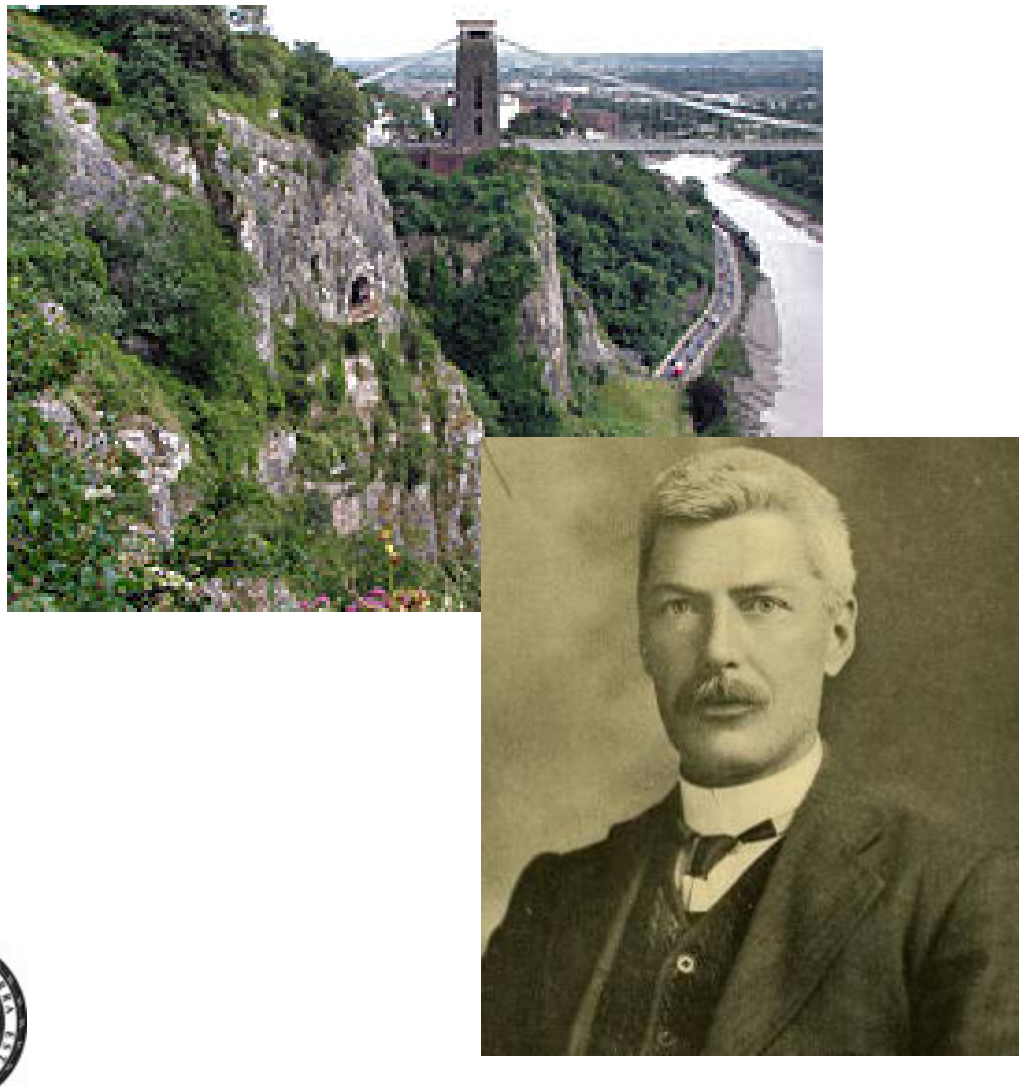
HOGG

Newsletter of the History of Geology Group of The Geological Society



Number 62
February 2018

Front cover

Arthur Vaughan (1868–1915) and the Avon Gorge, Clifton, Bristol

March 7th 2018 is the 150th anniversary of the birth of Arthur Vaughan. His paper of 1905 on the fossil sequences and biozonation of the Carboniferous Limestone of the Bristol region earned Vaughan the Geological Society's Wollaston Fund in 1907 and Lyell Medal in 1910, and "elevated the Clifton Gorge to the status of being one of geology's classical localities".

Educated at University College London and Trinity College Cambridge, Vaughan became a science tutor at an Army training establishment at Clifton, Bristol (1891–1910) where he became acquainted with Edward Wilson, curator of the Bristol Museum, and Sidney Reynolds, professor at the University College, Bristol. They were influential in steering Vaughan towards his main geological work of which it has been said "no more important piece of palaeontological stratigraphy has been carried out since Lapworth's work on the Lower Palaeozoic rocks". In 1910, Vaughan moved to Oxford to lecture on geology at the University. He died at the age of only 47 on 3rd December 1915.

