



THE GEOLOGICAL SOCIETY OF GLASGOW

Newsletter - October 2024 (Revised)

Lecture Programme

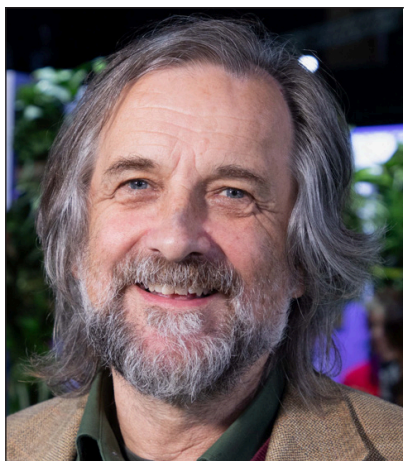
Lectures continue to be held in Room 407 of the Boyd Orr Building (unless otherwise noted). **Note: Meetings commence at 7.00 pm.** Room 407 is on the 4th floor. We will record the lectures but not the Q&A and will not be offering a live zoom.

Thursday 10th October 2024

Prof. Stuart Hazeldine, University of Edinburgh

"Climate and carbon, control or catastrophe"

Scotland and the UK were cradles of the industrial revolution – built on low cost coal energy creating vast wealth and empire. But since the 1850s and 1930s, and certainly from the 1970s it has been clear that huge emissions of CO₂ from burning fossil fuels are driving global heating, creating ocean acidification, causing sea level rise and accelerating dangerous climate change. Combating that requires: greatly decreased use of fossil carbon, capturing all CO₂ released by use of fossil carbon, and replacing all possible CO₂ into permanent geological storage. Features of UK offshore geological storage sites will be explained, and can mimic hydrocarbon accumulations. But to achieve this at industrial scales of tens of millions tonnes CO₂ per year in Scotland and Europe requires commercialisation equivalent to the present North Sea oil industry. Many successful pilot tests have been made, and recent legal victories in UK courts may now presage compulsory storage enacted on coal, oil and gas company producers. The weakest link remains the timidity of global governments to disturb the profitable status-quo, far harder to explain benefits in the 30, 100 and 10,000 yr future. Complete success is possible, but unlikely.



Stuart studied geology at the University of Edinburgh, then did a PhD on coal geology at the University of Strathclyde with Roger Anderton. Instead of working on post-doctoral study, he was employed by the British National Oil Corporation in Glasgow for 3 years,. He then returned to teaching and research at Strathclyde, Glasgow and Edinburgh.

The first half of his career was helping to produce fossil carbon out of the North Sea. The second half was developing the research to show that CO₂ derived from burning fossil carbon could be safely stored deep below the seabed - leading many of the first surveys and investigations of feasibility to create a new industry in Scotland. The third half of his career has been to investigate large geological storage of hydrogen, removal of CO₂ from air with biochar and basalt, and trying to convince UK and Scottish governments to fund the projects of Carbon Capture and Storage they like to support

Further Reading

Hazeldine, R.S., 2009. Carbon capture and storage: how green can black be?. Science, 325(5948), pp.1647-1652.
<https://www.science.org/doi/10.1126/science.1172246>

Marc Hudson, 2024 Carbon Capture and Storage in the UK. Routledge (social science)

Owain Tucker 2018 Carbon capture & storage. ebook. <https://doi.org/10.1088/978-0-7503-1581-4>

The next talks

November 14th - Heather Stewart BGS - "The abyss gazes also into you": exploring the deepest oceans

December 12th - Paige dePolo, Liverpool John Moores University - palaeontology talk

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

February 13th TBC

March 13th TBC

April 10th TBC

May 8th Members' Night

Recordings of past lectures

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

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

Residential Excursion 2025

8-12th May – Garvellachs: Leader David Webster.

A residential field excursion to the Garvellach islands. If you're interested then please email sec@gsocg.org.

Geonatter

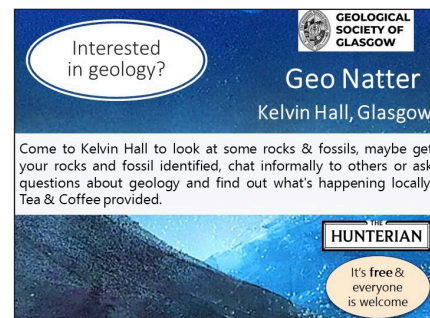
If you've not been before then come along to Kelvin Hall from 1:30 – 3 pm for Geo Natter – these informal meets are the perfect opportunity to meet like-minded rock enthusiasts and chat all things geological and palaeontological!

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.

October 2, 16 and 30

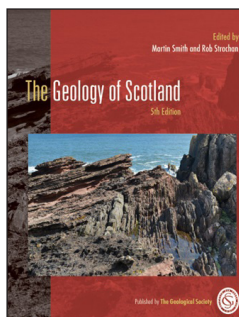
November 13 and 27

December 11



Geology of Scotland Book

Now available to buy following its launch last month. Go to <https://www.geolsoc.org.uk/GOSCOT5P>. At the event Colin Braithwaite was presented with an engraved quaich by the Presidents of the Glasgow and Edinburgh Societies (spot the Fossil Grove on the TV!)



