



# THE GEOLOGICAL SOCIETY OF GLASGOW

## Newsletter - November 2024

### Lecture Programme

Lectures continue to be held in Room 407 of the Boyd Orr Building (unless otherwise noted). **Note: Meetings commence at 7.00 pm.** Room 407 is on the 4th floor. We will record the lectures but not the Q&A and will not be offering a live zoom.

### Thursday 14<sup>th</sup> November 2024

**Asst. Prof. Heather Stewart, Director, Kelpie Geoscience**

**“The abyss gazes also into you: exploring the deepest oceans”**



The deepest parts of the ocean are one of the final remaining frontiers of discovery on our planet. Much of the deep ocean is unmapped and draws in explorers, scientists, cartographers and environmentalists, keen to discover its secrets. Underwater seascapes, comparable in size and complexity to our known continents, unknown ecosystems and processes that defy study from the surface means there are many gaps in our knowledge that science is hoping to fill. Due to the challenges of research at even moderate depths, almost every expedition venturing below 3000 m throws up a surprise.

Heather has been lucky enough to participate on a number of expeditions to explore the deepest seafloors and will share some of what these diverse expedition teams have learned. Heather is lead geologist for the Inkfish Open Ocean Program that brings together a multidisciplinary team of researchers to make our view of the deep ocean sharper than ever before.

*Heather is Deputy Director of the Munderoo-University of Western Australia Deep-Sea Research Centre and Director of Kelpie Geoscience. Heather has over 20 years of experience in multidisciplinary marine research and exploration with a focus on*

*characterising the geology and physical character of the seabed and sub-seabed. She has participated in more than 35 marine expeditions globally.*

### Further Reading

Harishidayat, D., Niyazi, Y., Stewart, H.A., Al-Shuhail, A. and Jamieson, A.J., 2024. Submarine canyon development controlled by slope failure and oceanographic process interactions. *Scientific Reports*, 14(1), p.18486.

Deeper, darker colder – exploring the South Sandwich Trench. p1-8 In *The Edinburgh Geologist*, Issue No. 69, Spring 2021. The Edinburgh Geological Society.

### The next talks

**December 12th LECTURE and AGM.** Paige dePolo, Liverpool John Moores University - The taphonomy of a pantodont-rich assemblage from the San Juan Basin, New Mexico, USA

**January 9th** - Dr David Bond, University of Hull - mass extinctions

**February 13th** Dr Alex Dunhill, University of Leeds Species loss, community collapse, and ecosystem recovery during times of mass extinction

**March 13th** Kiara Brooksby, Camborne School of Mines, Economic Geology

**April 10th** TBC

**May 8th** Members' Night

### Recordings of past lectures

St Andrews's students Greenland Expedition <https://youtu.be/giy1WE9L-Cw>

Stuart Haszeldine: Carbon Capture & Storage <https://youtu.be/oXiIQD7eHdk>

GSG YouTube channel <https://www.youtube.com/channel/UCfNSIvgEbUfLWMsCeNiRm1w/>

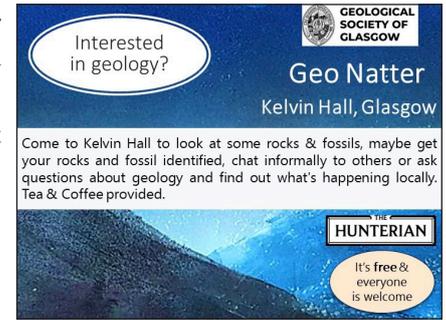
## Geonatter

If you've not been before then come along to Kelvin Hall from 1:30 – 3 pm for Geo Natter – these informal meets are the perfect opportunity to meet like-minded rock enthusiasts and chat all things geological and palaeontological!

You can bring your rocks and fossils along to show people, ask questions about geology, find out what's happening and perhaps even take part in future events! Tea and coffee provided.

November 13 and 27

December 11



## Deceased Members

We have become aware of the passing of two of our long standing members.

**Dr John Gordon Adamson** MB, ChB, Kyle of Lochalsh, who passed away in November last year aged 87. He had been a member since 2000 and also a member of the Highland Geological Society, John was well known by his local community both as a GP for 30 years and as a member of the local RNLI for 10 years. A fluent Gaelic speaker, he also played the bagpipes and was an Elder of the Church of Scotland and had been a past director of the Eilean Ban Trust

**Evelyn Mary Lennie**, Glasgow, who passed away earlier this year aged 96. She had been a member since 1980. Evelyn was a Housing Manager before retiring and was a past Director of the Willowcare Trust.

