

HOGG

Newsletter of the History of Geology Group of The Geological Society



Number 63
June 2018

Front cover

16–18 Queen Square, Bath BA1 2HN—home of the Bath Royal Literary and Scientific Society (BRLSI) since 1932.

Founded in 1824 as the Bath Literary and Scientific Society, the BRLSI is an educational charity providing a museum, an independent library, exhibition space, meeting rooms and a programme of public lectures, discussion groups and exhibitions related to science, the arts and current affairs. It is a direct descendent of Bath societies going back to the 1770s. It occupies a Grade 1 listed Greek Revival building designed in 1830 and built on a site originally occupied by the home of Dr William Oliver, inventor of the Bath Oliver biscuit, and a key figure in Bath's early 18th Century development.

The BRLSI is hosting the joint HOGG/GCR meeting in September this year (see PP.7–9 of this newsletter).

Sources: <https://www.brlsi.org> and Wikipedia

Image: © Ad Meskens/Wikipedia Commons

Editorial subcommittee

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The HOGG newsletter will be issued in February (copy deadline 31st January), June (copy deadline 31st May) and October (copy deadline 30th September).

Past newsletters are available at <http://historyofgeologygroup.co.uk/newsletter/> and <https://www.geolsoc.org.uk/hogg-newsletters> .

LETTER FROM THE CHAIR



Our meetings programme for this year got off to a fine start in early May with a successful Open Meeting convened by HOGG Secretary Chris Duffin at Burlington House. Our thanks are due to Chris who pulled together a fascinating and diverse range of talks covering geological maps, marine reptiles, dinosaurs, Captain Cook, Antarctic exploration, Hans Sloane, sharks' teeth, Arthur Holmes, the shape of the Earth and early attempts to measure its density (see P.4 of this newsletter). Open, un-themed meetings provide a great opportunity for members to present short papers on their fields of interest or talk about work in progress, and I hope that we can hold such meetings every other year or so.

Coming up later this year, we have a joint meeting in Bath with the Geological Curators' Group on collectors, collections and the geology of South West Britain (18th–19th September) (see P.7) and on 22nd November, we are holding a meeting at Burlington House on aspects of the history of coal, its geology and mining (see P.9); this latter meeting will include the HOGG AGM.

Plans for marking the bicentenary, in 2020, of the publication of Greenough's geological map of England and Wales are making progress, led by Duncan Hawley but before that, we have the centenary of the admission of women as Fellows of the Geological Society marked by a meeting at Burlington House on 21st–22nd May 2019 convened by Cynthia Burek, Bettie Higgs and Veronica Cubitt-Holmes. Look out for news of these events over the course of the next year or so.

Around the country, there are various markers and monuments to the great and the good of geology aside, of course from their graves. Amongst these are the siliceous Chipping Norton Limestone memorial to William Smith in Churchill; the large lump of Shap granite commemorating Adam Sedgwick in Dent; the less ostentatious plaque at Inchnadamph to Ben Peach and John Horne (and the slightly spooky modern sculptures at Knockan Cliff); and the column to Hugh Miller in Cromarty. On holiday recently in the Highlands of Scotland, I was surprised to come across a large slab of Old Red Sandstone at the side of the road in the glen at Inverfarigaig on the south shore of Loch Ness. It marked the nearby site of the death of 'James Bryce LL.D. F.G.S. F.R.S.E. A distinguished geologist ... killed opposite this spot while in pursuit of his favourite science July 11 1877'. Bryce's body was found at the foot of a cliff on the steep hill of Dún Dearduil. Depending



Image © Tom Sharpe

on which account you read, he either slipped and fell over the cliff, or his hammering brought a cliff fall down upon him. Born in Ireland in 1806, Bryce was a Glasgow graduate and a teacher of mathematics in Belfast and Glasgow until 1874, but his first love was natural history and, in particular, geology. He was elected FGS in 1834. His interests and publications ranged widely, but he was best known for his publications on the geology of Antrim and on the Jurassic of Skye and Raasay, and for his book on the geology of Arran first published in 1855. At the time of his death, he was working on the problem of the origin of the granites of the Central Highlands. Bryce's monument leads me to wonder how many more such memorials to geologists are out there. Do we know where they are, and what condition they are in? Do we care?

Something we most certainly should—and do—care about is the dispersal of the Lyell family archive following the death last year of Lord Lyell (Charles Lyell, 3rd Baron Lyell, 1939–2017). That the archive could be at risk was first brought to the attention of the HOGG committee soon after Lord Lyell’s death, but we were unable to find out much about the plans of the executors. Now, items from the archive, including albums of letters, photographs and drawings as well as some of Lyell’s publications, have appeared for auction in a sale at Sotheby’s in early July. Public institutions, certainly in the UK, lack the funds to purchase such material so the items are likely to go to private collectors or overseas, or possibly both. It remains to be seen what might happen to other material in the archive such as Lyell’s notebooks, but the HOGG Committee, through John Henry, is in touch with Lyell researchers, and we will offer whatever support we can to keep this important material in the public domain.

Tom Sharpe
e mail tom@tomsharpe.co.uk
June 2018

HOGG COMMITTEE 2018

Chairman Tom Sharpe **Vice Chairman** Geoffrey Walton **Secretary** Chris Duffin
Treasurer/Membership Secretary David Earle **Ordinary members:** Beris Cox (**newsletter**),
Stephen Cribb (**publicity**), Duncan Hawley, John Henry, Sabina Michnowicz (**web officer**), Nina
Morgan, Leucha Veneer (co-opted).

HOGG WEBSITE

Our main website <http://historyofgeologygroup.co.uk/> provides easy access to all aspects of HOGG including details about our meetings and the facility for online registration and payment, as well as subscription renewal. We also have a presence at www.geolsoc.org.uk/ where you will find some useful resources.

HOGG NEW MEMBERS

HOGG welcomes the following new members

John Milsom (Presteigne, Powys, Wales)
Prof. Stuart Monroe OBE (Edinburgh, Scotland)
Matthew Parkes (Dublin, Eire)
Dr Maria d c Sendiro Lara (London)



REPORT ON HOGG OPEN MEETING 8TH MAY 2018 at Burlington House

Chaired by Tom Sharpe, the first session got off to a light-hearted start when the speaker **John Smallwood** offered a prize for the person who could identify the mountain projected on the screen. Duncan Hawley quickly piped up with the answer ‘Schiehallion’ and was duly rewarded with a bottle of the eponymous craft lager (brewed by Harviestoun Brewery in Clackmannanshire). The mountain was to feature in John’s talk *Early field measurements of Earth’s mean density* in which he discussed several early field experiments using plumbline or pendulum—from Bouguer’s 1737 plumbline work in Equador to Thomas Mendenhall’s 1881 pendulum work on Mt Fuji, Japan. Maskelyne’s 1774–5 “Schiehallion Experiment” was the first to produce a reasonable quantitative estimate of the mean density value for the Earth—about double that of the mountain. Some of these early field experiments and ideas, including those involving the pyramids of Egypt, had been recreated by the speaker in the comfort of his office using a computer; he concluded that, with improved topographic data, early measurements would have been closer to a “modern” value.

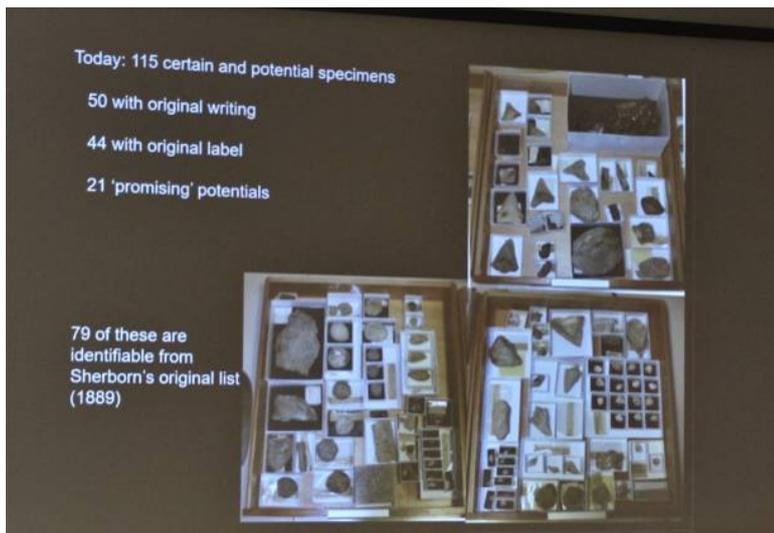
Leucha Veneer, in her talk entitled *Specimens and Speculations: William Daniel Conybeare’s ichthyosaurs and plesiosaurs*, then focused on some of the early papers published in the *Transactions of the Geological Society*, in particular William Conybeare’s papers of 1821, 1822 and 1824 on plesiosaurs. These involved collaboration with Henry de la Beche whose interpretation of environments (such as in his well known water colour *Duria antiquior*) was influenced by Conybeare (1787–1857). Conybeare was willing to be imaginative and speculative within the boundaries defined by theoretical limitations and discussions with colleagues. Such an approach was characteristic of the Geological Society in the late 1810s and early 1820s, and set the scene for the changes precipitated by the likes of Charles Lyell in the late 1820s who brought to the fore theoretical positions with which neither Conybeare nor De la Beche could or would align themselves.



