



Down to Earth *extra*

Issue 108 December 2021

NEWS FLASH...

- Book a place on a Residential Field Trip in 2022!
- Three Winter Zoom courses to choose from!
- Eight new Virtual Day Schools to book!

This is both an unusual location and an outcrop of unusual rock. First, the location is the north end of Hallcross beach in the South Hams of Devon. This long stretch of coastline ends with Start Pont at its southern end.

*Just to the north lies the impressive Slapton Sands, a spit with a lake on the landward side. The rocks here are weathered hornblende schists. These metamorphic rocks are of Lower Devonian age and tie in with similar rocks at Lizard Point.
(Image: Chris Darmon)*

From the Editorial team...

Now that the dust has settled on COP-26 and the 25,000 or so delegates and protestors have gone home, how do we judge that it went? Like a lot of subjects around climate change it depends on your own particular standpoint.

For some it will all have been a waste of time and energy, as Greta Thunberg would put it, too much 'bla, bla, bla'. But wasn't it always going to be so? For others, it was the first time that the leaders of the world actually engaged with the issues and took their first baby steps towards seeking a solution to a problem they all agree exists. Yes, it marks the beginning of the end for coal, even if the end is some way off, but for India and China in particular, this was a big commitment. It's extremely doubtful now that the UK will sanction the new coal mine in Cumbria, even if it's needed in the short term for steel production. Likewise, any new offshore oil and gas developments are doubtful. If we here in the UK don't set high standards we can hardly expect the third world to do so.

What was really good to see at COP-26 was how the leaders of the small island states, particularly those in the Indian and Pacific Oceans effectively banded together and were able to punch well above their weight. For them, limiting global temperature rises to 1.5°C was of paramount importance and they still see the outcomes as potentially catastrophic. They have a right to feel betrayed and let down. As if to demonstrate that COP-26 was just the beginning, it was encouraging to see that the incoming German Chancellor has just committed to his country being 80% dependent on renewable energy by 2030.

From the *Down to Earth* editorial team, may we wish you all a Happy Christmas and may 2022 be good for you.

Chris Darmon & Colin Schofield
The Down to Earth editorial team

See pages 6-10 for the full spectrum of our 'real' and virtual events!



news update

The Fagradalsfjall eruption is over, at least for the time being, or is the magma looking for a new exit?

Shortly after becoming Iceland's longest lasting volcanic eruption for more than 50 years the Fagradalsfjall volcano on the Reykjanes Peninsula stopped erupting. Over a period of a few short weeks the eruption slowed right down and then came to a whimpering end.

This is from Iceland Monitor:

"It seems to me there are many indications the eruptions is in its final stage," Þorvaldur Þórðarson, volcanologist at the University of Iceland, tells (the newspaper) *Morgunblaðið*, speaking of the Fagradalsfjall eruption in Southwest Iceland. "Some minor emission of gasses from the crater and from the lava has been detected, telling us there is still some life in there, although very little."



*A reminder of the recent past at Fagradalsfjall
(Image: Guide to Iceland)*

The volcanic eruption, which began March 19, will not be declared over until the crater has been inactive for at least three months. To wait that long is the general rule followed. Five weeks have gone by since lava flow was last detected by Fagradalsfjall, so the crater will have to remain inactive for nearly another two months before the end of the eruption is declared."

However, there are other volcanologists who believe that the ongoing seismic activity may be an indication that underground magma is still on the move and is looking for a new route to the surface that will lead to a new eruption site being seen in the near future. Clearly a watching game is going to be played out to see which scenario is correct.

In the meantime, whatever happens, Fagradalsfjall is a major tourist attraction that comes complete with a pay car park, portaloo and a street food vendor. The eruption site is on private land and the fact that charges are being made, it has re-ignited hot debate about the practice of commercialisation of nature.

You can watch out yourself from the live webcams that are still ongoing or by catching the regular seismic updates from Iceland.

