



EDINBURGH GEOLOGICAL SOCIETY

Promoting public interest in geology and the advancement of geological knowledge

Autumn Newsletter 2019

Welcome to the Society's 186th session! Your Society is in good heart. Thanks to all leaders and helpers who contributed to a full and well-attended excursions programme over the summer. We are looking forward to an interesting and varied programme of lectures, which will start at 7pm (on a trial basis) this winter. We are also pleased to announce that the Society will support the launch of a new charity, the Scottish Geology Trust, to work with other organisations across the country to promote our wonderful geology.

Robert W Gatliff, EGS President, president@edinburghgeolsoc.org



Public Lecture **The Secret Life of Carbon** Wednesday 23 October, 7pm at Dynamic Earth

The role of carbon in the atmosphere is well known, but what else does carbon get up to as it cycles through Earth systems?

This public lecture, organised by EGS and Dynamic Earth, gives the opportunity to hear first-hand about the role of carbon in soils, rivers and the oceans. Speakers are Susan Waldron (Professor of Biogeochemistry, School of Geographical and Earth Sciences, University of Glasgow), Tom Wagner (Professor of Earth System Science, The Lyell Centre, Heriot Watt University) and Dick Kroon (Regius Professor of Geology, School of Geosciences, University of Edinburgh). Venue: Dynamic Earth, Holyrood Road, Edinburgh EH8 8AS.

Tickets £5, free for students and under 18s. Book online at edinburghgeolsoc.org/public-lecture

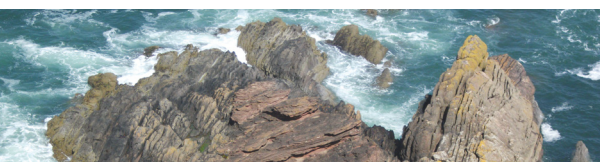


Coral reefs provide a record of past climate change. Gilbert Camoin will tell us more in a lecture on 27 November.

Recognising Scotland's Geological Heritage: introducing the Scottish Geology Trust

The Edinburgh Geological Society fully supports the creation of the Scottish Geology Trust, a new, national charity that will promote and celebrate Scotland's geology and its value to society, and encourage its conservation. This initiative arose from a meeting of interested parties hosted by EGS last autumn, which included all of Scotland's geological societies, the Geoparks, universities and museums, geoconservation groups and the Scottish Geodiversity Forum.

The new organisation will offer opportunities for EGS to collaborate with other organisations on projects of national importance, to build on and expand the work of the Scottish Geodiversity Forum and support Scotland's Geoparks. The Scottish Geology Trust will be a Scottish Charitable Incorporated Organisation and a membership organisation, seeking subscriptions and donations from individuals and organisations. There is strong potential to raise money, for example from the National Lottery Heritage Fund, for significant projects that promote Scotland's geology and specific sites of national/international importance. Updates will be available on www.scottishgeology.com and the new organisation will be launched in spring 2020.



Can we work with other organisations to improve interpretation and access at Siccar Point?

DATES FOR YOUR DIARY 2019

Wed 16 October, 7pm
Lecture: David McClay,
University of Edinburgh

Wed 23 October, 7pm
Public Lecture: The Secret Life of Carbon

Wed 30 October, 7pm
Lecture: Stephen Brusatte, University of Edinburgh / PalAlba

Wed 13 November, 7pm
Lecture: Callum Strong, University of Edinburgh

Wed 27 November, 7pm
Lecture: Gilbert Camoin, ECORD

Wed 11 December, 6.30pm
Fellows' Night

2020

Wed 8 January, 7pm
Lecture: Bruce Levell, University of Oxford

Wed 22 January, 7pm
Lecture: Roddy Muir

Wed 5 February, 7pm
MIS/EGS Joint Lecture

Wed 19 February, 7pm
Clough Medal Lecture: Kathy Whaler, University of Edinburgh

Wed 4 March, 7pm
Lecture: David Jarmin, Mountain Landform Research

Thu 12 March, 7.30pm
Joint Lecture with Geological Society of Glasgow: Andrew Scott, Royal Holloway, University of London

Wed 18 March
AGM (6.30pm) & Lecture: Dave McCarthy, BGS Marine

Lothian and Borders GeoConservation Volunteer Group meets upstairs at the Morningside Library, 184 Morningside Road, EH10 4PU at 10.30am on Wednesdays 25 September, 30 October, 27 November, 22 January, 19 February, 18 March, 22 April. All welcome.