Prehistoric creatures also featured in **Michael Howgate’s** talk on *Benjamin Waterhouse Hawkins, James Tennant and the World’s first commercially available prehistoric models*. Michael arrived at the lectern carrying a model *Megalosaurus* under his arm. Waterhouse Hawkins had been responsible for the geological reconstructions and models displayed at the Crystal Palace, and was interested in seeing them become more widely available. Hearing of this, James Tennant (Professor of Geology at King’s College and a noted mineral dealer) proposed the production of a series of models based on the Crystal Palace reconstructions. He advertised that Waterhouse Hawkins would prepare for casting a full reconstruction of each animal and then, unbeknown to Waterhouse Hawkins, a dissected specimen showing the anatomy. This plan did not come to fruition but a series of plaster models based on Hawkins’ one inch to one foot maquettes were produced and marketed by James Tennant, through his business in the Strand, London, and also in the USA through Professor Henry Ward of Rochester.

After a coffee break, the second morning session, chaired by Chris Duffin, kicked off with **Joseph Banks and Geology on Cook’s First Voyage** in which **Derek Morris** discussed some of the geological issues of Captain James Cook’s first voyage to the Pacific, the 250th anniversary of which departure is celebrated this year—not least the fact that although many plants, birds, insects and animals were collected on the voyage by the ship’s two naturalists Joseph Banks and Daniel Solander, rock and mineral specimens appear to be lacking (possibly dumped when the ship twice had to shed ballast). Banks had some geological training and made a number of geological observations, but he also learnt many lessons and ensured that a man with practical knowledge of mining was included on his later voyage to Australia (1801–5).

The following two talks had an Antarctic theme. In *The scientist most to be pitied: geology on the Imperial Trans-Antarctic Expedition 1914–17*, **Tom Sharpe** told the story of Sir Ernest Shackleton’s planned expedition to cross the entire Antarctic continent. The two ships involved each had aboard a geologist—James Mann Wordie (1889–1962) on the *Endurance*, and Alexander Stevens (1886–1965) on the *Aurora*—but both ships suffered misfortunes and, as a result, their scientific work was severely limited. Although Wordie, who was described by a shipmate as “the scientist most to be pitied on this expedition”, made the best of his time when *Endurance* was trapped in pack ice for ten months, the five months he spent camped on drifting ice floes, and the four and a half months marooned on Elephant Island, almost all his collected material was lost (surviving specimens are in the Hunterian Museum, Glasgow). Despite this, Wordie produced a series of three papers based on his geological observations in Antarctica—a remarkable output given the circumstances. **Phil Stone** then spoke about *The geological legacy of the Scottish National Antarctic Expedition, 1902–1904*, in particular the contribution of the expedition’s surgeon and geologist James Hunter Harvey Pirie (1878–1965)—notably his misidentification of an obscure plant fossil as a graptolite which led to an erroneous stratigraphy. Arguably the most important palaeontological discovery, although not recognized at the time, was the Early Cambrian archaeocyath fauna contained in a limestone block dredged from the bed of the Weddell Sea (thin-sections now in the Natural History Museum London). When the expedition returned to Scotland, its leader William Spiers Bruce (1867–1921) aspired to publish the scientific results in a series of reports but the project ran out of funds and Volume 8 (Geology) never appeared. However, of its intended content of eight papers, seven have been published either in the *Transactions of the Royal Society of Edinburgh* or in the *Proceedings of the Royal Physical Society of Edinburgh*, and the eighth is available in proof.



After a buffet lunch which was conveniently provided in the Lower Library, the afternoon session, chaired by John Henry, had a palaeontological flavour. **Consuelo Sendino** spoke about Sir Hans Sloane (1660–1753) and his collections in *Sloane: the British Legacy*. The British Government acquired Sloane’s extensive collection of fossilized animal and plant remains, and other curiosities in 1753 as part of his bequest to the nation. Originally the collection included at least 15,250 geological specimens,

but it now comprises only about 150 fossil and other geological samples which are housed at the Natural History Museum in London. Palaeontology was one of Sloane’s main interests and in 2010, a study began of the 110 fossils remaining in the collection to mark his 350th birthday. Although one-third of his fossils lack provenance, 115 certain or potential Sloane specimens have now been traced. In Sloane’s catalogues and in pre-scientific literature, fossil sharks’ teeth are referred to as ‘glossopetra’ (tongue stones) alluding to the belief that they were petrified serpents’ tongues. Such specimens were the subject of the next talk *Glossopetrae* in which **Chris Duffin** (who also convened the meeting) recounted the ‘folklore’ associated with these fossils since Pliny the Elder first mentioned them in his *Naturalis Historia* (c. 73AD). According to Western lapidary tradition, they took on amuletic and protective functions; examples range from the gold-mounted amulets found among the grave-goods at various Etruscan sites (4th–5th century BC) to the fossil shark tooth pendants of Renaissance (late 13th Century onwards) tableware.

In the final session of the day (chaired by Tom Sharpe), **Brian Roy Rosen** investigated the different models for the origin of the Himalaya and Tibetan Plateau as portrayed in successive editions

(1944, 1965, 1978, 1993) of the well-known student text-book *Principles of Physical Geology* by Arthur Holmes (1890–1965). In *The man who ‘knew so much’: an iconography of Arthur Holmes’ prescient models of the Himalayan-Tibet orogeny in successive editions of his Physical Geology text book*, Brian showed that Holmes’ model of the Second Edition (1965)—and reproduced in the Third Edition—came remarkably close to ‘inventing’ plate tectonics. In this ‘proto-plate-tectonics model’, Holmes conjectured an asymmetric system of mantle convection currents which dragged the leading edge of the Indian Foreland *c.* 1000 km northwards beneath the leading edge of Asia. He had also proposed that the resulting doubling of continental crust caused the isostatic uplift and great elevation of the Tibetan Plateau. Despite the revising authors of the posthumous Fourth Edition (1993) relegating this model in favour of a ‘modern’ version, Holmes’ Second Edition model is similar in principle to recent Himalaya and Tibetan Plateau thinking such as in Mike Searle’s *Colliding continents. A geological exploration of the Himalaya, Karakoram, & Tibet* (2013).

In the following talk, **Richard Howarth** spoke about *The enigmatic Robert J. Adcock and the Figure of the Earth*. There is little published about the life of the American mathematician Robert Adcock (1826-1895)—there are several contemporary namesakes—and his work is now largely forgotten. In 1687, Isaac Newton had deduced the polar flattening (1/230) of a spheroidal body rotating under gravitational attraction. This led to numerous attempts to determine the ‘Figure of the Earth’. In 1872, Adcock published a three-dimensional reworking of Newton’s approach which broadly confirmed Newton’s result but by later in the 1870s, it had become clear that the equatorial radius of the Earth exceeded the polar radius, with a polar flattening of 1/290–1/300. Between 1872 and 1895 (when he died), Adcock wrote numerous short mathematical contributions in *The Analyst*.



BGS

The final talk of the meeting was given by **Duncan Hawley** who told the story of *F. W. Rudler of Aberystwyth and the 1853 geological map of Ireland*. Duncan had found the name “F. W. Rudler” on a linen copy of the 1853 edition of Richard Griffith’s geological map of Ireland (first published in 1838), and decided to investigate why Rudler had such a copy, when there were a range of ‘commercial’ geological maps of Ireland available. It was not in the inventory of Rudler’s personal collection which was donated to (or purchased by) the University College of Wales Aberystwyth after Rudler’s death in 1915. The second owner of the map

was found to be Arthur Sansbury who began as a laboratory assistant in the Geology Department but went on to graduate and become a geography and geology teacher in Hampshire. The full story of how the map was first acquired and ‘handed down’ by its by now three owners (including Duncan) with their Aberystwyth connection can only be reasonably supposed, but it has ensured its survival.

The meeting was attended by 30+ members who certainly enjoyed the 11 talks, an excellent illustrated Abstracts booklet, and an in-house buffet lunch inclusive in the registration fee.

Congratulations and thanks to all concerned, not least the convenor Chris Duffin.

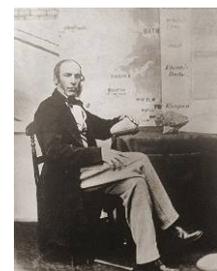
BMC

Images© Barrie Chacksfield unless otherwise stated.



GS LIBRARY EXHIBITION: THE LIFE AND WORK OF CHARLES MOORE (1814–1881)

A new exhibition sketching the life and work of Victorian amateur geologist Charles Moore can be viewed in the Lower Library and Lyell Room at Burlington House, Piccadilly, London W1J 0BG until July. It gives an insight into a man best known for his discovery of the ‘Rhaetic’ [Penarth Group] in England and for his vast collection of fossils which is housed at the Bath Royal Literary and Scientific Institution. He will also feature in the joint HOGG/GCG meeting to be held in Bath in September (see P.7).



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FUTURE HOGG EVENTS

*COLLECTORS, COLLECTIONS AND THE GEOLOGY OF SOUTH-WEST BRITAIN

(Joint meeting with the Geological Curators' Group and Bath Royal Literary and Scientific Institute)

18th–19th September 2018

Bath

See PP. 7–9 for more information.

*HISTORY OF COAL GEOLOGY AND MINING

22nd November 2018 (including HOGG AGM)

Burlington House, Piccadilly, London

See P. 9–10 for more details.

