

Down to Earth exera

Issue I I 5 July 2022



From the Editorial team...

Chris and Colin have had extensive experience of teaching Earth science to a wide range of different people of all ages and abilities. As the old adage goes 'say what you see' and that general approach works well with most people.

In particular we've worked out a challenge that can be one, word, two words or however many we deem at the time. We apply this to the view or the landscape, or even our immediate surroundings. Chris recently applied the 'two word challenge' to a group of rookie readers of the landscape on a walk in Sheffield's Forge Valley.

Only this time there was a difference, the nineteen people who accompanied him were all on the Aspergers scale. They were members of SAPAG: Sheffield Aspergers Parents Action Group. This voluntary group provides activities for adults and young people and their carers. Chris was approached by one of the members to lead a geology walk and this he readily agreed to do, also as a volunteer.

So how was it? The members rose to the 'two word challenge' and immediately spotted natural geological materials in the landscape and the built environment around them. It was immediately obvious to Chris that he was dealing with some very keen and well informed individuals who were quick to jump in with questions and to provide some prize nuggets of their own knowledge and experience. The evening passed at lightning speed and it was soon time to say goodbye. Yes, geology can be for everyone - and Chris is looking forward to the next outing - a day in the Peak District.

Chris Darmon & Colin Schofield
The Down to Earth editorial team

See pages 6-9 for the full spectrum of our popular field trips and visits



Devastating 5.9 magnitude earthquake strikes Afghanistan...

The longest day of the year, June 21st, brought only misery, death and destruction to Afghanistan's Paktika province in an area that has a history of destructive earthquakes.

The latest quake which was initially reported at magnitude 6.1 and subsequently downgraded to 5.9, has hit the region of Gayan and Barmal. There has been widespread destruction of buildings, most of which were constructed of mud, with casualties estimated to be in excess of 1,000, including many children. This is a remote area that has poor communications even in good times. There are few roads and almost none of them are suitable for heavy vehicles.



This image shows both the destruction and the nature of many of the buildings which were not able to withstand the 5.9 magnitude earthquake. (Image: Courtesy of Sky News)

Reaching the affected people is going to be dependent on helicopters which are almost non existent. The Taliban, who gained control of Afghanistan in 2021, are poorly prepared for such a massive relief effort and have put out an urgent call to the World for help and support. The UK was quick to respond and will be channeling its aid through the United Nations and other relief agencies.

This is the USGS had to say about the tectonic background to the latest earthquake:

"Earthquakes and active faults in eastern Afghanistan and western and northern Pakistan are the result of the India plate moving northward at a rate of about 40 mm/yr (1.6 inches/yr) and colliding with the Eurasia plate. Along the northern edge of the Indian subcontinent, the India plate is subducting beneath the Eurasia plate, causing uplift that produces the highest mountain peaks in the world, including the Himalayan, the Karakoram, the Pamir and the Hindu Kush ranges. West and south of the Himalayan front, the relative motion between the two plates is oblique, which results in strike-slip, reverse-slip, and oblique-slip earthquakes. The pattern of elastic waves that were radiated by the June 21, 2022 earthquake indicate the

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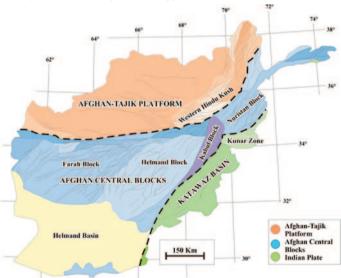
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Afghanistan earthquake community intensity map (Image: Courtesy of USGS)

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event was predominantly strike-slip faulting, either left-lateral slip on a northeast-striking fault or right-lateral slip on a northwest-striking fault

The June 21, 2022 earthquake is about 500km (300 miles) north-northeast of a deadly magnitude 6.4 earthquake that occurred on October 10th 2008 in western Pakistan that killed 166 people and destroyed several villages from triggered landslides.



Simplified tectonic map of Afghanistan showing how the southeast of the country is prone to intense earthquakes activity. (Image: Research Gate)

In the UK, the Disasters Emergency committee has set up an Afghanistan Crisis Appeal.