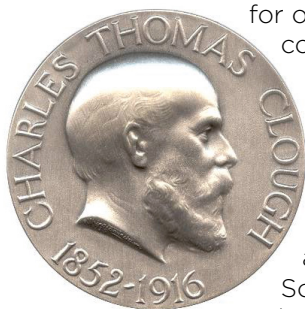
Society Medal, Grants and Awards

The Society recognises excellence in geology by making two prestigious awards, the Clough Medal and the Clough Memorial Award, and supports geological fieldwork with small grants from the Clough and Mykura Funds.

Nominations for the Clough Medal and Clough Memorial Award for 2020-21 and applications for fieldwork grants from the Clough and Mykura Funds are invited by 31 January 2020. Full details are on our website at edinburghgeolsoc.org/home/grants-and-awards/

The Clough Medal is presented annually to a geologist whose original work has materially increased the knowledge of the geology of Scotland and/or the north of England, or who is Scottish by birth or by adoption and residence and has significantly advanced the knowledge of any aspect of geology. This year's recipient is Kathy Whaler, Professor of Geophysics at the University of Edinburgh for the last 25 years, in recognition of her exceptional record of research in the field of geomagnetism, her major contribution to postgraduate research and her exceptional fund-raising ability to the University of Edinburgh.

The Clough Memorial Award is a monetary award, given to a geologist of British nationality and normally under 35 years old whose research on some aspect of the geology of Scotland or the north of England is considered as having outstanding merit. This year's recipient is Dr Steve Brusatte, University of Edinburgh, for outstanding research in palaeontology and contribution to public engagement.



Fieldwork Grants from the Clough and Mykura Funds are normally of the order of a few hundred pounds, and support geological field work at home or abroad. This year one grant of £650 was given to a group of five St Andrews University Earth Science students for Tuqtutoq Alkaline Giant Dyke Mapping and Research in Greenland.

The Society also makes **Project Grants** to support projects that encourage public interest in geology or advance geological knowledge. Applications may be from organisations or individuals, and requests of up to £1,000 will be considered. Applications must be made by email using the form available online. The next submission deadline for Project Grants is 31 March 2020.



Long Excursion to the Isle of Man 13-19 May 2020

David Quirk and Dr David Burnett have kindly agreed to lead the EGS Long Excursion to the Isle of Man. Dates have been chosen to fit with the tides, leaving Edinburgh on Wednesday 13 May and returning on Tuesday 19 May. If you are interested, contact Anne Burgess, preferably by email to longexcursion@edinburghgeolsoc.org, or by letter to 21 Woodside Place, Fochabers IV32 7HE. All emails will be acknowledged, so if you do not get a response within a couple of days, please try again. Anne will send details with costs to everyone who contacts her and bookings will open on 1 October.

Long excursion to Cyprus May 2019. Photo: Anne Burgess

Saving Charles Lyell's notebooks for research

Edinburgh University has launched a campaign to save Charles Lyell's notebooks, which record in remarkable detail the life, travels, thoughts and ideas of this significant historical geologist.

The Society has pledged a donation towards the purchase of the 294 notebooks, which are currently in private hands and were due to be sold abroad. Thanks to the level of support already offered, the ban on the export of the notebooks has been extended until 15 October 2019. This is now the final deadline to save Lyell's notebooks. The price has been set at £966,000 and the University of Edinburgh is making good progress in raising the funds required.

If you would like to donate, or find out more about the notebooks and plans to make them fully and freely accessible for the first time, visit www.ed.ac.uk/giving/save-lyell-notebooks, or come along to David McClay's lecture on 16 October.



Evening Lecture Programme 2019-2020

Our varied programme of illustrated lectures runs from October to Easter, on Wednesday evenings. These meetings are open to the public, there is no charge, and visitors are most welcome. Tea and biscuits are served afterwards, providing an informal opportunity to chat to other members. The lectures take place in the Hutton Lecture Theatre of the Grant Institute, The King's Buildings, James Hutton Road, Edinburgh EH9 3FE.

Please note trial of new start time for lectures this session. All lectures will commence at 7pm.

