

The Geological Society of Glasgow

Registered Scottish Charity No. SC007013

President: Dr Alan Owen, PhD

www.geologyglasgow.org.uk

Mid-September 2009

152/1

Meetings

October meeting:

The first indoor meeting of session 152 will take place on **Thursday 8th October 2009** at 7.30 pm in the Gregory Building, University of Glasgow, Lilybank Gardens.

This first meeting is the **Professor T.N. George Memorial Lecture** and presentation of the medal to

Professor Nigel Trewin
of the University of Aberdeen
who will then talk on

FOSSILS ALIVE! Interpreting Scotland's classic fossil localities.

Fossils, combined with the sedimentology of the rocks in which they are found provide us with factual information from which we can interpret ancient environments. However, the information is never complete, and our interpretations generally include speculation on the biota that was not preserved, the climate, and the palaeogeography. In the presentation we will visit Scottish localities ranging from Devonian to Jurassic age, to assess the fossil evidence and imagine what it would have been like to visit the area in the geological past. Amongst a number of localities we visit Caithness to see the Devonian fish in the Orcadian lake, Aberdeenshire for the celebrated biota of the Rhynie chert, and Skye for the rich Jurassic fauna that lived in warm shallow seas. New material is constantly being found, particularly by amateur collectors, enabling constant updating of our interpretations.

November meeting

The second indoor meeting of session 152 will take place on Thursday 12th November 2009 at 7.30 pm in the Gregory Building, University of Glasgow, Lilybank Gardens.

Dr Rob M. Ellam

Scottish Universities Environmental Research Centre, East Kilbride
will talk on

A Glasgow legacy: the scientific determination of the age of the Earth

The age of the Earth has been a central philosophical and spiritual question since 17th century theologians like Archbishop Ussher and John Lightfoot constructed chronologies based on biblical interpretation. Their results were stated very precisely but are now considered highly inaccurate. James Hutton's concept of "*no vestige of a beginning, no prospect of an end*" greatly challenged contemporary orthodoxy and is perhaps an underestimated contribution to

the Scottish Enlightenment. As geology gained confidence, eminent Victorians such as Lyell, Playfair and Darwin found their evidence for the vastness of geological time at odds with the thermodynamics of the Natural Philosophers; led from Glasgow by Lord Kelvin. As we now know, Kelvin's calculations failed to take account of, yet to be discovered, radioactive heat. In 1913, Frederick Soddy, working in the Department of Chemistry in the University of Glasgow, introduced the concept of isotopes. It is a delicious irony that the same radioactive isotopes that solved the thermodynamic conundrum of how an ancient Earth had stayed warm have also been exploited to date that very antiquity. This talk will explore the development of thinking on the age of the Earth with particular focus on the contribution from Glasgow.

December meeting

The December meeting is the AGM and Presidential address by the out-going President, Dr Alan Owen. This session there is quite a large number of office bearers and ordinary council members demitting office. 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 10th December.

Notices

Subscriptions

Annual subscriptions for Session 152 are due from **1 October, 2009** 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 152. 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 152 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.

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.

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Billet by email

We continue this session to offer you the Billet either on paper or electronically, or indeed both if you wish. If you have elected to receive this billet electronically but have received a paper copy, it is possible that we do not have your email address. If you have received a paper copy and are happy to get it electronically, or if you have received it electronically and wish a paper version instead, please contact the Hon. Secretary on geolsocglas@uk2.net

Membership Card

The enclosed card (or the one sent separately by post if you receive your billet by e-mail) 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 152.

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

Mrs Z D Fleming	Oban
Mr G R Gardner	Darvel
Miss A Metcalfe	Edinburgh
Mr W J Charter	Kilmacolm
Mr P D Esrich	Largs
Ms J L Haggerty	Largs

Strathclyde RIGS Group

Members of the various Scottish RIGS groups gathered in Perth in late May for the latest biannual meeting. There was lengthy discussion on the need for geodiversity to be embedded in Scottish Statute. Subsequently Mike Browne, Chair of UKRIGS raised an e-petition in the Scottish Parliament. Currently it has 301 signatures and a similar petition for biodiversity got some 700+ signatures. If you received this before 14th September when the petition closes, please consider adding your name. You will find the petition at: <http://epetitions.scottish.parliament.uk/> go to the list and scroll down for Geodiversity.

Since the last billet, two new leaflets have been produced by the group. An interpretation of the geology of Campsie Glen was published in June and was funded by the Society. In August, a larger leaflet explaining the geology around Balmaha in the Loch Lomond and Trossachs National Park was funded by the park authority and distributed around the area.

Fossil Grove, in Victoria Park, remained open again this summer. Its upkeep and the redevelopment of the surrounding area remain of concern to the Society.

A draft leaflet interpreting the geology of part of Rouken Glen was well received on a recent excursion. It is a Site of Special Scientific Interest and east Renfrewshire Council intend to apply for Heritage Lottery funding so that more can be made of what they call a “valuable resource.”

The former open-cast coal mine at Spireslack, the venue of one of the Society's recent excursions, has now been designated as Glenbuck RIGS. The group will continue to be involved with Scottish Coal's development for the site.

