

The Geological Society of Glasgow

Registered Scottish Charity No. SC007013

President: Miss Margaret Donnelly BSc(Hons) Glasgow, BSc (Hons) Open

www.geologyglasgow.org.uk

mid September 2011

154/1

Welcome to the 154th session of the Geological Society of Glasgow. We can look forward to another varied programme of evening lectures organised by Jim Morrison who was also responsible for the excellent lecture programme at the recent Open University Geological Society's Symposium in Stirling. The Society's website is the place to keep up to date with events and news so do check it out if you have the means to do so. The Society is a member of the Scottish Geodiversity Forum and you can join the forum as an individual member: see www.scottishgeodiversityforum.org and also the notice below about their next meeting

As this mailing includes your **membership card** for the new session, we have decided to send you the first billet in paper copy even though you may have already notified us that you wish it electronically. And may we encourage you to consider changing to electronic delivery if you do not already receive it this way. Just email the Hon. Secretary - geolsocglas@uk2.net. And if you currently pay your annual subscription by cheque, we would encourage you to complete an application for it to be paid by Banker's Standing order, details below, and to complete a Gift Aid form as well.

Meetings

October meeting:

The first indoor meeting of session 154 will take place on **Thursday 13th October 2011** at 7.30 pm in the Gregory Building, University of Glasgow, Lilybank Gardens.

Dr Phil Stone

of the British Geological Survey, Edinburgh
will talk on

The Geology of the Falklands islands

The Falkland Islands present a geological paradox: though they are contiguous with the South American continental shelf their rocks and fossils have African affinities. The Falklands succession comprises Proterozoic metamorphic rocks (Cape Meredith Complex) overlain by Silurian to Devonian, shallow-marine clastic strata (West Falkland Group), followed by Carboniferous to Permian glacial, marine and lacustrine rocks (Lafonia Group). These have South African correlatives in the Natal basement, Cape Fold Belt and Karoo Basin respectively. Mesozoic dyke swarms relate firstly to the early Jurassic break-up of the Gondwana supercontinent, wherein the Falklands and South Africa were neighbours, and secondly to the early Cretaceous rifting that initiated the Atlantic Ocean. The present-day landscape of the islands has developed from the interaction of their geology with climatic variations, most notably during the last ice age when large-scale, spectacular periglacial features formed. Early geological work in these remote islands was piecemeal and opportunistic but has had significant consequences, influencing, amongst others, Charles Darwin during the 1833 and 1834 visits by HMS Beagle, and Alexander Du Toit in his prescient 1927 championing of continental drift. More recent work has commonly had economic motivation, culminating in the current offshore exploration for hydrocarbons.

November meeting

The second indoor meeting of session 154 will take place on Thursday 10th November 2011 at 7.30 pm in the Gregory Building, University of Glasgow, Lilybank Gardens.

Professor Dorrick Stow

Heriot-Watt University

will talk on

A Vanished Ocean: How Tethys shaped the World

The Tethys Ocean once dominated the Earth. Between 260 and 6 Ma (million years ago) its vast waters bore witness to some of the most significant and dramatic episodes in the history of our planet. Two mass extinctions – the end Permian and end Cretaceous – rocked the world during this long period of time. Global environmental stress and changes in ocean chemistry are more correctly implicated in the cause of these events, rather than bolide impact.

The warm shallow waters of Tethys then nurtured the ensuing rebirth of new organisms: exuberant Jurassic marine life; the development of sponge reefs, coral reefs, rudistid bioherms, nummulitic shell banks and the myriad fishes that adapted to each new ecosystem; the evolution of feathered birds from Tethys lagoons and cetaceans from the strandline to the deep sea. Repeated black-shale episodes (180-80 Ma) when the ocean was close to its maximum extent have given the world the majority of its oil resources. Progressive closure of the Tethys led to uplift of the Alpine-Himalayan mountain ranges, and their dramatic erosion fed the world's largest deepwater fans. Many of these play host to important oil and gas reservoirs. Ocean circulation patterns also changed and so impacted global climate, the resultant changes causing the world to plunge into its current icehouse climatic phase. Opening of the Gibraltar gateway after final closure of the Tethys reign (5.2 Ma) resulted in the outpouring of warm salty water into the North Atlantic Ocean. This is likely to help keep the Atlantic Overturn in operation and so, at least initially, stem the worst effects of global warming.

