



Down to Earth *extra*

Issue 120 December 2022

NEWS FLASH...

- 2 Iceland vacancies!
- Simply Rocks! - our brand new Zoom course!
- Book a Virtual Day School!
- Book a Virtual evening!
- Book a 2023 Residential Field Trip!



There's something special about the coast of Holderness in East Yorkshire. Here, some of the Down to Earth readers on the October 2022 trip that was based near Filey, are examining some of the Quaternary till and overlying deposits. Yes, the sky was really this colour!

If anybody ever dismisses this as just 'drift' tell them to go to Holderness themselves to see this world class recent geology!

(Image: Chris Darmon)

From the Editorial team...

So, we come to the end of yet another year! You can hardly say that it's been an uneventful one, but most of what's happened has not been good. There's been the awful events in the Ukraine, with the people now enduring what will probably be months of extreme cold, without electricity, or in some cases, water. It puts our very real difficulties with the cost of energy into some sort of context.

Compared to this time last year, when many people were still battling with Covid related issues, somehow this time it all seems a little more 'normal'. Yes, Covid is still with us but we are mostly learning to live with it and cope with it in our own individual ways. For some people, life will never be the same again, whilst others are getting on with their lives almost as if it's just a memory.

We know that for a number of you, your local U3A groups have now begun again and that you are once again enjoying your group study of some geological topic. For others of you, there's always Zoom sessions. We are once again running a series of virtual day schools and beginning our second series of virtual evening talks under the title of "En evening in..."

If you haven't yet experienced one of these sessions, may we take the opportunity to recommend you to have a go! Our Zoom sessions are nothing to be frightened of and we always enjoy each others company in a relaxed and friendly atmosphere. Geology learned in the company of others who share the interest is enjoyable for all - including the presenters!

May we end by wishing you all a very Happy Christmas and an enjoyable and healthy new year!

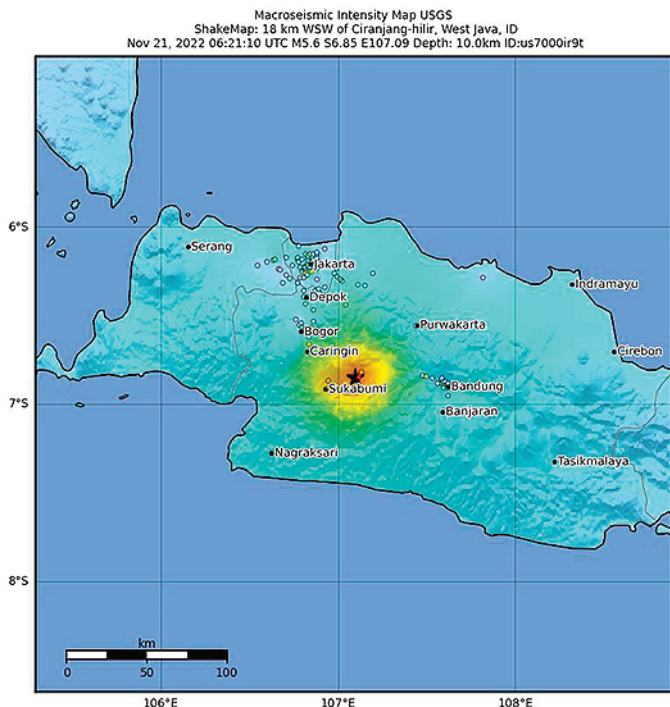
Chris Darmon & Colin Schofield
The Down to Earth editorial team

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



news update

Major earthquake strikes eastern Java...



A magnitude 5.6 earthquake that struck the Indonesian island of Java has killed more than 250 people, many of them children. The earthquake was initially given as magnitude 5.6, but some reports now give it as 6.9. It occurred at 13.37 local time on November 18th, when many children were attending school. Several of these buildings collapsed causing major casualties. The earthquake occurred at a depth of just 10 km.

The toll of dead, missing and injured has climbed steadily and at the time of writing stands at 271 deaths, with 40 still listed as missing. Thousands of buildings have collapsed and there have been reports of several villages being buried beneath thousands of tonnes of mud caused by landslides resulting from the quake.

Indonesia is a country that frequently has major earthquakes and only has limited infrastructure and local ability to deal with such a catastrophe.

Indonesia also experiences tsunamis and even volcanic eruptions. It's classed a lower income country, and still has famines and this latest event can only make matters worse. There are current appeals for aid.