To give go to: https://donation.dec.org.uk/afghanistan-crisis-appeal

UK Prime Minster drops heavy hint on what the Cumbrian coal mine decision will be...

The clock is ticking as we approach July 7th, the date by which Michael Gove needs to make a decision about the proposed West Cumbrian coal mine project. The history here is that Cumbria County Council gave the go ahead for the controversial mine to go ahead back in 2020.

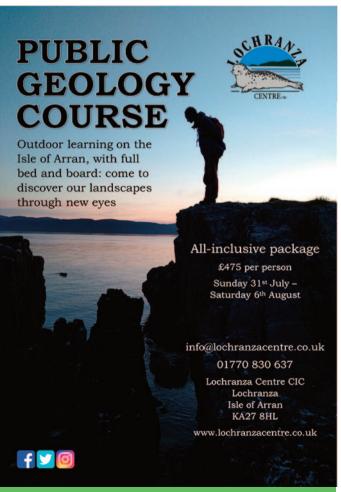
However the Government called a stop to the project in order for more detailed consideration. In the light of the COP26 conference in Glasgow last year, many thought that the project would be ditched, but the Russian invasion of Ukraine as changed the dynamic considerably with some 40% steel making coal set to be imported from Russia.

A strong hint as to what the Government decision will be came in the from of a response Boris Johnson gave to a Conservative member's question at PMQ's on June 22nd. Asked by Chris Green about the importance of levelling up and the approach of other countries to the burning of different types of coal.

The Prime Minister replied:

"We can all be proud of the way in which we reduced carbon dioxide emissions in this country, but plainly it makes no sense to be importing coal, particularly for metallurgical purposes, when we have our own domestic resources."

Clearly this puts pressure on Michael Gove, who is hardly likely to come to a different conclusion - unless he knows something new!



Sticking with coal, Ffos-y-Fran, keeps going until at least the Autumn...

We are reliably informed that coal will continue to be extracted from the South Wales opencast site at Ffos-y-Fran until at least the Autumn of this year, ensuring the continued supply of suitable coal to some of the UK's heritage steam railways.



Delegation from the Railway Heritage Association on their visit to Ffos-y-Fran (Image: Railway Heritage Association)

On May 25th a group from the Heritage Railway Association visited the coal site to press their case for the continued supply of this vital material, especially during the crucial and busy summer season. They met at Ffos-y-Fran where they learnt first hand from Chris Barber, mine manager and Darren Lewis, son of the owner, of the operational and market pressures in getting sufficient coal out to keep the mine viable and the cost of coal acceptable.

They were happy to learn that Ffos-y-Fran coal will be back on the market, in modest supply initially, by mid June with promises of increasing volumes going forward.

We are once again grateful to Down to Earth reader Tony Wardle for this information which comes from The National Traction Engine Trust.

You can still join the party for the launch, but if not you can still get to see Birmingham's erratic boulders...

An exciting Lottery funded project that's been running for some time to Birmingham's and explain Birmingham's Ice Age heritage reaches a milestone point on Saturday July 2nd. with guided tours along the Louis Barrow trail around Bournville and Cotteridge Park.

This is the second trail around Birmingham's Erratic Boulders, in which we aim to discover, document and preserve these fascinating relics of the Ice Age, transported to Birmingham by glaciers 450,000 years ago from North Wales.

Take a guided walk of the trail, or pick up a free leaflet to follow a self-guided tour. Chat to our knowledgeable Project Team, or try out our geology-themed children's art and craft activities!

Free guided tours will run along a 2 mile circular modified route at 1 p.m. (general) and 2 p.m. (for geology enthusiasts)



Just two of Birmingham's exotic glacial erratics that have been mapped and researched as part of this project.
(Image: Courtesy of workspace.uk)

No booking necessary. The tours will start from the History Marquee. in Cotteridge Park as part of the CoCoMAD event.

Further information can be found at:

https://erraticsproject.org/

Or email Zoë: erraticsproject@worc.ac.uk.

