



Down to Earth *extra*

Issue 142 October 2024

NEWS FLASH...

2024 trips...

- Yorkshire Dales - book now!

2025 trips...

- All trips now available
- NEW! South Devon

Autumn Zoom courses...

- Time Traveller's Britain
- Geology of the British Isles
- The Wednesday Club

What are you waiting for?

Who says that the sun doesn't shine in North Wales? This is a shot of the Llyn Peninsula from Morfa Nefyn in early September of 2024.

The rocks on the foreshore are part of the Mona Complex from the late Precambrian. Similar rocks form a large part of the geology of Anglesey. Away in the distance, the coastline shows Ordovician slates intruded by granodiorites of the more familiar Snowdonian geology. (Image: Chris Darmon)

From the Editorial team...

We're all getting used to using the internet to get hold of reliable and up to date information, but a recent personal experience has caused us to give a note of caution.

We all know that the cost of many commodities has risen quite a bit in recent years and the printed word, in the form of books is no exception. For a while prices were pegged back as publishers switched to having their works printed and produced abroad, anywhere from Poland to Malta and even India. However, even these countries are not immune from rises in the cost of things like paper.

Post pandemic, uncertainties in the market for books has meant that many publishers have cut back on the number of titles they accept and also cut the print run of many books. As a result prices have risen and fewer titles have come out. One route that budding authors of both fiction and non-fiction have taken is to self publish. Some have even gone to the extremes of making their work only available online, with printed copies being only available via a print on demand service.

All this is fine, but there may be a temptation to cut corners. Are all such books checked for accuracy for instance. I don't mean the presence of typos, I'm talking about geological accuracy. Worse still, if the book is an excursion guide, has somebody checked the safety of the suggested route? In our case, this did not seem to be the case and we had serious concerns about the timings given for the walk to be completed. Surely authors have a duty to check these things out.

We don't want to discourage people from sharing their work, but if they don't carry out the safety checks the onus is on us, the users to make sure that we use such books with care. Enjoy your geology safely!

Chris Darmon & Colin Schofield
The Down to Earth Editorial Team

Get ready to Zoom this Autumn - see page 11!



news update

Unlocking the history of a grain of sand...

'If only quartz could talk' - I've lost count of how many times, I've bemoaned the fact that we can't unlock the history of this common mineral. Now, thanks to artificial intelligence we may be able to do just that as I've been finding out.

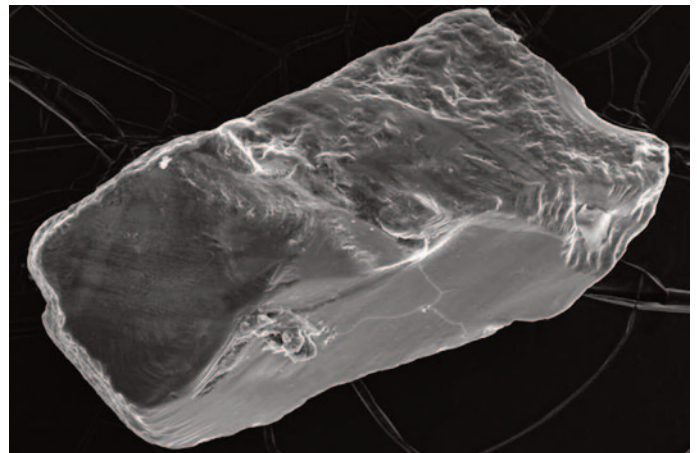
Researchers based at Stanford University in the USA have developed an AI based tool called SandAI that can reveal the history of a grain of sand stretching back hundreds of millions of years.

According to the website phys.org:

"With SandAI, researchers can tell with high accuracy if wind, rivers, waves, or glacial movements shaped and deposited motes of sand.

The tool gives researchers a unique window into the past for geological and archaeological studies, especially for eras and environments where few other clues, such as fossils, are preserved through time. SandAI's approach, called microtextural analysis, can also help with modern-day forensic investigations into illegal sand mining and related issues.