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49 Station Road, Chapeltown, Sheffield S35 2XE

Editor: Chris Darmon
Assistant Editor: Colin Schofield

Tel: 0114 245 5746 • FAX: 0114 240 3405

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SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
DAMAGE	None	None	None	Very light	Light	Moderate	Moderate/heavy	Heavy	Very heavy
PGA(%g)	<0.0464	0.297	2.76	6.2	11.5	21.5	40.1	74.7	>139
PGV(cm/s)	<0.0215	0.135	1.41	4.65	9.64	20	41.4	85.8	>178
INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based on Worden et al. (2012)

△ Seismic Instrument ○ Reported Intensity

★ Epicenter

Version 5: Processed 2022-11-22T06:22:41Z

The Knighton geological map - the one that BGS never did...

If you look at the geological map coverage of the British Isles, there's

a 'hole' where sheet 180 Knighton should be. That's because BGS never got around to completing it. Now a local initiative under the direction of Dr Arthur Tingley has published a limited edition of the map - see below. *February 2023 Down to Earth will tell the story!*

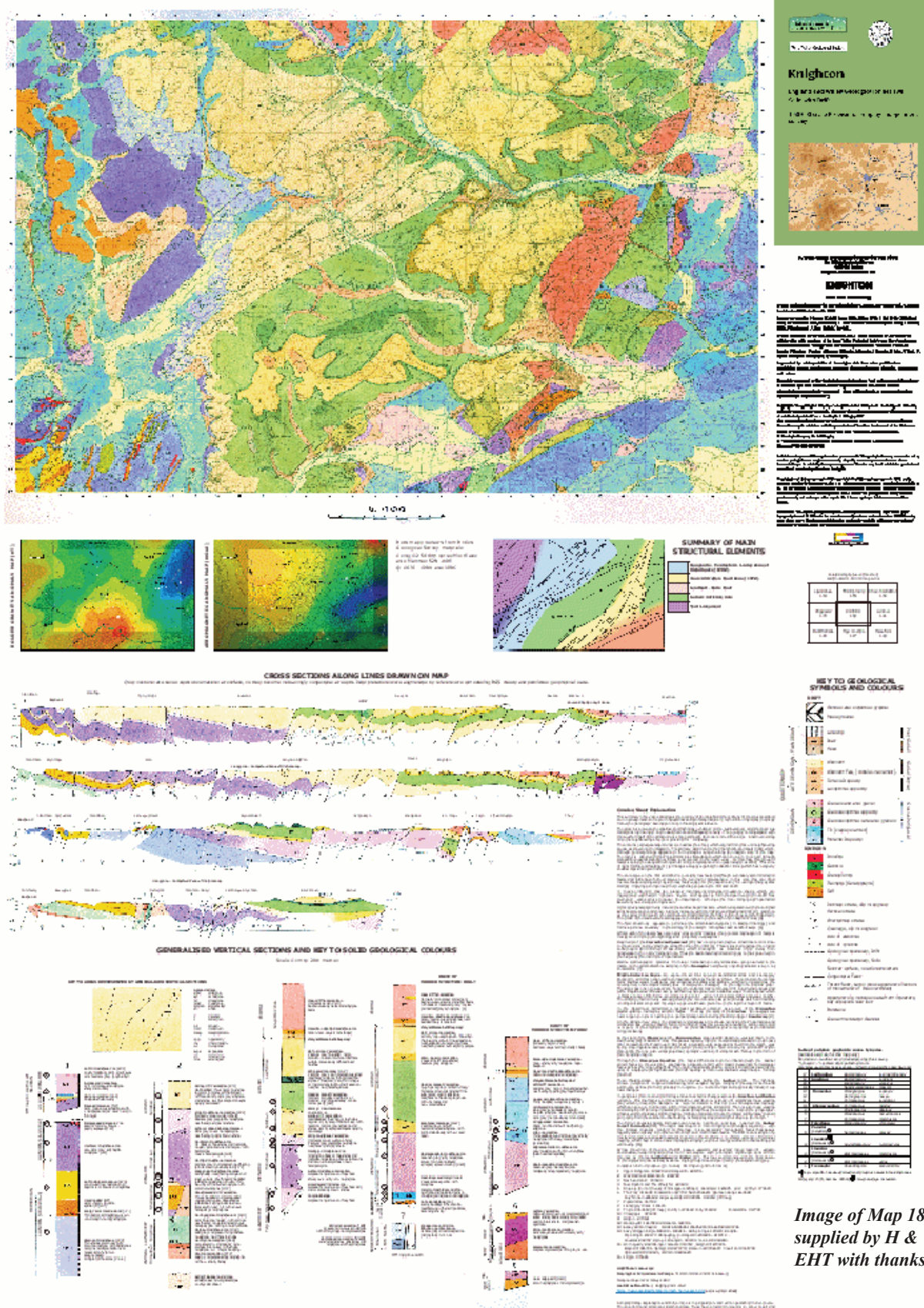


Image of Map 180
supplied by H & W
EHT with thanks

Help - one of our erratics is missing...

We are grateful to DtoE reader Janet Barnes for bringing this item to our attention.

This August, during our Summer School week at the University of Worcester, we were pleased to have an evening talk from Zoe Jackson, about the Birmingham Erratic Boulders Project. This Heritage Lottery Funded project is documenting the glacial erratic boulders that litter the area, especially down in the southwest of the city around Bournville.

Around a hundred years ago, many of the erratic boulders were put on display, often inside protective fences and were visited by many people, especially in some of the city's parks during the Edwardian era.

Sadly, some of the boulders have been lost, often when moved due to redevelopment. So what does a well documented 'missing' glacial erratic offer? Answer - a brilliant opportunity to massively raise the profile of the Project! Thanks to this 'missing' poster the Project is now known about far and wide with the BBC and national media outlets picking up on this 99-year old mystery.

So what do we know about the missing boulder? The clues that the modern day detective has are its dimensions, where it was last seen and how it got there in the first place. On the face of it, it does seem large enough to spot, but it could be anywhere by now.