*CELEBRATING THE CENTENARY OF GEOL. SOC. FEMALE FELLOWS

20th–21st May 2019

Burlington House, Piccadilly, London

See P. 10 for Call for Papers.



COLLECTORS, COLLECTIONS AND THE GEOLOGY OF SOUTH-WEST BRITAIN

18th–19th SEPTEMBER 2018



When it comes to geology and history, the south-west of England has a lot to offer. HOGG has teamed up with the Geological Curators Group (GCG) and the Bath Royal Literary and Scientific Institution (BRLSI) to convene a two-day meeting to highlight the many and fascinating aspects of this interesting part of Britain.

The meeting will be held at the BRLSI site in the centre of Bath and is open to any and all who are interested in the geology, history of geology and personalities who have explored the geology of the south-west of England both now and in the past. The meeting will take place on 18th–19th September 2018, and will include one day of talks followed by a day of related field trips. Abstracts will be made available as pdf files for participants to print out in advance.

Registration will cost just £15 for GCG and HOGG members, and members of the Bath Geological Society, and £19 for the general public. The field trips will be offered at low or even no extra cost. Coffee, tea and cold drinks are included in the registration fee, but attendees should make their own arrangements for lunch. There are plenty of cafés and sandwich shops nearby, and tables and cold drinks will be available at BRLSI for those who bring packed lunches.

Registration opens on 1st August 2018. Registration and payments will be handled online only at <http://www.geocurator.org/swmeeting> where you will also find further updates to the programme as time goes on.

The provisional programme is shown below. The talks programme is now full, but we are open for

more posters and field trip ideas. For further information, contact the organisers, Matthew Parkes (GCG) and Nina Morgan (HOGG) at swmeeting@geocurator.org

Provisional Programme

- 09.00 REGISTRATION (poster set-up; coffee available)
- 10.00 Keynote Speaker: Steve Etches (Etches Collection, Kimmeridge)
A new museum—starting from scratch!
- 10.30 Chris Duffin (Earth Science Department, Natural History Museum, London)
Charles Moore and Late Triassic vertebrates
- 10.50 Matt Williams (Bath Royal Literary and Scientific Institution)
Charles Moore & Strawberry Bank, Ilminster, Somerset
- 11.10 COFFEE BREAK and poster viewing
- 11.40 Tom Cotterell (National Museum of Wales)
Francis Basset, 1st Baron de Dunstanville and Basset, and his mineral collection
- 12.00 Maurice Tucker (Bath Geological Society and Earth Sciences Department, University of Bristol)
The source of stone for Roman Bath
- 12.20 Owen Green and Tony Watts (Earth Sciences Department, University of Oxford)
The Beacon Hill Silurian volcano: an ancient analogue of a modern island arc?
- 12.40 Jan Freedman (Plymouth City Museum and Art Gallery)
Plymouth's lost Pleistocene sites
- 13.00 LUNCH BREAK and poster viewing
- 14.10 Geoffrey Warrington (School of Geography, Geology & Environment, University of Leicester)
The Bristol Spore: the origin of Triassic palynology in Britain
- 14.30 Simon Harris (British Geological Survey)
Lost and Found—the rediscovery of the Christian Malford Lagerstätte
- 14.50 Roy Starkey (independent researcher)
“Shall I send them to you now?”—Richard Talling of Lostwithiel, the greatest Cornish mineral dealer of all time
- 15.10 Mike Howe (British Geological Survey)
BGS and the Royal Geological Society of Cornwall Collections
- 15.30 COFFEE BREAK and poster viewings
- 16.00 Karen Cook (Kansas University, USA)
Reflections across the Pond: Cuvier and Brongniart's Carte géognostique des environs de Paris (1811) and Conybeare and De la Beche's Map of 24 miles round the city of Bath coloured geologically (1823)
- 16.20 Debbie Hutchinson (Bristol City Museums)
Mr Sanders' map of Bristol
- 16.40 Brian Rosen and Jill Darrell (Natural History Museum, London)
Stratigraphic solutions: fossil corals of William Smith and Arthur Vaughan from SW England
- 17.00 CLOSE OF MEETING and final information on field trip options
- 17.15 END

ALL DAY POSTER PRESENTATIONS

David Hill and Natalie Watson (Alfred Gillett Trust)
The Alfred Gillett Fossil Collection of Marine Reptiles from the 19th Century quarries of Street, Somerset

Jan Freedman (Curator of Natural History, Plymouth Museums, Galleries and Archives) *The South-West's greatest mineral collectors*

Graham P. Hickman (Bath Geological Society)
Geology and hydrology of the Limply Stoke valley and Somerset Coal Canal

Deborah Hutchinson (Bristol Museums)
J. W. Tutchter (1858–1951)—geologist and pioneer of scientific photography

FIELD TRIP OPTIONS ON WEDNESDAY 19TH SEPTEMBER

2-hour morning gravestone geology walk in a Bath Cemetery, led by Nina Morgan and Phillip Powell (Oxford University Museum of Natural History)

Half day afternoon trip to Brown's Folly, Bathford, led by Maurice Brown (Bath Geological Society and Department of Earth Sciences, Bristol University)

Full day trip to Moons Hill volcanics, led by Tony Watts and Owen Green (Department of Earth Sciences, Oxford University)

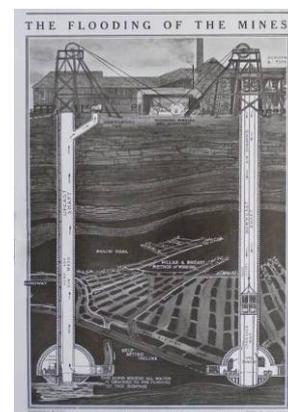
ASPECTS OF THE HISTORY OF COAL, ITS GEOLOGY AND MINING Thursday 22nd November 2018 (including HOGG AGM 2018) Burlington House, Piccadilly, London



This one-day meeting at the Geological Society rooms in Burlington House marks the demise of the Coal Geology Group and will look at a wide range of topics.

The meeting will start at 11.00 am. The AGM will follow lunch, and the meeting will then continue to end promptly at 5.00 pm. One objective of the meeting is to illustrate the role of coal in a country's development, and its longer term legacies which often call for an understanding and interpretation of history and historical documents.

Full details of the programme and how to register will appear in the October newsletter and on the website, but a provisional programme is given below. In the meantime, if you are interested in contributing a poster or have any queries, please contact Geoffrey Walton at geoffw@dustscan.co.uk



Provisional programme

- 11.00 Introduction *Geoffrey Walton*
- 11.10 The Coal Acts 1938–194-; the forgotten nationalisation *Richard Trounson*
- 11.45 The development and demise of British opencast coal-mining *Geoffrey Walton*
- 12.20 The evolution of coal-mining in the Far East *Larry Thomas*

- 12.55 BUFFET LUNCH (HOGG AGM 12.55–13.10)

- 14.10 The mountain that moved—how Aberfan dethroned King Coal *Ted Nield*
- 14.45 The Great Northern Coalfield *Leucha Veneer*
- 15.20 The understanding of mining subsidence *Alan Cobb*

15.55 James Bateman Longmire—the man who went to Russia instead of William Smith *Hugh Torrens*

16.30 GENERAL DISCUSSION on the development and evolution of coal in this country and its longer term legacies. There is likely to be a very long term requirement for the understanding and interpretation of historical documents.

17.00 CLOSE

CELEBRATING THE CENTENARY OF GEOL. SOC. FEMALE FELLOWS

A two-day conference to be held at

The Geological Society, Burlington House, Piccadilly, London

21st–22nd May 2019



CALL FOR PAPERS ON THE HISTORY OF FEMALE GEOLOGISTS

The conference welcomes proposals for research papers or poster presentations on the historical contribution of women in geology. It is hoped that the presentations will build on and expand the work achieved at an exploratory conference in 2005 *The Role of Women in the History of Geology* although this is not a necessity.

It is intended to hold a celebration conference dinner on the evening of 21st May and to publish the conference proceedings.

Please send abstracts to Professor Cynthia Burek and any enquiries to the convenors at the e mail addresses below.

Convenors

Prof. Cynthia Burek c.burek@chester.ac.uk

Dr Bettie Higgs b.higgs@ucc.ie

Veronica Cubitt Holmes FGS veronicaccubitt@hotmail.com

PLASTIC, PLASTER OR PASTE

Bill George¹ gives an update on the portrait medallion of James Hutton which featured in the last HOGG newsletter.



My short note in the last HOGG newsletter about a James Tassie (1735–1799) medallion depicting James Hutton (1726–1797) prompted several emails giving further information on this item. The previous note described a medallion attached to a piece of rock which appeared on the ebay auction site.

Dave Williams tells me that this particular example was produced for sale to conference delegates at the Geological Society of London's 200th anniversary Hutton meeting held in Edinburgh in 1997. The late Prof. Gordon Craig, who organised this meeting, suggested a mould should be taken from the National Portrait Gallery of Scotland's Hutton medallion. Casts were then produced in plaster at the Open University and given a light polish. Two versions were produced: "a full reproduction of the bust on a ground glass backing, with pale blue background, in a small

oval frame” and a few solitary busts which were “stuck onto a piece of slate from Siccar Point”. Dave is not quite sure how many of these Tassie’s were produced—but very few appear to have come onto the market.

