



Down to Earth *extra*

Issue 1 | 8 October 2022

NEWS FLASH...

- Book an Autumn Zoom course!
- Book a Virtual Day School!
- Book a Virtual evening!
- Book a 2023 Residential Field Trip!

Folding in the Lower Carboniferous rocks of Portishead, North Somerset. This coastal section on the outskirts of the City of Bristol involves rocks from the Devonian and Carboniferous that are affected by the Variscan Orogeny.

They are overlain by undisturbed Triassic rocks with the contact being an angular unconformity.

(Image: Chris Darmon)

From the Editorial team...

As we enter the month of October and the nights continue to draw in, our thoughts turn towards the dark, and possible cold, Winter that lies ahead. Even with the recently announced cap on energy prices, that will leave some people with potentially life threatening choices between heating and eating. We're all going to have to get used to wearing extra layers of clothing!

Up and down the country, churches, community centres and even pubs are looking at ways that they can bring people together, where warm spaces can be shared and people can get the most out of social get togethers. Never have we needed more by way of community activities. One organisation, the U3A, meets often in private homes, to study a myriad of subjects, including Geology. Our advice is to check what's on offer right now in your area.

If you prefer to stay in your own home then look out for what's on offer by way of online learning. A number of geological societies are offering either free or very cheap access to their online lectures. We at **Down to Earth** are offering *Yorkshire Geology* and *Fossils for All* as online Zoom courses which commence in late October and continue into the New Year after a Christmas break. We also have a range of Wednesday Virtual Day Schools and Wednesday evening talks, all on Zoom. Further details can be found in this issue of **DtoE extra**.

Looking further onto the future, now is the time to start planning for 2023. It looks like a number of companies who were offering exotic trips prior to Covid will once again be making tempting offers to get you out and about. Whatever you get up to this Winter and beyond we hope that you all stay safe and enjoy your Geology!

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



news update

Government lifts fracking ban in a new 'dash for gas'...

With the ending of the period of national mourning for Her Majesty Queen Elizabeth II, the new government lost little time before announcing the lifting of the near 3-year moratorium on fracking. This was imposed following concerns about low level seismic activity around fracking sites, especially one close to Blackpool.

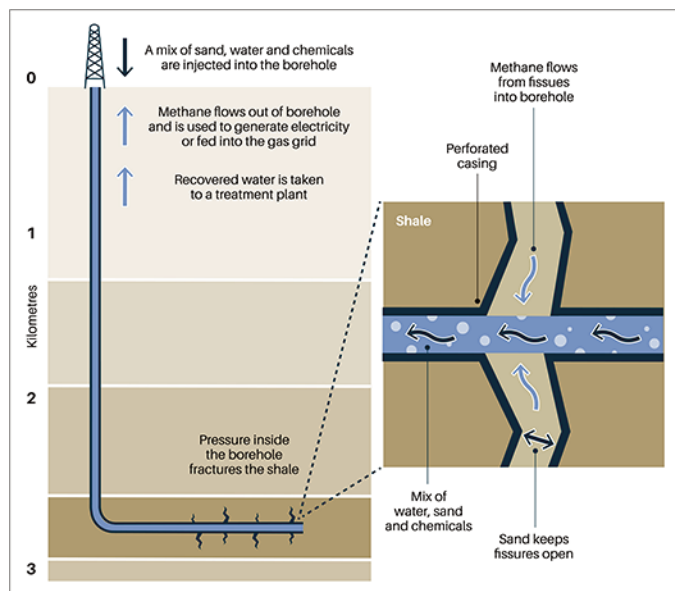
On Thursday, September 22nd, the ban was lifted with immediate effect and came hot on the heels of a new scientific report from BGS

into the practice. Newly appointed Business and Energy Secretary Jacob Rees-Mogg said: "In light of (Russian President Vladimir) Putin's illegal invasion of Ukraine and weaponisation of energy, strengthening our energy security is an absolute priority".

Speaking in the House of Commons, Rees-Mogg later explained some more of the government's thinking and in particular gave more information about the 'local consent' referred to in the original announcement. It seems that the energy companies are being allowed to offer inducements by way of discounted energy to people in the areas where fracking is to take place.