From this remarkable history of environmental change through the geological past we can learn much about our global environment today. What is robust and what precarious? How does life respond to changing stress? How does the ocean-climate nexus affect climate? Where are the tipping points to -wards irreversible change?

December meeting

The December meeting is the AGM and it will be followed by a regular lecture with the usual shorter talks being moved to the January meeting. The success of the Society relies on the continuing support of our members and the time and commitment of those who volunteer to serve on Council. Our lecture room can hold at least twice as many as normally attend so are you able to recruit a new member for us? There are always jobs on Council for willing hands and over the coming weeks we shall be seeking new members for election at the AGM on 8th December.

This session we are looking to find replacements for the **Hon. Secretary** and the **Excursion Secretary** among other positions

Notices

Distribution of the Newsletter (formerly Billet)

The Society's web site is the place for the most up to date information about our events, lectures and excursions. The newsletters will be available on the web site but the link will not be visible in the main menu. The link to download the newsletter is: www.geologyglasgow.org.uk/membership/members-page/ or if you wish to read it online then use: www.geologyglasgow.org.uk/about_us/billet

Members' Night 12 May 2011

Once again we had an excellent set of short talks by:

Meriel Young and Tim Hunter: BSES expedition to Svalbard 2010

Jim Morrison: An Garadh, Mull

Margaret Geene: Strathclyde Geoconservation Group and Scottish Geodiversity Forum

and displays by:

Chris Burton: donated books, free to good homes.

Margaret Donnelly; photos from excursions

Bill Gray: Dob's Linn and Greater Cumbrae

Emma Fairley and Robert Jamieson: display of rocks and maps from the Earth Science 4th year excursion to Spain

Robert McNicol: geological sketches from his field notebook from Poland, Northern Ireland, north Yorkshire and various Scottish localities

Strathclyde Geoconservation Group: Clochodrick Stone

Subscriptions

Annual subscriptions for Session 154 are due from **1 October, 2011** at the following rates:-

Ordinary Membership: **£20**

Associate Membership (available to those over 60, or spouses of Ordinary Members, or members of the Edinburgh Geological Society: **£10**

Junior Membership (available to those under 25, or full time undergraduates): **£5**

Note that the Scottish Journal of Geology is only sent to Ordinary Members and to those Junior members who pay an annual supplement of £5.

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 billet indicates our expectation that you intend to renew your membership subscription for Session 154. If you have an existing Bankers Standing Order this should happen automatically. If you currently pay by cheque then please remember to send in your subscription to the Membership Secretary for Session 154 at the address below.

Membership Secretary: Dr. R A Painter, 1a Alexandra Avenue, Lenzie, GLASGOW G66 5BE
Tel.:- 0141 777 7145: 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 year. 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.

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.

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, which is printed on the mailing label used for this billet. The number will also be repeated on the label for the next billet 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 154.

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

Mr M Addison	Coatbridge
Mr JJ Kocjan	Irvine
Mr K Torrance	Wishaw
Miss BJ Lafferty	Johnstone
Mr J Furnston-Evans	Maidenhead
Mr RD Paquay	Karrinyup, Western Australia
Mr C Seymour	Stirling
Mr M Barnett	Bearsden
Ms S Gemmill	Inverkip
Dr D Parkinson	Stirling
Mr P Lyden	Helensburgh

Scottish Geodiversity Forum

Those of you who have become members of the new Scottish Geodiversity Forum will be receiving the programme and booking form for the Conference at Battleby Centre, Perth on **Saturday 19 November 2011**. So if you haven't already done so, why not sign up to the Forum now! The website is **www.scottishgeodiversityforum.org**. Talks include the importance of geodiversity to Scotland and the future of our Geoparks. There will be ample opportunity for workshop discussion on topics such as working with young people, preparing leaflets and the place of geodiversity in policy planning. There is a charge of £15 for registration and lunch.