Gordon Herries Davies tells me that he bought a plastic example from the British Geological Survey (BGS) shop in Murchison House, Edinburgh on 11th April 1985 in an unmarked white cardboard box for about £5. Gordon’s example is “mounted in an oval black frame, just as might be a real Tassie, but this frame is plastic. The Hutton bust is affixed to a very dark green plastic field, and upon the truncation is all the detail just as reproduced in the HOGG newsletter”. This plastic example has apparently now developed “a splendid antique patina” which “has every appearance of being a couple of centuries old”. Alas, a quick search of the BGS Scotland, now based at the Lyell Centre, only shows for sale a British Isles Tea Towel produced in 2016 by Half a Donkey. No plastic Tassie medallion of James Hutton is now listed!

Finally, Wendy Cawthorne, the indefatigable assistant librarian at the Geological Society Library at Burlington House reported that they have a Hutton Tassie medallion mounted in a wooden frame, but there is nothing in their catalogue entry to say how it came to be acquired—but investigations are ongoing!

Incidentally, the late Jean Jones penned a very detailed article on “The Tassie Portrait of James Hutton” for *The Edinburgh Geologist* No.16 Autumn 1984 pp. 2–5. From this, we learn of the process employed by Tassie, get some idea of the very limited numbers produced, and his prices. At the end of the 19th Century, Tassie’s vitreous paste was analysed and found to be basically a lead potash glass to which arsenic had been added to prevent the lead oxide from darkening.

Given the number of Hutton medallion portraits now in circulation, it is odd that more have not come onto the market whether plastic, plaster or paste, although a rather splendid example was recently sold by Timothy Millett Historic Medals and works of art.

Some online sources:

1) Geological Society’s Hutton Medallion by Tassie

<http://geolsocarchives.org.uk/Record.aspx?src=CalmView.Catalog&id=GSL%2fPOR%2f29&pos=1>

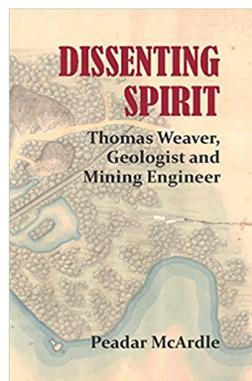
2) Jean Jones article on “The Tassie Portrait of James Hutton” for *The Edinburgh Geologist* No.16 Autumn 1984 pages 2-5. http://www.edinburghgeolsoc.org/eg_pdfs/issue16_full.pdf

3) Timothy Millett Historic Medals and works of art.

<http://www.historicmedals.com/viewItem.php?no=850>

¹ email william-george@lineone.net

BOOK AND MAP NOTES



Dissenting spirit: Thomas Weaver, geologist and mining engineer

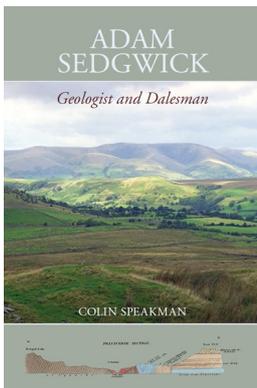
Peadar McArdle

The Liffey Press, Dublin 2018 v + 290pp.

ISBN 9780995792746 paperback RRP £22.94

“Before he was thirty, at the beginning of the nineteenth century, Thomas Weaver [1773–1855] was an accomplished engineer and geologist who was successfully managing Avoca's main copper mine and had brought order to the nearby gold workings. He had no ordinary upbringing in Gloucester, where George III had visited his father's factory, and he was sent to study at Freiberg

in distant Saxony. Now known as a strict if considerate manager to his Irish workforce, he also participated in suppressing the 1798 Rebellion in Wicklow. He was subsequently active in the mining industry in both Ireland and Mexico. In parallel, he carried out geological mapping in these countries as well as in Great Britain and North America. He was an engaging personality, someone who would partake as enthusiastically in a local ploughing contest as in a scholarly debate in London. His story sheds light on industrial and social conditions in pre-Famine Ireland and elsewhere. It is a story worth telling. He was active at a time when geology was coming of age as a scientific discipline. Science is described as a journey without destination, where theories are constantly challenged and remain valid only until they are undermined by new evidence. Yet, as the current climate change debate shows, there can be an alarming intolerance for the very dissent that should be critical to validating its conclusions. This proved to be the case in Weaver's lifetime. For he also took issue with emerging new mindsets and was eventually marginalized as a result. This book will appeal to anyone interested in the science and industry of the early nineteenth century, as well as to students of the philosophy and history of science.” [publisher’s notes]



***Adam Sedgwick
Geologist and Dalesman***

Colin Speakman

New edition 2018 xiv +145pp

Gritstone Publishing, Hebden Bridge

ISBN 978-0-9955609-4-9 paperback

Mail order from the Yorkshire Geological Society

<http://www.yorksgeolsoc.org.uk/book.php>

£10.00 + £2.00 p&p

“Out of print and much sought after for over 30 years, this facsimile edition with a new introduction and illustrations is published jointly by the Yorkshire Geological Society and Gritstone Publishing Co-operative Ltd. It tells the story of the upbringing, professional life and research of Adam Sedgwick (1785–1873), one of the great figures of geology and of Victorian British science.

Colin Speakman, already well known for his writings and broadcasts on the Yorkshire Dales, carries the reader from Sedgwick’s humble beginnings in Dent to his long-held academic positions of Woodwardian Professor and Master of Trinity College in the University of Cambridge. He greatly influenced at first his most famous student, Charles Darwin, though he eventually rejected Darwin’s more controversial views. Because of the detailed research by the author, the book will appeal not only to readers with an interest in the history of science but also to those who enjoy a fast-moving and diverse story of success, often against all the odds, while lovers of Yorkshire, and in particular the Dales, will find much to enjoy.” [Andy Howard & Patrick Boylan, *Yorkshire Geological Society Circular* 613, February 2018]

Ironstone mining in the Lincolnshire Wolds

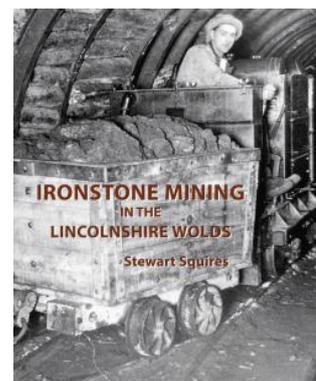
Stewart Squires

The Society for Lincolnshire History and Archaeology. Lincoln.

2017. 135pp.

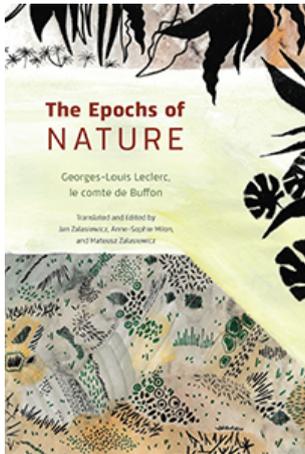
ISBN 978 0 903582 57 5 paperback

£15.00 (£18.00 by post UK) from SLHA, 213 Steep Hill, Lincoln LN2 1LS



“...Though not aimed primarily at geologists, this very clearly written and well-illustrated book describes the development, growth and closure of ironstone mines between 1867 and 1969 in a small area of Lincolnshire not usually associated with industrial activity. It describes the machinery and

tells of the miners themselves, the risks they took, how they worked and relaxed. It is a human story of exploration, innovation and hard physical work which has left a legacy to be seen in today's still beautiful landscape..... The latest Jurassic and early Cretaceous rocks of Lincolnshire show facies and thickness variation over relatively short distances. One bed, the Claxby Ironstone, attained a thickness and iron content sufficient to make it a viable iron ore in the area just south of Caistor. The effects of this attraction to the iron-making industry and the consequent industrial archaeology and social history are recorded through photographs, plans, records and anecdotes collected by the author during his many years of research...." [Paul Hildreth, *Yorkshire Geological Society Circular* 613, February 2018]



The Epochs of Nature

Georges-Louis Leclerc, le Comte de Buffon

Translated and compiled by J. Zalasiewicz, A.-S. Milon & M.

Zalasiewicz with an Introduction by J. Zalasiewicz, S. Sörlin, L. Robin & J. Grinevald.

Chicago University Press. 2018. 288 pp.

ISBN 9780226395432 cloth \$45

ISBN 9780226395579 E book \$45

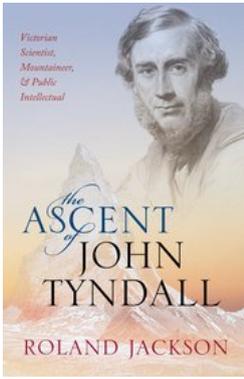
Pre-order Amazon price £34.00 (available 4th June 2018).

“Georges-Louis Leclerc, le comte de Buffon's *The Epochs of Nature*, originally published as *Les Époques de la Nature* in 1778, is one of the

first great popular science books, a work of style and insight that was devoured by Catherine the Great of Russia and influenced Humboldt, Darwin, Lyell, Vernadsky, and many other renowned scientists. It is the first geological history of the world, stretching from the Earth's origins to its foreseen end, and though Buffon was limited by the scientific knowledge of his era—the substance of the Earth was not, as he asserts, dragged out of the sun by a giant comet, nor is the sun's heat generated by tidal forces—many of his deductions appear today as startling insights. And yet, *The Epochs of Nature* has never before been available in its entirety in English—until now.