Fracking remains controversial, even amongst the scientific community. It ranges from people who think that there is huge potential across wide areas of the UK to those who think that commercial medium term fracking operations will be few and far between. Given that the current energy situation demands a short time frame, it's unlikely that fracking will have any significant impact on energy supply over the coming 12 to 24 months.

Organisations such as Friends of the Earth remain totally opposed to



Shale gas extraction (Image: BGS/NERC)

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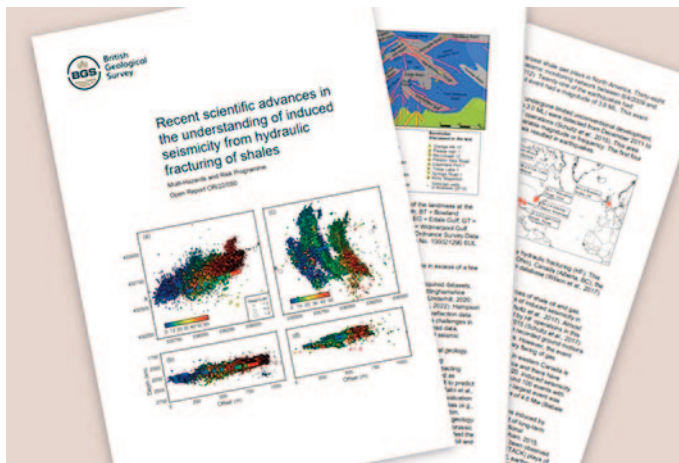
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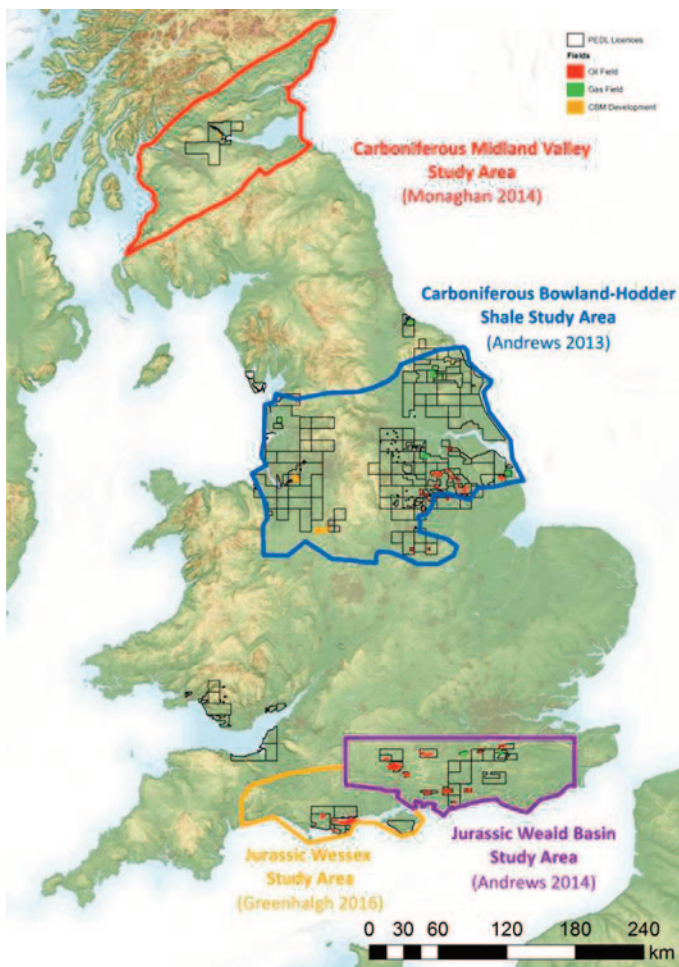
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fracking, as this statement indicates: “This announcement suggests that the government is planning to throw communities under the bus by forcing them to accept 'a higher degree of risk and disturbance'”, said Friends of the Earth energy campaigner Danny Gross.



Meanwhile the scientific review into fracking, commissioned in April from BGS, has been published. On the key issue of earthquakes, it has little to say either of comfort, or adds any new information. “Forecasting the occurrence of large earthquakes... remains a scientific challenge for the geoscience community.”



This map shows areas of the UK where shale gas lies below the surface. Though whether such gas could be commercially extracted would require extensive exploration and drilling. (Image: BGS/NERC)

The report goes on: “it is not possible to identify all faults that could host earthquakes with magnitudes of up to 3...even with the best available data.” Whilst this somewhat bland statement will come as little or no surprise to those of us who know about such things, it clearly is not what government was looking for.