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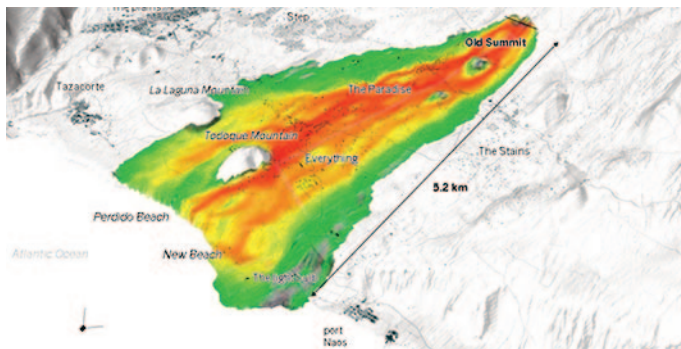
Meanwhile on La Palma the Cumbre Vieja volcano is still causing major problems...

Latest reports from the Canary island of La Palma indicate that lava and ash is continuing to flow from existing and new fissures. On November 25th a power plant and a cemetery were hit and there continues to be loss of property.

There are calls from some local politicians for the area of the eruption to be 'bombed' so that the directions of flow can be changed to move it away from populated areas. So far, nothing of that nature has been attempted.

Examination of several live webcams on November 26th revealed a high degree of ash being erupted. The lava front entering the sea now extends for more than a mile along the coast. So far at least, the east coast, and the capital Santa Cruz de la Palma, have not seen any significant impact or damage. Instead the flows have been towards the more sparsely populated west coast and the community of Puerto Naos.

The long term future of the island's population is clearly under threat, the longer the eruption goes on for. Much agricultural land has been lost and tourism has effectively come to a halt, with the airport closed indefinitely. Only Spanish people can now get to the island by the ferries which are currently providing a lifeline for the community.



The fissure nature of the eruption site is clearly seen in this recent map of the lava and ash field. (Image: Volcano Discovery)

Euronews, published this summary on November 24th:

"La Palma's Cumbre Vieja volcano continued erupting into the early hours of Wednesday morning. One of the volcano's seven lava flows dropped into the sea Monday, the third flow to reach the Atlantic ocean.

Air quality has worsened on the island after a new overflow of the volcano cone. European Union scientists calculate that the molten rock has covered more than 1,000 hectares (2,471 acres) and damaged more than 2,700 buildings.

According to the local government, 314 hectares (775 acres) of crops have been affected, of which more than half are banana trees.

The volcano on La Palma, on the Canary Islands off northwest Africa, first erupted more than nine weeks ago. The prompt evacuations of more than 7,000 people helped avoid casualties."

Meanwhile there continues to be speculation about what will happen should the western flank of the Cumbre Vieja volcano collapse. What everyone agrees is that it isn't imminent!

New Geoheritage app reveals the geology of the Forest of Dean...

A new app has been launched to help everyone explore and learn more about the amazing geological heritage found beneath our feet in the Forest of Dean. It introduces the story of the rocks that underlie the Forest of Dean and that in turn shape the heritage of the Forest. The story is told through 10 self-guided walks, plus introductory sections about the rocks, 'deep time' history and Freemining.



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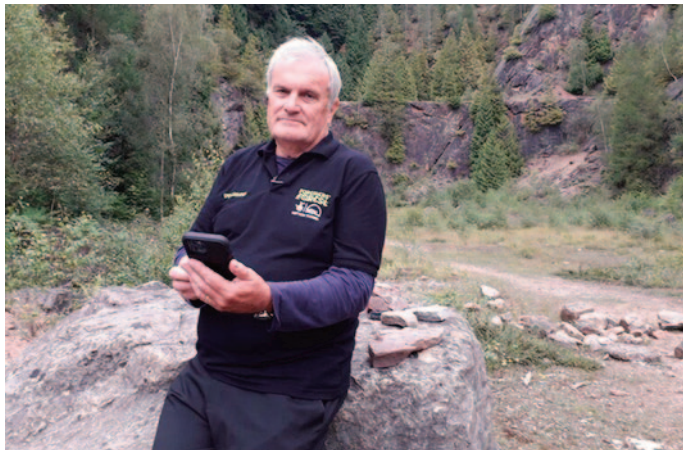
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As you explore the trails, your location will be tracked on the map using the GPS built into your mobile device. When you near a point of interest, the GPS triggers information explaining the site.

The Geoheritage app can be downloaded for free through the Apple and Android app stores. It joins other apps produced for Foresters' Forest including Hidden Heritage of the Dean, Coleford's Hidden Heritage and Cinderford's Hidden Heritage.