"Working on sedimentary deposits that haven't been disturbed or deformed feels about as close as you can get to being in a time machine—you're seeing exactly what was on the surface of Earth, even hundreds of millions of years ago. SandAI adds another layer of detail to the information we can pull from them," said Michael Hasson, a Ph.D. candidate with Mathieu Lapôtre, an assistant professor of Earth and planetary sciences at the Stanford Doerr School of Sustainability."



What's the story in a grain of sand? According to a new report using AI - an awful lot!
(Image: Stanford University)

Microtextural analysis isn't in itself new, but the approach using AI certainly is. In the past it had to be done by hand and involved painstakingly looking at individual grains using eyes, hand lenses and microscopes. Now AI does the time consuming donkey work.

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The starting point is pretty familiar it's about the shape of the grains - how rounded or angular they are. There are also telltale abrasion patterns on the grains. AI is much quicker, more accurate, less subjective and can study individual grains rather than groups of them.

“Instead of a human going through and deciding what one texture is versus another for sand grains, we are using machine learning to make microtextural analysis more objective and rigorous,” said Lapôtre, who is senior author of the paper. “Our tool is opening doors for microtextural analysis applications that were not available before.”

Clearly this work is just the beginning for our understanding of sand grains. There are so many applications of technology like this in the field of geology. It's just the latest example of AI and one of many in geology where we often need to analyse vast volumes of data, and this is something that plays to the strengths of AI.

See the full article:

<https://phys.org/news/2024-09-ai-tool-scanning-sand-grains.html>

Or read the full Stanford Report:

<https://news.stanford.edu/stories/2024/09/introducing-sandai-a-tool-for-scanning-sand-grains-that-opens-windows-into-recent-time-and-the-deep-past>

Stonehenge Altar Stone it was never going to be the last word!

In the last *DtoE extra* we told you about a piece of research that suggested that the Old Red Sandstone found to be forming the Altar Stone of Stonehenge came from the far north of Scotland. This prompted discussions about how it got down to Wiltshire and also the level of business/commerce and sophistication that implied.

I was not alone in suggesting that the stone could have been transported at some point during the Quaternary Ice Ages. Indeed, I'm certain that there will be many who would have thought just that. Note that I'm not implying that it got there directly, or in one journey. Don't forget that there have been many glaciations over the past 2 million years. Importantly we know much less for certain about glacial events prior to the last Devensian one.

The research that we featured in the last issue of *DtoE extra*, suggested that the stone had originated in the Orcadian Basin of the Old Red Sandstone. Now the latest research says that it has not come from Orkney at least.

So, at least for the time being all options are still on the table, so it's a case of 'back to the drawing board'! We'll keep you informed.

The strange case of the matching dinosaur footprints on either side of the Atlantic Ocean...

Scientists at Southern Methodist University (SMU) led by palaeontologist Louis L. Jacobs has found matching sets of Early Cretaceous dinosaur footprints on what are now two different continents. They were found in South America and Africa respectively on either side of the Atlantic Ocean.

Here's the full story from the SMU website:

More than 260 footprints were discovered in Brazil and in Cameroon, showing where land-dwelling dinosaurs were last able to freely cross



A long ornithomimid trackway at Passagem das Pedra, Sousa Basin preserved in floodplain deposits of Lower Cretaceous. (Image: Ismar de Souza Carvalho)

between South America and Africa millions of years ago before the two continents split apart.

“We determined that in terms of age, these footprints were similar,” Jacobs said. “In their geological and plate tectonic contexts, they were also similar. In terms of their shapes, they are almost identical.”

The footprints, impressed into mud and silt along ancient rivers and lakes, were found more than 3,700 miles, away from each other.