Even within the Earth Science community there isn’t exactly rejoicing at the report’s findings. This is from Professor Andrew Aplin of Durham University Earth Science Department: “The BGS report indicates that in terms of the science, little has changed since the 2019 moratorium on fracking,”

What has not been addressed is the somewhat simple fact that by definition a seismic event of magnitude 3 and below, will be felt, will seem somewhat alarming for some people, but is highly unlikely to either cause significant damage to property or worse still, cause any injury to people in the vicinity.

You can read the BGS report here:

<https://www.bgs.ac.uk/news/update-on-scientific-shale-gas-report/>

South Wales coal mine seeks a further nine months extension to mining, to serve the steel industry...

The operators of South Wales’ final opencast coalmine at Ffos-y-Fran in Merthyr Vale have put forward a plan that will see mining extended by a further nine months into 2023. The associated reclamation scheme would also be extended to 2025.

Mine operator, Merthyr (South Wales) Ltd is applying to vary a condition of its planning permission so it can keep extracting coal until June 6, 2023. Restoration of the site would then not be completed until September 6, 2025. It is basing its application on the continuing shortage of suitable coal for use in the steel industry both locally and nationally. All this comes against the background of the war in Ukraine.



The Ffos-y-Fran reclamation site near Merthyr Tydfil. (Image: Courtesy of Western Mail)

The operator argues that they need continuity of output from Ffos-y-Fran to satisfy the needs of TATA Steel, saying: “Without the continued provision of the coal from the Ffos-y-Fran site, users of Dry Steam Coal (such as TATA Steel) would need to import suitable coal products from Russia, Venezuela or Australia. This is an unsustainable practice and results in an increase of Carbon footprint of such operations given the transit miles required (in comparison to extracting and utilising a locally sourced coal). Consideration should also be given to the security of supply given the geo-political situation

and the sustainability of supply from such regions.”

According to Merthyr (South Wales) Ltd., TATA are not alone in having a requirement for this coal. Britain’s heritage railways are desperate for this coal, as are traction engines and steam raising boilers.

In the longer term, Merthyr (South Wales) Ltd are making a new planning application to the coal authority for a three-year mining programme to see the country through the energy crisis. Such an application is likely to see more widespread opposition, both locally and across Wales.

We are grateful to our reader, Peter Ganesh for brining this news to our attention. It is based on material from WalesOnline.

Your can read the full article at:

<https://www.walesonline.co.uk/news/local-news/plans-put-forward-merthyr-coal-25060902>

Yorkshire gets its own Natural History Museum...



Just one year on from major shutdowns due to Covid, the opening of a new regional museum is somewhat brave. But that’s exactly what one person has done in Sheffield. James Hogg, a 22-year old palaeontologist has put his own collection on display in a former engineering workshop situated at Malin Bridge in the North Sheffield area of Hillsborough.

James has an extensive collection of fossils including a mammoth tusk and the skull of an ancient crocodile. Ever since the new museum opened to the public in mid-August, there have been a steady stream of people beating a path to the doors.

This is what the Museum’s website says about themselves:

“We are a small charity run by our Board of Trustees and an outstanding group of volunteers to provide you the full facilities of our museum.

We have something to offer to children of all ages. Come learn about the exciting history of the natural world and explore what the collection has to offer.

Not only are we a repository of natural history specimens, we also

actively research the collection. Additionally, we provide visiting academics free access to the collection in the pursuit of advancing the sphere of knowledge.”

The Museum is situated at 149 Holme Lane (see map). It is open 10.00 to 16.00 daily (except Wednesdays when it is closed).

Admission costs £4.00 for adults, £2.00 for children and a family ticket costs £10.00.



We hope to bring you a fuller article in the next issue of Down to Earth, including an interview with James Hogg.

Telling the story of Arran’s archaeology, geology and ecology...

Arran Geopark has gathered three film crews together with many enthusiastic Arran experts to create three films focussed on the geology, archaeology, and ecology of our island.

The films seek to bring together and highlight these distinct “ologies” and thus the concept of “*Arranology*” was formed.

The Arranology project was kindly funded by Highlands and Islands Enterprise with an additional contribution from the Arran Trust; enabling Arran Geopark to create the trilogy of short films celebrating Arran.