Could it perhaps have been broken up - but this would have required for it to be drilled and explosives used, which does seem a little extreme.

Alternatively did someone remove it to use to somewhere in the grounds of a stately home perhaps? Could it be that we already have a record of the same erratic somewhere else?

Meanwhile closer to the 'crime scene' Project volunteer and *Down to Earth* reader Julie Schroder said: "So far, we know nothing more about the fate of this boulder beyond 1923" adding: "It may have been

Birmingham's Erratic Boulders
Heritage of the Ice Age

MISSING

Glacial Erratic Boulder



Last seen in 1923 during its excavation in Rowheath Grounds

History:
Brought by ice 450,000 years ago and dropped here when the ice melted

Photo:
Bournville Works Magazine, April 1923.
Courtesy of the Cadbury Archive, Mondelēz International.

Dimensions:
8ft 6in x 5ft x 3ft,
(2.6m x 1.5m x 0.9m)

Project:
For more information about the project go to: erraticproject.org



Do you know what happened to this boulder?
Can you help us find it?
If you have any information or photos please contact the project team, email: erraticproject@worc.ac.uk

Heritage Fund | Earth Heritage Trust | Lapworth Museum | BOSF | University of Worcester

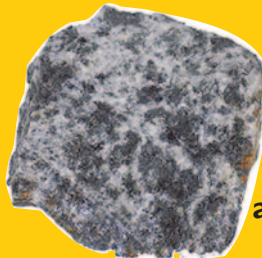
The 'missing' poster that's gone viral. (Image: Birmingham Erratic Boulders Project)

moved for display somewhere, or it may have been smashed up, or possibly covered and reburied. It would be very satisfying to learn the fate of the Rowheath boulder or better still, find it, before the centenary of its discovery in April 1923."

A Zoom course for everybody...

'Simply Rocks!'

Can you identify these two rocks in a hand specimen?



In fact, one is a granite and the other a gabbro - but which is which?

'Simply Rocks!' will help you identify your finds and learn so much more about rocks

Starting on February 7th 2023, we'll be presenting a 6-week Zoom based course that looks at all kinds of rocks - pure & simple! It starts with the mineral that make rocks and then goes on to look at Sedimentary, Igneous and Metamorphic rocks. Zoom sessions are Tuesdays at 2pm.

The course costs £55.00 and that includes a set of rock specimens and a handy identification guide!

