



Down to Earth

"Earth science learning for all"

Edinburgh & the Scottish Borders

June 10-17 2024 (7-nights)

A word from your leaders...

Even after a number of visits, over many years, Chris still finds himself travelling back to the late 1780s and the experience of James Hutton as he gazed upon the rocks at Siccar Point in Berwickshire. Using just his eyes and applying his extensive field experience to the scene shown here, he was able to declare that "he was peering into the abyss of time". This site is truly the 'holy grail' of geological time and should be visited by everyone as a kind of pilgrimage!

This trip will take in Siccar Point, but also much more of the geology of the Border region. Inland we'll visit places like Selkirk and Peebles, whilst on the coast taking in the geology of Dunbar, Pease Bay, and North Berwick. We spend a couple of days in the Edinburgh area, taking in Arthur's Seat volcano and Hutton's Section as well as some lesser known outcrops in the Pentland Hills. Weather permitting, we may also take a boat trip out into the Firth of Forth to see something of the coast in general.

This trip will provide us with a positive feast of excellent geology with something for everyone! From fossiliferous sediments to a large variety of igneous rocks and spanning several different time periods. It's going to be a matter of what we leave out rather than what we include, there's just so much.

For your added convenience, all of this trip is based at the comfortable Royal Macintosh Hotel in the small town of Dunbar, from where we can access all of our field areas using our minibus. As this trip will be covering some new ground for us, we expect it to fill up quite quickly. Early booking is advised, especially if you want a single room.

Chris Darmon & Colin Schofield
Course Organisers/Leaders

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Getting to and from the area

Dunbar is served by trains on the East Coast from London and also TransPennine Trains from Northern England. It is also served by good road links to the rest of the country. There's also a regular service of local trains to and from Edinburgh.

Getting Around

We'll be making use of our 17-seater hired minibus for this tour. It will be driven by my friend and colleague Colin. If numbers exceed 15 we will need to make use of an additional car. Daily distances will be modest, and the roads good in largely rural areas. On at least one of the days in Edinburgh, we will make use of the local train service, so please bring any railcards you have with you.

Walking

This is not an area of particularly difficult terrain, although there will be a couple of steep ascents and descents of cliffs. We'll get you as close as possible to the relevant sites and will, in almost every case, involve minimal walking distances. Everything therefore should be within the capabilities of all of the party. Not everyone will want to descend the cliff to the Siccar Point unconformity. However, if at any time you wish to 'opt out' that will be fully acceptable and understood. In view of the uncertainties of the weather you are strongly advised to bring all waterproofs and walking boots – particularly as you may be walking over rough ground.

Samson's Ribs at Arthur's Seat Volcano (Image: BGS)

The Geology of the area

This part of the Scottish Borderland holds a very special place in the history of geology because it was in and around this area that James Hutton was very active in the 1780s. A member of the so called Scottish Enlightenment, Hutton has been described as the 'father of modern geology'. In Edinburgh Hutton recognised that intrusions were later emplacements of molten magma into re-existing sediments and at Siccar Point he was able to demonstrate the enormity of geological time.

Our fieldwork this week will take us across the major Southern Uplands Fault, with some contrasting rock types in either side. On the south side, we'll be able to see Silurian greywackes and volcanics and the Cheviot granite of Devonian age. On the north side, in the Midland Valley, we will see a great variety of mainly Carboniferous rocks, including sediments, volcanics and intrusives.

Aside from the solid geology, there are also some insights into more recent Quaternary events in the form of erratics, raised beaches and other landscape features. If all this geological variety were not enough, you also have to add in the fabulous coastal scenery and inland landscape, much of it the results of meltwater erosion.

Itinerary



At this stage, this is meant to be indicative of the course content. Final details will be worked out in accordance with the wishes of the group and the prevailing weather.