Malcolm Wilkinson, Coordinator of Arran Geopark said:

“These wonderful films celebrate the amazing landscape, biodiversity and heritage of our small island – and this is exactly what Geoparks all around the world are there to do”.

Sheila Gilmore, Chief Executive of VisitArran said:

“These films will encourage everyone visiting our beautiful island to delve further into the island’s environmental past, and appreciate aspects that they may have been unaware of. Arran Geopark, and indeed all involved, are to be congratulated on the whole concept of Arranology”

You can view the Arranology films here:

<https://www.ArranGeopark.co.uk/Arranology/>



in-house

Rite in the Rain all-weather books - the choice slims down...

Over many years, we've sold all weather field notebooks from two sources. The distinctive yellow covered water-resistant books from Chartwell and the American Rite in the Rain books.

Chartwell manufacture our range of three 'Geo Notebooks' that are our best sellers for student use. However in recent years we've sold more and more books from Rite in the Rain, as these offer even greater protection from the ravages of rain.

Sadly, the UK importer is now restricting the number of different books that they bring into the UK. We still hope to be able to satisfy most requests, but be prepared to change to something similar rather than your favourite book.

Grab an achromatic lens whilst you still can...

We've always been able to rely on steady sales of top quality Japanese Ruper style lenses. These small quality products are fitted with lenses that reduce the achromatism (colour fringes) that cheaper lenses give.

Retailing for around £40.00 including VAT these lenses offer good value, however we've just been informed by our supplier that we now have the last stocks as they have gone up so much that they are no longer going to import them into the UK.

Take our advice - grab one whilst you still can!

We're delighted that a number of you have already taken our advice and made your purchase. At the moment we still have a few of most models available - perhaps Father Christmas might need to make an early delivery!



Two more titles from Siri Scientific Press...

Two more titles from Siri Scientific Press to bring to your attention! Both titles have been around for a little time, but may be new to you.

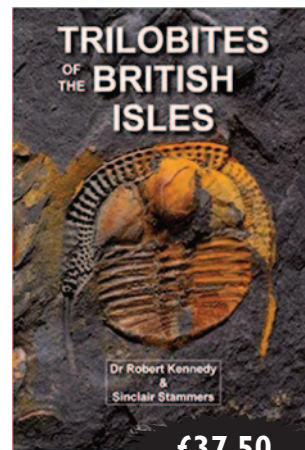
Both are comprehensive guides, well illustrated in full colour, and are softbacks.



Prices shown include UK postage.

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

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 5 issues, to the end of 2023 and 7 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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Extra October 2022

Down to Earth extra 118 October 2022

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Down to Earth

'Earth science learning for all'

The learning zone

Great geo-adventures in 2022/3 begin here...



Dartmoor is one of the places we'll be visiting during our stay at Ilfracombe. This was the group on a previous trip to the area. (Image: Chris Darmon)

We now have the final programme for field trips in 2023. Sadly, La Palma isn't a runner due to a lack of direct flights. We have reinstated Fuerteventura.

Brochures for most 2023 trips, are now on our website and we are accepting bookings. Iceland is now fully booked, but you can be put on a waiting list. Our Autumn line up has been completed with the addition of Berwick which was postponed from 2022 due to a booking mix up.

To view a 2022 or 2023 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

Our 2023 residential field trips programme...

- Fuerteventura, February 27-March 6
- Iceland, March 27-April 6 - fully booked
- 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 Yorkshire - August 12-19
- Berwick & the Borders - September 6-13
- Isle of Man, September 23-30
- Guernsey, Channel Isles, October 7-14
- North Norfolk Coast, October 18-23

Early booking is advised, especially if you require a single room

Browse online at www.geosupplies.co.uk or ring us on 0114 245 5746
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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

The 2023 Residential Trip programme - already to rock and roll..

After a period of little activity, coinciding with the passing of Her Majesty the Queen, bookings are now picking up again. You are strongly advised to now act quickly to secure your places.

We are still working on the final programme for the Summer School in August 2023 which is now expected to be base in North Yorkshire as suitable accommodation was not available in Sunderland. That will complete our line up for next year.