To enrol or for further details go to: www.geosupplies.co.uk
Email: downtoearth@geosupplies.co.uk or ring us on: 0114 245 5746.



in-house

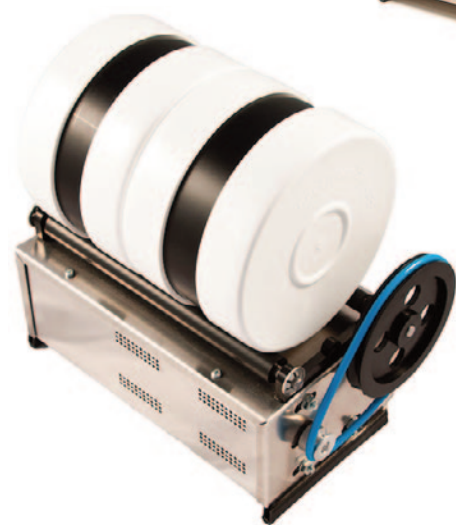
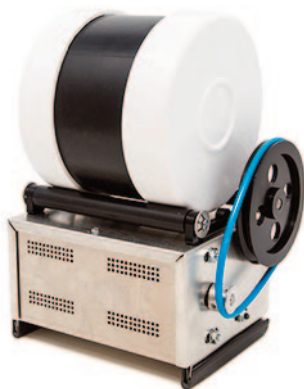
Rock Tumblers are back...

For a number of years, we have stocked the English made Rock Tumblers from UK manufacturer Beach who were based in Twickenham. The company has now changed hands and trades from Devon. The machines are still essentially hand built and have an excellent reputation for reliability and value. They are both mains operated and simple to use.

We have two offers for the Christmas period. With stock available for immediate dispatch...

Christmas Standard Tumbler Offer - comprising a single 900gm capacity barrel with a starter pack of grits and polish and a handy tips booklet - all for £89.95

Prices shown include UK postage.
Buy online at:
www.geosupplies.co.uk
or ring us on: 0114 245 5746



Christmas Deluxe Tumbler Offer - comprising 2 x 675gm barrels that allows two batches of material to be processed at the same time, plus a starter pack of grits and polish and a handy tips booklet - all for £104.95

As Christmas comes, the jigsaws are available again...



Each
£25.95



Prices shown include UK postage.

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or ring us on: 0114 245 5746

With Royal Mail strikes due, order early for Christmas!

Down to Earth readers welcome!

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Down to Earth for Christmas...

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?

This Christmas, why not give someone a gift subscription? Go to: www.geosupplies.co.uk and enter the online shop or ring us on 0114 245 5746.

Down to Earth is published quarterly. Subscribe now for 2023 for just £15.00 in the UK. We'll send you the next 4 issues, to the end of 2023 and 8 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 2023 e-subscription for £10.00. Additionally, all subscribers will get DtoE extra FREE each month.

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Extra December 2022

Down to Earth extra 120 December 2022

5



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)

Please see opposite our programme of residential trips for 2023.

Since we last updated you, we now have two places on Iceland due to a cancellation. We are still awaiting confirmation of our Summer School that has had to move to Yorkshire.

Brochures for most 2023 trips, are now on our website and you are advised to book soon as most of our trips are nearing capacity.

To view a 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 full 2023 field trip programme...

- Iceland, March 27-April 6 (2 places remain)
- 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

Advance advice for 2024

- Southern Norway - March/April

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

Browse 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 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 most trips we have our own minibus but you will always 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...

Bookings continue to come in apace for our programme of residential field trips for 2023. For a number of trips, there are now just a handful of places remaining especially single rooms.

The trip to Iceland, next March, previously shown as fully booked now has places for two/three people due to a couple of cancellations.

We are still unable to confirm the Summer School next August. This is because many universities are no longer able to offer accommodation during the summer period due chiefly to the fact that they do not control the letting any more. We are currently exploring options in Yorkshire.

Iceland, (10-nights) March 27-April 6

Late places available due to a couple of cancellations. See the brochure on our website, or ring us on 0114 245 5746

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 couple of double/twin rooms available.



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 still have a number of vacancies on this trip!



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 still have a few vacancies in twin/double rooms on this trip

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.

This trip is filling up fast - BOOK 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, seaside resort that give us access to a stretch of coastline that takes in some rich and varied geology.

We still have a number of vacancies for twin/double rooms on this trip.



Folded rocks and fabulous coastal scenery at Hartland Quay

Berwick & the Borders September 6-13

This trip includes a visit to the 'holy grail of geological time' at Sillar 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. This is an ideal place to come as a beginner, as the geology and landscape are 'in your face, and there's such a great variety!

