see

<http://www.edinburghgeolsoc.org>

12 February: John Crone (formerly Development Geologist, Scottish Coal Company Ltd) *The geology and history of surface mining in east Ayrshire*.

26 February: Professor Tony Fallick (SUERC) *Clough Medal Lecture: Planet Earth's Mid-Life Crisis* Joint Mining Institute of Scotland lecture hosted by the MIS in the Murchison House Common Room.

12 March: Professor Jane Evans (NIGL) *Tracing visitors to our shores: the application of isotope*

analysis to archaeological human migration studies.

26 March: Dr Kathryn Goodenough (BGS) *The global critical metals hunt*

For the summer excursion programme see http://www.edinburghgeolsoc.org/x_home.html

Aberdeen Geological Society

<http://www.aberdeengeolsoc.org.uk/>

27th February: Gary Nichols (Nautilus) *Old Red Sandstone Rivers and Reservoirs: are we using the right models?*

6th March: Peter Kokelaar (University of Liverpool) *Caledonian volcanoes and plutons of Scotland: under-appreciated enigmas revisited.*

27th March: Brice Rea (University of Aberdeen) *Glacial wanderings on Deeside* (to be confirmed)

24th April: Jan Zalasiewicz (University of Leicester) *The Anthropocene: A new geological era?*

15th May: *Annual General Meeting, Rock Auction and Member Travelogues.*

For summer field excursions see http://www.aberdeengeolsoc.org.uk/fieldtrips/field_trips.html

Highland Geological Society:

<http://www.spanglefish.com/highlandgeologicalsociety/index.asp>

26 February: *Annual General Meeting*

26 March: Dr Paula Lindgren (University of Glasgow) *Aqueous Alterations of Asteroids*

For summer field trips see

<http://www.spanglefish.com/highlandgeologicalsociety/index.asp?pageid=405568>

Westmorland Geological Society:

<http://www.westmorlandgeolsoc.co.uk>

19th February Dr. Emrys Phillips. *AGM starting at 7:45pm followed by the Presidential Address.*

19th March: Dr. Peter Kokelaar (University of Liverpool) *(Subject to be advised).*

For summer field excursions see <http://s3.spanglefish.com/s/22263/documents/pdfs/summer-programme-2014.pdf>

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