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

Having abandoned our attempt to get to La Palma due to a lack of flights we've switched back to our original plan Fuerteventura. This is one of the lesser known Canary Islands and none the worse for that. What it lacks in present day volcanic activity it makes up for in fine scenery and rocks that date back to the Jurassic! On Fuerteventura we get a glimpse of the seamount stage in the building of the Canarian platform as well as the later stages of Miocene and Pliocene volcanics and associated sediments. This is a 'must' for anyone who has never explored this part of the Canaries.



Fabulous basalt columns on the rugged Fuerteventura coastline are just a part of the varied geology of this island.

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 Snaefellsnes 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 Vatnajökull Glacier. The highlight of the trip is a 2-night stay on the Westman Islands, that were almost destroyed in a 1973 eruption. ***This trip is now full, but you can be put on a reserve list.***

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. ***Just a few vacancies remaining on this trip.***

Ayrshire 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!***



Pillow lavas at Downan Point, a key part of the evidence for an Ordovician ophiolite complex in Southwest Scotland

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!

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 to 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. This seaside resort that gives 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!



Folded rocks and fabulous coastal scenery at Hartland Quay

Summer School, Sunderland (7-nights) - August 12-19

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.

Brochure and booking form are due shortly.

Berwick & the Borders September 6-13

As we were unable to run this trip in September 2022, we've put it into the 2023 programme. 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. We already have several bookings for these rearranged dates.

We are ready to take bookings for this trip NOW!

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



A Carboniferous dyke at the southern tip of the Isle of Man (Image: Manxgeology.com)

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 bears 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 skeleton 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!

Now it's over to you! We're happy to discuss any trip with you and to guide you in your choice. Advice is just an email or a telephone call away!

To obtain a booking form for any of these trips, please, email us at: downtoearth@geosupplies.co.uk or ring us on: 0114 245 5746.

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

Autumn Zoom Courses...

We will be commencing our Autumn Zoom courses in late October with the courses continuing until February of 2023.

We welcome everyone onto our Zoom courses whether you have studied with us before or not! If you'd like to chat with your tutor Chris Darmon before enrolling he'd be pleased to hear from you. Just call him during office hours on 0114 245 5746 or email: downtoearth@geosupplies.co.uk



Pretty colours make great geology! (Image: Wikipedia)

Yorkshire Geology (11-weeks) commencing October 24

This course examines the geology of Yorkshire from its earliest rocks in the Ordovician through to the most recent glacial deposits of the Quaternary. It's an interesting journey through time that takes us from one bit of stunning scenery to another. There's the Carboniferous limestones of the Dales, the Millstone Grits of the Pennines and the Jurassic Coast of Whitby and Scarborough.

Cost: Eleven 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 Mondays at 2.00pm or 7.00 pm (it's your choice).

Fossils for all (11-weeks) commencing October 27

After an introduction to fossils and fossil preservation this course goes on to examine a wide range of fossil groups. We'll be covering trilobites, ammonites, graptolites, corals and many more, including dinosaurs. This course is aimed at a wide audience, so even if fossils aren't normally of great interest to you, why not give them a try?

Cost: Eleven 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).

Steps Towards the Rock Face (12-units) commencing at any time to suit you.

This is our course that's designed as an introduction to all things geological! It provides you with a grounding in all the major branches of the subject including minerals, sedimentary, igneous and metamorphic rocks, fossils, plates tectonics, Earth chemistry and the history of the British Isles.

The course is run via a series of Units and associated Tasks (and answers) that you can access at your own pace. You have access to tutorial support online and via our learning site Moodle for a period of six months - all included in the price!

Cost: Electronic materials £50.00, printed papers £75.00

Autumn Virtual Day Schools...

Our virtual day schools take place on Wednesdays and commence at 10.30. They comprise three short Zoom sessions through the day, ending at no later than 4.30. They give you time to work on material at home and then to join in with a your fellow learners on Zoom.

Cost: £20.00 per person or £25.00 with printed papers.

September 28 "The Lewisian rocks of North West Scotland"

The Lewisian Gneisses are Britain's oldest rocks, dating back more than 3 billion years. This day school examines what we now know about these rocks and the forces that formed them.

October 19 "Charles Lapworth - an extraordinary geologist"

Charles Lapworth was a self taught geologist who went on to become head of department at Birmingham University. Along the way he sorted out the geology of the Southern Uplands, names the Ordovician and got the Northwest Highlands of Scotland right!