Mineral, Gem & Fossil Show

North London



Saturday 30th
November
2024
10am – 4pm



Large Hall with

Jewellery, Gems, Fossils, Meteorites, Minerals
Children's Lucky Dip, Books, Maps + Refreshment area

TRINITY CHURCH, NETHER STREET, N12 7NN
Near 'Tally Ho' Pub & Arts Depot, Ballards Lane, North Finchley
See map overleaf

Local car parking + nearby **Northern Line** underground stations -
West Finchley + Woodside Park Stations
Also **Finchley Central** and buses No.13, 125, 460, 134 to Tally Ho'.

Adults £2 Accompanied children under 12 – Free

Organised by the **Amateur Geological Society** Finchley, London

For contact details and all about us: www.amgeosoc.wordpress.com



Left. Theropod footprint from Sousa Basin, Lower Cretaceous of Northeastern Brazil. Credit: Ismar de Souza Carvalho. Right Theropod tracks from the Koum Basin in Cameroon. (Image: SMU)

Dinosaurs made the tracks 120 million years ago on a single supercontinent known as Gondwana– which broke off from the larger landmass of Pangaea, Jacobs said.

“One of the youngest and narrowest geological connections between Africa and South America was the elbow of northeastern Brazil nestled against what is now the coast of Cameroon along the Gulf of Guinea,” Jacobs explained. “The two continents were continuous along that narrow stretch, so that animals on either side of that connection could potentially move across it.”

Most of the dinosaur fossils were produced by three-toed theropod dinosaurs. A few were also likely made by sauropods or ornithischians, said Diana P. Vineyard, who is a research associate at SMU and co-author of the study.

Other co-authors of the study were Lawrence J. Flynn in the Department of Human Evolutionary Biology at Harvard University, Christopher R. Scotese in the Department of Earth and Planetary Sciences at Northwestern University and Ismar de Souza Carvalho at the Universidade Federal do Rio de Janeiro and Centro de Geociências.

The study was published in print by New Mexico Museum of Natural History & Science in a tribute to the late paleontologist Martin Lockley, who spent much of his career studying dinosaurs tracks and footprints.

What's the geological context? SMU's website again:

Africa and South America started to split around 140 million years ago, causing gashes in Earth's crust called rifts to open up along pre-existing weaknesses. As the tectonic plates beneath South America and Africa moved apart, magma from the Earth's mantle rose to the surface, creating new oceanic crust as the continents moved away from each other. And eventually, the South Atlantic Ocean filled the void between these two newly-shaped continents.

Signs of some of those major events were evident between both locations where the dinosaur footprints were found – at the Borborema region in the northeast part of Brazil and the Koum Basin in northern Cameroon. Half-graben basins -- geologic structures formed during rifting as the Earth's crust pulls apart and faults form -- are found in

both areas and contain ancient river and lake sediments. Along with dinosaur tracks, these sediments contain fossil pollen that indicate an age of 120 million years.

Before the continental connection between Africa and South America was severed, “rivers flowed and lakes formed in the basins” Jacobs said. “Plants fed the herbivores and supported a food chain. Muddy sediments left by the rivers and lakes contain dinosaur footprints, including those of meat-eaters, documenting that these river valleys could provide specific avenues for life to travel across the continents 120 million years ago.”

Application to restart blasting at Leicestershire quarry

Aggregate Industries (AI) wants to restart blasting at a quarry it deemed to be uneconomic in 2022. The context is that whilst demand remains high for hard aggregates, especially in the southeast of England, there are only a handful of working quarries in the Leicestershire area.



Croft Quarry shown before it stopped production in 2022. Parts of the large site away from the pit are used for recreation including running. (Image: Mike McSharry)

AI has identified a further area on the existing site that it intends to work at some time in the coming 10 years. In the meantime, the Company intends filling the previous quarry site, shown here. During this time the site would concentrate on recycling with materials arriving by train.

The area would then be landscaped partly as grassland with some woodland and water features.