Sources:
Herries Davies, G. L. 2007 *Whatever is Under the Earth. The Geological Society of London 1807 to 2007*. The Geological Society London. 356pp.
Reynolds, S. H. 1916. Obituary Arthur Vaughan B.A. (Cant.), M.A (Oxon), D.Sc. (Lond.). *The Geological Magazine*, New Series, Decade 6, v. 3, 92–96.
Savage, R. J. G. 2004. Vaughan, Arthur (1868–1915), geologist. *Oxford Dictionary of National Biography*. *https://doi.org/10.1093/ref:odnb/56920*

Images: courtesy Wikipedia and *The Geological Magazine*

Editorial subcommittee
Beris Cox (e mail: beris.cox@btinternet.com)
David Earle (e mail: daearle@btinternet.com)

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 .

HOGG NEWSLETTER 62

CONTENTS

LETTER FROM THE CHAIR

Although we're in February already, may I begin by wishing you all a (slightly belated) happy and prosperous New Year! We start 2018 with several new committee members. At our November AGM, we said goodbye to Ted Rose and Jill Darrell, both of whom have completed their three year stint on committee; we are grateful for all they have done for HOGG during that time. I'm sure that we won't let them fade into the background; Ted continues to oversee the forthcoming *Special Publication* on the military aspects of engineering geology and I'm sure we'll be turning to Jill from time to time for help and advice, based as she is at the Natural History Museum. Joining us in their stead, we are pleased to welcome Nina Morgan and Duncan Hawley who were elected at the AGM and we are delighted to welcome back Leucha Veneer who has long been our official tweeter and has now agreed to help coordinate our social media and to look after our website. The new committee met for the first time on 13th February when we worked our way through a packed agenda.

Amongst the issues we discussed was the impact of the new General Data Protection Regulation (GDPR) which comes into effect from 25th May 2018. This is an enhancement of the existing legislation of the Data Protection Act and requires us to be able to demonstrate greater accountability in how we manage personal data, and deal with and notify any data breach as well as making it clearer how inaccurate data can be corrected and how we deal with requests to have information erased. In terms of how this will manifest itself to you, our members, you are likely to receive requests seeking specific consent for us to store and use your data. We will be required to be able to demonstrate that such consent was given and to maintain an effective audit trail to that end. We have a small working group pursuing what actions we need to take. Look out for further information about this over the next couple of months through JISCmail, our website, and our Newsletter.

Our AGM in November last was held within a very successful joint meeting at the Geological Society, its theme considering the Society of Arts and its encouragement of mineralogy and geology between 1754 and 1900. This was arranged by John Henry on behalf of HOGG and Susan Bennett of the William Shipley Group and about 45 attended. Our thanks to John and Susan for pulling this together and giving us an insight into an aspect of the history of our science that was unknown to many of us.

This year our meetings programme begins with an Open Meeting at the Geological Society on 9th May. Convened by our Secretary Chris Duffin, this is an opportunity to present a short paper on your recent work or to describe work still in progress. Do, please, make the most of this chance to tell us all what you're up to!

On 18th September, we are planning a joint meeting in Bath with the Geological Curators' Group along with the Bath Royal Literary and Scientific Institution and the Bath Geological Society to consider the history of geology and collections not only in Bath but in the wider region of the South West. Look out for more on this and a call for papers in due course.

Our 2018 AGM is scheduled for 22nd November at the Geological Society when we will be looking at the history of coal geology, a theme brought to us by the Geological Society's Science Committee to mark the recent extinction of the Coal Geology Specialist Group. Our Vice Chairman Geoff Walton is pulling together an interesting programme.

Looking ahead to 2019, we have a conference planned for May of that year to mark the centenary of the admission of women as Fellows of the Geological Society and we are also exploring the

possibility of meetings in Edinburgh and Cambridge. 2019/2020 also sees the bicentenary of the publication of the Geological Society's Geological Map of England and Wales compiled by G.B Greenough. After much consideration and discussion about whether we mark the bicentenary on the date on the map (1st November 1819) or on its actual date of publication (1st May 1820), we have decided that May 2020 is a more appropriate date, so look out for more on this forthcoming anniversary over the next couple of years. With 'tempus fugiting' with increasing velocity, all of these meetings will be upon us sooner than we realise.

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

HOGG AGM 2017

The 2017 HOGG AGM was held at Burlington House on Thursday 9th November during the Society of Arts meeting. For the benefit of those members who were not present, the reports of the Chair, Secretary and Treasurer are included here.

Chair's Report 2017

And so another full year of HOGG activities comes to a close. This year we've had, I think, a diverse and interesting range of meetings, beginning with one in December to commemorate the life and work of the late Bob Symes, followed by Cherry Lewis' May weekend in the footsteps of David Mushet in the Forest of Dean, our September weekend meeting in Lyme Regis, and now our AGM. Our thanks are due not only to those who take on the job of convening our meetings but to all who contribute as speakers and field leaders and to our members who come along and take part. I hope that we can continue to provide a meeting programme that meets your interests. We are always very open to suggestions for meetings, especially if you want to do the organisation!

Some of our proceedings make it into print and I'm delighted that HOGG continues to contribute to Geological Society Special Publications. This year we've seen the publication of SP452 *Geology and Medicine: Historical Connections*, edited by Chris Duffin, Christopher Gardner-Thorpe and Dick Moody, which arises from a HOGG meeting in 2014. Meanwhile, Ted Rose is bringing to completion another Special Publication from last year's meeting on military aspects of engineering geology. We are also looking into the possibility of publishing an expanded proceedings of our Lyme Regis meeting.