WALKING HOLIDAY



Four full days of guided walks around our island, enjoying Arran's fascinating geology, wildlife and landscapes, plus one free day to explore. Fully catered accommodation. So why not make a little time for yourself?

All-inclusive package £475 per person

Sunday 28th August – Saturday 3rd September





This summer why not drop in to our shop for your geological equipment, books, maps & save...?

We guarantee that if you call into our shop you'll always get our best prices! Why is this? It's because we don't have to pack and then post your items, adding to the profits of Royal Mail.

Off the shelf prices for BGS maps start at just £12.00 - that's a saving of £1.00 from our mail order prices. On many items your saving will be at least 10% - possibly even more.

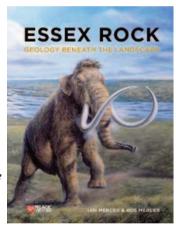
See the panel below for our opening hours. We're on the northern outskirts of Sheffield, just 5 minutes from M1 Junction 35.

The new books keep coming...

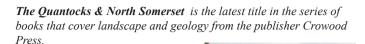
During the height of the Covid pandemic back in 2020 and 2021 sales of books rose significantly and with that has come a subsequent wave of new titles.

Even in 2022 sales of books are at a higher level than they were back in 2019. It's particuarly pleasing to see some long term projects come to fruition, as can be see below:

Essex Rock is the brainchild of Ian & Ros Mercer and is an in-depth look at the geology and landscape of the county of Essex.



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get Down to Earth regularly...

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You can subscribe now for the remainder of 2022 and 2023 for just £18.00 for printed copies or £10.00 for it as pdf files, direct to your email. To subscribe, go to: www.geosupplies.co.uk or ring us on 0114 245 5746.

Down to Earth is published quarterly. Subscribe now for 2022/3 for just £18.00 in the UK. We'll send you the next 6 issues, to the end of 2023 and 6 back issues from 2021/2. For an additional £25.00 (UK only) we'll send you a parcel of back issues around 50! Alternatively, take a 2022 e-subscription for £10.00. Additionally, all subscribers will get DtoE extra FREE each month.

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The learning zone



We have limited availability on three Autumn trips for this year.

Brochures for all 2023 trips, except La Palma are now on our website and we are accepting bookings. Iceland is already close to being full and several other trips are booking well. We are still working on an early September trip to the Scottish Highlands, which we will release as soon as we can.

To view a 2022 or 2023 brochure, go to our to website at:

www.geosupplies.co.uk or Tel: 0114 245 5746

Booking forms are only available direct from us.

Email: downtoearth@geosupplies.co.uk

- Berwick & the Borders September 1-8
- Minehead, Somerset September 14-21
- Yorkshire Coast October 10-15

2023

- La Palma, Canaries February 23-March 2
- Iceland, March 27-April 6
- · Islay, Gigha & Mull of Kintyre, May 2-11
- Ayrshire Coast & Islands, May 12-19
- Isle of Wight, May 31-June 7
- Anglesey, June 11-16
- Ilfracombe North Devon, June 23-30
- Summer School Sunderland August tbc
- Isle of Man, September 23-30
- Guernsey, Channel Isles, October 7-14
- North Norfolk Coast, October 18-23

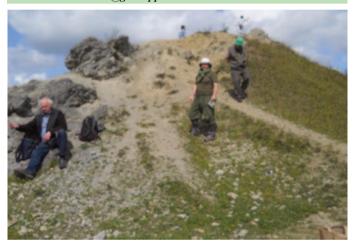
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The learning zone

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 mainly comprise 15-20 people. Overseas trips are usually larger.
- We usually use 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.
- During the current period, even if we have a minibus you will be able to use your own car if you wish.
- Dates shown in this listing are the start and finish dates.

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



Participants on a trip to the Wren's Nest National Nature Reserve where fossil trilobites can be found in the Silurian limestones.

Still a few vacancies on our 2022 Residential Trip programme...