Geologically, Croft Quarry is an SSSI which exposes an Ordovician tonalite and is one of several such bodies in the Enderby-Croft area. These are not to be confused with the Charnwood diorites of Ediacaran (late Precambrian) age elsewhere in the area. Like many other rocks, the tonalites are sold as granites.

The High Court quashes West Cumbria coal mine plan...

The long running saga that is the plan to restart coal mining at Whitehaven looks to have been dealt a knock out blow by the High Court in London. The project had previously been given the go ahead by the Conservative Government in December 2022.

At the High Court, the judge Justice Holgate said environmental assumptions underpinning the development at Whitehaven in Cumbria were "legally flawed". The legal challenge had been brought by Friends of the Earth and South Lakes Action on Climate Change.

Their main legal challenge was that the permission did not take into account the environmental impact of burning the coal that had been extracted. Instead the permission focussed on the operation of the mine. In his judgement, Mr Justice Holgate said: "The assumption that the proposed mine would not produce a net increase in greenhouse gas emissions, or would be a net zero mine, is legally flawed."

Is this the end of the road for West Cumbria Mining? The short answer is that it probably is. With the Port Talbot and Scunthorpe steel plants no longer needing large amounts of high quality coal, the home customer base has effectively evaporated. Also a change of government has brought a renewed emphasis on green energy and a commitment to meeting our climate goals.

Meanwhile on Anglesey copper mining is a step nearer to happening...

The possibility of copper mining returning to the Welsh island of Anglesey has come a step closer with the submission by Anglesey Mining Plc of its Environment Impact Assessment in the middle of August. This is a vital step before an application to commence mining can begin.

The BBC reported:

Rob Marsden, the CEO of Anglesey Mining, described the move as "a very significant milestone for Anglesey" but that re-starting mining at the site would require a capital investment of "around \$100m" (£75m). This would include construction of an on-site processing plant. "We're very aware of its heritage with the great open pit, pearl engine house and windmill up on the mountain - those areas won't be affected at all," Mr Marsden told the BBC.

"We'll be at around 400 metres underground, whereas the deepest 18th Century mining was at about 100 metres below surface. "The idea would be to process into a concentrate, containing about 30% copper, and truck that to the Port of Holyhead for export. He said he expects that "around 40%" of revenues would be generated from the copper and 33% from zinc.

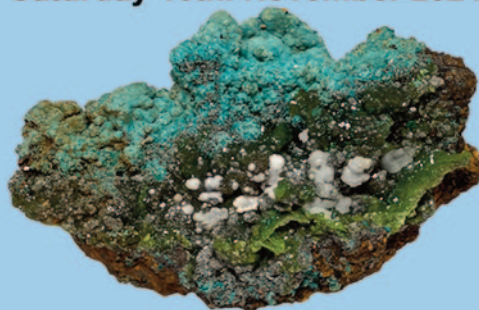
The 220-page scoping report has now been submitted to the North Wales Minerals and Waste Planning Service, which will have the final say, although further planning permission will be required before any work can take place.

"The mine life at the moment is 12-15 years, we're hopeful it will be longer and we discover more deposit there," Mr Marsden added. He said Mynydd Parys was "demonstrably the largest and most advanced project of its kind in the UK" and was "favourably located on a previously permitted, development site with significant existing infrastructure already in place".

We'll watch out for further developments.

SUSSEX MINERAL & FOSSIL SHOW

Saturday 16th. November 2024



Haywards Heath College, Harlands Road, RH16 1LT

Free parking 10am - 4.30pm

Admission: Adults £3 Children £1 Rockwatch Members Free

DISPLAYS & SALES OF MINERALS, GEMS AND FOSSILS

EXHIBITIONS, COMPETITIONS AND TALKS (see overleaf)

CHILDREN'S WORKSHOP – GOLD PANNING & FOSSIL HUNT

FLUORESCENT MINERALS DISPLAYS

The illustrated mineral is Smithsonite and Rosasite with Aurichalcite and Hemimorphite. Sounion Mine No 6, Agrileza Mines, Lophos, Lavrion District, Attiki Prefecture, Greece
14 x 9 x 3 cm Nick Hawes collection

smis.online

facebook.com/sussexmineral



Down to Earth - in print...