We're hoping soon to finalise our 2018 meeting programme which begins on 9th May with an Open Meeting at Burlington House organised by Chris Duffin. This is your opportunity to present a short paper on any aspect of the history of geology, or to describe work in progress. Contact Chris if you have a paper to offer. We're awaiting confirmation of a meeting in Bath, organised jointly with the Geological Curators' Group, probably in mid September; and we hope to have our AGM in Burlington House in November with a meeting on the history of coal geology. Calls for papers for both the Bath and coal meetings will go out in the February newsletter.

Looking further ahead, on 20th–21st May 2019 we have a meeting to commemorate the centenary of the admission of women to membership of the Geological Society and, later in the year, we hope too to mark the bicentenary of the publication of the Geological Society's map of England and Wales. We are also considering a meeting on the history of polar geology, if there is sufficient interest and speakers. We're conscious that we don't often meet in North Britain and we're looking at the possibility of convening a meeting in Edinburgh which is not short of links to the history of geology.

During the year, Stephen Cribb has reworked our membership leaflet which will be distributed at various meetings and events, and Stephen is also looking at the possibility of producing 'pop-ups', those flexible poster/banner things that we can take to other meetings such as the GA Festival of Geology which we hope to attend next year.

Over the course of the year, we were sorry to hear of the passing of Norman Butcher, Ron Cleevely, Trevor Ford, Deryk Laming and Elizabeth McIntyre.

I would like to record my thanks to my fellow committee members, all of whom do a grand job keeping HOGG on the road and me on the straight and narrow, and are generous with their time. I'm grateful to Geoff Walton, our Vice Chair, for standing in for me at our 2016 AGM and for the experience he brings to our committee meetings; to Chris Duffin, our Secretary, who does all the hard work; to David Earle who keeps us financially viable; to Beris Cox who produces our Newsletter regularly, three times a year and makes sure it is always of interest; to Sabina Michnowicz for her revamp of our website; and to Stephen Cribb, John Henry, Ted Rose and Jill Darrell for their support and contributions to our meetings. Sadly, both Ted and Jill have reached the end of their terms on committee; on behalf of the Group, I extend our thanks for all they have done during their three years on committee.

Tom Sharpe
7th November 2017

Secretary's Report 2017

This has been another encouraging year for the History of Geology Group with a number of interesting and well-attended meetings.

At the beginning of the year, we welcomed John Henry onto the committee, and Dick Moody was appointed Field Trip Secretary.

The HOGG website and associated social media continues to evolve, thanks to the groundwork provided by Cherry Lewis and Sabina Michnowicz.

So far as publications are concerned, *Geology and Medicine: Historical Connections* was published by The Geological Society as Special Publication 452 in June 2017. Edited by Chris Duffin, Christopher Gardner-Thorpe and Dick Moody, this volume was based on a core of papers delivered to a HOGG meeting in 2014. The papers presented at the meeting on Military Aspects of Engineering Geology, Past and Present (2016) will shortly be the subject of another Special Publication of the Geological Society. We also congratulate Cherry Lewis on the publication of her biography of James Parkinson.

Meetings since the last AGM included that honouring Bob Symes, a former Vice-Chair of HOGG, on December 8th 2016. In May 2017, Cherry Lewis organised a Field Trip to the Forest of Dean, celebrating the mining and geological history of the area; fully booked, it was both popular and well received. The meeting concerning the Geologists of Lyme Regis, held in the Mary Anning Wing of the Philpot Museum in Lyme Regis also attracted a capacity audience, with a well-attended accompanying field visit to the sites of historical interest in the town led by the ever knowledgeable Hugh Torrens and Tom Sharpe. The joint meeting with the Royal Society of Arts, co-organised by John Henry (HOGG) and Susan Bennett (RSA), examining how the Society encouraged mineralogy and geology in the period from 1754 to 1900, coincides with this AGM.

HOGG members (Roy Starkey, John Henry and Chris Duffin) continue to lend expertise to the Pope's Grotto conservation project, the first phase of which should be completed in November 2017.

The Committee continues to plan for the future, with an Open Meeting to be held at Burlington House on 9th May 2018, a Geotour of Northern Spain (also in May) and a joint meeting with the GCG at Bath in September. Details of the date of the next AGM and associated meeting will be forthcoming.

It is a pleasure to be able to thank each member of the current Committee for their various contributions and hard work. We look forward to being able to serve the Group over the next year, together with two new members, who have yet to be appointed.