Information about the lectures, including more detailed abstracts where available, from edinburghgeolsoc.org/lectures or from Graham Leslie, Lectures Secretary agle@bgs.ac.uk.

2019

Wednesday 16 October 2019, 7pm

David McClay, University of Edinburgh

Sir Charles Lyell: Making the archives of a public man of science public

From popularising previous geological theories, advancing as well as adapting to new ideas, Charles Lyell was for forty five years one of the great public figures of Victorian science. Through his many books, writings and lectures he reached and influenced a broad and diverse audience. Following a survey of Lyell's success in public engagement, David McClay of the University of Edinburgh will explore and discuss how Lyell's extensive archives and collections are, inspired by Lyell himself, going to become fully publicly accessible and used in the future.

Wednesday 23 October, 7pm

Public Lecture: The Secret Life of Carbon

See page 1 for details.

Wednesday 30 October, 7pm

Stephen Brusatte, University of Edinburgh / PalAlba

The Jurassic Hebrides: New Dinosaur Discoveries from the PalAlba Group

Over the past six years, palaeontologists from Scotland have worked together as the PalAlba group, to discover, study, conserve, and publicise fossil vertebrates. Our focus has been on Middle Jurassic faunas of the Inner Hebrides, particularly the Isle of Skye. In this talk I will review our most interesting discoveries, including several new dinosaur tracksites, and introduce our newest finds, including a new pterosaur (flying reptile) from Skye and tracks and bones from Eigg and Muck. Together, these discoveries reveal an ecosystem of dinosaurs and many other species, living on a subtropical island ca. 170 million years ago.

Wednesday 13 November, 7pm

Callum Strong, University of Edinburgh

Dating the source of the Nile

Cenozoic rifting in East Africa profoundly altered the regional topography. The surface-warping of an ancient Gondwanan landscape formed vast lakes and redirected the former headwaters of the Congo River into the Nile. These landscape events influenced the evolution of hominins and show us that river networks can respond in surprising and dynamic ways to continental rifting. This talk will discuss how modern cosmogenic isotope dating methods are answering old questions about the chronology of catchment capture and river reversal at the source of the Nile.

Wednesday 27 November, 7pm

Gilbert Camoin, ECORD

Coral reef records of sea-level and climatic changes during the last glacial cycle

Coral reefs are sensitive recorders of past sea-level, climatic and environmental changes. They form archives that may be used to understand the long-term behaviour of the tropical ocean/atmosphere system in response to anthropogenic and natural forcing. Coral reef records of the last deglaciation (the last 23,000 years) and of the last interglacial (about 125,000 years ago) are of special interest as these periods are potential analogues of climatic and environmental changes that our planet may face in the future in the context of global warming.

Wednesday 11 December, 6.30pm

Fellows' Night

This meeting, close to the anniversary of the foundation of the Society, is a chance to meet other members informally, with refreshments served from 6.30pm, followed by a series of short talks given by members. The event will be held in the upper level of the Lyell Centre, Heriot Watt campus (Research Ave S, Edinburgh EH14 4AP) and booking is not required. We are very grateful to BGS Scotland for hosting this event. If you would like to give a short talk on a subject of interest to members, please email Chris Lofthouse on fellowsnight@edinburghgeolsoc.org.

2020

Wednesday 8 January 2020, 7pm

Bruce Levell, University of Oxford

The Argyll Group: Two Beasts

Further details of this talk will be posted on the EGS website as soon as they are available.

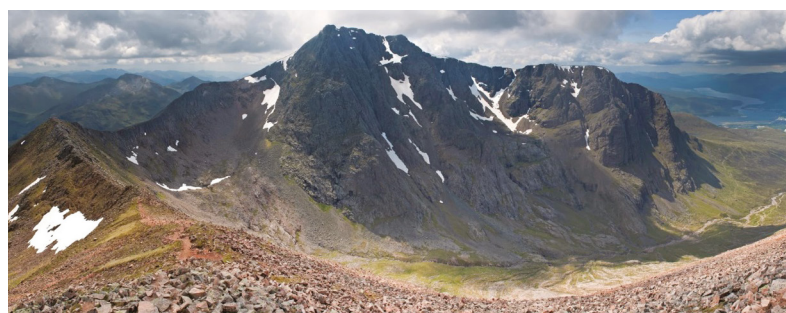
Wednesday 22 January, 7pm

Roddy Muir

Ben Nevis – remnant of a lost volcanic landscape

A recent project co-ordinated by the Nevis Landscape Partnership has surveyed the geology and flora of the North Face of Ben Nevis. The results of the new field