## New Members

We welcome the following new members

Craig Dooris

Nathan Martin

Nicole Stuart

John & Lesley Mitchell

Terry Callow

Scott Van B

Oliver Gilmore

Michael Hinds

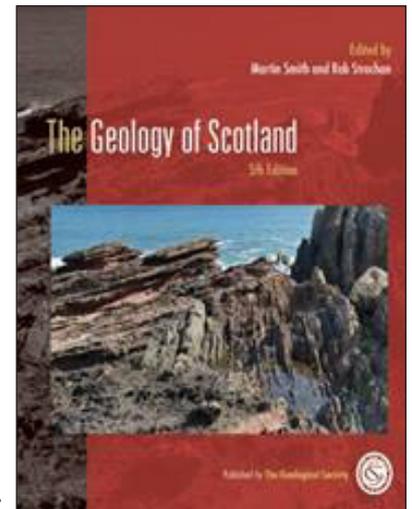
Eliza Lanzani

James Campbell

Arran Martin

Annick McGarridge

Brian McGarridge



## Geology of Scotland Book

We have purchased two hardback copies of the new Geology of Scotland book. These will be available for members to borrow on a request basis. Please email [library@gsocg.org](mailto:library@gsocg.org)

**Programme:**  
**Sunday 3rd**  
A day with Prof Robert Butler (Aberdeen University) Walk at Knockan Crag talk & exhibition opening at Ullapool Museum.  
**Monday 4th - Thursday 7th**  
Free entry to exhibition.  
**Friday 8th - Saturday 9th**  
7 days of talks at Ullapool Museum  
For more info on the events and to book, please visit our website: [www.nwhgeopark.com](http://www.nwhgeopark.com) or contact Pete at [pete@nwhgeopark.com](mailto:pete@nwhgeopark.com)

North West Highlands **GEOPARK** na Gàbhannach  
With support from:  
Ullapool Museum, Halesden Museum,  
Highland Geological Society, Edinburgh  
Geological Society, and Scottish Geology Trust

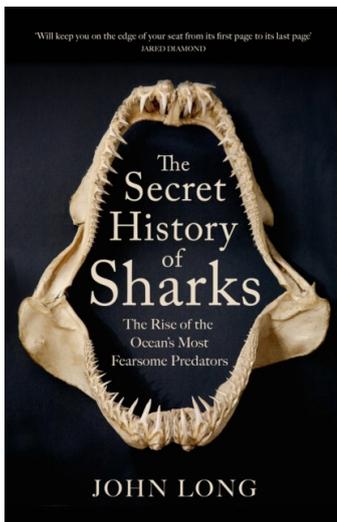
## NW Highlands Geopark

Celebration of Sir Archibald Geikie - 3-9 November  
Ullapool Museum

## Strathclyde Geoconservation Group

The Local Sites section of the Society website has been updated with a couple of things. The new Portencross leaflet is linked and there is an entry for Calderglenn.

## **New Shark Book**



From ancient megalodons to fearsome Great Whites, this book tells the complete, untold story of how sharks emerged as Earth's ultimate survivors, by world-leading paleontologist John Long.

Sharks have been fighting for their lives for 500 million years and today are under dire threat. They are the longest-surviving vertebrate on Earth, outlasting multiple mass extinction events that decimated life on the planet. But how did they thrive for so long? By developing superpower-like abilities that allowed them to ascend to the top of the oceanic food chain.

John Long, who for decades has been on the cutting edge of shark research, weaves a thrilling story of sharks' unparalleled reign. The Secret History of Sharks showcases the global search to discover sharks' largely unknown evolution, led by Long and dozens of other extraordinary scientists.

As the tale unfolds, Long introduces an enormous range of astonishing organisms: a thirty-foot-long shark with a deadly saw blade of jagged teeth protruding from its lower jaws and bizarre sharks fossilized while in their mating ritual. With insights into the threats to

sharks today, how they contribute to medical advances, and the lessons they can teach us about our own survival, The Secret History of Sharks is a riveting look at scientific discovery with ramifications far beyond the ocean.

'This book is the work of a master scientist and storyteller. It will make you see sharks in a new way: not as blood-thirsty monsters that we should fear, but as nature's ultimate survivors' - Steve Brusatte, New York Times bestselling author of The Rise and Fall of the Dinosaurs

'Readers will want to sink their teeth into this' - Publishers Weekly

John will be in the UK early next year to launch the book here and we may get him to give us a talk

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## **Geology Bites**

Oliver has just posted an episode with Adam Simon, Professor of Economic Geology at the University of Michigan, on the five metals that are critical ingredients of the modern lithium-ion battery. The economically important deposits of these metals have quite diverse geological origins. For example, lithium comes from percolating brines and from pegmatites in granitic intrusions. Nickel, on the other hand, comes mainly from laterites at the base of highly weathered ultramafic rocks.