Chris Duffin
1st November 2017

Treasurer's Report 2017 Financial Year ending 30th September 2017

1. HOGG maintains three accounts:
   Santander Business Account
   Co-operative Community Directplus Account
   Paypal Account

Main items of expenditure

1.1 Committee travel expenses
   September 2016 £242.38
   February 2017 £277.53
   May 2017 £167.58
   September 2017 £183.75
   Additional travel £86.05

1.2 Newsletter production
   Number 58 £81.14
   Number 59 £112.35
   Number 60 £131.00

1.3 GA Affiliation fee for 2017 £40
   GA group insurance for 2017 £171.36

1.4 Website maintenance £260.00

1.5 Publicity materials £194.71

1.6 Total expenditure on these items £1947.85 (previous year £2165.08)

2. Subscription Income
   £2360
   Subscription remains the same for 2018 at £15.

3. Meetings

4.1 Military Eng. Geol. (Nov. 2016) surplus of £501.76 (inc. £250 sponsorship)
4.2 Bob Symes meeting (Dec. 2016) deficit of £50.32
4.3 Forest of Dean (May 2017) surplus of £10.09
4.4 Lyme Regis (Sept. 2017) surplus of £61.05

5. Account Balances

Santander	£10207.08
Co-op	£2016.55
Paypal	£1636.00
Total	£13859.63 (previous year £13016.80)

David Earle
6th November 2017

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.

NEW COMMITTEE MEMBERS

At the 2017 AGM, Duncan Hawley and Nina Morgan were elected to fill the two vacancies left by retiring members.

Duncan Hawley writes

I was first exposed to the achievements of the 'greats' of the heroic age of geology at school. Studying at UCL, consolidated the 'tradition' of geology, with tales of early pioneers featuring in lectures, drawing rocks and fossils collected by Greenough, and reading Geikie's *Founders of Geology* in the Geology Department's library. In my final year, I was elected President of the student Greenough Club—named after GBG. I have enjoyed a varied career in education, having taught geography and geology in both state and independent schools, at a field centre in the Forest of Dean, and at university in Swansea (I was Director of the PGCE programme). As an advocate for physical geography helping to enthuse teachers and improve the quality of their teaching, I was awarded the Geographical Association's Award for Excellence in 2012. I am a past Chair of the Earth Science Teachers' Association. I have worked and published on the geology of the Old Red Sandstone and contributed to the latest BGS maps for Brecon, Talgarth and Hay-on-Wye. I have explored the work of geological pioneers in mid-Wales and traced the footsteps of Murchison using a copy of his field notebooks, establishing the site of 'The first true Silurian' (in the Wye Valley). I have a particular interest in the development of early geological maps. I am currently involved in geoconservation through the Sheffield Area Geology Trust. I have already contributed to HOGG events through co-leading/leading field trips about W. D. Conybeare in South Wales and Murchison's 'Brecon Anticlinal', and I was a speaker at the William Smith bicentenary conference.

Nina Morgan writes

I have a DPhil in Geology from Oxford University and worked as an exploration geologist/geophysicist in the oil industry for seven years before turning to freelance science writing and editing in 1986. I now specialise in generalising—that is writing about all branches of science and technology in a lively, interesting and relevant way for non-specialist audiences of all ages. I maintain a strong interest in geology, so leap at the chance to write about geological subjects and am keen to use geology as a way of introducing science to non-scientists.

I have a long standing (but unofficial!) connection with the Geological Collections section at the Oxford University Museum of Natural History (OUMNH). I've been fascinated by history ever since I was a child and for the past 13 years have been combining my interests in geology and history by delving into the OUMNH archives in my spare time and working to produce annotated transcripts of letters written to Anne Phillips by her brother John and her uncle William Smith. I've also carried out research into Archibald Geikie's work on weathering in gravestones, and write the monthly Distant Thunder column for *Geoscientist* which covers a wide range of historical topics.

I served for one term on the HOGG committee beginning in 2008, and was one of the convenors of their conference on Collectors and Collecting which took place at the Natural History Museum in April 2011.

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

Jasper Cook (Twickenham, Middlesex)
Nick Davidson (London)
Peter Lincoln (Saxmundham, Suffolk)
Ron Smeed (Romford, Essex)

OBITUARIES

For an obituary of HOGG member **Tony King**, who died last August, see https://www.geolsoc.org.uk/About/History/Obituaries-2001-onwards/Obituaries-2017/King-Anthony-John-Paynter--FICC-FGS-1929-2017

For an obituary of HOGG member **Norman Butcher**, whose death we announced in Newsletter 60 (June 2017), see https://www.geolsoc.org.uk/About/History/Obituaries-2001-onwards/Obituaries-2017/Norman--Edward--Butcher-1928-2017

THE SOCIETY OF ARTS AND THE ENCOURAGEMENT OF MINERALOGY AND GEOLOGY 1754–1900

Leucha Veneer[1] reports on the joint meeting of the History of Geology Group and the William Shipley Group for RSA History, held at Burlington House on Thursday 9th November 2017.

This very interesting meeting started, from a geological viewpoint, with a close focus on the early activities of the Society for the Encouragement of Arts, Manufactures and Commerce (RSA), and broadened out across a range of themes as the day progressed, covering agriculture, quarrying, surveying and mapping, public health, and model-making.

