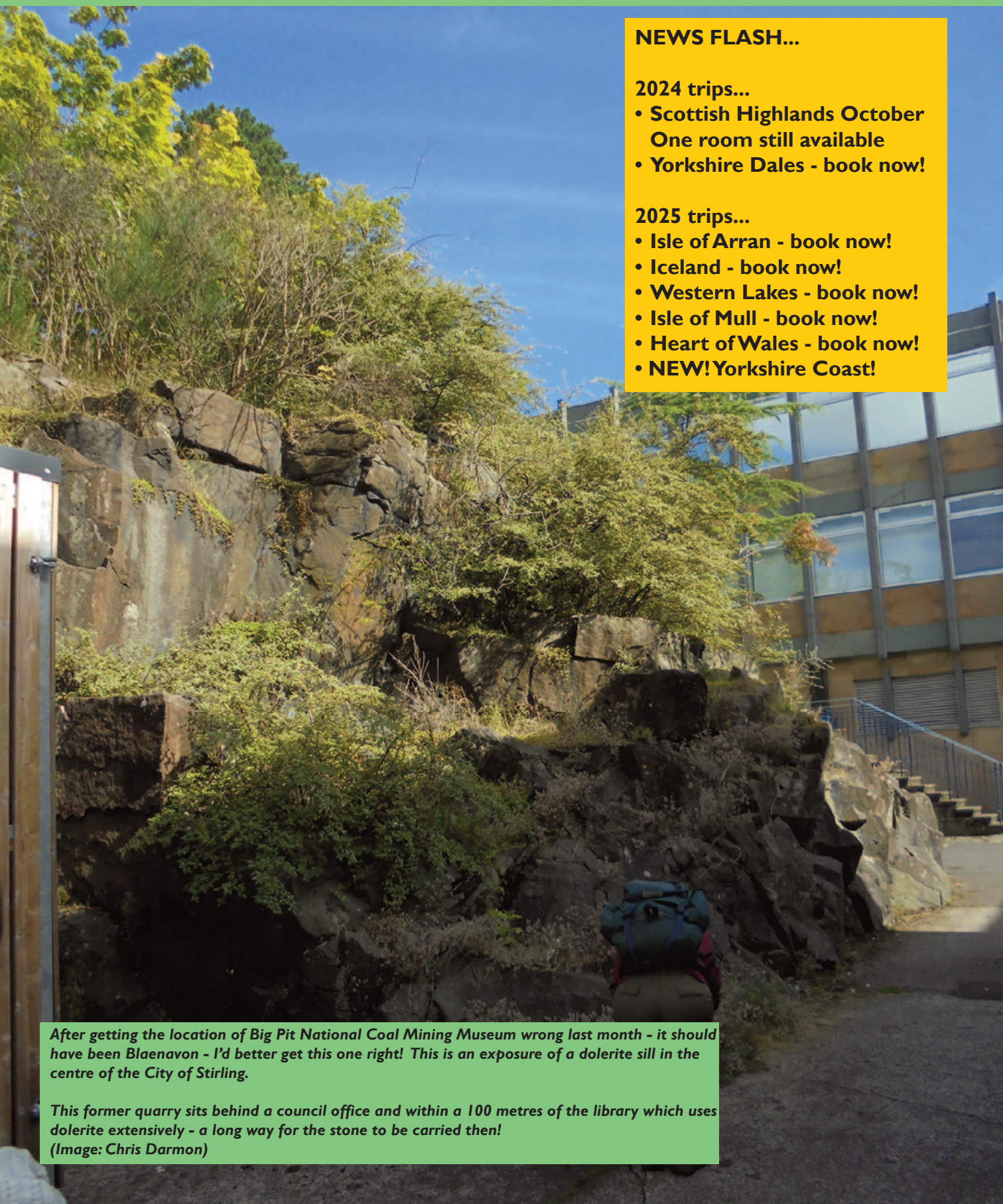
Down to Earth extra

Issue 141 September 2024

NEWS FLASH...

2024 trips...
- **Scottish Highlands October One room still available**
- **Yorkshire Dales - book now!**

2025 trips...
- **Isle of Arran - book now!**
- **Iceland - book now!**
- **Western Lakes - book now!**
- **Isle of Mull - book now!**
- **Heart of Wales - book now!**
- **NEW! Yorkshire Coast!**



After getting the location of Big Pit National Coal Mining Museum wrong last month - it should have been Blaenavon - I'd better get this one right! This is an exposure of a dolerite sill in the centre of the City of Stirling.

This former quarry sits behind a council office and within a 100 metres of the library which uses dolerite extensively - a long way for the stone to be carried then!
(Image: Chris Darmon)

From the Editorial team...

We often talk about the lack of coverage that geology gets in the regional and national TV, well August has proved to be a 'blue moon' in more than one way with extensive coverage of several stories that certainly raised our profile.

First, there was the real 'Blue Moon' story with some really nice pictures and clear explanations of what it was, how it occurred and even the human angle with the wildfires of Canada causing a red tinge to the colour of the moon. As always with stories like these it's down to who the media (particularly TV) get in as experts. We were lucky on this occasion with some good speakers.

Next there was the unexpected news (for us anyway) about the origin of the altar stone at Stonehenge. It was particularly interesting because this wasn't about the so-called blue stones of the ring, it was the sandstone that forms the recumbent main altar stone. This has long been thought to be Old Red Sandstone from somewhere in South Wales. New research involving geochemistry has now concluded that instead originates in Caithness in the far north of Scotland! Whilst the bare bones of the discovery were well presented, the evidence got a bit tangled up as it was rather technical and few people would have got the message that this involved our 'wonderful friends' the Zircons!