In seven epochs, Buffon reveals the main features of an evolving Earth, from its hard rock substrate to the sedimentary layers on top, from the minerals and fossils found within these layers to volcanoes, earthquakes, and rises and falls in sea level—and he even touches on age-old mysteries like why the sun shines. In one of many moments of striking scientific prescience, Buffon details evidence for species extinction a generation before Cuvier's more famous assertion of the phenomenon. His seventh and final epoch does nothing less than offer the first geological glimpse of the idea that humans are altering the very foundations of the Earth—an idea of remarkable resonance as we debate the designation of another epoch: the Anthropocene. Also featuring Buffon's extensive “Notes Justificatives”, in which he offers further evidence to support his assertions (and discusses vanished monstrous North American beasts—what we know as mastodons—as well as the potential existence of human giants), plus an enlightening introduction by editor and translator Jan Zalasiewicz and historians of science Sverker Sörlin, Libby Robin and Jacques Grinevald, this extraordinary new translation revives Buffon's quite literally groundbreaking work for a new age.” [publisher's notes]

See also Jan Zalasiewicz's article 'Buffon the Geologist' in April's *Geoscientist* Vol.28, No. 03; available online at <https://www.geolsoc.org.uk/Geoscientist/April-2018/Buffon-the-geologist>



The Ascent of John Tyndall
Victorian Scientist, Mountaineer, and Public Intellectual

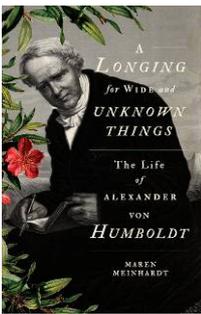
Roland Jackson

Oxford University Press 2018 576pp.

ISBN 9780198788959 hardback RRP £25.00

“John Tyndall was a leading scientific figure in Victorian Britain, who established the physical basis of the greenhouse effect, and why the sky is blue. This rich biography describes the colourful life and achievements of this brilliant communicator, physicist, and mountaineer, who ascended from humble beginnings to the heart of Victorian society.

- Drawing extensively on journals, letters, literary articles, and scientific publications of the time, Roland Jackson paints a detailed portrait of John Tyndall and his world in this first major biography for over 70 years
- Sets Tyndall's life and changing ideas against the backdrop of the intense debates of Victorian Britain concerning science, religion, and society
- Describes both Tyndall's scientific achievements and his major mountaineering expeditions
- Captures the intellectual life of mid-Victorian Britain through Tyndall's interactions with figures such as Faraday, Huxley, Pasteur, Carlyle and Tennyson” [publisher’s notes]



A Longing for Wide and Unknown Things: The Life of Alexander von Humboldt

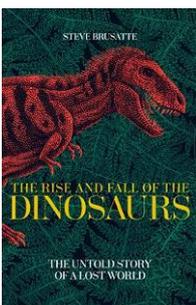
Maren Meinhardt

Hurst Publishers 2018 320pp.

ISBN 9781849048903 hardback RRP £25.00

“A beautifully written biography of a giant of the nineteenth century, explorer of Latin America and founder of biogeography.”

“Alexander von Humboldt was the most admired scientist of his day. But the achievements for which he was most celebrated in his lifetime always fell short of perfection. When he climbed the Chimborazo, then believed to be the highest mountain in the world, he did not quite reach the top; he established the existence of the Casiquiare canal, between the great water systems of the Orinoco and the Amazon, but this had been well known to local people; and his magisterial work, *Cosmos*, was left unfinished. This was no coincidence. Humboldt’s pursuit of an all-encompassing, immersive approach to science was a way of finding limits of nature and of the scientist’s own self. *A Longing for Wide and Unknown Things* portrays a scientific life lived in the era of German Romanticism—a time of radical change, where the focus on the individual placed a new value on feeling, and the pursuit of personal desires. As Humboldt himself admitted, he ‘would have sailed to the remotest South Seas, even if it hadn’t fulfilled any scientific purpose whatever’.”[publisher’s notes]



The Rise and Fall of the Dinosaurs. The Untold Story of a Lost World

Steve Brusatte

Macmillan 2018 416pp.

ISBN 9781509830060 hardback RRP £20.00

“66 million years ago the dinosaurs were wiped from the face of the earth. Today, Dr. Steve Brusatte [Edinburgh University], one of the leading scientists of a new

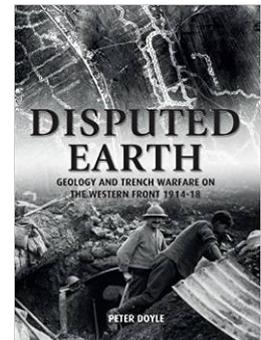
generation of dinosaur hunters, armed with cutting edge technology, is piecing together the complete story of how the dinosaurs ruled the earth for 150 million years.In *The Rise and Fall of the Dinosaurs*, top dinosaur expert Brusatte, tells the real story of how dinosaurs rose to dominate the planet. Using the fossil clues that have been gathered using state of the art technology, Brusatte follows these magnificent creatures from their beginnings in the Early Triassic period, through the Jurassic period to their final days in the Cretaceous and the legacy that they left behind. Along the way, Brusatte introduces us to modern day dinosaur hunters and gives an insight into what it's like to be a paleontologist. *The Rise and Fall of the Dinosaurs* is full of thrilling accounts of some of his personal discoveries, including primitive human-sized tyrannosaurs, monstrous carnivores even larger than T. rex, and feathered raptor dinosaurs preserved in lava from China....." [publisher's notes]

Disputed Earth: Geology and trench warfare on the Western Front 1914–18

Peter Doyle

Unicorn Publishing Group 2017 208pp.

ISBN 978-1-910500-87-3 paperback RRP £24.00



“Geology controls the outcome of battle and no more so than during the trench warfare of the Great War; this new book by expert Peter Doyle takes us through the details. An understanding of terrain has been the mark of a great commander from at least the time of Sun Tzu, and most campaigns can be interpreted and understood from this standpoint. It is the Great War, a war of trenches and dug-outs, of mines and mud, that epitomises the struggles of commander and soldier alike in the prosecution of battle against the obstacles set for them by terrain. This book, based on twenty-five years of study, takes the geology of northern France and Flanders and examines such issues as: What created Flanders mud? How were the Germans able to dig deep dug-outs to resist the British on the Somme? and, Why were the British successful at mine warfare? These and other issues are dealt with in this volume illustrated throughout with maps and photographs.” [publisher's notes]

BOOK OFFER

14–18: La Terre et le Feu, géologie et géologues sur le front occidental



The Association des Géologues du Bassin de Paris (AGBP), the Comité Français d'Histoire de la Géologie (COFRHIGEO) and the Société Géologique du Nord (SGN) have produced a book entitled *14-18 : La Terre et le Feu, géologie et géologues sur le front occidental*. The book, which has been awarded the label of the Mission du Centenaire of the Ministry of Defence, is now part of the official celebrations and is placed under the patronage of the French Académie des Sciences and the Delegation of the French Republic to Unesco. Peter Doyle and Ted Rose are amongst the British authors who have contributed chapters.

Publication is due at the end of 2018 and is available at a subscription price of 28 € (postage and packing 8 €) until October 15th 2018. See <http://agbp.fr/grande/le-livre>

RECENT HISTORICAL PUBLICATIONS BY HOGG MEMBERS

Please let us know of your recent output so that we can publicise it in the Newsletter.

David G. Bate & Andrew L. Morrison. 2018. Some aspects of the British Geological Survey's contribution to the war effort at the Western Front, 1914-1918. *Proceedings of the Geologists' Association*, **129** (1), 3–11.

Cherry Lewis. 2018. 'The same topics still make a good story'. Letter in *New Scientist*, No. 3173, 14 April 2018, p.53.

Nina Morgan. 2018. Distant Thunder: Enduring Love. *Geoscientist*, **28** (1), 27. [on Hugh and Lydia Miller].

_____ 2018. Distant Thunder: Spot on! *Geoscientist*, **28** (2), 24.[on Trevor Ford, *Charnia* and Leicester meteorite].

_____ 2018. Distant Thunder: Dinosaur deniers. *Geoscientist*, **28** (3), 26.

_____ 2018. Distant Thunder: Overwhelming generosity. *Geoscientist*, **28** (4), 26 [on fossils from Tingewick].

_____ 2018. White Watson's Tablets—a story of innovation in the understanding of geology as revealed by Trevor Ford. *Yorkshire Geological Society Circular*, **615**, 9–10 (Abstract of talk to be given on 2nd June 2018).

Henriette McBurney, **Ian Rolfe**, Caterina Napoleone & Paula Findlen. 2017. *The Paper Museum of Cassina dal Pozzo. Birds, Other Animals and Natural Curiosities*. 2 vols Royal Collection Trust in association with Harvey Miller Publishers. ISBN 978-1-909400-60-3 hardback 944pp. 28b/w ills 428 col. ills £150/€170/\$221.

“This two-volume catalogue brings together some of the finest natural history drawings assembled by Cassiano dal Pozzo (1588–1657) and his younger brother Carlo Antonio (1606–89) in Rome over the course of the seventeenth century. Included are 251 coloured drawings of fauna and 63 of precious stones, marbles, fossils, exotic fruits and seeds and other natural curiosities. Cassiano had a particular interest in ornithology, and birds are thus the best-represented animals in this group, with more than 200 drawings of both native and exotic species. Many were the models for the plates in a book on ornithology, the *Uccelliera*, which Cassiano co-authored and presented to the Accademia dei Lincei on his election to that scientific society in 1622. Several others were executed to accompany discourses written by Cassiano on individual birds, often following dissection of those birds. Other drawings of animals here include mammals, fishes, crustaceans and molluscs.