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. Why not request a FREE sample electronic copy of the current issue?

For 2024/5 why not treat yourself or a loved one to a gift subscription? Go to: www.geosupplies.co.uk and enter the online shop or ring us on 0114 245 5746.

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Extra October 2024



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 Iceland's 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 Claerwen Valley is part of the area flooded by the Elan Valley Reservoir.
(Image: Cwm Elan Valley)

If you are still looking to have a short break this year. We can fit in another couple of people on the Yorkshire Dales trip.

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. We have just released the final trip to the South Devon Riviera Coast.

To view a brochure, go to our 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 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 trip...

We can still accommodate a couple more people on the October trip to the Yorkshire Dales. We can recommend the village of Gargrave near Skipton as 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 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)

Before you book for 2025...

We are always pleased to welcome new people along on our trips. So if you are thinking about it, what do you need to know before you 'take the plunge'?

Who are the trips aimed at?

The short answer is that they are not aimed at any particular group of people. Our participants are mainly older retired people who want to keep their minds and bodies active, but younger people are welcome.

Some people have lots of geological field experience whilst others are complete beginners. As one person put it to us "I've forgotten all I once knew and need to come along to hear it again." Our UK trips are all small groups of 15 to 20 people maximum so we can make lots of what we say personal to you.

Will I be able to manage the walking?

We always try to keep walking to a minimum, but, almost by definition, some walking will be involved. If you can't manage a particular walk, just tell us and it will never be a problem for you not to do it. We have one person who really enjoys sketching - she's done some amazing sketches while the rest of us visit a quarry!

How do we get about on trips?

It varies a lot from trip to trip. Sometimes we hire a minibus, on other occasions we use public transport and at other times we'll make use of shared cars. Look at the details for each trip to find out.

What about accommodation?

We always try to use hotels or guest houses that have ensuite rooms as standard. Most of our accommodation will provide breakfast and evening meals, but sometimes we eat in local restaurants. We include the cost of all food, including a packed lunch for each field day.

We prefer to use small family run hotels and guest houses but they are getting harder to find, so sometimes we use larger hotels such as Premier Inns and hotels in the Leisureplex group. Once again, see the individual trip brochures for details.

Are your bookings safe with us?

Yes indeed they are! We've been in the business of running trips a long time and ensure that all the money you pay us is safe in a client trust account until your trip is completed.



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

Akureyri 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 Eystrí 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 the family run Hotel Balmoral in Torquay. 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 Paignton and Kingswear steam railway and combine it with another boat trip on the River Dart at Totnes.

Contrary to what we said last month, the brochure 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)

Time Traveller's Britain - all new locations!

Under this title we've explored more than 30 parts 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!

Book the whole course or individual sessions at £10.00 each.



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: take all six sessions for £4.00 for one person or £50.00 for 2-people studyingtogether, or £10.00 for each session. 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

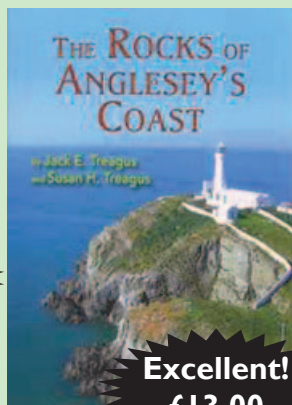
You can enrol via our online shop at: www.geosupplies.co.uk or ring us on: 0114 245 5746

Featured books for October 2024

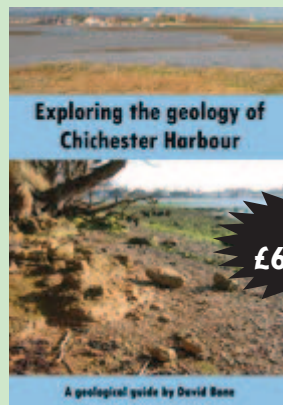
In each issue we are pleased to be able to introduce you to a range of featured books. Where they are being offered at reduced prices, these will be current to the end of October 2024 provided that stocks are available. Please note, all prices include UK postage.