The opening session was introductory, with **Susan Bennett** from the William Shipley Group for RSA History and HOGG's **John Henry** (the meeting's convenors). **Susan** gave us an excellent overview of the RSA: how it was said "to poke its nose into everything" from the time of its foundation in 1754; how it did much of the groundwork for the Great Exhibition in 1851; and how

it achieved Royal patronage in 1908. The RSA's links with the Geological Society (GS) in its early years came mainly through GS founder member Arthur Aikin, who served as RSA Secretary for 22 years. **John** then focused on the contribution to geology of the RSA's mapping awards, which were started in 1759 to encourage accurate county mapping at a scale of an inch to a mile. By 1809, the Society had made 14 awards, and much of the country had been surveyed topographically and in detail, even before the first one-inch-to-one-mile Ordnance Survey map was published in 1801.

After the morning break (*picture left*), we continued with HOGG speakers—**John Mather** (Professor Emeritus, Royal Holloway) on the national water supply and disagreements between geologists and engineers, and **Cherry Lewis** (Hon. Research Fellow, Bristol) on the RSA agricultural medals awarded to John Farey and William Smith. **John** gave us a wry account of Victorian debates over the national water supply. The 1878 Congress on National Water Supply, organised by an RSA committee comprising engineers, chemists, and Fellows of the GS, made various recommendations, but little was done, and the 1879 Health and Sewage of Towns Congress revisited many of the issues, with the same experts speaking. The RSA also offered awards for the best suggestions "for dividing England and Wales into watershed districts," and later awarded two essays with medals. Further meetings were also held, but it eventually took the Second World War to convince the government of the importance of a national water supply survey! **Cherry**'s fascinating paper on the 1805 RSA silver medals for agriculture awarded to John Farey and William Smith showed how important the geological knowledge of these professional men was in their surveying and land management work, and how this was not widely appreciated at the time. Farey's medal was for experiments on the growth of timber trees over a 16-year period, while Smith was credited with converting Prisley Bog into Prisley Water Meadow through a drainage and irrigation scheme.

A break for lunch followed during which the HOGG AGM was held; the pertinent annual reports of the Chair, Secretary and Treasurer appear on pages 3–5 of this newsletter. After the AGM, we had a brief and unexpected intermission, with **Peter Wigley** updating us on the progress of the William Smith online mapping project—for more information see www.strata-smith.com

After lunch, **Gordon Walkden** (Professor Emeritus, Aberdeen) talked us through marbles, **Frank James** (University College London) gave us some broader context on Humphry Davy and the Royal Institution, and **Mike Howgate** told us about Benjamin Waterhouse Hawkins and his dinosaur models for the Crystal Palace. **Gordon** told us how the economic blockade of Britain during the French Revolutionary and Napoleonic Wars crippled the supply of decorative marbles which, at that time, were generally obtained from France, Belgium and Italy. This led the RSA, in 1802 and again in 1804, to offer premiums for the discovery of British equivalents. The promotions lasted for over 20 years, with some of the applicants being major marble dealers seeking to establish the suitability of various examples of limestones, granite and alabaster as alternatives to decorative marble. **Frank** then took us off to another London society, the Royal Institution (RI), to discuss Humphry Davy and mineral collecting. During his time at the RI, Davy collected over 4000 mineralogical specimens from all over Britain, creating one of the most extensive collections in London. However, Davy did not have great relations with the RSA, referring to it as "the tradesmen of the Strand" following controversy over the invention of the miners' safety lamp—the RSA had earlier recognized William Reid Clanny's alternative version of the safety lamp. **Mike** then explained how Benjamin Waterhouse Hawkins crafted some of the first models of dinosaurs: the life-size reconstructions erected in the grounds of the Crystal Palace (after it was moved to

Sydenham) in 1854. Hawkins worked from sketches to build small models, none larger than a foot tall, often in plaster but sometimes also in cast iron. These macquettes were then vetted by Richard Owen before construction of the larger models began. Hawkins later also reproduced some of the macquettes as teaching aids.

After tea, we heard about the Royal School of Mines (RSM) and its programme of lectures for working men (1852–1889) from **Anne Barrett (**archivist at Imperial, London), and about the importance of wooden crystal models in understanding mineralogy from **Jane Insley** (University College London). **Anne**'s revealing paper showed us the broad educational programme the RSM started soon after its foundation. Her study of the journals in which the public lectures were announced makes it clear that the adverts were aimed at both the artisans themselves and their employers. Attendees were in fact required to prove that they were 'working men,' though it's not clear how (or if) this was actually enforced. The first series of lectures in 1852, given by Lyon Playfair, Edward Forbes, Robert Hunt, W.W. Smyth and John Percy was successful, and the programme retained its popularity for many years: the lecture theatre was filled to its 450 capacity, and men asked in vain to be permitted to bring their wives. **Jane** brought us to a stimulating conclusion with a return to the material aspects of popular mineralogy: crystal models. *Conversations on Mineralogy* (1822) by Delvalle Lowry (daughter of Wilson Lowry, an engraver and an early member of the GS) emphasized the importance of physical 3-D models of crystals for beginners in mineralogy to gain further understanding of crystal structures. Amateur mineralogists in fact made models for themselves from whatever material was available, including potato and cheese!
The day concluded with a roundtable (which was recorded for posterity); this was wide ranging, but an ongoing theme was the lack of attention to history of technology—to paraphrase Hugh Torrens, we need to pay as much attention to doing/making [technology] as to knowing [science]. This was a contentious issue, with some pointing out that simplistic comparisons of the number of history of technology lecturers in UK universities with those in other countries do not take account of, for example, the rich tradition of industrial archaeology in Britain—this was one of many discussions that continued over drinks!