Finally, a group of tiny Hebridean islands in Scotland, the Garvellachs - now who had even heard of them? In a series of brilliant interviews, Graham Shields and colleagues from UCL carefully explained the scientific evidence for the beginning of 'snowball Earth' 720 million years ago. The story told in this rock succession records this worldwide event in minute detail. We await the decision as to whether the islands earn a 'golden spike' - watch this space!

The moral to all these stories is that told right, rocks make for some compelling narratives that can be told on prime time TV!

Chris Darmon & Colin Schofield
The Down to Earth Editorial Team

Get ready to Zoom this Autumn - see page 11!

news update

Remote Scottish islands awaiting a 'golden spike'?

Research by a team of geologists from University College London (UCL) on the Garvellach Islands of the Inner Hebrides in Southwest Scotland, could be recognised by the award of a 'golden spike'. The discovery in the 720 million year old Dalradian rocks has provided geologists with a unique insight into the precise beginning of the almost global ice age known as 'snowball Earth'.

This is taken from UCL's website:

The study, published in the ***Journal of the Geological Society of London***, found that the Port Askaig Formation, composed of layers of rock up to 1.1km thick, was likely laid down between 662 to 720 million years ago during the Sturtian glaciation – the first of two global freezes thought to have triggered the development of complex, multicellular life.

One exposed outcrop of the formation, found on Scottish islands called the Garvellachs, is unique as it shows the transition into "snowball Earth" from a previously warm, tropical environment. Other rocks that formed at a similar time, for instance in North America and Namibia, are missing this transition.

Senior author ***Professor Graham Shields***, of UCL Earth Sciences, said: "These rocks record a time when Earth was covered in ice. All complex, multicellular life, such as animals, arose out of this deep freeze, with the first evidence in the fossil record appearing shortly after the planet thawed."

First author ***Elias Rugen***, a PhD candidate at UCL Earth Sciences, said: "Our study provides the first conclusive age constraints for these

In the foreground are limestone beds of the pre-glacial Garvellach Formation. Due to tectonic tilting, the sedimentary layers get younger, and closer to the onset of glaciation, as you move to the right. (Image: Graham Shields, UCL)

Scottish and Irish rocks, confirming their global significance. "The layers of rock exposed on the Garvellachs are globally unique. Underneath the rocks laid down during the unimaginable cold of the Sturtian glaciation are 70 metres of older carbonate rocks formed in tropical waters. These layers record a tropical marine environment

Down to Earth extra is designed & published by Geo Supplies Ltd., 49 Station Road, Chapeltown, Sheffield S35 2XE

Editor: Chris Darmon
Assistant Editor: Colin Schofield

Tel: 0114 245 5746 • FAX: 0114 240 3405
Subscribe for FREE: downtoearth@geosupplies.co.uk

Tony Spencer, co-author of the latest study and of a classic 1971 memoir about the rocks, standing in 2023 on glacial till of the Port Askaig Formation on Garbh Eileach, the largest of the Garvellach islands. (Image: Graham Shields)

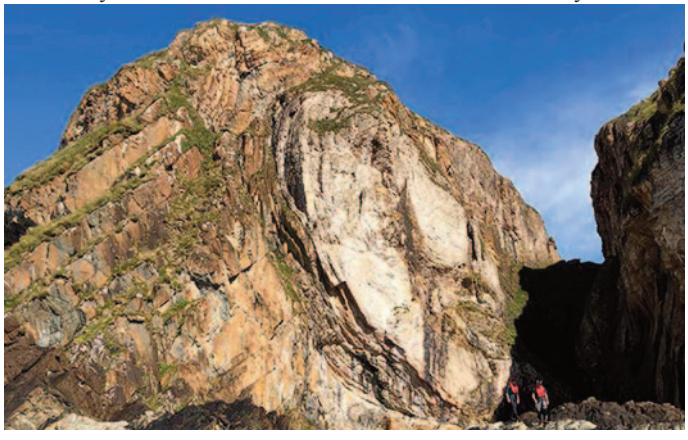
with flourishing cyanobacterial life that gradually became cooler, marking the end of a billion years or so of a temperate climate on Earth.

"Most areas of the world are missing this remarkable transition because the ancient glaciers scraped and eroded away the rocks underneath, but in Scotland by some miracle the transition can be seen."

The Sturtian glaciation lasted approximately 60 million years and was one of two big freezes that occurred during the Cryogenian Period (between 635 and 720 million years ago). For billions of years prior to this period, life consisted only of single-celled organisms and algae.

After this period, complex life emerged rapidly, in geologic terms, with most animals today similar in fundamental ways to the types of life forms that evolved more than 500 million years ago.

One theory is that the hostile nature of the extreme cold may have prompted the emergence of altruism, with single-celled organisms learning to co-operate with each other, forming multicellular life.



An outcrop called 'the Bubble' on Eileach an Naoimh (Holy Isle). It shows a huge white rock fragment, tens of metres across, which was originally part of the underlying rock sequence. The layering in the carbonate rock has been squeezed tightly under immense pressure and transported by thick ice sheets to its final resting as one of many different rock fragments within a moraine.
(Image: Graham Shields)

The advance and retreat of the ice across the planet was thought to have happened relatively quickly, over thousands of years, because of the albedo effect – that is, the more ice there is, the more sunlight is reflected back into space, and vice versa.