Geodiversity Petition to the Scottish Parliament

Representatives of the Forum Executive Committee, including the Society's Margaret Greene, have been meeting with Scottish Government officers, Scottish Natural Heritage and British Geological Survey to discuss the way forward with the Petition objectives. In June it was confirmed there is no funding (or political will) for statutory protection of geodiversity through legislation - even the Geoparks are threatened. However, following from the commissioned SNH/BGS study, *Scotland's Geodiversity: Development of the Basis for a National Framework*, it has been agreed that, as the Scottish Biodiversity Strategy is being re-drawn, this opportunity should be taken to incorporate geodiversity. In addition a short publication on Scotland's Geodiversity should be published, mainly on the internet, in the style of Scotland's Landscape Charter. This is on the SNH website www.snh.gov.uk. Here you can also find a note on ecosystem dependence on geodiversity – a view strongly supported by the Forum.

Scottish Journal of Geology

The Scottish Journal of Geology will handle any papers dealing with the earth sciences that either refer to Scotland and its adjacent areas or come from authors based in Scotland and is keen to see papers on the history of geology and geoconservation and geodiversity. The Society has many professional members and also has a tradition of amateur members being published authors and the current membership includes some amateurs

with very extensive geological knowledge. The SJG editorial board wish to bring the opportunity to publish in the SJG to the attention of anyone who might be interested. It has a scheme to mentor new authors in the skills of writing for peer-reviewed publication and it would be splendid to get submissions from non-specialist members of the Society who are engaged in citizen science such as geodiversity.

Points to remember are:

- 1) The work must be original
- 2) There must be a Scottish connection in the subject matter
- 3) All manuscripts will undergo the full review process
- 4) Manuscripts which take up no more than 4 pages in the SJG ('Short Communications') are likely to be dealt with quickly and favourably

Please see a recent issue of the SJG for the current format.

Dr Al McGowan is the secretary of the editorial board as well as the specialist editor for palaeontology and will be happy to discuss potential contributions with you. He may be contacted at: amcgowan@ges.gla.ac.uk

Youth Outreach

Volcano Fun Day on Saturday 8th October 2011 has, once again, been organised by Katerina Braun on behalf of this Society and the Edinburgh Geological Society. The venue is the Holyrood Park Visitor Centre, 1 Queen's Drive, Edinburgh EH8 8HG from 11 am to 3 pm. For information, email rockwatchscotland@googlemail.com

DACE – Courses For Adults at the University of Glasgow Programme in the Earth Sciences 2011-2012

Information from Dr Mike Keen

We have another varied programme this year, the full details of which can be found in the DACE brochure. If you wish to receive a copy of the brochure please contact DACE at 0141 330 1835 or visit it on the web at the department's website: www.glasgow.ac.uk/dace

Course codes are given in the following summary.

First of all however, I would like to thank all of you who wrote letters, or sent e-mails, in support of Adult Education at Glasgow, including the Council of the Society. The widespread support was overwhelming. The result is the survival of DACE. Adult and Continuing Education will become an independent unit of the university – although its name has still to be decided, but it will no longer be part of the School of Education. The university has asked for a business plan by early 2012 to take the department forward for the next 3 years, so a lot has still to be decided. In the meantime it is business as usual.