Overall, the meeting was a successful collaboration with the William Shipley Group, and a highly enjoyable day.

[1] e mail lveneer@uclan.ac.uk

Image © Barrie Chacksfield

POPE'S GROTTO

John Henry[1] reports on the continuing story of restoration.

The work of conserving and restoring Pope's Grotto in Twickenham has reached the first stage. In earlier HOGG Newsletters, I described the poet Alexander Pope's grotto concept and how the grotto needed rescuing. HOGG were able to find the survey and mineralogical talent to help progress the work. At the end of last November, Chris Duffin and I attended a reception of donors and people who had worked on Pope's Grotto restoration to view the south chamber. It had been completed as a pilot project and we were able to see the improvement in the cleaned fabric and the proposed lighting. The pilot project enabled the conservators to estimate the cost of doing the rest of the Grotto which will enable the grant applications to the Heritage Lottery Fund and other sources to be made and then the raising of matching funding to proceed. Part of this estimate was a requirement for 10sq.metres of minerals for patching and replacing defective specimens.

We are again very grateful to Roy Starkey who had already been so helpful in identifying and photographing the *in situ* minerals. Roy put a call out for suitable minerals for the restoration and had a very positive response from several collectors/dealers. HOGG would like to put on record the generous

donations from Roy, and from Neil Hubbard, Breedon Quarry, Frank Ince, Chris Jewson, Frank Bouweraerts and Tony Rigby. Roy assembled the minerals in his garage in Bromsgrove, which amounted to two loads in my compact car to ferry to the Grotto site. Roy also put me in touch with Richard Tayler, a Surrey mineral dealer, and through him, Emma Corke who donated a car-load from the stock of her late father, the mineral dealer Hilary Corke.

We now have at least 10 sq. metres—some of the pieces are large and will need to be broken to do the ceiling—so that estimating the areal extent of the three car-loads is guess work. I believe there is enough to replace the considerable amount of flint and old tiles which past repairers have used. I feel that we have worked very much in the spirit of Pope who, through a network of friends, and friends of friends, pulled together an eclectic collection to glitter and to delight.

[1] email geol.maps@virgin.net

FUTURE HOGG EVENTS

***OPEN MEETING**
Thursday 9th May 2018
Burlington House, Piccadilly, London
See P. 11 for Call for Papers.

***A GEOTOUR OF NORTHERN SPAIN**
14th–25th May 2018
Organised by Prof. Dick Moody
See PP. 11–12 for full details.

***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 P. 12 for more information.

***HISTORY OF COAL GEOLOGY AND MINING**
22nd November 2018 (including HOGG AGM)
Burlington House, Piccadilly, London
See P. 13 for more details and Call for Papers.

***CELEBRATING THE CENTENARY OF GEOL. SOC. FEMALE FELLOWS**
20th–21st May 2019
Burlington House, Piccadilly, London
See P. 13 for Call for Papers.

HOGG OPEN MEETING
Thursday 9th May 2018
Burlington House

CALL FOR PAPERS

Oral and poster presentations on any aspect of the history of geology are invited, including reports on work in progress. Depending on the number of submissions, oral presentations will each last 20 or 30 minutes including time for questions. Posters are best prepared at A0 size and in portrait orientation.

If you think you might like to contribute, please send, as soon as possible, a provisional title, indicating whether this is envisaged as an oral or poster presentation, to the convenor:

Dr Chris Duffin, 146 Church Hill Road, Cheam, Sutton, Surrey SM3 8NF
e mail cduffin@blueyonder.co.uk

Abstracts of talks and posters should be a maximum of 500 words including title, name and address of author and any literature cited; some figures may also be included. Please e mail these to cduffin@blueyonder.co.uk .

DEADLINE FOR SUBMISSION OF TITLES AND ABSTRACTS IS 28TH FEBRUARY 2018

Further details, including how to register, will be circulated and on the website in due course.

A GEOTOUR OF NORTHERN SPAIN

Organised by Professor Dick Moody

14th–25th May 2018

Flights: BA London to Bilbao return

This excursion to the north and north-eastern regions of Spain will visit several Geoparks recognised by the International Union of Geological Sciences (IUGS) and UNESCO. They include the magnificent Flysch Coastline (*Ruta del Flysch*) between Zumaia and Deba, west of San Sebastian and the UNESCO listed Rock Art caves of the Cantabrian cavern-complex near Santillana del Mar, Cantabria.