Professor Shields explained: "The retreat of the ice would have been catastrophic. Life had been used to tens of millions of years of deep freeze. As soon as the world warmed up, all of life would have had to compete in an arms race to adapt. Whatever survived were the ancestors of all animals."

For the new study, the research team collected samples of sandstone from the 1.1km-thick Port Askaig Formation as well as from the older, 70-metre thick Garbh Eileach Formation underneath.

They analysed tiny, extremely durable minerals in the rock called zircons. These can be precisely dated as they contain the radioactive element uranium, which converts (decays) to lead at a steady rate. The zircons together with other geochemical evidence suggest the rocks were deposited between 662 and 720 million years ago.

The researchers said the new age constraints for the rocks may provide the evidence needed for the site to be declared as a marker for the start of the Cryogenian Period. This marker, known as a Global Boundary Stratotype Section and Point (GSSP), is sometimes referred to as a golden spike, as a gold spike is driven into the rock to mark the boundary. GSSPs attract visitors from around the world and in some cases museums have been established at the sites.

A group from the International Commission on Stratigraphy, a part of the International Union of Geological Sciences, visited the Garvellachs in July to assess the case for a golden spike on the archipelago. Currently, the islands are only accessible by chartering a boat or by sailing or kayaking to them.

The study involved researchers from UCL, the University of Milano-Bicocca, Italy, and Birkbeck University of London. The work was funded by the Natural Environment Research Council (NERC).

We thought that we knew all about the origin of the stones of Stonehenge - 'think again' says new report!

It's fair to say that the amazing stone circle on Salisbury Plain, known as Stonehenge has presented archaeologists and geologists alike with a fair number of problems over the years. Stepping aside from the purpose and design of the monument has been the central questions about the stones themselves, where they came from and how they got there?

In recent years the focus has been on the so-called sarsen stones that make up the circle itself, collectively known as the bluestones. These stones, of a distinctive igneous origin, are thought to have originated in the Preseli Hills of West Wales.

However the recumbent 'altar Stone' has always been known to be a sandstone from the Devonian, an Old Red Sandstone. With abundant outcrops of the ORS across South Wales and the Welsh Borders, it had been assumed that this was where it came from. New research published in the journal ***Nature*** shows that this is not the case and a more likely candidate is Caithness in Northern Scotland.

The recumbent Altar Stone is clearly a sandstone as seen in this view beneath one of the upright bluestones.
(Image: Prof. Nick Pearce, Aberystwyth University)

Scientists from the University of Aberystwyth, along with others from Curtin and Adelaide Universities in Australia have used cutting edge geochemical techniques involving the mineral Zircon in their quest to find the origin of the stone.

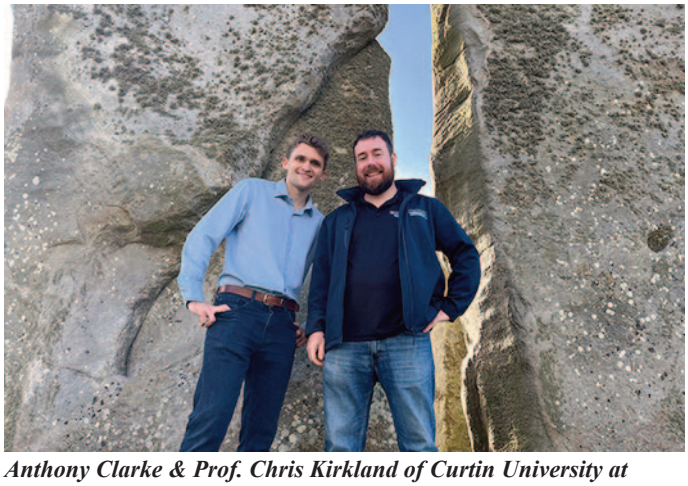
This comes from the University of Aberystwyth website:

The findings (of the research) show a remarkable similarity between the Old Red Sandstone of the Orcadian Basin in northeast Scotland and the Stonehenge Altar Stone.

Construction at Stonehenge began 5,000 years ago, with changes and additions over the next two millennia. Although it is unclear when the Altar Stone arrived at Stonehenge, it may have been placed within the world-renowned central horseshoe of stones during the second construction phase at around 2620 – 2480 BC.

For the past hundred years, the iconic six-tonne Altar Stone at the heart of the ancient site was believed to have come from Wales.

The majority of Stonehenge's world-renowned 'bluestones' came from the Preseli Hills area in west Wales and are believed to have been the first stones erected at the Wiltshire site. The Altar Stone, a sandstone, has traditionally been grouped with these other, smaller, igneous bluestones.



Anthony Clarke & Prof. Chris Kirkland of Curtin University at Stonehenge. (Image: Curtin University)

However, the Altar Stone's origins had remained an open question, until now. According to the new research involving scientists at Aberystwyth University, UCL, Curtin University and the University of Adelaide, both the chemical composition and the ages of mineral grains in the sandstone indicate it is very likely to have come from northeast Scotland.