The drawings of mineral specimens and natural curiosities illustrate items typically found in the collectors' cabinets of the period: gemstones, marbles, bezoars, corals, fossils, exotic seeds and scientific instruments. Many of the specimens came from the collections of Cassiano's contemporaries and were the focal point of scientific investigations and discussion. To catalogue such a wide range of material, a team of historians of art and science and specialists from the fields of ornithology, zoology and geology has been assembled.

The introductory essays discuss Cassiano's engagement with nature and the collecting and illustrating of fauna and other *naturalia* in the seventeenth century. Documentary appendices provide transcriptions and translations of key manuscript sources. Following the dispersal of a large number of the natural history drawings from the Royal Library at Windsor Castle between the two world wars, many are now in public and private collections. They constitute more than a third of the drawings catalogued here, which allows Cassiano's surviving holdings in these fields of natural history to be studied in their entirety.” [publisher's notes]

Martin S. Rudwick 2018. A bit of history: paradigms in palaeobiology. *The Palaeontology Newsletter*, No. 97, 47–49 (available at <https://www.palass.org/publications/newsletter/archive>)

This partly autobiographical article summarizes the content of the author's two earlier papers:

Rudwick, M. S. 2017a. Functional Morphology in Paleobiology: Origins of the Method of 'Paradigms'. *Journal of the History of Biology*, 51, 135–178.

----- 2017b. The Fate of the Method of 'Paradigms' in Paleobiology. DOI <10.1007/s10739-017-9501-z> [Epub ahead of print].

OTHER RECENT ARTICLES OF HISTORICAL INTEREST IN RECENT *GEOSCIENTIST* (The Fellowship Magazine of the Geological Society of London)¹

Douglas Palmer. 2018. Thomas McKenny Hughes—a hundred years ago. [**Online Special**. Thomas McKenny Hughes (1832–1917) was Adam Sedgwick’s successor as eighth Woodwardian Professor and his biographer Douglas Palmer (Sedgwick Museum) blows the dust off his memory. <https://www.geolsoc.org.uk/Geoscientist/March-2018/>

Jan Zalasiewicz, Anne-Sophie Milon & Mateusz Zalasiewicz. 2018. Buffon the geologist—Jan Zalasiewicz and friends uncover an under-reported aspect of the great French biologist. *Geoscientist*, **28** (3), 16–19.

Douglas Palmer. 2018. Dalesman Don—This year is the bicentenary of Adam Sedgwick’s appointment as Woodwardian Professor. *Geoscientist*, **28** (4), 16–19.

¹Circulation of *Geoscientist* is not restricted to fellows of The Geological Society as editor Ted Nield explains:

“...it is available to all freely online because, like the print version (which through departmental coffee tables and library ephemera displays, goes farther than the Fellowship too), it is seen as a shop-window for the Society and a spur to recruitment. The reason it is emphasised that it is the ‘Fellowship’ magazine is to remind readers that it serves the demos, and is not (like most such publications) a dull PR-sheet Pravda, obedient creature of the elected, and their executive arm. It constitutes a fourth estate which allows the electorate to criticise their representatives and their functionaries should the need be felt to do so. This sophisticated arrangement, which in my opinion lies at the heart of the magazine’s success, came about because *Geoscientist* arose out of the ashes of The British Geologist, the magazine of the Institution of Geologists, which on merger with the Society was not content that its beloved organ should lose its identity—and wished to be sure that, in that atmosphere of fear and loathing, it could remain independent just in case the merger went wrong and former IG members could say so in print.”

RECORDS AND ARCHIVES

In answer to a plea for help regarding storage of archival material that went out to HOGG members via JISCMail in April, **Sandra Freshney** (Archivist at the Sedgwick Museum of Earth Sciences, Cambridge, UK) added the following guidance:

“For those interested in Records & Archives (general discussions as well as more specialist info/advice), please do have a look at the JISCMail group ARCHIVES-NRA@JISCMAIL.AC.UK and consider signing up to it, I think many of you would find it of some interest

And for professional advice, please consult with:

The National Archives: <http://www.nationalarchives.gov.uk/>

The Archives and Records Association: <http://www.archives.org.uk/>

The British Records Association: <http://www.britishrecordsassociation.org.uk/>

For anyone interested in the Sedgwick Museum Archive collections, please do take a look at our website, and the *Archives Hub*—I hope lots of you are familiar with this excellent resource for archive research <https://archiveshub.jisc.ac.uk/>”

STOP PRESS

Dr Joanne Kluessendorf RIP

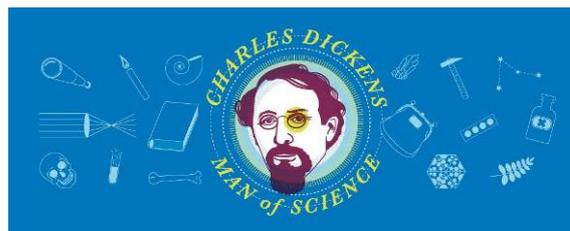
HOGG member **Alan Cutler** has passed on the following news about the death of Joanne Kluessendorf:

"Dr. Joanne Kluessendorf died in a Milwaukee area hospital on June 1, 2018 at the age of 69. Joanne was the founding Director of the Weis Earth Science Museum in Menasha, Wisconsin, and was widely recognized as an expert in the bedrock geology and paleontology of the Midwestern United States. In addition to her scientific research, she was long known for her education, historical, preservation, and museum activities."

Alan adds "It was through her historical work that I first knew her. In particular with Ed Landing and Don Mikulic, Joanne was one of the editors of *Fabulous Fossils, 300 years of Worldwide Research on Trilobites*, (Bulletin 507), a collection of papers published by New York State Museum in 2007. In that publication and of special interest to me, she was co-author with Don of the paper, "Legacy of the Locust—Dudley and its famous Trilobite, *Calymene Blumenbachii*"

OTHER FUTURE MEETINGS AND EVENTS

CHARLES DICKENS: MAN OF SCIENCE
CHARLES DICKENS MUSEUM
48 DOUGHTY STREET
LONDON WC1N 2LX
24th March–11th November 2018
Tuesday–Sunday, 10am–5pm, last entry 4pm



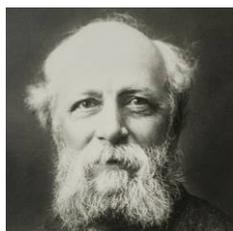
“*Charles Dickens: Man of Science* aims to reveal Dickens not only as a scientific enthusiast, but as the key communicator of science in the Victorian age. Displaying his writings alongside artefacts, instruments, and texts of the developing sciences, we share the story of Dickens’s friendships and scientific passions. Journeying through some of Dickens's favourite sciences—geology, thermodynamics, chemistry, and medicine—we reveal that what made him a great writer was precisely what made him a man of science.”

A number of items from The Geological Society Library's special collections—including Roderick Murchison's geological hammer—are on display, as well as the Library’s copies of Henry De La Beche's drawings *Duria Antiquior* and *Awful Changes*, and William Buckland's *Bridgewater Treatise*.

The Museum is offering Fellows of The Geological Society 2 for the price of 1 entry for the duration of the exhibition.



HIDDEN GEMS – SCOTTISH AGATES
NATIONAL MUSEUM OF SCOTLAND
CHAMBERS STREET, EDINBURGH
4th May–2nd September 2018
10.00–17.00hrs Admission free



The exhibition Hidden Gems – Scottish Agates explores the variety and beauty of Scottish agates. The deceptively simple exteriors of agates conceal an enormous spectrum of colour and texture. Discover how and why these beautiful semi-precious Scottish gems have captivated collectors past and present, in particular their allure for Professor Matthew Forster Heddle (1828–1897, Scotland’s most famous mineralogist) and the current Earl of Cromartie.

<https://www.nms.ac.uk/national-museum-of-scotland/whats-on/hidden-gems-scotland-s-agates/>

5TH INTERNATIONAL PALAEOLOGICAL CONGRESS
PARIS, FRANCE
9th-13th JUNE 2018

Session S19 - How to build a palaeontological collection: expeditions, excavations, exchanges



Organizers:

Eric Buffetaut (Geology laboratory, Ecole Normale Supérieure, France), Irina Podgorny (CONICET - Universidad Nacional de La Plata, Argentina), Margaret Lopes (University of Brasilia, Brazil)

“The aim of this [session] is to explore how fossil collections have been built, since the early days of palaeontology to the present. Ways to build a palaeontological collection include fossil collecting, sometimes in the course of expeditions to remote parts of the world, which may involve individual field work as well as large-scale excavations, the funding of which (by institutions, patrons, private means etc.) needs further consideration. A point worth investigating is how some well-known 19th century palaeontologists used the sale of fossil specimens to fund their field work. Another significant way of building and increasing fossil collections, especially in the 19th and early 20th centuries, was through exchange and/or purchase of fossils, either between institutions or between individual palaeontologists or fossil dealers. Exchanges and sales of replicas (especially casts) will also be taken into consideration. Confiscations, especially in wartime, have also been used to expand fossil collections. Transportation of fossils from the field to the museum /laboratory, networks of fossil exchange as well as organization of fieldwork are some of the topics to be discussed.