The 3000m of flysch exposed at Zumaia is indicative of the regional tectonics that resulted in the collision of the Eurasian and Iberian plates and the opening of the Bay of Biscay during Late Cretaceous–Tertiary times. Mining for gold, silver and base metals is recorded in pre-Roman times. The history of mining in the Pyrenees and Cantabrian Mountains will be revealed in visits to both outcrop and museums. The salt-pans of Salinas de Añana are also on the tentative list for recognition as a site of Outstanding Universal Value. The salts have been known for over 1500 years and are probably sourced from Late Triassic sediments.

In the Burgos region, we will visit the Museo de la Evolucion Humana, and the Museum of Dinosaurs as well as the Centro de Arqueologia-Experimental Carex, in Atapuerca. Karstification is a common denominator throughout this trip and the endokarstic housing adopted by early ‘hominids’ is dated back

400,000 years. The caves in the Sierra de Atapuerca to the east of Burgos show that there were three stages of occupation.

East–Southeast of Burgos, we will visit Salas de los Infantes, a small town known for its museum and a number of wonderful fossils, including a host of dinosaur species and an ever-growing number of dinosaur trackways from what was a paradise for Upper Jurassic–Lower Cretaceous dinosaurs.

On leaving Salas de los Infantes, we will journey north, through Burgos, and the Rudron Gorges in the Loras GeoPark to the Campo de Ayloluengo—a unique onshore oil field near Sargentes de la Lora. The oil field is comparable with the Dukes Wood Field but gives the opportunity to visit the actual field and a host of nodding donkeys. Weathered limestones appear just before Reinosa and our turn northwards across the source area of the Ebro and the dissection of the Cantabrian Mountain Chain. This journey will return us to thinking about 'alpine tectonics', regional stratigraphy and movements of the Iberian plate relative to Europe.

Stratigraphy, mineralogy, karstification, hominids, and visits to the very famous caves at Altamira, El Castillo, El Pindal and Bustillo and the visit to the impressive Jurassic Museum at Colunga and the Jurassic Coast between Gijon and Ribadasella will round off a wonderful tour of a little known region of Spain.

The estimated overall cost of the trip is £740–£760.00, including flight, hotels and local transport.

If you are interested in joining this trip or have any queries, please contact Dick Moody at **richard@rtjmoody.com**

HISTORY OF GEOLOGY GROUP

COLLECTORS, COLLECTIONS AND THE GEOLOGY OF SOUTH-WEST BRITAIN

GCG

A joint meeting of HOGG and the Geological Curators Group (GCG) hosted by the Bath Royal Literary and Scientific Institution in Bath and focusing on Collectors, Collections and the Geology of South-West Britain.

The meeting is planned for **18th–19th September 2018** and will include one day of talks followed by a day of related field trips. We are especially seeking contributions on:

- Collectors who worked in the south-west, contributing to the development of geological science. The role of more modern or even contemporary collectors should not be forgotten.
- Collections from the south-west which are poorly known, or which have been returned to prominence with recent projects. These may be rock, fossil, mineral or archival collections.
- Field geologists whose work and observations were important to the development of the science, without necessarily having made significant collections.

A Call for Papers and posters will be issued in April, with abstracts requested in May. In the meantime, please consider whether and what you can contribute.

For further information or to discuss your ideas informally contact Nina Morgan nina.morgan@cooptel.net

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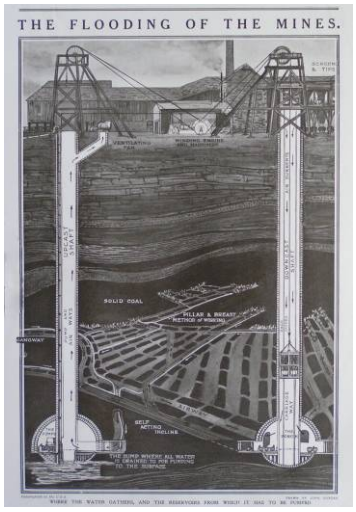
HISTORY OF COAL GEOLOGY AND MINING
Thursday 22nd November 2018 (including HOGG AGM 2018)
Burlington House, Piccadilly, London

Last year the Geological Society asked HOGG if it would like to organise a meeting on the history of coal, its geology and mining, to mark the demise of the Coal Specialist Group.

This one day meeting will be held on 22nd November in the Society rooms in Burlington House starting at 11.00 am. The AGM will follow lunch, as it did last year, and the meeting will then continue to end at 5.00 pm.



The speakers will include, amongst others, Alan Cobb, Ted Nield, Larry Thomas, Hugh Torrens, Richard Trounson, Leucha Veneer and Geoffrey Walton. The topics to be covered will include James Bateman Longmire, who went to Russia instead of William Smith to try to find coal there for the Czar, historical aspects of coal mining law and the understanding of mining subsidence, specific aspects of coal mining in the Great Northern Coalfield, South Wales and elsewhere, the evolution of coal mining in the Far East, and the development of opencast mining in Britain. 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.

If you are interested in contributing or presenting a paper or poster, please contact Geoffrey Walton at geoffw@dustscan.co.uk. Full details of the programme and how to register will appear in the next (June and October) newsletters and on the website.