November 2 "Arthur's Seat volcano in Edinburgh"

It's probably Britain's most famous volcano yet it probably lasted a very short time. Discover much more about this volcano that sits on the doorstep of the Scottish Parliament.

November 16 "When deserts covered much of the British Isles"

Of all the ancient environments that have existed in Britain's past, it's the Permo-Triassic deserts that present us with so many mysteries. Why are the rocks red? What are the trademarks of an ancient sand dune? What lived at the time?

November 30 "George Barrow and his metamorphic zones"

George Barrow set about trying to understand metamorphic rocks across large swathes of Scotland. The zones he gave us still provide the basis on which we classify and recognise those rocks to this day.

December 14 "Mount Vesuvius"

Of all the volcanoes that have existed in the Mediterranean, none is more enigmatic than Vesuvius. It is a dramatic past, but perhaps its best 'fireworks' are still to come! We promise you a 'Christmas cracker' of a day as we explore Europe's most famous volcano.

An evening in...

A series of evening talks with background materials. Enrol for them all, or just the odd one or two, it's up to you! Wednesday evening at 7.00pm via live Zoom. **Cost:** £10.00 each or £32.00 for all 4.

October 26 "An evening in El Hierro"

November 9 "An evening in the Himalayas"

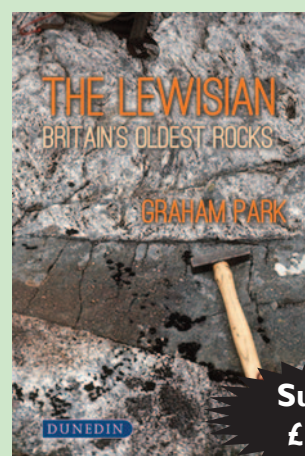
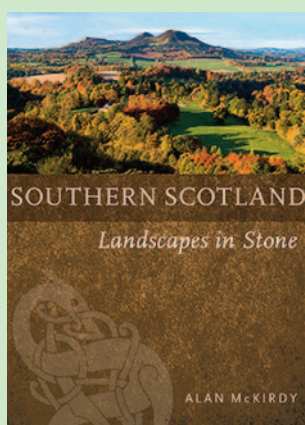
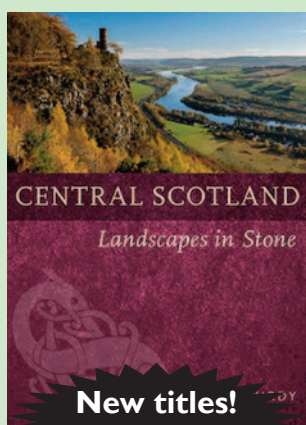
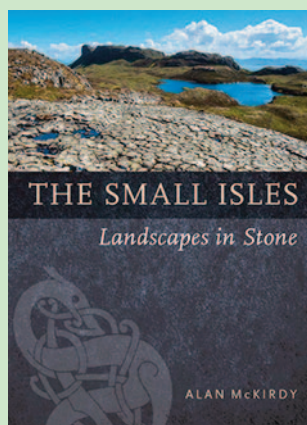
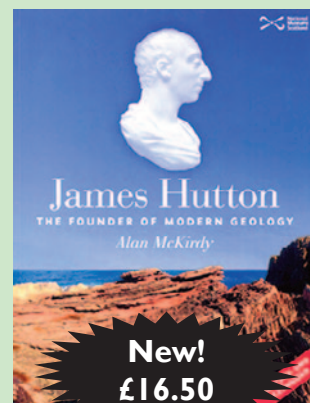
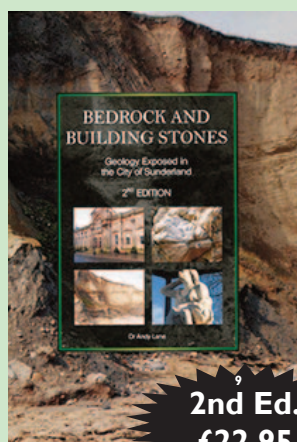
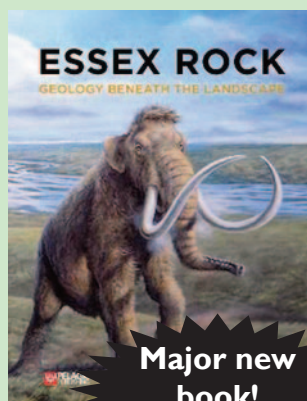
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