- The coastal geology around St. Abb's Head and Siccar Point
- Volcanics and granite of the Cheviot Hills
- Coastal geology at Pease Bay
- Volcanic rocks around North Berwick
- Arthur's Seat Volcano
- Hutton's Section, Edinburgh
- Coastal geology of the Firth of Forth
- Geology around Selkirk and Peebles
- Coastal geology at Dunbar
- Devonian rocks of Blackford Hill

Red sediments at Pease Bay (Image: James Herring)

Accommodation & Food

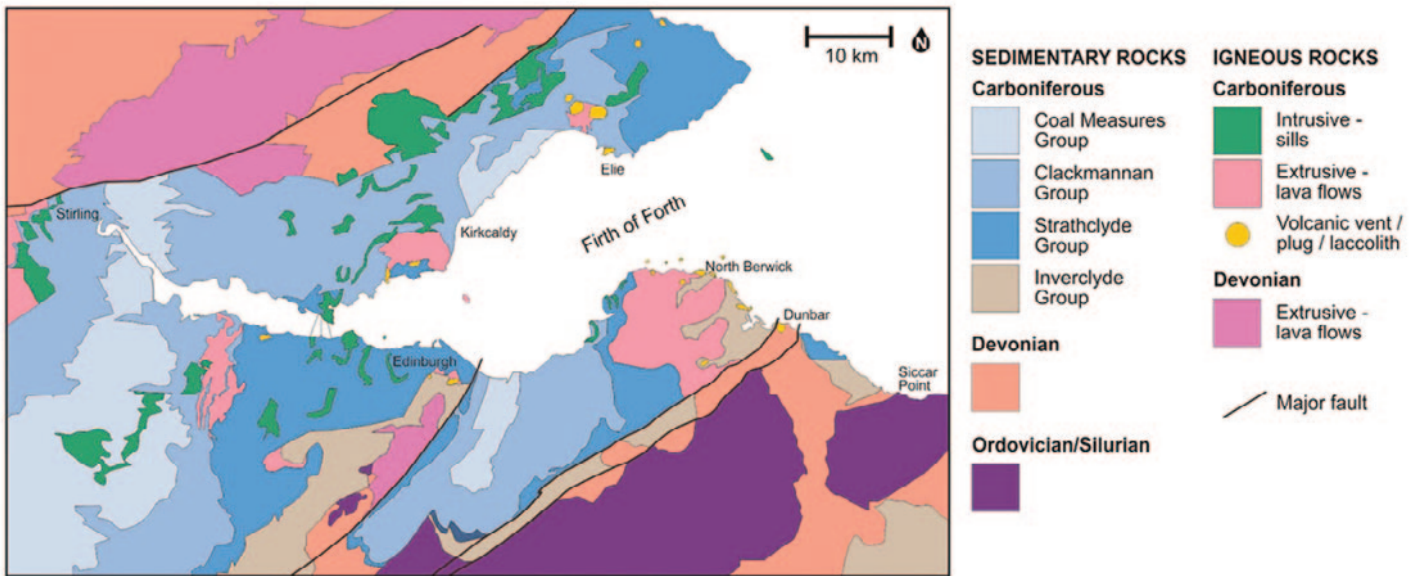
Good food and a good night's rest are important elements to our tours and we have worked hard to bring you good value in local accommodation. The Royal Macintosh Hotel is about 200 yards from the station and is family run and offers good hospitality, both in its ensuite rooms and food. A tasty evening meal is included, which will be taken at the hotel. Packed lunches will be sourced locally. Single accommodation is available, but is limited and subject to a modest supplement.

We are happy to help anyone looking for someone to share a twin bedded room – simply indicate on the booking form.

Cost

For 2 people sharing a double or twin room, the cost of the 7-night tour will be £1095.00 per person; for single occupancy, the cost will be £1195.00 per person.





The regional geology of Edinburgh (Image: Courtesy of Edinburgh Geological Society)

Insurance

Everyone booking a place and paying a deposit is strongly advised to take out holiday insurance. This can cover you against loss of money in the event of you having to cancel due to illness etc. Cover is often included in with your credit card or bank account.

Booking

Please fill in and return a completed booking form.. Your booking will be confirmed upon receipt of either a deposit of £300.00 per person or the full payment. The balance of the brochure price will be due by March 31st. 2024.

This trip will run provided a minimum of 12 people have booked by December 31st. 2023.

Your money...

Upon receipt, all monies paid for these trips are placed in a specific 'client trust account' where it cannot be drawn by us until after completion of the tour. This is in accordance with EU Directives and ensures that your money is safe in the unlikely event of corporate failure by Geo Supplies.

What happens next?



As soon as we are in a position of confirming that the trip will run - we will let you know. You will then be free to start making your own travel plans and to take advantage of any early deals on train/air tickets.

Please don't make any such arrangements until we have been in touch with you.

Also see information contained in our 'Residential Field Trips 2024'

North Berwick Law - an intrusion (Image: Wikipedia)