Author of the app, Mike Brooks out in the Forest of Dean

Julie Godfrey, of Foresters' Forest, says:

"It has been delightful to see the app evolve. It includes lots of fascinating facts, some hidden gems within our Forest, and an abundance of photos and images capturing both the beauty of our landscape, the industrial heritage and what lies beneath. The Forest has a complex geological history, with some of the oldest rocks in Gloucestershire, and these have massively influenced the landscape, history, culture and economy of the local area. The app, once downloaded onto a smart phone or tablet, can be used from anywhere, either whilst out on one of the self-guided walks, or simply from the comfort of your armchair. Take a look! Like me, you may be amazed!"

The Geoheritage app has been created for Foresters' Forest, with National Lottery Heritage funding, by Mike Brooks of the Gloucestershire Geology Trust, and Brooks Designs. Mike is an enthusiastic amateur geologist with a professional background in graphics and software, producing apps for the Apple and Google stores since 2011.

To download the Geoheritage app go to:



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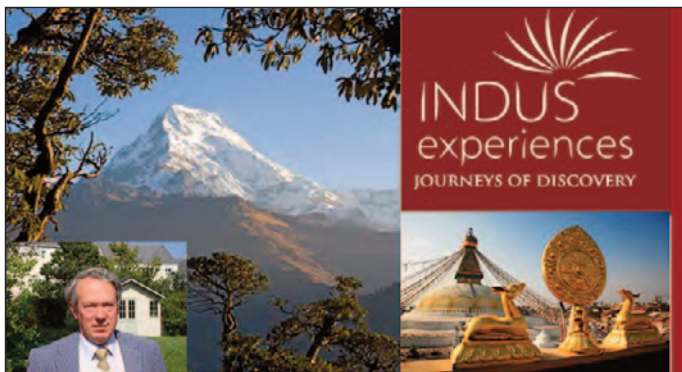
www.forestersforest.uk/projects/29/geology-of-our-forest
Rest in peace, we remember Mavis Gill...

As this issue of *Down to Earth extra* closed for press, we learned of the sad news that long time supporter of all things geological, Mavis Gill had passed away after a long and brave battle with cancer.

As well as a successful career in the health service, Mavis, from Rowlands Gill in Tyne and Wear, devoted much of her spare time to her many pastimes, including astronomy and geology. Mavis never did anything by halves and was always amazingly enthusiastic and knowledgeable. She went on numerous field trips with *Down to Earth* readers. And right up to the end was taking part in Zoom sessions and courses.

Rest in peace Mavis, you will be sadly missed - Editor.

*Mavis as we remember her - with a smile on her face! Here she is overlooking Bergen in Norway. *



Indus Experiences is pleased to announce special interest (geology) tours to a range of destinations. Dr Danny Clark-Lowes will be your tour leader on many of these. He is a geologist, educated at Cambridge and London universities, and a mountaineer, much travelled in the Himalaya. Tour destinations include Annapurna region in Nepal, Bhutan, Ladakh and Zaskar (northern India), Rajasthan, Kyrgyzstan, Oman, Jordan and Morocco.

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in-house

With Christmas coming up, Geosupplies have got some goodies just for you!

We're pleased that a number of you came and took advantage of our special offer on BGS maps and visited us in person during the summer months.

Sorry to say that the map offer has now ended, but we've still got lots of bargains for you! Our shop prices on geological equipment and specimens all reflect the fact that we don't have to pay out on postage. We've also got a whole shelf full of clearance book titles at bargain prices, as well as some clearance maps. If there's something specific that you are looking for, we always suggest that you ring us first, just to make sure that we have it in stock.

Our opening hours are 8.30-4.00 Monday to Friday and 9.30-1.00 on Saturday. We're just 5 minutes off the M1 Junction 35.

Bag an Estwing geological hammer bargain this Christmas...

Thanks to the cancellation of an export order, we've got some excess stocks of the popular Estwing E322P Geological pick that we want to clear at a new low price! These USA made rock picks are the 'Rolls Royce' of geological hammers that feature a comfortable vinyl grip and one-piece steel shaft.

One can be yours for just £48.95 including carriage within the UK.

Alternatively you can pick one up from our shop and save a further £2.00!

Once they're gone, they're gone!



get Down to Earth regularly...