EVENING CLASSES

There are two evening classes this year:

EVOLUTION OF THE EARTH, LIFE, AND ENVIRONMENTS (6HW7)- 22 weeks on Wednesdays from 21st September, 7.30-9.30pm in the Gregory Building. This is a formal university course, equivalent to one half of the first year undergraduate course. Such courses lead to the Certificate of Education (CertHE), are validated by the university Senate and operate within the Scottish Credit and Qualifications Framework. If you take this course you may or may not choose to take assessments. As the title suggests, this covers geological surface processes, climate, fossils, economic and environmental geology, geological maps, and the history of Britain during the past 3,500 million years.

The course lecturers include Mike Keen, Cristina Persano, Fiona Meade, and Chris Burton. If you want further details I would be happy to help – contact me via e-mail at michael.keen@talk21.com or through DACE.

INTRODUCING GEOLOGY (GC195) – given by Mike Keen, 8 weeks on Tuesdays 7.30-9.30pm in the Gregory Building, from 4th October. This covers the complete spectrum of geology, and is intended for those new to the subject, or those wanting a refresher course.

DAY-TIME CLASSES

THE GEOLOGY OF BRITAIN (GC171) – given by Mike Keen, 18 meetings from Thursday 6th October, 2.00-4.00pm. As the name suggests, a look at the geology of Britain from the oldest rocks to the youngest.

THE GEOLOGY OF ASIA (GC172) – given by Chris Burton, 10 meetings from Friday 13th January 2012, 11-13.00. Again, a fairly self evident topic.

DAY EVENTS

ANTARCTICA AND CLIMATE CHANGE, Derek Fabel, Saturday 5th November 10.00am-4.00pm. An exploration of the role Antarctica plays in the earth's climate system, given by a member of the School of Geographical and Earth Sciences at Glasgow who is an expert in the field and an active worker in Antarctica.

AN INTRODUCTION TO SEQUENCE STRATIGRAPHY, Mike Keen, Saturday 11th February 2012, 10.00am-4.00pm. A practical introduction to this technique for interpreting sedimentary successions on the basis of basin-wide sea-level change.

FIELD TRIPS

GEOLOGY IN THE FIELD – Chris Burton, Jim MacDonald, Mike Keen.

As usual we plan a series of day excursions during the spring and summer months, Wednesdays from 18th April 2011.

STUDY TOUR TO BIARRITZ AND THE WESTERN PYRENEES

Leaders Mike Keen and Judith Lawson, 7-14 June 2012

The arrangements are nearly complete for this study tour, and prices will be announced in the near future. We will fly Edinburgh to Bordeaux, with 3 nights in Bayonne, close to Biarritz, 2 nights in Torla, in the Ordesa National Park in Spain, and 2 nights at Pau. We will study the Cretaceous and Tertiary coastal successions of the Biarritz area, including one of the important sections for the K/T boundary iridium layer, have two traverses through the Pyrenees to see the metamorphic Variscan (Palaeozoic) with its granite intrusions, see the magnificent Ordesa Valley in Spain with its large scale thrusts, and finally visit Lourdes and Gavarnie. The rocks include flysch, limestones (some with Nummulites), metamorphic Variscan, granite, and many superb structures.

We will circulate all those who have attended previous tours, as well as distributing leaflets as widely as possible, but if you want to let me know of your interest you can contact me at michael.keen@talk21.com

Edinburgh Geological Society - lectures

28 Sept. Professor David Green, University of Tasmania, *Are 'Hotspots' Hot? - Plate Tectonics without Deep Mantle Thermal Plumes*

19 Oct. Professor Jim Floyd, Heriot-Watt University, *Geology and architecture in South Scotland*

2 Nov. Dr Adrian Finch, University of St Andrews, *Coral aragonite: Rosetta stone of past climates or another useless rock?*

16 Nov. Professor Ben Harte, The University of Edinburgh, Presentation of the Clough Medal, *The Evolution of a Mesozoic Subducted Slab beneath Gondwanaland tracked by Mineral Inclusions in Deep Diamonds*

All details at: www.edinburghgeolsoc.org

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