(Continues overleaf)



North Face of Ben Nevis from Carn Mor Dearg. Photo: Roddy Muir

mapping and 3D model building provide important insights into the geometry, emplacement and preservation of plutonic and volcanic rocks. The summit region of Ben Nevis consists of volcanic rocks originally interpreted as a thick sequence of andesite lavas and agglomerates. These are now interpreted as volcanoclastic debris flows, and extensive block and ash flow deposits, preserved in a large roof pendant. They represent a former volcanic land surface that once covered much of the SW Highlands.

Wednesday 5 February, 7pm

Joint MIS/EGS lecture

Apologies, the speaker and title for this lecture had not been confirmed at the time of going to press. Details will be posted on the EGS website as soon as they are available.

Wednesday 19 February, 7pm

Clough Medal Lecture: Kathy Whaler, University of Edinburgh

Adventures with Maxwell's equations

James Clerk Maxwell's equations of electromagnetism underpin my research. Using them, we can model magnetic fields, arising from the crust (e.g. oceanic magnetic stripes) and core (making your compass needle point approximately North), and probe the electrical properties of rocks. I'll present results on the magnetic fields of Earth and Mars and discuss their implications, and show how electrical properties have been useful in inter-disciplinary studies, especially in the East African rift.

Wednesday 4 March, 7pm

David Jarmin, Mountain Landform Research **Rock slope failure in the Scottish mountains**

Over 900 montane Rock Slope Failures have now been identified in the mainland Highlands, and 37 in the Southern Uplands. They embrace dramatic rock avalanches, great rockslides with bulging ramparts, and subtle anticarped slope deformations attaining kilometric extent. Nearly all are 'fossil', dating from around deglaciation, thus 'paraglacial', and rarely

hazardous today. Their pronounced clustering around glacial breaches of main divides, and in 'late-developing' trough-heads, suggests association with concentrated erosion of bedrock, inducing local petro-isostatic rebound stresses augmenting endemic glacio-isostatic ones. They often shape mountain scenery, and contribute to biodiversity and early human settlement.

Thursday 12 March, 7.30pm in Glasgow

Joint Lecture with Geological Society of Glasgow: **Andrew Scott, Royal Holloway, University of London** **Burning planet: the story of fire through time**

This joint lecture will take place in the Lecture Theatre, Gregory Building at the University of Glasgow. EGS members are warmly invited to attend.

Further information at <https://gsocg.org/events/category/lectures/>.

Wednesday 18 March, AGM 6.30pm, Lecture 7pm

Dave McCarthy, BGS Marine

The geological controversies of the Falklands Plateau

Despite the Falklands Plateau's significance as a crustal structure, our knowledge of the plateau is severely limited. Many of the findings from geological and geophysical studies are widely debated. This discussion will provide an overview of the main controversies including: the role of the plateau in the break-up of Gondwana; its crustal composition; and whether it is home to one of the largest impact craters on the planet.



Top of the Battery Rock Slope Failure, Glen Ey, Braemar. The crest is split for a kilometre. Photo: David Jarman.

Membership Subscriptions

Subscriptions for 2019-20 are due on 1st October, please help the Membership Secretary by making sure that you are paying the correct amount at the right time! Payment by Standing Order is preferred, or by bank transfer: in both cases please use a reference of your surname and first initial (e.g. Surname_A).

Please contact the Membership Secretary by email or phone to confirm changes to your address or email address, or to check your membership, subscription, and Gift Aid Declaration status.

AGM 18 March 2020, 6.30pm

Please note that to help streamline our administration and reduce postage costs, this year's AGM will be held immediately before the final lecture of the session. Papers for the AGM will be included in the spring mailing in early March.

Edinburgh Geological Society

The Lyell Centre, BGS – Second Floor, Research Ave S, Edinburgh EH14 4AP

The Edinburgh Geological Society is a friendly and informal organisation with a wide range of members of varied backgrounds and interests, united in an interest in rocks and the science of the Earth. This newsletter is published in September and March, with details of our lectures and excursions programme.

The Edinburgh Geological Society is a charity registered in Scotland No SC008011

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