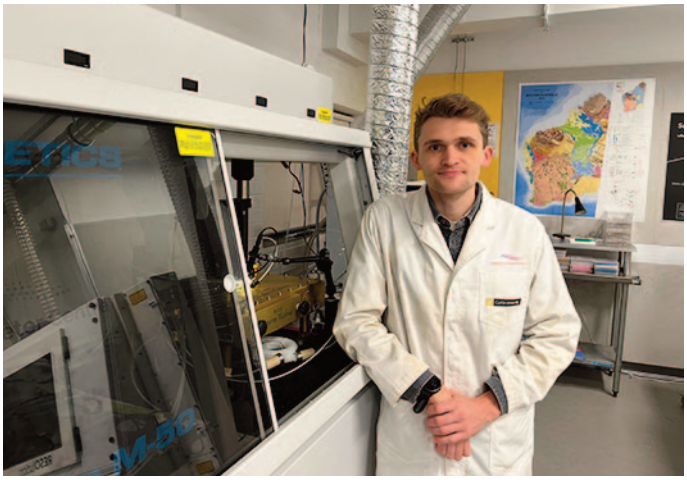
The scientists used their analysis of the ages of the mineral grains to create a 'fingerprint' of the source of those grains. They matched ages found in rocks of the Orcadian Basin found in the north-east of Scotland, and are completely different from Welsh-sourced stones.

Co-author ***Professor Richard Bevins*** from Aberystwyth University said:

"These findings are truly remarkable - they overturn what had been thought for the past century. We have succeeded in working out, if you like, the age and chemical fingerprints of perhaps one of the most famous of stones in the world-renowned ancient monument."

"It's thrilling to know that our chemical analysis and dating work has finally unlocked this great mystery. We can now say that this iconic rock is Scottish and not Welsh. Although we can say that much, and confidently – the hunt will still very much be on to pin down where exactly in the north-east of Scotland the Altar Stone came from."

The new discovery implies that one of the most famous stones in the world was moved much further than had been believed - at least 700 km (435 miles).



Anthony Clarke in the Geochemistry laboratory at Curtin University (Image: Curtin University)

Anthony Clarke from the Timescales of Mineral Systems Group at Curtin University said:

"Considering the technological constraints of the Neolithic, our findings raise fascinating questions about how such massive stone was able to be transported over the vast distance implied. Given major overland barriers en route from north-east Scotland to Salisbury Plain, marine transport is one feasible option."

Co-author ***Dr Robert Ixer*** of the UCL Institute of Archaeology said:

"This is a genuinely shocking result, but if plate tectonics and atomic physics are correct, then the Altar Stone is Scottish. The work prompts two important questions: why and exactly how was the Altar Stone transported from the very north of Scotland, a distance of more than 700 kilometres, to Stonehenge?"

While the research does not provide direct evidence about how the Altar Stone got to its world-famous location in Wiltshire, the revelation that it travelled so far will raise questions about its journey given the limits of human technology during Neolithic times.

Professor Nick Pearce from Aberystwyth University added:

"This stone has travelled an awful long way – at least 700 km - and this is the longest recorded journey for any stone used in a monument at that period. The distance travelled is astonishing for the time. While the purpose of our new, empirical research was not to answer the question of how it got there, there are obvious physical barriers to transporting by land, but a daunting journey if going by sea. There's no doubt that this Scottish source shows a high level of societal organisation in the British Isles during the period. These findings will have huge ramifications for understanding communities in Neolithic times, their levels of connectivity and their transport systems.

"Hopefully, people will now start to look at the Altar Stone in a slightly different context in terms of how and when it got to Stonehenge, and where it came from. I am sure this will lead to some new thinking about the development of Stonehenge and its links to the rest of Neolithic Britain."

The new research builds on findings published by Aberystwyth University and UCL researchers last year in the Journal of Archaeological Science: Reports that cast doubt on the Altar Stone's Welsh origins, and suggested that it should not be classified as a bluestone.

This study was supported by a Leverhulme Trust Emeritus Fellowship, Salisbury Museum and Amgueddfa Cymru – Museum Wales and funded by an Australian Research Council Discovery Project. It was a collaboration between Aberystwyth University, Curtin University, the University of Adelaide, and UCL.

You can read the Nature paper by going to: https://www.nature.com/articles/s41586-024-07652-1

The Editor comments: I'm more than a little surprised by certain aspects of this story. Why is everyone looking for a human means of transport? Surely there's another candidate - movement by glaciers? Ancient people would have had the pick of available erratic boulders back all those years. Recent work in the Birmingham area points to erratics from Northern England, so why not Scotland? As always we'd love to hear your thoughts on the matter,

Here we go again, yet another volcanic eruption on the Reykjanes Peninsula of Iceland...

It's the evening of August 22nd. and there's yet another volcanic outpouring on the Reykjanes Peninsula. It's the sixth such event in the past couple of years. Local people are getting tired of emergencies being declared, as no doubt are the owners of the Blue Lagoon, outdoor tourist attraction.

This is what Iceland Review had to say about it:

"An eruption has just begun on the Reykjanes peninsula near the evacuated town of Grindavík. The eruption had been expected for some weeks due to ongoing seismic activity in the area.

An emergency phase was declared shortly after 9:00 pm this evening (August 22nd.) and the area around Grindavík was evacuated. While few residents had been in the town in recent weeks, there were some workers constructing and reinforcing lava barriers in the area when activity indicated that an eruption was imminent, RÚV reports.

The eruption is in the Sundhnúksgígaröð area, in a very similar location to the eruption that occurred last May. The fissure appears to be 1.4 km long as of 10:15 pm but is likely to lengthen further over the next couple of hours.