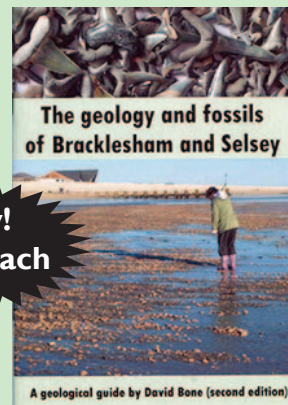
New!
£32.00



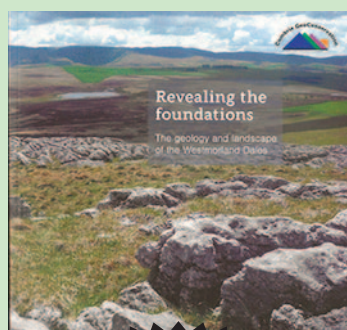
Excellent!
£13.00



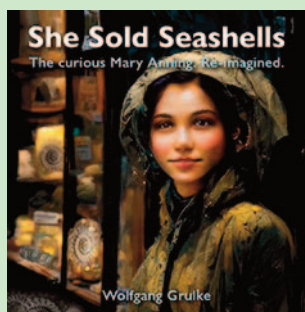
New!
£6.00 each



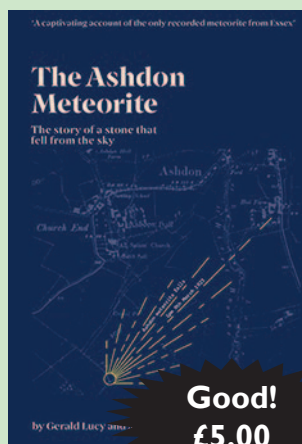
Buy both of the above for £10.00



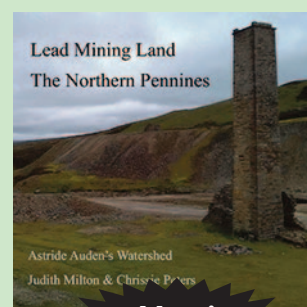
New!
£10.00



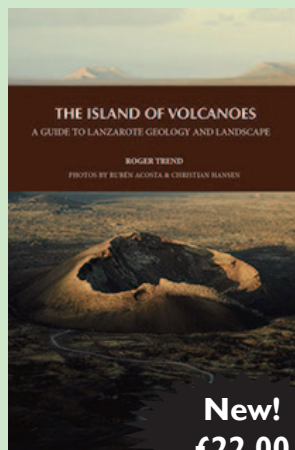
New!
£13.00



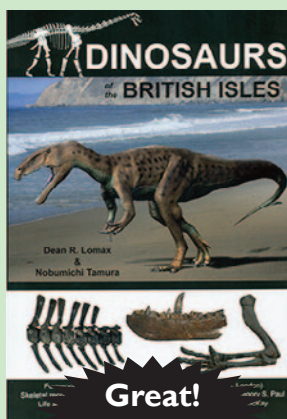
Good!
£5.00



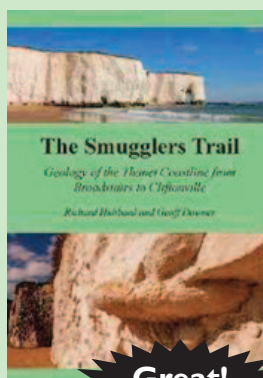
New!
£18.50



New!
£22.00



Great!
£37.00



Great!
£12.00



Brilliant!
£22.00

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