If you hurry we can still fit you in on our Summer School and a few of our Autumn trips! For the latest vacancy situation email us at: downtoearth@geosupplies.co.uk or ring: 0114 245 5746

University of Worcester Summer School August 13-20

Our annual summer school is beginning to feel a bit like the Tokyo Olympics! We first tried to run it in 2020 and then the University could not accommodate us in 2021, so we have finally made in in 2022! We are sure that it will have been worth the wait as we bring you a varied programme of field visits across the Midlands and Welsh Borders, from our base in Worcester. Accommodation at the University is mainly in en-suite single rooms. Come and join our group of more than 30 people as we explore the geology of the area.

Berwick & the Borders September 1-8

This trip includes a visit to the 'holy grail of geological time' at Siccar Point and lots of other amazing places. From our base at the comfortable Castle Hotel, we'll be taking in both coastal and inland locations from Northumberland and Berwickshire. Marvel at folded

Carboniferous sediments at Scremerston, the granite scenery of Cheviot and volcanics at St Abbs. In short, there's something for everyone on this week. There are just a few vacancies remaining on this trip.



Lundy Island, home to the eponymous Tertiary granite

Minehead, Somerset September 14-21

The coast of North Somerset is the 'other' Jurassic Coast with similar geology to that of Dorset, but without the crowds! We'll be taking in the Devonian rocks of Lynmouth and the landscape of the Exmoor National Park. Take in the slower pace of life aboard a West Somerset Railway steam train as it travels between Watchet and Blue Anchor. Weather permitting, we'll also take a day trip to the fabulous Island of Lundy in the Bristol Channel where you can examine a Tertiary granite and marvel at the fabulous birdlife.



Chalk cliffs and raised beach caves at Flamborough Head

The Yorkshire Coast October 10-15

This trip is based at the small North Yorkshire village of Hunmanby, just to the south of Filey. From our comfortable guest house base, we'll get to see Jurassic and Cretaceous rocks from Scarborough down to Flamborough. We'll also take in the fine Quaternary cliffs of Holderness and the unique inland scenery that is the Yorkshire Wolds. A great way to round off the 2022 field season!

You can view brochures for all of our trips at our website: www.geosupplies.co.uk

Booking forms are only available from us at: downtoearth@geosupplies.co.uk. or ring us on 0114 245 5746

Day Trips...

We're pleased to bring back a few of our ever popular day trips for 2022. These normally commence around 11.00 in the morning and end around 16.00 in the afternoon. Walking distances are moderate and should be within everyone's capabilities.

The cost is £10.00 per person. Currently we are ready to accept bookings on the trips shown below.

July 6 Wednesday, Manifold Valley & Brown End Quarry, Staffs. Away from the hoards of visitors that visit some of the honey pots of the Peak District lie some of the hidden gems that offer superb geology in some of the quieter spots. The Southwest Peak District is one such place.

We'll tour the amazing Brown End Nature Reserve before venturing up the Manifold Valley a little to see some of the local Carboniferous and its structures.

Meeting: Brown End Nature Reserve, Waterhouses (by cycle hire centre) at 11.00



Coal seam and fireclay at Saltwells NNR (Image courtesy of Twitter)

August 3 Wednesday, Saltwells National Nature Reserve, Dudley Saltwells is one of the best geosites in the newly designated Black Country UNESCO Geopark.

Saltwells is a complex of 3 different geological sites, all designated SSSI, that include a former Carboniferous claypit, known as Doultons and also local coal bell pits and the unconformity with the underlying Silurian.

Meeting: Saltwells NNR car park, off Coppice Lane adjacent to Saltwells Inn at 11.30

To enrol onto these Day Trips, or to find out more, go to our website, and enter the online shop: www.geosupplies.co.uk Or ring us on 0114 245 5746, where you can pay using any major credit/debit card.



Don't worry, we don't bite!

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

Come and join us! If you have any questions please ask us.

The 2023 Residential Trip programme...

We've been delighted by the response to the release of some of our 20-23 trips, with Iceland already confirmed and nearly full and several other trips booking up well.