The British Geological Survey was commissioned by East Dunbartonshire, Council, with SNH support, to audit and assess its geodiversity. A total of 33 sites are recommended as Local Geodiversity Sites for inclusion in a Local Geodiversity Action Plan. Many of these could be promoted as RIGS.

Because of its increasing involvement in West of Scotland geoconservation, the group are campaigning for new members. Any member of the Society will be more than welcome – and you can bring a friend, member or not..

Scottish Festival of Geology

Details of all events which are part of this month-long festival throughout September are available on the festival website – www.scottishgeology.com. For example, the annual BGS Open Day is on Sat. 26th Sept.

DEPARTMENT OF ADULT AND CONTINUING EDUCATION (DACE), UNIVERSITY OF GLASGOW PROGRAMME IN THE EARTH SCIENCES 2009-2010

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.

The study tour to Madeira, which had to be cancelled last year, has now been organised for March 2010.

STUDY TOUR TO MADEIRA (S270)

22nd -29th March 2010

Leaders Jim MacDonald and Chris Burton

Madeira is a volcanic island in the central Atlantic with a history of violent eruptions during the last 15 million years. The scenery is spectacular with some of the highest cliffs anywhere. We will examine many aspects of its volcanic history and the tour will be an ideal introduction to the study of volcanoes.

Full details will be available in late September. If you have already expressed an interest in the tour, details will be automatically sent to you, otherwise contact DACE in advance, tel: 0141 330 1835 or e-mail: dace-query@educ.gla.ac.uk.

EVENING CLASSES

There are three evening classes this year:

EVOLUTION OF THE EARTH, LIFE, AND ENVIRONMENTS (6HW7)- 22 weeks on Wednesdays from 23rd 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, 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, 10 weeks on Tuesdays 7.30-9.30pm in the Gregory Building, from 6th October. This covers the complete spectrum of geology, and is intended for those new to the subject, or those wanting a refresher course.

GEOCHRONOLOGY (GC259) – introduced by Paul Bishop and administered by Cristina Persano, 10 meetings on Tuesdays from 6th October, 7.30-9.30pm in the Gregory Building. This follows on from the course we ran last year on the geological research being carried out in Glasgow, and results from an analysis of the comments given at the end of the course. Several lecturers who are specialists in their subjects will give will cover all the methods of dating rocks, set in the framework of depth within the earth, from deep plutons to surface sediments. It will examine isotope dating, fission track dating, sequence stratigraphy and modern biostratigraphy. The highlight will be a Saturday morning visit to see the equipment used at SUERC in East Kilbride. This course is aimed at those with some geological knowledge, but will be set at a level suitable for DACE students. So don't be put off if you fear it will be too specialised. I hope that there will be enough support to run such courses in the future – so come on, enroll!

DAY TIME COURSES.

THE GEOLOGICAL HISTORY OF CONTINENTS (GC197) – given by Chris Burton, 10 meetings on Fridays from 9th October, 11.00-1.00pm; venue to be announced. This course examines the formation and breakup of supercontinents through the last 3000 million years of earth history.

ICE AGES (GC196) - given by Mike Keen, 20 meetings on Thursdays from 8th October, 2.00-4.00pm, venue to be announced. An examination of modern glaciers and icesheets and the evidence for former ice ages, concluding with a consideration of future climates. There will be some emphasis on the evidence for Scottish glaciation.

Day Events

These are intended for those who wish to study a specific subject in more detail than is usually possible in an evening or day class. The two courses listed below will be held in the Gregory Building from 10am until 4pm. They will include practical work as well as lectures. They will include practical work as well as lectures.

FLYSCH, GREYWACKE AND MOLASSE (Y258)

Mike Keen

Saturday 14th November 2009

These sedimentary rocks are associated with mountain building: the first two 'syn-tectonic' turbidites associated with subduction while 'post-tectonic' molasse forms from the erosion of rising mountains. They show spectacular folding and faulting. Examples will be taken from the Cretaceous and Tertiary of the Alps and Pyrenees, and the Ordovician and Devonian of Scotland. We will study how they form and examine rock hand specimens, sedimentary structures, microscope slides, and trace fossils.

SUPER SLIME: HOW THE EARTH'S EARLIEST LIFE FORMS LIVED ON A HOSTILE PLANET (Y199)

Vernon Phoenix

Saturday 20th February 2010

Bacteria were the first life forms to inhabit our planet. These tiny creatures, however, experienced a planet that was extremely hostile to life as we know it today. Toxic atmospheric gases and high levels of UV radiation made life exceptionally difficult for any microorganisms inhabiting the surface. This course will examine how a wide range of microorganisms adapted to live within a variety of habitats that enabled life to flourish under these conditions. We will also examine the various theories for the origins of life on our planet and how bacteria can apparently exist in almost any environment where there is sufficient water for their survival. The impact these organisms have had upon the chemistry of our planet today will also be studied. The course will involve a mix of both lecture and lab work.

The following day event may also interest members:

Climate Change (YO41), Saturday 13th March, David Bailey, Andrew Conway, Alexander MacKinnon, and Dominic McCafferty

Edinburgh Geological Society

All details on their web-site: www.edinburghgeolsoc.org

Highland Geological Society

Next Billet

The next billet will be with you in mid-November with nominations for Council members to be elected at the AGM

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