If you've enjoyed reading this Down to Earth extra, you'll love our quarterly Down to Earth! It's a 32-page quality magazine in full colour that's packed with up to the minute geological news and articles. You can get your hands on this either in print or electronic formats.

You can subscribe now for the remainder of 2021 and 2022 for just £16.00 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. Take out an e-subscription now for 2022 for just £10.00 anywhere in the world, or £16.00 for printed copies in the UK. We'll send you the next 4 printed issues, to the end of 2022 and 4 back issues. Additionally, all subscribers will get DtoE extra FREE each month. If you'd like back issues of printed copies, you can get a parcel of these for just £25.00 extra.

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If you don't subscribe to the Down to Earth magazine, why not take the plunge?

We're pleased that you enjoy *Down to Earth extra*, but would be pleased to send you even more of what you enjoy! You can get the full 32-page issues of *Down to Earth* four times a year.

You can get copies as pdf files or as high quality print versions through the post. Subscriptions start at just £10.00 a year - see the coupon below.

Tumblers make excellent Christmas gifts...

Rock Tumblers make an excellent Christmas gift for people looking for something a little different. Our tumblers are easy to use and are British made!



The 2lb capacity model is £72.95 and 3lb model is £87.95. They come complete with a starter pack of grits and polish and handy tips booklet.

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Down to Earth

'Earth science learning for all'

Book now for our 2022 programme of residential trips

*This is the Triassic Hopeman Sandstone near Lossiemouth on the coast of Moray and Nairn. It's just one of many memorable sites that we will visit in July 2022.
(Image: Chris Darmon)*

We have worked hard to ensure that, as far as we can see, the advertised programme for 2022 will run as planned.

With air schedules slowly returning to something like pre-pandemic levels, we think that the Dingle trip will also be fine, with people flying to Cork airport.

We have had to pay particular attention to pricing for 2022 as several trips that we previously advertised for 2020/1 are still to run. Price rises have become inevitable given pressures in the sector. We have kept these increases to the absolute minimum.

Several trips are approaching being full at this time, so act now to secure your place.

To view a brochure, go to our website at:

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

Booking forms are only available direct from us.

Email: downtoearth@geosupplies.co.uk

The 2022 programme - the full list

- North Cornwall - April 2-9
- Raasay & Skye - April 21-28
- Northwest Highlands - April 29-May 6
- Dingle Peninsula - May 18-25
- Mull & Ardnamurchan - June 4-11
- Pembrokeshire - June 25-July 2
- Northeast Scotland - July 20-27
- Worcester Summer School - August 13-20
- Berwick & the Borders - September 1-8
- Minehead, Somerset - September 14-21
- Malvern Hills - September 28-October 2
- Yorkshire Coast - October 10-15

Full refund, if we, or you, have to cancel due to Covid-19. Everyone booking will be required to have completed a Covid-19 vaccination programme in good time and to be 'fit to travel'.

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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 the South Devon trip at Start Point in October 2021. Colin Schofield is the one wearing the sun glasses and the hat.

The 2022 Residential Trip programme...

Since June 2021 we've been running our residential field trips largely as before, but at the same time taking every precaution to prevent the spread of Coronavirus. We continue to insist that everyone who joins us must have undertaken a programme of at least two vaccinations unless they are medically exempt. In addition, we recommend the wearing of masks in confined spaces and in accordance with the rules of the various UK nations.

For 2022 we are hoping to return to making use of a hired minibus driven by our own Colin Schofield. However, if you wish to use your own car you are welcome to do so. For the time being, we are keeping things simple and, aside from a trip to Ireland, will not be running any overseas trips. These will hopefully resume in 2023.

Please remember that some of these trips have been advertised previously and are therefore already nearly full. If you are looking for a single room, these will be in short supply on most trips. The message is to book early to avoid disappointment!

NEW! North Cornwall, April 2-9

This trip, which is based at the Cliff Hotel in Bude, takes in the varied geology and fabulous scenery of North Cornwall. Rocks of Devonian and Carboniferous age have been superbly folded and faulted in the Variscan Orogeny. We'll be taking in places such as the Delabole Slate Quarry, Tintagel and the amazing cliffs of Hartland Quay. Add in some of the granite around the north of Dartmoor and we have a great trip in store for you.