Scottish Geology Festival

<https://www.scottishgeologytrust.org/festival/>

Fossil Walks with Hugh Miller's Birthplace Cottage and Museum 10th October, 12th October, 25th October, 26th October.

Evening Lecture: Long Live Mammals in the Time of Dinosaurs with Dr Elsa Panciroli 2 October

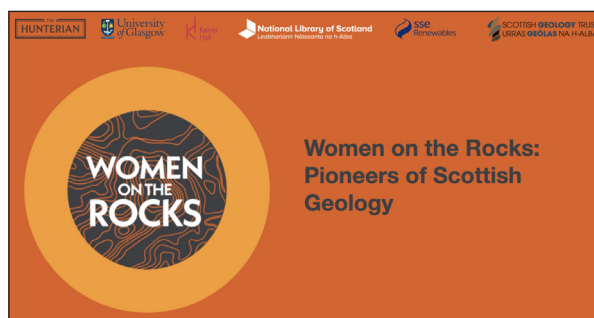
Geoconservation Gathering 6 October

Exhibition: Women on the Rocks

“Women on the Rocks” is a new display in Kelvin Hall. It explores the stories and scientific achievements of some of the pioneering women in Scottish geology, and their contributions to The Hunterian's collections.

Scotland has been home to many pioneering women geologists, whose important work has helped us to understand the Earth. Despite this the history of geology has largely been told through the accomplishments of male scientists. The women have often gone unacknowledged and their contributions have been lost to history.

Until very recently, women with an interest in geology had to fight harder than their male contemporaries for access to education and equal recognition. Those who managed to prosper were usually privileged or married into privilege. Many were expected to give up their jobs if they married, so remained single.



Co-produced by The Hunterian in collaboration with members of the Geological Society of Glasgow and GeoNatter: Clare Clark; Margaret Greene; Lindsay Smith; Barbara Balfour; Margaret Anderson; Allison Drummond; Susan Gemmill; Palaeontologist and writer: Elsa Panciroli; Curator, the National Library of Scotland: Ann Cameron; and Curator of Geology, Glasgow Museums: Ann Ainsworth.

Snowball Earth on the Garvellachs.

Recording of lecture given by Elias Rugen for the Scottish Geology Festival

<https://www.youtube.com/watch?v=fNFxPVyM7-4>

Stonehenge Altar Stone

Recording of lecture for the Scottish Geology Festival

<https://www.youtube.com/watch?v=QQsRHNHA9Ow>

Euan Clarkson.

Most members will already know of the death of Euan Clarkson. He studied geology at the University of Cambridge and had a long career as a palaeontologist at the University of Edinburgh, Scotland. His most notable research occurred in the study of trilobites (especially visual systems), Paleozoic stratigraphy and the description of the anatomy of the Conodont animal. He had a sustained record of publication and teaching, authored some 100+ papers and other publications, including a book that is widely regarded as the “standard” palaeontological text for undergraduates. He was president of the Edinburgh Geological Society (1985–87), a trustee of the Natural History Museum (1987–92) and president of the Palaeontological Association (1998–2000). He was awarded the Geological Society of London’s Coke medal in 2010. Euan died on 31 August 2024, at the age of 87. A full obituary will appear in the Proceedings.

Recent Papers on Scottish Geology

McMahon, W.J., Herron, S.T., Craig, J.A. and Davies, N.S., 2024. Mud retention in hydrologically closed basins promoted pre-vegetation meandering: evidence from the Neoproterozoic Diabaig Formation, Scotland. Geological Society, London, Special Publications, 540(1), pp.SP540-2022.

Donovan, S.K., Hoare, G., Clark, N.D., Dixon, B. and Fearnhead, F.E., 2024. A new crinoid morphotaxon from the Silurian (Llandovery) of south-west Scotland (Ayrshire). Scottish Journal of Geology, pp.sjg2024-007.

Valore, L., Sømme, T. and Eide, C., 2024. High-resolution sediment mass-budget of the Shetland Platform during the Palaeocene-Early Eocene—constraints on external forcing by uplift and climate. Journal of the Geological Society, pp.jgs2024-058.

Newman, M.J., 2024. A Lectotype for the Scottish Middle Devonian (Givetian) fish *Osteolepis panderi* and the historical problems of the genus *Osteolepis*. Scottish Journal of Geology, pp.sjg2024-006.

Daly, J.S., Flowerdew, M.J., Whitehouse, M.J. and Badenszki, E., 2024. Paleoproterozoic (late ‘Laxfordian’) reworking of juvenile Neoproterozoic Lewisian orthogneisses, Iona, Inner Hebrides, Scotland. Scottish Journal of Geology, 60(2), pp.sjg2024-005.

Stubbs, A.R., MacDonald, J. and Neill, I., 2024. Mechanisms of secondary carbonate precipitation on felsic, intermediate, and mafic igneous rocks: A Case Study for Northwest Scotland. Scottish Journal of Geology, pp.sjg2024-003.

Down to Earth Xtra

Download link to [October](#) edition

Geological Society of Glasgow

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

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