

THE HIGHLAND GEOLOGICAL SOCIETY

Scottish Charity No. SC004427

MAY 2016

Dear Members,

Our summer programme is continuing apace, following an excellent weekend on Skye with Iain Allison. More details regarding the June excursion are given below; unfortunately due to ill-health, John Mendum is now unable to lead the trip but he has very generously made his notes available to us. Consequently the weekend will be self-led, although we will continue to look for additional support. This format worked very well on Mull so am sure that we will see and learn lots!

Following on from Peter Harrison's talk about the NW Highland's Geopark, information about their field trip programme is available at: http://www.nwhgeopark.com/geotours-2016/ and, for those members who receive their newsletter by email, the .pdf is also attached.

SUMMER PROGRAMME 2016

Saturday 11 June - Sunday 12 June - Banffshire coast

Saturday: meet at Golf Links car park, Cullen at 10 am (NJ 5052 6735)

We will walk to Portknockie from Cullen to view sedimentary structures in the Cullen Quartzite, the lowermost formation of the Grampian Group. From here, we will make our way east, moving through progressively younger rocks of the Dalradian Supergroup. Localities will include Findlater Castle, Sandend and Boyne Bay but exact outcrops and timings will be dependent on weather and rate of progress.

Sunday: meet at 9.30am Cullen Square car park (NJ 5124 6712)

Terrain includes good tracks and sandy beaches but also exposed grassy slopes and vertically-bedded rocks which are slippery when wet; please ensure that appropriate footwear is worn.

On Saturday evening we will eat at the Crannoch Hotel, 12, Blantyre Road, Cullen, AB56 4RQ (http://www.cullen-hotel.co.uk/index.html); please let Alison know if you would like to join the group for dinner.

Sunday 7 August – Duntelchaig, south of Inverness, Ann Reynolds (HGS)

Meet at the Matalan car park at Inshes, Inverness (NH 6875 4420) at 10.00. (Take the Hospital turning off the A9 to the retail park and follow it round). Note: there is limited parking available at the excursion start so we will leave as many cars as possible at Inshes.

The 'Inverness Lake District' lies SW of Inverness between the Great Glen and Strathnairn. We will look at the area around the southern end of Loch Duntelchaig (covered by new BGS Sheet 73E – Foyers). The bed rocks are psammites and pelites of the Grampian Group which contain garnet amphibolites, pegmatites and felsite dykes; some of these are migmatised. Overlying Devonian breccia—conglomerate sandstones outcrop in the area and we will be able to see (or infer) the position of the unconformity at 3 or more points. There are also several faults and a very fine fault breccia. These rocks were exposed during the last period of glaciation and we will have a look at the geomorphology of the area.

Much of the day will be spent on the road side or walking up a well-made forestry track we will have to cross rough ground so good supportive boots are recommended. A set of binoculars may be helpful to try and establish the plane of the unconformity.

Saturday 3 September – Sunday 4 September – Tayvallich volcanics, Dr Roger Anderton

This excursion will be based in Lochgilphead to allow us to look at the upper part of the Argyll Group (Craignish Phyllites, Crinan Grits, Tayvallich Limestone and Volcanics) which provides varied stratigraphy and sedimentology, volcanics, and interesting tectonic structures. There is also some fascinating Quaternary geology to see, including moraines, outwash, sea level, and periglacial features, as well as noteworthy geoarchaeology.

It is also hoped to have an excursion in early October; plans are already in place for the start of the 2016/17 winter programme so details given below to ensure your early availability!

WINTER PROGRAMME 2016

9 November – A Geologist's Perspective of the Role of the Highlands and Islands in Hydrocarbon Exploration and Production, Jim Ritchie, Subsurface Director, Speedwell Energy Ltd, Aberdeen

Major engineering facilities in the Highlands and Islands provide visual evidence of the impact of the oil and gas industry in the region. Examples include the platform fabrication yards at Ardersier, Kishorn and Arnish Point on the Isle of Lewis, the exploration rig maintenance yards at Invergordon and Nigg with mobile rigs lined up in the Cromarty Firth and, further north, the oil terminals at Flotta and Sullom Voe, as well as the subsea production and control bundles fabrication facility at Sinclair's Bay. What is perhaps less well known is the important contribution of the Highlands and Islands to the understanding of the subsea geology in the Moray Firth, North Sea and Atlantic Margin. The consequent successful exploration for, and development of, oil and gas in these areas continues to be very important to the economy of Scotland and the UK. Jim's talk will give some examples of applying outcrop studies to the offshore environment and will also describe some onshore hydrocarbon exploration and development activity. There will also be a description of the components needed for a working petroleum system, which is essential for successful hydrocarbon exploration.

7 December – *The real mineral resources of the UK*, Professor Peter Scott, Peter W. Scott Ltd. and Camborne School of Mines, University of Exeter

Rocks and minerals mined or quarried in the UK provide many of the raw materials for our basic industries. Those currently extracted include sand and gravel, limestone, dolomite, sandstone, igneous rocks, silica sand, gypsum, potash, salt, china clay, ball clay, common clay, building and dimension stone, slate, fluorite, barite, and talc. They are worth about £2.5 billion to the UK economy and provide around 20,000 jobs at about 2,000 sites of extraction. Processing and manufacture into mineral-based and other products that contain one or more of these minerals add considerably more value and gives even more employment. By contrast, metal ore extraction in the UK in recent years was worth about £1 million, although this will increase with a new tungsten mine now on-stream in Devon. The lecture will describe the geological features of some of the minerals that were once extracted in the UK and discuss the geological problems in extracting some of the present ones.

Contact information:

Chairman: Alan Thompson 01463 238992 alanrossthompson@hotmail.com

Secretary: Dr Alison Wright 01309 671949 a.j.wright00@aberdeen.ac.uk

Treasurer: Dr Rhona Fraser rhonabifraser@tiscali.co.uk