Raasay & Skye April 21-28

The island of Raasay is situated just off Skye and is a geologists' paradise with rocks ranging from the Lewisian to the Tertiary with Torridonian, and fossiliferous Triassic and Jurassic rocks in between. All this on an island that's 4 miles across and 11 miles long. We also spend two full days on Skye in what will be a truly memorable trip. *(Very few remaining places available.)*

Northwest Highlands of Scotland April 29-May 6

Based at the famous Inchnadamph Hotel in Assynt, this trip takes in some of the UK's finest geological sites in the Moine Thrust and other classic places. We journey to the 'multi-coloured rock stop', Smoo Cave and beautiful Achmelvich on the coast. See our oldest rocks and get to grips with the processes that were in place nearly 3 billion years ago. *(Few places remaining on this trip.)*

Dingle Peninsula, Ireland May 18-25

The west coast of Ireland is amongst the most beautiful in the whole of the British Isles and we want to share it with you! See amazing folds in the rocks of the Lower Palaeozoic and also a great variety of different rocks, minerals and fossils. For this trip, flights to and from Cork are recommended. *(Very few places remaining.)*



In your face geology at Mingary Pier, Ardnamurchan

NEW! Mull & Ardnamurchan June 4-11

This trip is based in the beautiful Mull village of Tobermory. We will spend much of the week studying the rocks of Mull, including taking in a trip to the island of Staffa (weather permitting). We'll also spend two full days on the Ardnamurchan Peninsula where we will be able to see Jurassic sediments with fossils, along with excellent igneous rocks from the Tertiary. Back on Mull we'll also take in the rocks of Iona and places like Calgary and Dervaig. This promises to be a great trip, full of varied geology and scenery. All this and a comfortable, modern hotel, who could ask for more!

Pembrokeshire June 25-July 2

We've been trying to return to this, one of our favourite areas, for two years! This trip is based at the Premier Inn in Haverfordwest enabling us to travel to all the best sites in Pembrokeshire, and allowing you to travel by train to the field area. We'll be taking geological sites at Marloes, St Davids, Broadhaven and Saundersfoot, to name but a few. This is Palaeozoic geology at its best, all folded and faulted in the Variscan Orogeny. *(Few places remaining on this trip.)*

NEW! Northeast Scotland July 20-27

This trip examines the coastline of Moray and Nairn, along with some of the inland outcrops. It's known to geologists as the 'kingdom of Dalradia' because it's dominated by the metamorphic rocks of the Dalradian formation. That said, we'll also see sediments from the Old and New Red Sandstones and even a little Jurassic. Come and explore an area of Scotland that lies between Inverness and Peterhead, we promise that you will not be disappointed!

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 this year, so we've gone for 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 bases in Worcester. Accommodation at the University is mainly in en-suite single rooms. *(We have a number of bookings already in place, but can accommodate more.)*

NEW! 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..



Lundy Island, home to the eponymous Tertiary granite

NEW! 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. 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.

NEW! Malvern Hills September 28-October 2

Great Malvern is world famous for its spring water that flows from fissures in the Precambrian rock of the hills made famous by Elgar. Aside from these ancient igneous rocks there are also nearby exposures of Lower Palaeozoic limestones along with sediments from the Carboniferous and Permo-Trias. We'll also be including a trip along the Severn Valley railway to view Coal Measures and dunes.



Chalk cliffs and raised beach caves at Flamborough Head

NEW! 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:
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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.**



Come & join us on a Zoom Virtual Day School or Course this Winter...

With Winter now upon us, we're once again holding Zoom sessions on a regular basis. Starting in January, we're offering three live Zoom courses and eight 'Virtual Day Schools'. We're all still learning and having fun together in the new virtual world!

The Geology of the British Isles in 13 hours!

Yes, 13 weekly Zoom sessions cover the geological history of our country from start to finish. Monday afternoons or evenings - your choice.

How the Earth Works - from the Earth to plate tectonics

This amazing story is told in 11 weekly Zoom sessions, held on Thursday afternoons or evenings - your choice.

Rocks from the pressure cooker - Metamorphic rocks & processes

This 10-week course has fortnightly Zoom tutorials on Wednesday.