Authorities ask civilians to stay away from the area for their own safety and the safety of response crews. Like previous eruptions in the area, the eruption is localised as does not impact international travel to and from Iceland."

The familiar fissure eruption and curtain of lava, this is the scene on the evening of August 22nd. (Image: mbl.is)

Down to Earth

"Earth science learning for all"

Announcing a very special trip...

Iceland - the North & East Fjords
September 1-10 2025

Colourful rocks in the East Fjords with rhyolites and basalts (Image: Chris Darmon)

Beautiful scenery across the north & east

The very best of Icelandic geology

- Explore the north and east of Iceland for the best geology & scenery
- See Lake Myvatn and the area around Krafla volcano
- See colourful rhyolites in Borgarfjarðar Eystri
- See a superb collection of Icelandic minerals
- Coach transport with an experienced Icelandic guide
- Stay in some idyllic locations with good food and comfortable beds
- Option of an extra day visiting recent eruption sites in the Reykjanes
- Immerse yourself in the 'real Iceland'!

Everyone is invited to join us! The cost is £2595.00 per person sharing or £2995.00 single. BOOK NOW!

See the brochure & book online at www.geosupplies.co.uk
Email downtoearth@geosupplies.co.uk or ring us on 0114 245 5746
Geo Supplies Ltd 49 Station Road, Chapeltown, Sheffield S35 2XE

Down to Earth
'Earth science learning for all'

The learning zone

Great geo-adventures in 2024/5 begin here...

The Claerewen Valley is part of the area flooded by the Elan Valley Reservoir.
(Image: Cwm Elan Valley)

For 2024, we are still able to accept additional people onto our trips to Fort William and the Yorkshire Dales in October.

Our 2025 programme is now complete and places are filling up fast. We have now added Scarborough on the Yorkshire Coast, Heart of Wales, Western Lake District, Mull and Ardnamurchan and our Peak District Summer School. South Devon completes the Autumn line up.

To view a brochure, go to our to website at: www.geosupplies.co.uk or Tel: 0114 245 5746

Remember that booking forms are only available direct from us:
Email: downtoearth@geosupplies.co.uk

Residential Field trip programme 2024/5...

- The Highlands of Scotland - Fort William, October 4-14
- The Yorkshire Dales, October 21-26

2025
- Isle of Arran, March 30-April 6
- Troodos Mountains, Cyprus, April 24-May 1
- NEW! Scarborough, Yorkshire Coast June 1-6
- Mull & Ardnamurchan, June 11-18
- Western Lake District, June 25-30
- Heart of Wales, July 9-16
- Peak District Summer School, August 9-16
- Iceland, North & East Fjords, September 1-10
- Torbay, South Devon, October 8-15

Early booking is advised, especially if you are looking for a single room.

Search online at www.geosupplies.co.uk or ring us on 0114 245 5746
Geo Supplies Ltd 49 Station Road, Chapeltown, Sheffield S35 2XE

If you haven't joined one of our residential field trips before, what can you expect?

- *Our residential field trips are suitable for adults of all levels of interest and geological knowledge.*
- *Our trips are friendly and informal and usually comprise 15-20 people. Overseas trips are usually larger.*
- *We usually make use of comfortable small hotels and guest houses and all meals are included.*
- *You have the services of Chris Darmon and Colin Schofield as field leaders. Both are highly experienced and knowledgeable field geologists.*
- *For some trips we have a hired minibus but on other trips we will use shared cars, or even public transport.*
- *Dates shown in this listing are the start and finish dates.*
- *Where prices are quoted, they are per person in a shared twin/double room.*

If you still have any questions or queries, don't hesitate to email us at: downtoearth@geosupplies.co.uk or tel: 0114 245 5746

Autumn 2024 - Final call for the last 2 trips...

We can still accommodate a few more people on two trips this Autumn, both in October. Autumn in Scotland can be a real treat with the lovely colours of the season, combined with a warm hotel in the town of Fort William. We can also offer the Yorkshire Dales, closer to home and a great place for a 5-night break before Winter sets in.

Contact us NOW for a booking form!
Email: downtoearth@geosupplies.co.uk or ring: 0114 245 5746

The Fort William area (10-nights) - October 4-14 £1595
This is one of the undoubted highlights of the entire year. We've gone to the max to bring you a comprehensive 10-night itinerary based in this iconic Highland locality, at the comfortable Croit Anna Hotel.

A new angle on Glencoe (Image: Scottish Geology Trust)

We'll be taking in the local geology of Glen Nevis, the volcanics of Glencoe the slates of Ballachulish and also more distant places such as Mallaig and Ardnamurchan. The trip will also include an excursion

Our hotel, Croit Anna, on the outskirts of Fort William.

by boat on Loch Linnhe and a train trip to Mallaig which includes the famous Glenfinnan viaduct. This trip offers excellent value for ten nights. Don't let the Autumn date of this trip put you off, at this time Scotland is at its very best and the midges have gone for the season!
See the brochure online - get the booking form from us.

The Yorkshire Dales (5-nights) - October 21-26 £895
Amazingly, we've never managed to base one of our trips in the Yorkshire Dales National Park. We had planned this trip for 2020, but it never happened due to Covid. Our base for the week is the small village of Gargrave, just to the west of Skipton. From here we'll take in some of the highlights of the National Park, including the ancient rocks of Ingleton and Horton in Ribblesdale, the magnificent Carboniferous limestone with its show caves and the younger rocks of the Yoredales and the Coal Measures. It's the perfect way to end our field season.
The brochure for this trip is now available, booking form from us!