Just a few vacancies for twin/double rooms left.

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

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

Just a few vacancies for twin/double rooms left - early bookings is strongly advised!



*Folded rocks on the Isle of Man - nice cleavage as well!
(Image: Courtesy of OUGS)*

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,



*Guernsey has some of the finest coastal scenery and geology.
(Image: Courtesy of TripAdvisor)*

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.

Just a few vacancies for twin/double rooms left.

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.



Hotel de Paris, Cromer - our base for this trip

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. *Still plenty of spaces left for all!*

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.

The South of Norway (8-nights) - March April 2024

Just to give you advance warning - more details later!

Winter Zoom sessions...

We begin our Winter season with a continuation of our Zoom courses, Yorkshire Geology and also Fossils for All. If you'd like to join us, we can still accept you, but enquire for details.

Meanwhile, we have a brand new course Simply Rocks! You can also join our beginners' Steps Towards the Rock Face at any time to suit you as this is a course that's available 'on demand'.

Simply Rocks! (6-weeks) commencing February 7

This course is designed for everyone who wants to learn more about rocks. We don't pretend that this is a complete guide to rocks, but it lays the foundations for further study and will help you to sort your granite from your gabbro, your conglomerate from your breccia! To help you with your practical hands on experience, the cost of this course includes a set of essential specimens covering all the major rock types and also a handy identification guide.

Cost: Six hour-long Zoom sessions with electronic background papers £55.00 for one person or £75.00 for 2-people studying together. Printed background papers cost an additional £15.00. The price includes a set of 20+ essential rocks and also a handy identification guide. Zoom sessions are on Tuesdays at 2.00pm.

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

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

Winter 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 your fellow learners on Zoom. Cost: £20.00 per person or £25.00 with printed papers.

December 14 "Mount Vesuvius"

Of all the volcanoes that have existed in the Mediterranean, none is more enigmatic than Vesuvius. It has 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.

January 4 "Fabulous fossils from China"

We begin the new season of virtual day schools with a bang! What better way to start the year with some fabulous fossils from China? In recent years there have been some remarkable finds of genuine fossils that have enabled us to rewrite some of the fossil record. We also focus on some of the fakery that was once rife.

January 25 "Gold mining in the UK"

Gold has been mined in Wales going right back to the Romans and even the Celts before them. The nineteenth century saw a mini gold rush at Kildonan in Scotland and then everything went quiet. Today, there's renewed interest in gold mining with preparatory work taking place in Wales and Northern Ireland and an active mine at Tyndrum in Scotland. Learn about the history and the present day activity in this interesting day.

February 8 "Quartzites of the UK"

Quartzites can be sedimentary or metamorphic rocks that are composed almost 100% of the mineral quartz. During this interesting day we'll look at both types of quartzite through geological time. We'll be considering the sedimentary environment in which each was formed and what this tells us about the palaeogeography of the time.

February 22 "The oil and gas resources of the UK"

It all began with the discovery of a small oilfield at Eakring in Nottinghamshire in the 1920s and mushroomed into a major offshore industry in the late twentieth century. During this fascinating day we'll be joining up the dots of UK oil and gas exploration and production. For much of the time this has been both mysterious and also contentious, yet even today, we are still a producer of oil and gas.

March 8 "The Chalk of the UK"

Everyone is familiar with the white chalk cliffs of Dover, but what about this enigmatic rock? It's the product of a greenhouse world where the surface temperatures were at least 45°C and it's almost entirely made up of tiny calcareous skeletal remains. We'll be examining chalk the length and breadth of the UK both onshore and offshore. With recent research to access, this will be a day with lots of surprises, we promise you!

Book online at: www.geosupplies.co.uk

To find out more email us at:

downtoearth@geosupplies.co.uk or ring us on: 0114 245 5746

An evening in...

A series of evening talks with background notes. 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 £40.00 for all 5 in the Winter series.