This symposium will be global in geographical scope, with special emphasis on international expeditions and exchanges, and will cover all types of fossil collections. It is expected that it will be of interest to historians of science, palaeontologists interested in the history of their discipline, and curators of palaeontological museums and collections. We plan to publish the proceedings of the symposium in a suitable international journal.”

Further details at <https://ipc5.sciencesconf.org/>

**FIELD GEOLOGY IN THE STEPS OF THE PIONEERS
SHROPSHIRE SUMMER SCHOOL
HARPER ADAMS UNIVERSITY, NEWPORT, SHROPSHIRE
28th July–4th August 2018
Led by Chris Darmon and Colin Schofield (Down to Earth)**

The week “will give us the opportunity to celebrate the work of people like Murchison and Lapworth at some of the very localities that they visited back in the nineteenth century. At some of our indoor sessions, you can learn more about these pioneers and their work.”

See full brochure at www.geosupplies.co.uk or e mail downtoearth@geosupplies.co.uk

**89th CONGRESS OF THE GEOLOGICAL SOCIETY OF ITALY (Società Geologica Italiana SIMP) AND ITALIAN SOCIETY FOR MINERALOGY AND PETROGRAPHY
12th–14th SEPTEMBER 2018 CATANIA, SICILY**

GEOSCIENCES FOR THE ENVIRONMENT, NATURAL HAZARDS AND CULTURAL HERITAGE

**Session: History of Geosciences and Geoethics: the right path for social responsibility
Convenors: Marco Pantaloni, Silvia Peppoloni, Fabiana Console, Giuseppe Di Capua**

What cultural heritage have we received from the geologists of the past? What value references, insights, ethical guidelines can be recovered? What is the social value of geological knowledge?

The history of geosciences is an indispensable starting point for understanding the scientific and cultural climate in which the reference values of the Italian geology matured, the geological thought that accompanied its development and which today, like a red thread, binds us to our past.

Geoethics deals with the ethical, social and cultural aspects related to geosciences. One of its objectives is to improve the quality of geological research and practice, enhancing the role of the geologist and emphasizing his/her responsibilities in making decisions that may have repercussions on the natural, social and economic balance of a territory.

In recent years, the interest in these aspects of the geological activity has grown considerably, also in relation to the increasing urgency of the global challenges that affect our planet (from geological risks to the use of geo-resources, from climate changes to the reduction of pollution) and which require the involvement of geologists, as experts of the territory and its processes.

For these reasons, today it is essential to develop a reflection on the cultural and historical identity of the geological sciences, with reference to the knowledge and consciousness of the national territory, its resources and evolution, by deepening the ethical, historical, social and cultural aspects of geosciences, both in practical and theoretical terms, including case studies.

The session is jointly organized by the sections of "History of Geosciences" and of "Geoethics and Geological Culture" of the Italian Geological Society, and is promoted by INHIGEO (International Commission on the History of Geological Sciences - www.inhigeo.com) and the IAPG (International Association for Promoting Geoethics - www.geoethics.org).

<http://www.sgicatania2018.it/index.php>



SEDGWICK200



SEDGWICK BICENTENARY MEETING: SEDGWICK 200
SATURDAY 22nd SEPTEMBER 2018
DEPT OF EARTH SCIENCE, UNIVERSITY OF CAMBRIDGE

Earth Sciences in the 21st Century and beyond

Adam Sedgwick was one of the founding fathers of Geology, and 2018 marks 200 years since he was appointed to the Woodwardian Chair of Geology at the University of Cambridge. This Chair, established in 1731 by John Woodward, was the first-ever professorship in Earth Sciences and was endowed in Woodward's will with the proviso that the holder of the Chair should promulgate Woodward's own views on the history of the

Earth and look after Woodward's extensive collection of rocks, minerals and fossils. This bequest marked the beginning of geological studies in Cambridge, and 1818 marked the beginning of Sedgwick's illustrious career as a geologist.

We are celebrating this bicentenary with a one-day conference, with an impressive slate of invited speakers who will give us an up-to-date overview of Earth Sciences today and take us forwards into the future. The talks will begin with a brief introduction to Sedgwick and his times, followed by a discussion of how we can predict and mitigate the effects of volcanic eruptions and earthquakes. There will be talks on the Anthropocene and the effect we are having on the Earth's climate, and an introduction to geology on other planets and the search for extraterrestrial life. We hope you will join us for this exciting programme that is designed to be accessible to a wide audience, from sixth-

formers, to alumni and practicing geologists. The conference will be followed by a dinner hosted at Trinity College, Cambridge.

Friday 21st September

17:30 Drinks Reception, Master's Lodge, Trinity College

Saturday 22nd September

09:00 *Welcome and introduction*

09:15 *Sedgwick's legacy*: Professor Jim Secord, University of Cambridge

10:00 *The co-evolution of life and environments*: Professor Nick Butterfield, University of Cambridge

10:45 MORNING COFFEE

Restless Earth

11:15 *Partly cloudy with a chance of eruption—the future of forecasting volcanic events, large and small*: Dr Mike Poland, United States Geological Survey

12:00 *Earthquake warnings—a practical approach to an impossible problem*: Dr Lucy Jones, California Institute of Technology

12:45 LUNCH

The Anthropocene

14:00 *Defining the Anthropocene*: Professor Mark Maslin, University College London

14:45 *Climate change now and in the future*: Dame Julia Slingo, Cabot Institute, University of Bristol

15:30 AFTERNOON TEA

Beyond Earth

16:00 *If Sedgwick explored Mars - a field geologist's perspective on the search for extraterrestrial life*: Dr. Sanjeev Gupta, Imperial College London

16:45 *The search for extraterrestrial life*: Dr. Seth Shostak, SETI Institute

17:30 SEDGWICK MUSEUM DRINKS RECEPTION

19:30 DINNER IN TRINITY COLLEGE OLD KITCHEN

BOOK NOW at <https://www.esc.cam.ac.uk/alumni/sedgwick200>

INHIGEO 43rd CONFERENCE MEXICO CITY, MEXICO

12th–22nd November 2018 2nd circular now available on INHIGEO website

CONFERENCE THEMES

- History of volcanological studies
- Humboldt's influence in earth sciences
- Werner's neptunists in America
- History of mining and oil research
- General contributions on the history of geology



CONFERENCE VENUE

The Palace of Mining, one of the masterpieces of Neoclassical architecture in the Americas, was built between 1797 and 1813 by the renowned architect Manuel Tolsa, to house the Royal School of Mines and the Royal Court of Mining. Currently, it is part of the heritage of the National Autonomous University of Mexico (UNAM).

The Closing Ceremony will be held at the Geological Museum. It was built by the architect Carlos Herrera, under the guidance and collaboration of geologist José G. Aguilera, to house the Geological Institute. This building was the seat of the 10th International Geological Congress and it operated as a research institute until 1956, when it became the Museum of the Institute of Geology of the National Autonomous University of Mexico.

MID-MEETING FIELD TRIP

Mid-Meeting field trip to Tepoztlan, devoted to crossing one of the most impressive Quaternary volcanic fields of the Transmexican Volcanic belt in central Mexico. This field comprises 250 monogenetic cinder cones, the youngest created in the last 2000 years, when there were already human settlements in the region. The field trip includes a visit to the scenic Miocene volcanic succession near Tepoztlan, which is a beautiful village with traditional architecture.

POST-MEETING FIELD TRIP

Post-Meeting five-day field trip to Oaxaca, with the goal of travelling along a representative section of central Mexico stratigraphy, from the Quaternary volcanic successions to the Proterozoic high-grade metamorphic terranes. The trip includes a visit to palaeontological-rich Cretaceous sites and emblematic archeological centres. Overnights will be in Puebla, Tehuacan and Oaxaca. Important geological landscapes to see during this trip are the highest stratovolcanoes in Mexico (Popocatepetl, Iztaccihuatl and Pico de Orizaba), the Tehuacan Valley, the Juarez range and the colourful Jurassic units of Oaxaca.

REGISTRATION FEES

400 US\$ for Conference and Mid-Meeting Trip (early bird registration)

Fee will include *coffee breaks and lunch during the Conference, transportation and lunch during Mid-Meeting trip, as well as the Conference dinner at the Geological Museum.*

400 US\$ for Post-Meeting Trip (early bird registration)

Fee will include *transportation, hotel, breakfast, lunch and dinner.*

250 US\$ for special programme for accompanying participants (early bird registration)

Fee will include *special tours during the Conference, Mid-Meeting Trip and the conference dinner at the Geological Museum.*

N.B. Registration fees will not include hotel costs during the Conference.

IMPORTANT DATES

- 15 July 2018 closure of early bird registration for Conference, Post-Meeting trip, and accompanying participant's registration
- Registration fees for Conference and Post-Conference trip after 15 July will be 450 US dollars, and 300 US dollars for accompanying participants.