Winter Virtual Day Schools on the following Wednesdays

- Extinction! The big 5 of the fossil record (January 5)
- The North Atlantic Igneous Province (January 19)
- Limestones of the UK (February 2)
- Silicate minerals make rocks (February 9)
- Metamorphism & metamorphic rocks (February 16)
- Black Diamonds - the coalfields of the UK (March 2)
- The geology & landscape of Yorkshire (March 16)
- Torridonian, Old Red & New Red - the continental sandstones of the UK (March 30)

Virtual Day Schools are offered at the bargain price of £20.00 each or £25.00 if you would like printed papers.

*Everyone is welcome on a **Down to Earth** learning experience!*

Welcome to our virtual world!

Virtual Day Schools

Our popular Day School format, transcribed into a virtual format, with some lively topics for you to enjoy! Individual day schools cost £20.00 each. Printed background papers cost an additional £5.00 per day school. Day schools begin at 10.30 and involve three Zoom sessions of about 45 minutes each with time for you to carry out your own guided study in between.

You can book online at: www.geosupplies.co.uk

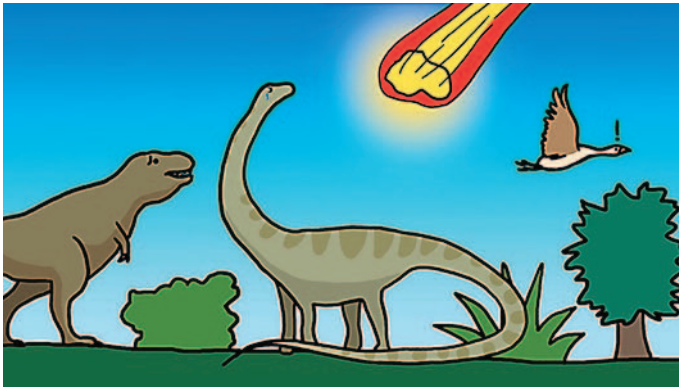
December 15 UK & Chinese Lagerstatte

In this, our final day school, we'll be examining some of the UK's most amazing fossil sites found in what are known as lagerstatte. We have three such formations, A Silurian one in Herefordshire famed for its amazingly preserved crustaceans, the early Devonian flora of Rhynie in Aberdeenshire, the Eocene London Clay flora and the latest, exceptional Echinoderms in Wiltshire. To make this a Christmas cracker of a day school we'll also add in some Chinese lagerstatte! Are you ready to get blown away?

Just released - our Winter Virtual Day Schools...

January 5 Extinction! The big 5 of the fossil record

The fossil record is littered with extinctions, but there have been five major such events in the Phanerozoic. During this action packed day we'll be examining these events and learning about the many and varied reasons for them. Some are understood much better than others. Expect our friends the dinosaurs to put in an appearance!



January 19 The North Atlantic Igneous Province

It began about 63 million years ago with a supervolcano on the Isle of Skye and gave us volcanoes and igneous intrusions as far south as Lundy in the Bristol Channel. One dyke that originated on Mull got as far as the North Yorkshire Moors! We examine this amazing volcanic episode, one of the largest in the Phanerozoic, its causes and the legacy it has left us.

February 2 Limestones of the UK

They are amongst our most treasured assets. Limestones have been used in so many ways for hundreds of years, and they occur across the length and breadth of our country from the Northwest Highlands of Scotland to the South Down of Sussex and to Torquay. They range in age from the Cambrian to the Tertiary, yet all are the products of mainly shallow tropical seas. In this day we'll learn more about what limestones are and how they form, and what they tell us about our geological journey through time.



February 9 Silicate minerals make rocks

Next to Carbon, Silicon is able to make the most chemical compounds, so it's no coincidence that Silicon forms the basis of most rock forming minerals and also artificial intelligence. This day will take the lid off silicates and explore how they define not only igneous rocks, but also metamorphics and sedimentary types. Don't let a bit of basic chemistry frighten you!

February 16 Metamorphism & metamorphic rocks

Of the three classes of rocks, metamorphics are the least understood. In this day school we'll debunk these rocks and show how to understand and appreciate them. By the end of the day we hope that you not only know more about them, but also that metamorphic rocks will be your favourites!