The unconformity at Helwith Bridge, near Horton in Ribblesdale. (Image: Upper Wharfedale Field Society)

Don't worry, we don't bite!

All our educational classes and courses are friendly, informal and open to all.

Come and join us!

Welcome to our real world!

The 2025 programme...

We are delighted to tell you that we have now completed our programme of residential field trips for 2025. The public offering of nine trips is less than in previous years because we have two private trips for Americans in the frame. We already have strong bookings, so you are strongly advised to get in as soon as you can.

To make a booking email us at:
downtoearth@geosupplies.co.uk or ring us on: 0114 245 5746
Whilst the brochures are, or will be, available on our website, booking forms are only available from us. You can then arrange to pay the deposit and we'll send you the booking form.

Isle of Arran, March 30-April 6 £1395
Welcome to the Isle of Arran that is the original geologists' paradise. James Hutton was probably the first person to study the geology of Arran in 1786 when he described an unconformity at Lochranza. Since then, thousands have trod the paths to examine the rocks! Arran is currently going down the path to become a full geopark.

Arran on a beautiful day showing the landscape and a magnificent raised beach. (Image: Scottish Geology Trust)

This trip is based at the very comfortable (and warm) Best Western Kinloch Hotel at Blackwaterfoot on the Island's quiet west coast. We spend a leisurely week examining most parts of Arran, making full use of unlimited travel on the local buses - the terminus of the main route is right outside our hotel.
At this time there are vacancies for single and twin/double rooms.

Troodos Mountains, Cyprus April 24-May 1 £1795
This trip is currently full, however we are able to accept a few people onto a waiting list. When we have confirmation of the transport being used we may be able to accept a people from the waiting list.
The brochure is available on our website - take a look before contacting us.

NEW! Scarborough, on the Yorkshire Coast June 1-6 £895
Amazingly, we have never based a trip at Scarborough the 'queen' of the Yorkshire Coast, for the simple reason that we've never found suitable accommodation! Based at the comfortable Cumberland Hotel, we'll spend 5-nights in and around the town, taking in field

The Cumberland Hotel in Scarborough. (Image: Leisureplex)

visits to places like Filey, Forge Valley, Robin Hoods Bay and Whitby to mention just a few. This will allow us to examine rocks from the Jurassic and also the Cretaceous with lots of fossils and sedimentary structures that give us clues to ancient environments.
At the time of writing we have single and double rooms available.

NEW! Isle of Mull & Ardnamurchan June 11-18 £1695
We have managed to secure reasonably priced accommodation at the Park Lodge Hotel in Tobermory and this trip replaces the one previously advertised to Raasay.

Near the lighthouse at Ardnamurchan Point

The Isle of Mull and Ardnamurchan will put two Tertiary igneous centres at our disposal with that on Mull being one of the most imposing, whilst that on Ardnamurchan is the most accessible. We also hope to be able to take in a visit to the tiny Isle of Staffa with its famous basalt columns, depending on the weather. Another highlight will be a visit to the Island of Iona with its Precambrian rocks.

With at least one full day on Ardnamurchan we'll be able to take in the fossiliferous Jurassic sediments as well as the basement metamorphics from the Moinian and the Tertiary igneous rocks.
At the time of writing we have only twin/double rooms available on this trip.

Western Lake District, June 25-30 £895
The Lake District is renowned for its superb landscape and scenery, but access to the central part is limited and accommodation is very expensive. We have previously stayed at Summergrove Halls in Whitehaven, but this is no longer available to us. Accordingly we've turned to Workington and the comfortable modern Premier Inn.

Amazing cliffs at St Bees. (Image: St Bees community)

From Workington we'll be able to access all of the Western Lakes, with trips to see places like Eskdale, Lake Windermere, the iron mines of West Cumbria and St Bees Head.
This trip is filling up fast!

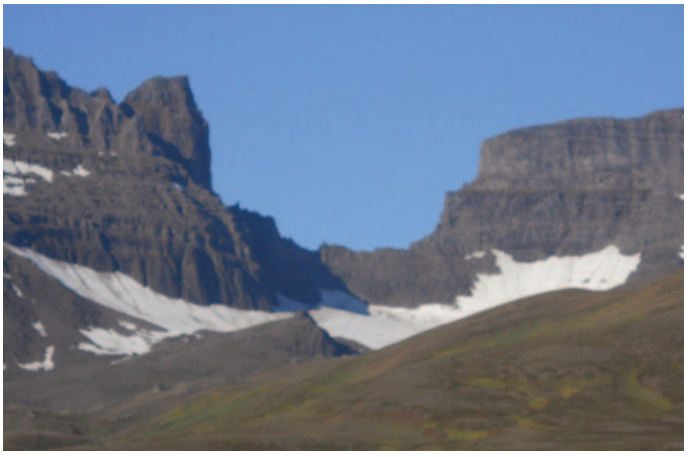
Summer School Peak District, August 9-16 £1395
For the first time in the 7-year history of our Summer School week's we're actually returning to a place that we've visited before. Cliff College in the Peak District of Derbyshire is a well known Methodist theological college. It provides excellent ensuite bedrooms and lovely home cooked food, and makes for an ideal summer school base.

The beautiful grounds of Cliff College (Image: Cliff College)

We'll be sampling lots of the excellent local geology and giving you those added summer school bonuses of evening talks and special visits to places of cultural and historic interest as well as geology.
The brochure is just out - book now!