We have enough of the five metals to supply our needs for the energy transition that is under way, but Oliver was surprised to learn that it is the demand for copper, which we've been mining for millennia, that dwarfs the demand for the other four metals and which urgently needs the discovery of new economically viable deposits. To accelerate our copper prospecting, Simon and his colleagues have determined the chemical and isotopic fingerprint of upstream copper deposits in ground and surface waters.

see <https://www.geologybites.com/adam-simon>



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## **Tectonics Resources**

Rob Butler of The University of Aberdeen has been busy with a trilogy of films, shot on location this summer that look at eclogites, associated rocks and structures in the NW Alps and explores exhumation ideas.

### **Eclogites at Cignana - a walk into a subducted ocean**

<https://www.youtube.com/watch?v=x5q9g3QSS98&t=4s>

This is the first film in the series – which visits the classic ultra-high pressure location.

### **Tectonics at the Matterhorn (Cervino)- Alpine kinematics**

<https://www.youtube.com/watch?v=ZSBPanyyPa4>

In the second film we look at structural geology beneath the “Alpine lid”

### **Raising eclogites - reconstructing the Alpine subduction channel**

<https://www.youtube.com/watch?v=O0HbPvAXxRg>

The concluding film pulls together information from the first two films along with other locations in the Italian NW Alps and explores the idea of return flow in the subduction channel. This is likely to be controversial with a few Alpine geologists!

These are all on Rob's *The Shear Zone* YouTube channel.



<https://www.youtube.com/channel/UCIUyjr1yPCZQWY19cJCO1mA>

There are currently 260 films on the channel, some of which visit a few classic sites for structural geology (a bunch of Alpine sites and topics, lots in Scotland and a few elsewhere) The video on the Highland Controversy is particularly worth watching

<https://www.youtube.com/watch?v=iBpyYMGsk7E>

There are also short courses (grouped in playlists) on basic geological map interpretation, cross-section construction (including section balancing and restoration), basic stereographic projection, tectonics and on seismic interpretation and more. This is an open resource. The linked website has downloadable exercises (seismic, maps, sections etc). and the worked solutions are videos.

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## Geologists Association

FESTIVAL OF GEOLOGY Saturday 2 November 2024 10.30 am to 4.30pm The Geological Society Burlington House, Piccadilly, London W1J 0BG Events throughout the day

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## Down to Earth Xtra

Download link to [November](#) edition.

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## Scottish Geology Trust

**SCOTTISH GEOLOGY TRUST**  
**URRAS GEÒLAS NA H-ALBA**

### Seeking new trustees!

Scottish Geology Trust (SGT) are seeking two new Trustees to lead on developing our **fundraising and membership strategies**.

- Ideal candidates will have a strategic mind-set & experience of successful fundraising in the heritage sector or relevant experience with membership-based organisations.
- A connection to Scotland & interest in geology is desirable but not necessary.
- We welcome applications from candidates who are under-represented in the wider Scottish Geological communities, & who are looking for their first Trustee role.

**Apply by 23:59 (GMT) on Sunday November 17<sup>th</sup>**

For full details visit  
[www.scottishgeologytrust.org/sgt-seeking-new-trustees/](http://www.scottishgeologytrust.org/sgt-seeking-new-trustees/)

**Down to Earth extra**  
Issue 143 November 2024

**NEWS FLASH...**

2025 trips...  
• All trips now available  
• NEW! South Devon

Last call for Autumn Zoom courses...  
• Time Traveller's Britain - all new locations!  
• Geology of the British Isles  
• The Wednesday Club - all new lively topics!

What are you waiting for?

The Waterfalls Trail that starts and finishes in the North Yorkshire Village of Ingleton has been a commercially operated attraction for well over a hundred years. It's a largely well maintained route of around 5 miles that goes up the valley of the River Tais and down the River Doe.

This is the star attraction Thornton Force with Carboniferous limestone resting unconformably on folded Ingletonian greywackes from the Ordovician.  
(Image: Chris Darmon)

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## Geological Society of Glasgow

<https://geologyglasgow.org.uk/>

[@geolsocglasgow](#)

President: Simon Cuthbert [pres@gsocg.org](mailto:pres@gsocg.org)

Secretary: David Webster [sec@gsocg.org](mailto:sec@gsocg.org)