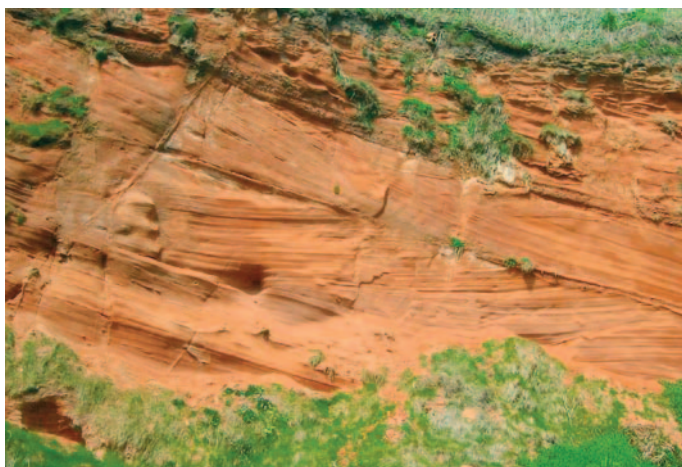
March 2 Black Diamonds the coalfields of the UK

During the nineteenth and the first half of the twentieth centuries, the UK was one of the world's largest producers of coal. We exported it around the globe from numerous places around our coastline. In this day we'll be exploring how that coal formed, and where and how it was mined. Today we view coal as an evil substance that has been a major contributor to global warming, but back in the day it was seen as a saviour to industrial prosperity.

March 16 The geology & landscape of Yorkshire

Yorkshire is a large county with a geology that stretches back to the Silurian and along the way includes rocks from the Carboniferous, Permian, Triassic, Jurassic, Cretaceous, Tertiary and Quaternary. Come with us on this rich and varied journey through the geology of 'God's own county'!





March 30 Torridonian, Old Red & New Red - the continental sandstones of the UK

Through the long geological history of the UK, there have only ever been three really important and thick continental sandstones, the Torridonian, the Old Red Sandstone of the Devonian and the New Red Sandstone of the Permian and Triassic. In this unusual day school we'll take a look at each of these formations. We'll examine their shared characteristics and the environments in which they formed.

Our Virtual Day Schools cost £20.00 each or £25.00 if you want the background materials in printed form. Alternatively, you can book all eight day schools for £140.00.

Winter Zoom Courses

We've got some exciting plans for Winter as we begin a new season of Zoom sessions. Remember that you can join us in our weekly Zoom sessions at the allotted times, or you can choose to have printed background papers and access the audio at a time to suit yourself. Expect our usual informal approach and style that welcomes each and every one of you!

You are invited to enrol on these courses from mid-November onwards. All courses will begin in the week commencing January 17th 2022.

To enrol onto the course, 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

If you have any questions email: downtoearth@geosupplies.co.uk

The Geology of the British Isles in 13-hours!

One of the first distance learning courses that we did was *The Geology of the British Isles*. Many people have embarked on this journey since then, but now, for the first 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 Collins material on Moodle. We want this to be the best course ever, aided and abetted by your own participation.

Cost: Thirteen hour-long Zoom sessions with electronic background papers £60.00 for one person or £85.00 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)

How the Earth works - from flat Earth to plate tectonics!

To understand the planet on which we all live, we really need to understand the processes that operate upon it. Put simply, it can be thought of as a machine and as such it has a means of working! Over 10-weeks we'll unpack our planet and show you how, over the years, we have come to understand much about those complex processes. It culminated with what many call a revolution - plate tectonics. You'll meet some amazing scientists along the way and sometimes take a step backwards before a new discovery takes us forward again.

Cost: Ten hour-long Zoom sessions with electronic background papers £50.00 for one person or £70.00 for 2-people studying together. Printed background papers cost an additional £20.00. Zoom sessions are on Thursdays at 2.00pm or 7.00 pm (it's your choice).



Metamorphic rocks in the field showing obvious banding (Image: www.reference.com)

Metamorphic Rocks - rocks from the pressure cooker (10-weeks)

This course has previously been offered as a basic distance learning course only. Now we are able to bring it to you with fortnightly Zoom tutorial sessions. The course is arranged in a way that covers all the basic elements of metamorphic rocks. It takes you through how metamorphic rocks form, the textures the rocks exhibit and the minerals that make them up. You'll learn about contact, regional and dynamic metamorphism and how we classify these enigmatic rocks.