We are being frustrated however by one or two issues which are preventing us from finalising the programme. In particular, we are still unsure as to whether La Palma will run as currently, only TUI are flying direct to the island. If this isn't resolved shortly, we will go back to our original plan and substitute Fuerteventura instead. We are also hoping to run a trip to the Scottish Highlands in September as soon as we can confirm hotels.

Aside from La Palma and Summer School all other trips can now be booked and brochures are on our website.

La Palma, Canary Islands (7-nights) - February 23-March 2

We want to be amongst the first people to take a look at the geology after the 2021 volcanic eruption! Whilst the island is most definitely open, certain roads and trails are currently closed, but they are being worked upon and everyone is keen to see the tourist trade back to where it was. Currently there aren't a lot of flights from the UK, aside from TUI, but that is expected to change in 2023.



Iceland's South Coast grandeur in snow - but will we see any in 2023, the chances are pretty low?

Iceland, beyond the Golden Circle (10-nights) - March 27-April 6 For 20 years from 1997 we took groups almost every year to Iceland, but have not been since 2017. So why are we returning? Tourism has undergone something of a revolution and whilst the country is still expensive, it does offer decent value for money. Crucial for us, as geologists, there's been a recent volcanic eruption and finally we still have the services of our fabulous guide and driver Ingi! We'll be taking in the area around Reykjavik, including the Snaefelsnes Peninsula and Mount Fagradalsfjall, the site of the most recent eruption. We'll also travel along the south coast to Vik and then onto the Vatnajokull Glacier. The highlight of the trip is a 2-night stay on the Westman Islands, that were almost destroyed in a 1973 eruption. We are ready to take bookings for this trip NOW!

Islay, Gigha & Mull of Kintyre (9-nights) - May 2-11

This 3-centre trip takes in a group of islands and mainland Mull of Kintyre that are dominated by metamorphic rocks from the Dalradian. These varied rocks (along with others) are all set in some beautiful countryside. We'll also visit the island of Jura with its famous Paps

made from quartzite. All this and even an unusual Carboniferous coalfield! A great trip for anyone looking for variety in landscape and geology. We are ready to take bookings for this trip NOW!

Avrshire Coast & Islands (7-nights) - May 12-19

We break new ground on this trip as we take in the varied geology of the island of Great Cumbrae and the Ayrshire coast around Largs. The second centre is Girvan from where we can take in the amazing geology of the Ballantrae Igneous Complex and, weather permitting, take a trip to the granite island of Ailsa Craig.

We are ready to take bookings for this trip NOW!

Anyone booking for both the above Scottish trips gets the intervening night's accommodation free of charge.

The Isle of Wight (7-nights) - May 31 - June 7

Often called 'the dinosaur isle' the Isle of Wight has some of the country's most recent geology. There are fine exposures of Cretaceous and Tertiary rocks, that give us some fine coastal scenery. Places like the Needles, Alum Bay, Shanklin and Ventnor will all be taken in. All this and some fine Alpine structures, including vertical beds! We'll be getting around using the island's intensive bus network, including open top double deckers!

We are ready to take bookings for this trip NOW!



Pillow lavas at Newborough Warren, Anglesey

Anglesey, North Wales (5-nights) - June 11-16

The island of Anglesey, or Ynys Mon in Welsh is home to some of the finest geology in. the UK. Rocks range in age from the late Precambrian to the Carboniferous and include examples of sedimentary igneous and metamorphic types. The island's geology is celebrated as a geopark and comes with lots of explanatory boards. We are ready to take bookings for this trip NOW!

Ilfracombe, North Devon (7-nights) - June 23-30

We last visited this area about 4 years ago and found it be quite amazing. We want to re-visit some of those places, but also take in so much more! The rocks come from the Devonian and Carboniferous, but they show some amazing structures. We'll visit places like Hartland Quay in the west along to the Valley of the Rocks at Lynton in the East. We'll also venture south onto Dartmoor to take a look at the granite and the varied minerals, seaside resort that give us access to a stretch of coastline that takes in some rich and varied geology. We are ready to take bookings for this trip NOW!

