



THE HIGHLAND GEOLOGICAL SOCIETY

Scottish Charity No. SC004427

FEBRUARY 2017

Dear Members,

Welcome to another (hopefully!) geologically fun-filled year. Our Winter Programme continues apace and this newsletter contains additional dates for your diary. Please check the dates for the field trips that are already planned (a week-long excursion to Islay in May and a weekend trip to Skye in September) and let me know if you are able to attend as soon as possible – thank you – as this greatly aids the planning process.

Also, hot off the press, I am delighted to confirm that our speaker on **12 April** will be **Professor Iain Stewart** from the University of Plymouth – do hope that you have kept this date free! More details to follow but trust that you will help spread the word and ensure that we have a good attendance on the night. **This event will be ticketed** – please contact Alison (a.j.wright00@aberdeen.ac.uk) for more information.

After a short illness, Dr John Mendum (BGS) died peacefully in December last year and his obituary is included at the end of the newsletter – John was a long-time supporter of the HGS, leading a particularly well-supported trip to Rosemarkie in 2012 (see image at <http://www.spanglefish.com/highlandgeologicalsociety/index.asp?pageid=405571>); he will be much missed by us and everyone who has an interest in the geology of the highlands.

WINTER PROGRAMME 2017

22 February – AGM

Following the successful format of previous AGMs, the important business part of the society's activities will be followed by a short talk:

Looking for life on Mars? Dr Alison Wright, HGS

The question of where life originated is one that has puzzled scientists for decades. Some authors have suggested that life was carried to Earth from Mars via meteorites, a theory supported by the announcement that bacteria-like fossils had been found in a Martian meteorite, ALH84001, in 1996. This claim was not supported by the wider scientific community, but, due to the presence of water, life may still have evolved on Mars. Alison shares the results of work that she did investigating why fluid inclusions in evaporites might be the best place to look for evidence of life on Mars.

22 March – *The Shaping of the Highlands: Deep-time origins and evolution of an orogenic landscape* – David Jarman, HGS

Is it possible to trace the origins of the present-day Highlands as a mountain range all the way back to the Caledonian orogeny? David will explore a geomorphological version of the Highland Controversy including issues which are apparent in the modern Highland landscape: why do all the main rivers flow east, from a main watershed close to the west coast; why are the mountain summits consistently at Munro level, yet spiky west and smooth east; does the Caledonian Unconformity tell us whether the Highlands were once as high as the Himalayas? As a geomorphologist, David applies the principles of landscape evolution to examine whether the long gap between tectonic history and correlatable deposits can be bridged by reconstructing palaeodivides. This promises to be an engaging and thought-provoking discussion, particularly as this will be its very first outing.....

12 April – Scotland: Living on the Edge – Prof. Iain Stewart, University of Plymouth

Iain Stewart is Professor of Geoscience Communication at Plymouth University and thus spends much of his time writing and talking about how our planet works. Iain will discuss how ‘tartan geology’ has influenced scientific thinking in the past and how it is likely to continue to do so in future.

*This meeting will be held in the **Lecture Theatre** (Main Assembly Hall) at Milburn Academy at 7.30pm. Non-members welcome (admission charge £5) – contact Alison for ticket information.*

SUMMER PROGRAMME 2017 (thus far)

ISLAY 6 – 13 MAY – self led

I’m delighted to confirm that this trip will go ahead. Islay has been chosen on the basis that a very good field guide to the geology of the island has just been published, full of detailed descriptions and excellent colour photographs (see below). Outcrops of interest include the Rhinns Complex (an ancient island arc dated ~1800 Ma) and the Dalradian Port Askaig Tillites (evidence of a global glacial event). The Dalradian rocks on the island are not as intensely metamorphosed as elsewhere in Scotland, allowing many original sedimentary features to be determined, and excellent examples of stromatolites can also be found. Large dykes on the northern shore, dated ~ 55 Ma, are linked to the opening of the North Atlantic and the island’s Quaternary deposits show a variety of geomorphological features. The trip may include a day trip to Jura if there is sufficient interest.