December 7	"An evening in the Bahamas"
Winter Series	
January 18	"An evening in New Zealand"
January 1	"An evening in the Channel Isles"
February 15	"An evening in Cyprus"
March 1	"An evening in the Grand Canyon"
March 22	"An evening in the Shetland Isles"

Book online at: www.geosupplies.co.uk

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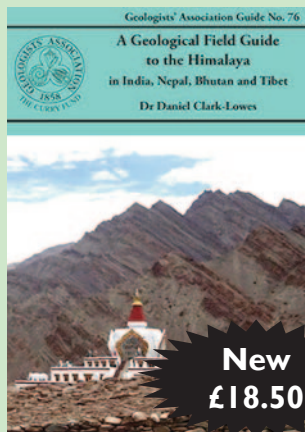
Don't worry, we don't bite!

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



Featured books for December 2022

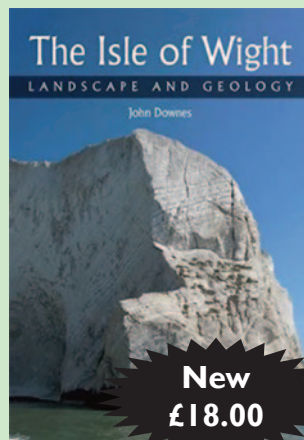
In each issue we are pleased to be able to introduce you to a range of featured books. Where they are being offered at reduced prices, these will be current to the end of December 2022 provided that stocks are available. Please note, all prices include UK postage. With Royal Mail strikes due - order early!



New
£18.50



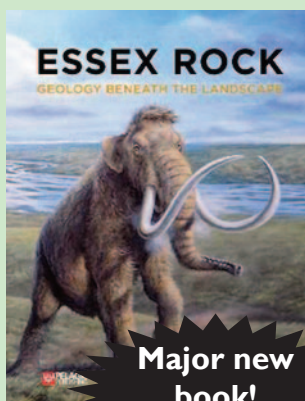
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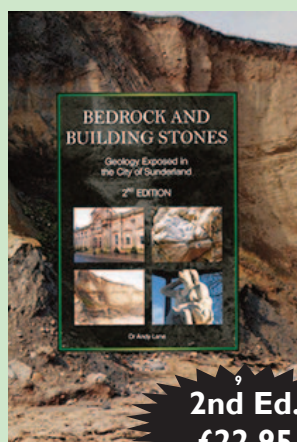
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New!
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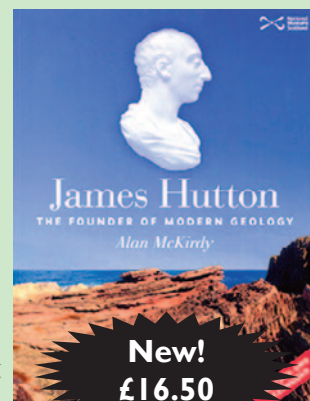
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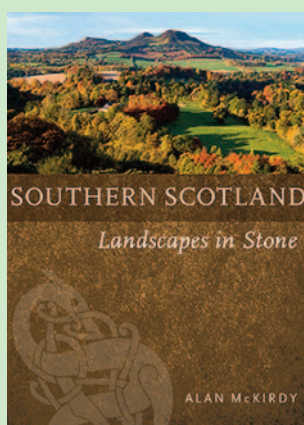
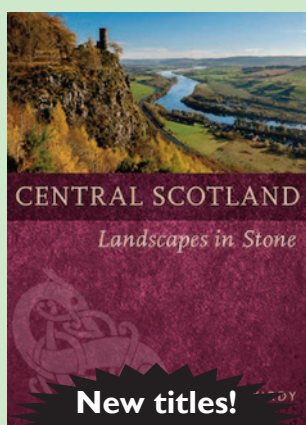
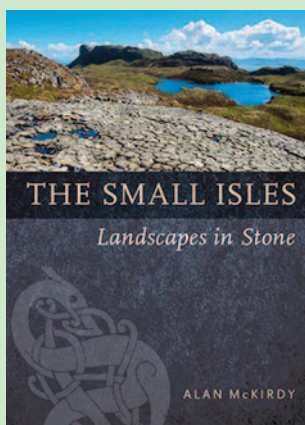
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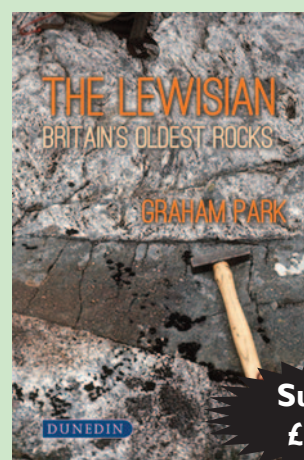
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