LOCAL ORGANIZING COMMITTEE

Dr Manuel Suárez Lastra (Director of the Institute of Geography, UNAM)

Dra Elena Centeno García (Director of the Institute of Geology, UNAM)

Dr Hugo Delgado Granados (Director of the Institute of Geophysics, UNAM)

Mtro Luis Espinosa Arrubarrena (Head of the Geological Museum, UNAM)

Dra Luz Fernanda Azuela (Institute of Geography, UNAM)

Dr Dante Moran Zenteno (Institute of Geology, UNAM)

Dra Lucero Morelos Rodríguez (Institute of Geology, UNAM)

Dr Enrique González Torres (Faculty of Engineering, UNAM)

QUERIES

Any queries should be sent by email to the organizing committee at inhigeo@igg.unam.mx

3RD BIENNIAL SOUTH-EAST ENGLAND REGIONAL CONFERENCE
SATURDAY 24TH NOVEMBER 2018
KINGS CHURCH CENTRE, BROOKS ROAD, LEWES, EAST SUSSEX
Conference Organiser: email anthony.brook27@btinternet.com

HERITAGE AND RESOURCES IN SOUTH-EAST ENGLAND

PROGRAMME

8.30–9.40 REGISTRATION AND WELCOME

9.40–10.20 *The Hastings Coast: where the High Weald meets the Sea.* Ken Brooks (Hastings and District Geological Society)

10.20–11.00 *Haunt of the Hippo: Quaternary Mammals of South-East England* Danielle Schreve (Royal Holloway, University of London)

11.00–11.30 COFFEE AND BISCUITS

11.30–12.10 *The Roman Heritage in South-East England: Real or Overrated?* David Rudling (Sussex School of Archaeology)

12.10–12.50 *The Roman Military and the Saxon Shore Forts* Simon Elliott (University of Kent at Canterbury)

12.50–2.00 BUFFET LUNCH (including 1.10–1.40 Performance of South Coast Songs and Shanties)

2.00–2.40 *The Industrial Archaeology of Sussex* John Blackwell (Sussex Industrial Archaeological Society)

2.40–3.20 *Smuggling in the South-East, 1740–1840: Myth or Reality?* Chris Hare (History People U.K.)

3.20–3.50 TEA AND BISCUITS

3.50–4.30 *The Kent Coalfield: Discovery, Development and Closure* Geoff Turner

4.30–5.10 *Offshore Wind Farms as Renewable Energy* David Shilston (Atkins)

Registration Form

Name _____

Address _____

_____ Tel: _____

Email: _____

CONFERENCE FEE for the day is still only £25, including coffee/tea/biscuits, buffet lunch and Conference publication. CONFERENCE FEE for Full-time Students is only £20!

Please make your cheque payable to *Anthony Brook* and forward, with this completed Registration Form, to:

Anthony Brook, 15 Cambourne Court, Shelley Road, Worthing, BN11 4BQ

**ICMG19—THE 13TH INTERNATIONAL CONFERENCE ON MILITARY
GEOSCIENCES PADOVA (ITALY)
24th—28th JUNE 2019**

Conference Theme:

Peace Follows War: Geosciences, Territorial Impacts and Post-conflict Reconstruction

The Conference will be held between Monday 24th June and Friday 28th June 2019, at the University of Padova in northern Italy. The Conference is being organised on behalf of the IAMG by the Department of Historical and Geographic Sciences and the Ancient World (DiSSGeA).

Location

The University of Padova is located in north-eastern Italy, 20 minutes from Venice. It is close to the beaches of the Adriatic Sea and to the Dolomites, one of the most scenic regions of the Alps. Conference delegates and accompanying guests have easy access to the historic cities of northern and central Italy such as Milan, Verona, Bologna, Florence and Rome (ranging from 30 minutes to 3 hours train journey) with their many artistic treasures. The recommended port of arrival is the International Airport Marco Polo in Venice.

Provisional Program—Conference

- **Sunday 23rd June:** Icebreaker: 1800–2000hrs at the Geographical Section of the DiSSGeA Department. Wine tasting and food for which Italy is justifiably famous.
- **Monday 24th June:** Opening Ceremony & Key Notes 0900–13:00hrs; Scientific Session 1400–18:00hrs; evening visit to the Cappella degli Scrovegni and/or Padova City Center.
- **Tuesday 25th June:** Scientific session 0900–1300hrs; Poster Session 1430–1600hrs; evening visit to S. Pelagio Air Museum (via bus transfer at 1600hrs); Conference Dinner at the Euganean Hills winery and restaurant; return to accommodation at 2300hrs.
- **Wednesday 26th June:** Mid-conference excursion—Venice fortifications: the Naval Arsenal and WW1 forts. Transfer by bus or train to Venice. Visit of Forte Marghera. Provisionally, a boat tour in the lagoon with lunch on a lagoon island. Visit to the Naval Arsenal of Venice. Free evening in San Marco Square and return to Padova by group bus or independently by train (30 minutes).
- **Thursday 27th June:** Bus transfer to Montello Hill. Scientific session 1000–1300hrs. Field trip to the battlefield and visit of the WW1 Sacramentum (military cemetery). Visit and evening dinner at the Great War Memorial.
- **Friday 28th June:** Scientific sessions 0900–1500hrs. IAMG Biennial General Meeting 1500–1700hrs.

Themes

The following themes have been identified as being of significant interest. Other topics may be considered upon receipt of abstract. This list will be updated in the next circular and potential attendees are encouraged to contact the organisers with thoughts on additional themes.

- The Alpine operational environment
- WW1 era history of northern Italy
- Post-conflict reconstruction
- Military tunnelling
- Venetian military history
- Conflict archaeology

Abstracts

Abstracts are limited to 1,200 words and may contain references and up to three illustrations. Details regarding submission, including a submission template, will be provided with the second circular. Deadline for abstract submission: 31st January 2019.

Conference Committee

- President–Prof G.L. Fontana
- Secretary–Prof Aldino Bondesan
- Members–Roberto Francese, Marco Mondini, Francesco Ferrarese, Ted Rose

The Conference Committee will be supported by members from the Council of the Association, including:

- The Association President–Cdr (Dr) Hennie Smit (South Africa)
 - The Association Secretary–Maj Drew Craig (UK)
 - Representative from ICMG 2015–Annapolis, USA–Prof Peter Guth
 - Representative from ICMG 2017–Stellenbosch, South Africa–Cdr (Dr) Jacques Bezuidenhout
-

Post-Conference Excursion: Italian Alps from WW1 to Cold War (5 days)

During the tour, participants will visit the battlefields, museums, memorials and cemeteries of the Italian Alps and Piave frontline. The tour includes several WW1 glacial ‘White War’ sites, including high mountain emplacements (up to 3,000 masl), mine warfare sites, fortresses, military tunnels, and the largest Memorials and Military Museum of Northern Italy. Most of the battlefields are in the Dolomites, probably the most famous mountains of the alpine range which is, in turn, reflected in its status as a UNESCO World Heritage area.

Provisional Excursion Program

- Day 1 **Saturday 29th June**–Transfer from Padova to Trento. Cogollo del Cengio war track; Thunder Base (Cold War American base); War Museum of Rovereto; overnight in Trento. Museo della Grande Guerra di Rovereto.
 - Day 2 **Sunday 30th June**–Air Force Museum “Caproni”, Trento; transfer from Trento to Marmolada Glacier. Cableway to Mount Marmolada. Serauta defensive Italian positions (field excursion). Passo Fedaia War Museum. Overnight in Cortina d’Ampezzo.
 - Day 3 **Monday 1st July**–Transfer from Cortina d’Ampezzo to Lagazuoi. Cableway to Lagazuoi high mountain battlefield. Descent by cableway or by foot through a system of WW1 galleries and fortifications. Visit of the Forte Tre Sassi museum. Overnight in Cortina.
 - Day 4 **Tuesday 2nd July**–Transfer from Cortina d’Ampezzo to Monte Piana open air museum. 4-wheel-drive mountain trip to Italian and Austrorungarian fortifications. Visit to the 3 Cime di Lavaredo and Monte Croce Comelico Pass. Overnight in Auronzo di Cadore.
 - Day 5 **Wednesday 3rd July**–Transfer from Auronzo di Cadore to the Cold war bunkers at Savogna. Then, Redipuglia (Biggest WW1 Memorial; Memorial of Redipuglia. Transfer to Caorle beach or to Trieste.
 - Day 6 **Thursday 4th July**–Transfer to the Venice International Airport, to Venice or to Padova.
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Key Dates

- First circular: May 2018
 - Second circular: October 2018
 - Third circular: December 2018
 - Abstract submission deadline: 31st January 2019
 - Abstract acceptance notification: 15th February 2019
 - Registration deadline: 28th February 2019
 - Fourth and final circular: March 2019
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INHIGEO SYMPOSIA 2019–2021

- **2019** 44th INHIGEO Symposium Como/Varese, Italy
- **2020** 45th INHIGEO Symposium New Delhi, India (in association with the 36th International Geological Congress)
- **2021** 46th INHIGEO Symposium Krakow, Poland and 25th International Congress on the History of Science and Technology (25ICHST), Prague



HOGG STANDING ORDER MANDATE

Name of bank or building society.....

Branch address.....

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Sort code.....Account number.....

Account name.....

Please pay the amount of £15 (fifteen pounds) to the History of Geology Group of the Geological Society (Santander Business Account, Sort code ___ - ___ - ___ Account number _____) on 1st January (or closest date thereto) following the date of this instruction and annually thereafter until terminated by me in writing. **[NB Account details will be inserted by the HOGG Treasurer.]**

Signed.....Date.....

PLEASE SEND THE COMPLETED MANDATE TO

**David Earle (HOGG Treasurer)
61 Straight Road, Old Windsor, Berkshire SL4 2RT**