Iceland - the North & East Fjords, September 1-11 £2595
These days a lot of people go to Iceland, but they very rarely visit the north and east of country. In this trip with our usual guide and driver Ingi, we'll begin at Keflavik near the airport and then travel to Akueyri before working our way clockwise to Myvatn to the volcano Krafla before heading to the beautiful east Fjords.

We'll stop in the amazing geo-village of Borgarfjarðar Eystri to see Iceland's most colourful rhyolitic rocks. The last time we were here we did see the Northern Lights in all their glory!



The Eastern Fjords are beautiful in any season! (Image: Chris Darmon)

We fly back from Egilstaddir to Reykjavik and then to Keflavik where we started. There's an option of an additional night at the end to have a day looking at the most recent volcanic activity on the Reykjanes peninsula and viewing the recent lavas, which will still be hot!
This trip is already more than half full!

NEW! The South Devon Riviera, Torbay, October 8-15 £1295

Distinctive Red Permian rocks of South Devon

The South Devon Riviera coast has been a holiday destination for more than 150 years and we will be staying in a lovely small hotel in Paignton. From here we will be exploring the local area that lies within the UNESCO world geopark. This is an area of great coastal scenery, with lots of Devonian sediments, plus some volcanics. As the geology is best seen from the sea, we'll ensure that we have at least one boat trip out into Torbay to get up close and personal with the cliffs and their fabulous structures. We also hope to take a trip on the Paington and Kingswear steam railway and combine it with another boat trip on the River Dart ot Totnes.
Contrary to what we said last month, the borochure for this trip is still awaited - watch out for details!

For further information or to book,
email: downtoearth@geosupplies.co.uk
or ring us on: 0114 245 5746

Learning with us is FUN...

We've been offering online and distance learning since before Covid and over that time hundreds of people have taken part in our learning programmes from the UK and around the world.

All our learning programmes are created and delivered by our in house team of Chris Darmon and Colin Schofield. Both are experienced teachers of distance learning over many years.

We deliver courses that are enjoyable and stimulating whilst at the same time being informative and educational. No one is required to carry out any sort of assessment and there's no entry requirements or formalities.

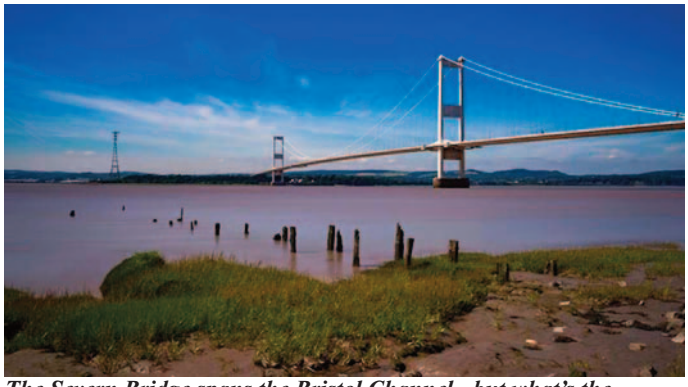
Just sign up and go!

What's on offer this Autumn and Winter?

The Geology of the British Isles
This was one of the first distance learning courses that we devised. Over the years, many people have embarked on this geological journey since then, but now, for only the second time, we're bringing it to you live!

Chris is looking forward to sharing the British Isles' journey through time in 13 hour long Zoom sessions. Each session will be brought alive through the use of YouTube videos and photographs, augmented by Chris's stories and Colin's material on Moodle. We want this to be the best course ever, aided and abetted by your own participation.

Course dates: Starts Monday November 11 - December 16 and then restarts January 13 for a further 7 weeks.
Cost: Thirteen hour-long Zoom sessions with electronic background papers £80.00 for one person or £95.00 for 2-people studying together. Printed background papers cost an additional £25.00.
Zoom sessions on Mondays at 2.00 and 7.00 pm (you choose)



The Severn Bridge spans the Bristol Channel - but what's the geological story? (Image: National Highways)

NEW! Time Traveller's Britain
Under this title we've explored more than 30 part of the British Isles and examined the work of some of our geological pioneers, but for this short course, we're bringing you six more brand new episodes in the series!

Rock & Spindle volcanic neck, St Andrews

Come with us as we explore the Mendips, Islay and Jura, the Kingdom of Fife, Snowdonia (Eryri), Shropshire and the Bristol Channel.

At the heart of each session is an hour long live Zoom presentation with electronic background material. You'll hear from Chris and Colin some of their personal reflections on the areas concerned along with the most up to date interpretations of the geology.

Course dates: Starts Thursday November 14 - December 19
Cost: Six hour-long Zoom sessions with electronic background papers £40.00 for one person or £50.00 for 2-people studying together. Printed background papers cost an additional £10.00.
Zoom sessions on Thursdays at 2.00 and 7.00 pm (you choose)

The Wednesday club...

Over the past couple of years, we've been running a series of one-off sessions covering random geological topics. These were branded as 'Wednesdays at 7'.

Whilst these have been very popular, several of you urged us to also offer the same session in the afternoon. Well, we've listened and now you can enjoy the same content in the afternoon or the evening!