The group will be based in the Port Charlotte area, where there are various accommodation options available. There is one place available in the self-catered accommodation and there is also a youth hostel and a campsite for both tents and campervans on the edge of the village. This location means that most exposures can be reached within a 30 minute drive and that shared transport can be arranged.

If you are unable to attend for the full week, you can join the group on an ad-hoc basis but please let Ann Reynolds know which day(s) you wish to participate in (annandpeterfarr@hotmail.com). Ann is away until the end of March; please copy your email to Alison (a.j.wright00@aberdeen.ac.uk) if you are trying to contact Ann before then.

Detailed information about the island can be found in:

A GUIDE TO THE GEOLOGY OF ISLAY by David Webster, Roger Anderton & Alasdair Skelton
Ringwood Publishing, Glasgow 2015 ISBN 978-1-901514-16-2

KNOYDART MICA MINE – Saturday 17 JUNE – Andy Moffat, HGS

Following his talk last month, Andy has very kindly agreed to take the group to visit the mica mine on the Knoydart peninsular. We will travel by boat from Mallaig, climb up to the mine along the stalkers’ track and return to Mallaig late afternoon. The cost of the boat will be £30-£40 depending on the number of participants. *To secure your place, please send Alison a cheque (payable to the Highland Geological Society) for £30 at time of booking.*

We also hope to have an excursion in the Glen Nevis area on Sunday 18 June so that we can make this a weekend trip. More details to follow in due course.

SKYE 2 – 4 SEPTEMBER – Jim Ritchie, Speedwell Energy Ltd.

Jim Ritchie will lead this weekend excursion to Skye which will allow us to explore the UK’s Atlantic Margin Petroleum System. Depositional environments, palaeogeography, reservoir and source rock development within the Jurassic sedimentary succession will be examined and the impact of Tertiary volcanics on reservoir properties and source rock maturation will be observed. Intra-basalt reservoirs, which are hydrocarbon-bearing in the offshore Rosebank discovery, will also be studied. This promises to be an

interesting weekend, focussing on aspects of the stratigraphy that we have not addressed on previous trips to the island.

We will be based at the Sligachan Bunkhouse – please let Alison know if you wish to join the group here or whether you would prefer to arrange your own accommodation elsewhere. There is also a campsite at Sligachan; more information available at: <http://www.sligachan.co.uk/sligachan-hotel.php>
Note that this is still peak-season for Skye so accommodation may prove difficult (and expensive) to secure nearer the time!

The plan is to meet in Portree and then spend Saturday afternoon and Sunday exploring the Trotternish Peninsula, followed by a visit to Elgol on Monday morning.

WINTER PROGRAMME 2017

11 October – *Scottish and Agate Creek Agate*, John Mackenzie, Earl of Cromartie

Scottish agate is some of the most beautiful in the world and John's talk will give some insight into their variety, whilst the well-known Agate Creek area of Northern Queensland has agates of a colour brilliance possibly unrivalled. The talk will include photos of agates from both regions as well as from various other localities.

8 November – *Drilling the Nankai Trough Accretionary Complex*, Dr Stephen Bowden, University of Aberdeen

The Nankai Trough Accretionary Complex is the most recent of a number of such complexes that have developed to the south-west of the Japanese island arc. In 2016, Stephen joined an international team of scientists on a leg of the Integrated Ocean Drilling Programme to further investigate the history of the complex and explore it for microbial life. Like many drill targets it was chosen on the back of good preparative work and was considered well-characterised; mud, more mud and mud. But what really happened was far more surprising. Come share the surprise..... A documentary about the project can be seen at: <https://www.youtube.com/watch?v=7-WgYZVYYWQ>

13 December – *Clay*, Professor Peter Scott, Peter W. Scott Ltd. and Camborne School of Mines, University of Exeter

Clay was one of the first of the Earth's mineral resources to be exploited by mankind. It has been extracted throughout history and remains an important raw material in the 21st Century. Clay has properties that are unique and not found in other rocks and minerals. The talk will describe the diverse types of clay that are found in the UK and elsewhere, their mineralogy, geological setting and origin. It will also explain why clay is unique and how the properties of the microscopic sized clay minerals control the wide range of uses of clay.