Cost: Five hour-long Zoom sessions with electronic course units and tasks £40.00 for one person or £60.00 for 2-people studying together. Printed background papers cost an additional £20.00. Zoom sessions on alternate Wednesdays at 7 pm

Steps towards the rock face - the complete course for beginners (11-weeks)

More than 150 people have taken part in this course since we first launched it more than five years ago. We are now able to offer it as an 'off the peg' course for to start and finish whenever you want. It covers a wide spectrum of basic materials on rocks, minerals and fossils and much more besides. This course has been specifically designed with adult learners in mind. It does not require you to submit homework and you can do it electronically or by post to suit your requirements.

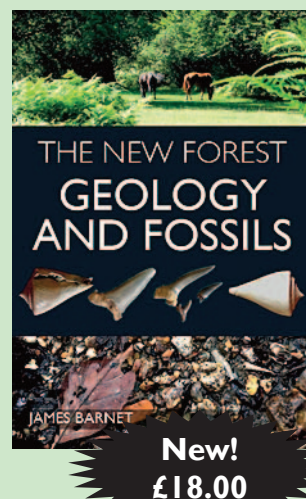
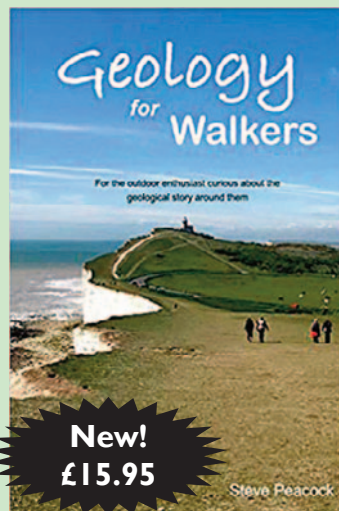
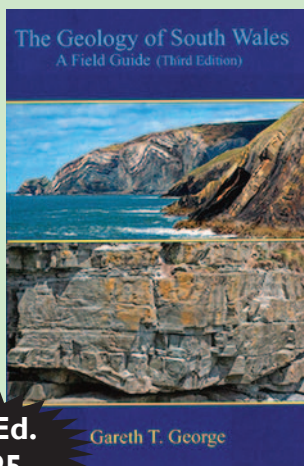
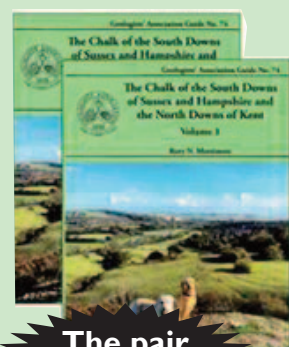
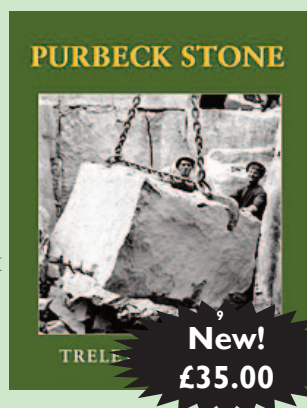
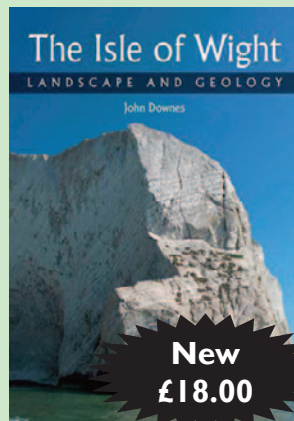
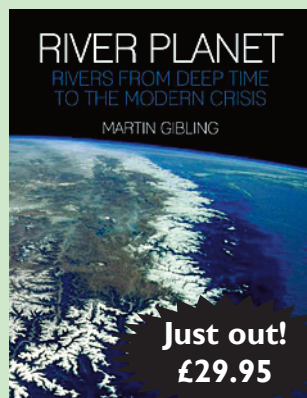
Cost: £50.00 by Moodle/Email, or £75.00 by post with printed papers. There are no Zoom meetings with this course and tutorial help is available by email. You can start this course at any time to suit your requirements.

To enrol on any course go to our website: www.geosupplies.co.uk or email us at: downtoearth@geosupplies.co.uk



Featured books for December 2021

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 December 2021 provided that stocks are available. Please note, all prices include UK postage.



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