Summer School, Sunderland (7-nights) - August dates tbc

Our annual Summer School for 2023, takes us to the coastline of Tyne and Wear and Durham with some excellent geology from the Carboniferous and Permian, with sedimentary and igneous rocks. Inland we will be taking in Weardale and Teesdale and visiting some great places along the way. All of this and the great friendship of a summer school, set in a hall of residence at Sunderland University.

Loch Lomond, Trossachs & Oban (8-nights) - September dates tbc Autumn is a good time to visit Scotland with the midges on the decline and still the last of the sun's warmth. We are working on a trip that will be split between Best Western Hotels in Crianlarich and Oban. This will allow us to visit Loch Lomond, the Trossachs National Park, Glencoe and islands such as Lismore and Kennacraig. As soon as this trip is finalised we will release further details.

Isle of Man (7-nights) - September 23-30

If you've never been to the Isle of Man to study geology before, you have been missing a treat! There's igneous, metamorphic and sedimentary rocks in great variety, along with mineral and even a few fossils! Crucial evidence for the closure of Iapetus Ocean can be found here, along with pillow lavas and limestone from the Carboniferous. For those more interested in recent deposits, there's also some of the UK's finest Quaternary in the north of the island. All this and our favourite hotel, the Welbeck!

We are ready to take bookings for this trip NOW!

Guernsey (7-nights) - October 7-14

The Channel Islands have a rich and varied geology that bares little or no relation to the geology of England. In the case of Guernsey there are ancient metamorphic and igneous rocks, some of which go back more than 2 billion years. There's also evidence for an orogeny, known as the Cadomian, that occurred in the late Precambrian. We have secured the excellent Peninsula Hotel that we've stayed in twice before. It's on the NW coast in a quiet bay.

We are ready to take bookings for this trip NOW!

The North Norfolk Coast (7-nights) - October 18-23

There's not a finer place to round off our 2023 season than a visit to the North Norfolk resort town of Cromer. It gives us access to a unique coastline that takes in the Cretaceous rocks of Hunstanton, as well as some superb early Quaternary sediments that include a visit to West Runton that has yielded the most complete mammoth skelton yet found anywhere in the UK.

This is also the best area in the UK to see evidence of the 450,000 year old Anglian glaciation with features that include ice wedges and an excellent esker. Finally, any visit would not be complete without taking a look at the rapidly disappearing coastline and how we are seeking to manage coastal erosion. All this and a great hotel right on the seafront!

We are ready to take bookings for this trip NOW!

To express an interest in La Palma, Summer School or Loch Lomond, Trossachs and Oban, email us at: downtoearth@geosupplies.co.uk or ring us on: 0114 245 5746. For all other trips, just ask us for a booking form so that you can complete your reservation.

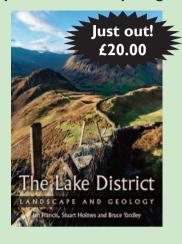
View a brochure at: www.geosupplies.co.uk or contact us.

If you are looking for a single room these are very limited and so you are strongly advised to make an early booking. We can always advise you on your best options.

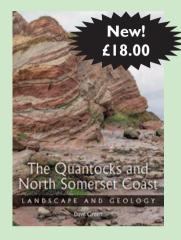
Featured books for July 2022

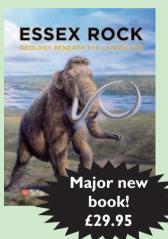
In each issue we are pleased to be able to introduce you to a range of featured books. Where they are being offered at reduced prices, these will be current to the end of July 2022 provided that stocks are available. Please note, all prices include UK postage.







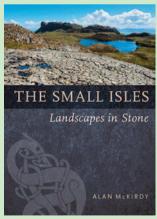


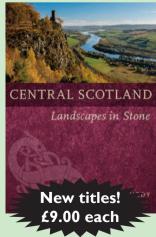


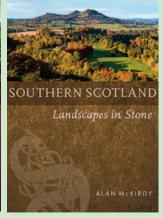














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