10 January – *Hydrogeology - water under the ground*, Dr John Heathcote, HGS

30% of the fresh water on the planet is groundwater, and 69.8% is ice. Most of the drinking water supply in southern England is from groundwater. Groundwater often features in civil engineering too - usually as a nuisance. Thus there's a whole branch of science that studies groundwater - it involves chemistry and maths as well as geology. The talk will cover the broad scope of hydrogeology, without too much chemistry and maths!

OTHER DATES OF INTEREST:

18 February – NW Highlands Geopark AGM, 11 am Coigach Community Hall, Achiltibuie

1, 8, 15, 22 March – Lochaber Geopark Local Geology Course, plus fieldtrip 25 March, Fort William; contact info@lochabergeopark.org.uk or 01397 705314 for more details.

13 March – *To frack or not to frack*, Professor Iain Stewart, University of Plymouth.
Royal Scottish Geographical Society Inspiring People Lecture, 7.30 pm Highland Council Chambers.
Tickets available from:
<https://www.eventbrite.co.uk/e/rsgs-inspiring-people-professor-iain-stewart-inverness-tickets-29299729279#tickets>

8 May – *Geology of the Great Glen*, Professor Alasdair Skelton, Stockholm University.
7.00 pm Glen Urquhart Public Hall, Blairbeg, Drumnadrochit, IV63 6UG

9 – 10 September – Conference organised by the Friends of Hugh Miller *The Old Red: Hugh Miller's Geological Legacy*, Cromarty, Black Isle with possible field trip 11 – 13 September.
More information and application form for the conference at:
<http://www.thefriendsofhughmiller.org.uk/index.asp?pageid=661915>

OBITUARY – Dr JOHN MENDUM – 10 January 1945 – 8 December 2016

(Information taken from the ‘Service of Thanksgiving’ on 20 December at Currie Kirk, Edinburgh, which was well attended by family and friends from the geological community).

John was born the middle child of three in, what was then, the outskirts of Middlesborough, with farms at one end of the road and a burgeoning industrial town at the other. His parents, who had met in the local rambling club, seem to have spent a good number of holidays in the far flung (in the 50s and 60s) Alps, trips that may have begun his lifelong passions for rocks and mountains. He did well at school and he went on to Leeds University, to follow his interests and study geology. It was here, in the confines of the caving club that he met, and later married Mary Bates. The couple travelled to Australia, where John took a post, mapping and adventuring across the Northern Territories. On returning to the UK, and Edinburgh he re-started his studies and was awarded a PhD on the orogeny and metamorphics of the Italian Alps. By now he was father to two sons, Tom and Neil, with a daughter, Josephine soon to arrive. His mapping work continued, allowing him and on occasions his family, the opportunity to visit and explore many of the most beautiful parts of the highlands. When the geology of Scotland was not requiring his attentions, the family spent the school holidays in various far flung (or so they still seemed to his children) European destinations that more often than not would include the Alps of his childhood.

Later in life, as the children left home, he continued to work in Scottish geology. The death of his wife Mary in 2004 came as an unexpected and tragic blow, but only made his geology and other interests, particularly the appreciation of the world’s wines and the nuances of bridge, ever more important during the 11 years of active retirement.

John is survived by his three children, Tom, Neil and Jo, and his four grandchildren, Ben, Arun, Summer and Sam.

CONTACT INFORMATION:

Chairman: Alan Thompson 01463 238992
Secretary: Dr Alison Wright 01309 671949
Treasurer: Dr Rhona Fraser

alanrossthompson@hotmail.com
a.j.wright00@aberdeen.ac.uk
rhonabifraser@tiscali.co.uk