November 13	**Alabaster - occurrence and uses**
November 20	**Graptolites - a geological enigma**
November 27	**Potash & Polyhalite mining in the UK**
December 4	**Metamorphic rocks in a nutshell!**
December 11	**The Ediacarans - the world's first fossils?**
December 18	**Gemstones of the British Isles**

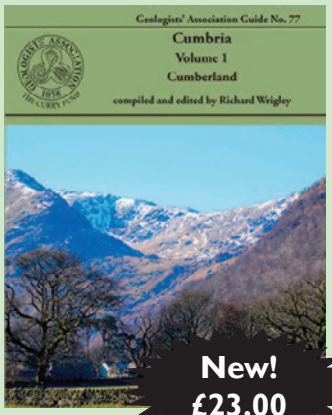
Cost: Take all six sessions for £40.00 or book them individually for £10.00 each.
Timings: Wednesdays at 2.00 or 7.00pm - your choice.

To register interest, email us at:
downtoearth@geosupplies.co.uk or ring us on: 0114 245 5746

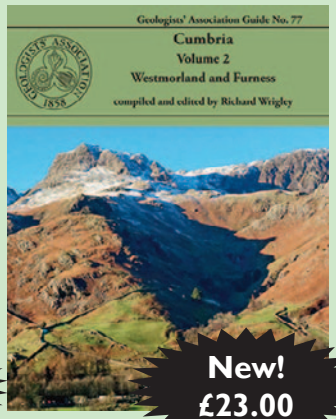
You can enrol via our online shop at: www.geosupplies.co.uk
or ring us on: 0114 245 5746

Featured books for August 2024

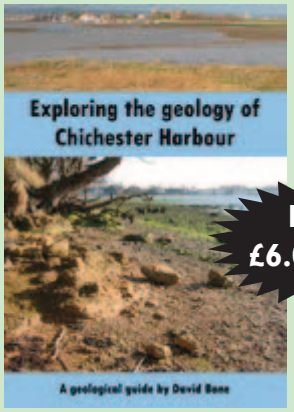
In each issue we are pleased to be able to introduce you to a range of featured books. Where they are being offered at reduced prices, these will be current to the end of August 2024 provided that stocks are available. Please note, all prices include UK postage.

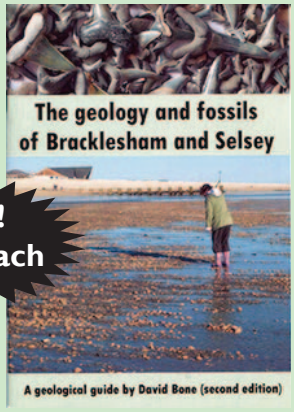


New! £23.00



New! £23.00

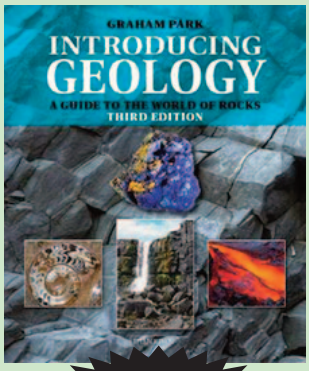




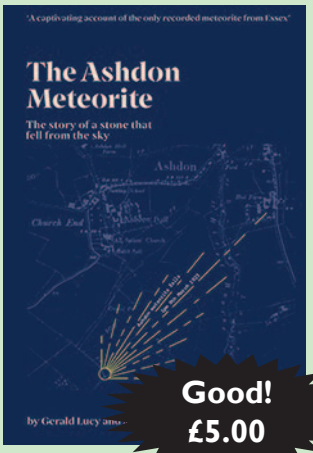
New! £6.00 each

Buy both of the above for £10.00

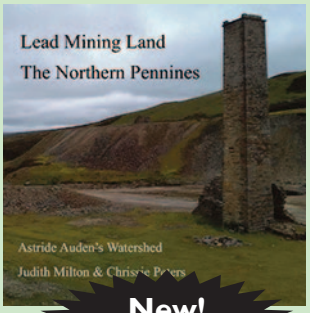
New! £10.00



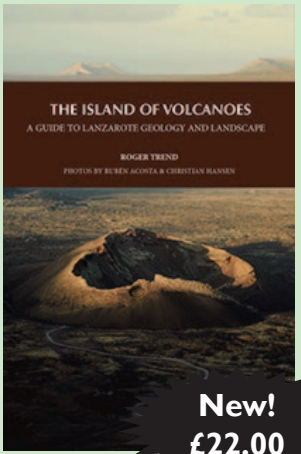
New Ed! £11.00



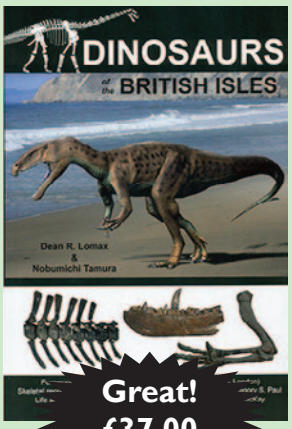
Good! £5.00



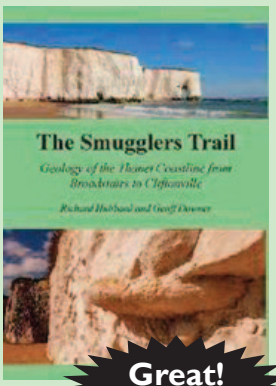
New! £18.50



New! £22.00



Great! £37.00



Great! £12.00

Superb! £30.00

Order online at www.geosupplies.co.uk or ring us on 0114 245 5746
Geo Supplies Ltd 49 Station Road, Chapeltown, Sheffield S35 2XE