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

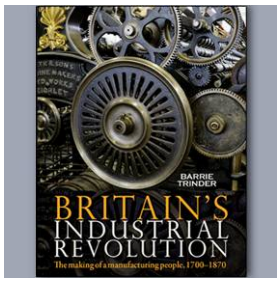
The conference welcomes proposals for research papers or poster presentations on the historical contribution of women in geology. It is hoped that the presentations will build on and expand the work achieved at an exploratory conference in 2005 *The Role of Women in the History of Geology* although this 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

BOOK AND MAP NOTES



Britain's Industrial Revolution—the making of a manufacturing people, 1700–1870
Barrie Trinder
Carnegie Publishing. 2013 688pp.
ISBN 978-1-85936-219-8 paperback
ISBN 978-1-85936-175-7 hardback (now sold out)
RRP £19.99

Reviewed here by Geoffrey Walton[1]

Many geologists both past and present have had an interest in former industrial activities often associated with mineral operations—Arthur Raistrick and Trevor Ford to name but two. Unfortunately, this remarkable publication has been little reviewed in the geological world but it is an outstanding book by one of the world's leading industrial archaeologists. It is comprehensive and based on an enviable experience in industrial archaeology. It is a big book, weighing in at 1.7 kg, but then so too are many books dealing with the diverse industrial concerns of the period that range from the potteries of Wedgwood and Spode to the Great Western Railway, and from the Grand Union Canal to the manufacturers of the English regional chair.

In 1968, I lived in Shropshire and worked for the NCB Opencast Executive. Numerous artefacts—early wooden water pipes, picks and footwear were being discovered in old coal workings exposed in opencast mines in Coalbrookdale. Hence I was delighted to meet Barrie Trinder when he gave a series of WEA talks on the industrial archaeology of the Telford area in Albrighton. His lectures were inspiring and most of us eagerly took the opportunity to accompany him to the Ironbridge area and various old manufacturing sites including brick kilns and potteries. He was interesting then and his book is no less so today.

The book is a carefully developed construct in which the author sees the 'industrial revolution' not as an inevitable or uncontrollable process, but rather as the result of people's actions. He is primarily concerned with the physical changes and the impacts on where and how people lived, as well as the landscape; this is the theme of the superbly illustrated book. It covers developments from 1700 to 1870 coinciding with much of the period studied by those interested in the history of geology.

The *Introduction* addresses the early development of transport and steam power, and other forms of power generation. This is followed by three main sections. The first section, *Illustrious followers of science*, considers the need for, and the development of, improved transport of goods and materials and the recovery of the basic raw materials, especially coal and iron. The author discusses the impact of men such as James Watt, the development of more refined sources of energy with both stationary and locomotive engines, and then logically outlines the evolution of civil engineering and illustrates ways in which science used the findings arising from these works. The impact of canal building, larger quarries and early coal mining exposed what was previously poorly appreciated and directly led to improved geological knowledge; William Smith's role in this work is noted. However, the author appears to be less concerned with the 'appliance of science' than with what was built to aid industrial growth. Quite properly, he sees the applications of technology and professionalism in engineering as being truly significant in the changes that occurred. It is what the 'followers of science' made and produced that concerns the author rather than their thoughts and theories although he does note their beliefs and political backgrounds, and at times records how these influenced what they did for those who worked for them.

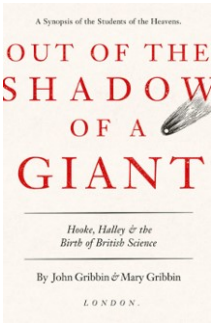
The second section, *Creating the 'workshop of the world'*, is the core of the book and deals with many industrial sectors, region by region across Britain and where relevant in Ireland. It starts with the coal industry and the users of coal in the production of glass, salt, soda ash, pottery, lime and bricks. This is followed by extensive sections on the production of iron and then non-ferrous metals, and concludes with sections on textiles and paper. It particularly notes the interconnected nature of industry and how one development led to another, and how the key players moved around the country and saw different uses for the technology of one area in another industrial location elsewhere. This 400 page section goes progressively around the country usually in the order in which each industrial sector developed, so coal in the North-East is covered first and similarly, the iron industry in Coalbrookdale. Each area includes a description of the development, a brief history of the key steps in opening up the sector, and the industrial innovations and linkages that followed. There are many contemporary plans, drawings and sections of installations, and paintings and engravings that show how the industry was seen at the time, as well as recent photographs. All these illustrations are supported by detailed captions, something which is often poorly dealt with in other historical overviews. It is pleasing to see that many of the structures and industrial sites visited and individuals mentioned during the recent HOGG field trip to the Forest of Dean are referred to in the book and backed up by extensive further references and a glossary and index.

The final section on *Towns, cities and communities* is more concerned with the social history and with the industry that arises directly from the growth of large centres of population. The world's first industrial revolution did indeed turn Britain into a nation of urban dwellers. The start of the move from primary to secondary production is therefore covered. It might appear that this is not necessarily of interest to geologists, but towns and cities need clean water and, at the outset, they require building materials and the infrastructure to supply their day to day needs. Many diverse secondary urban industries are covered from brewing to local iron foundries and mills for various food processes, to the manufacture of scientific instruments and furniture. Some 'aspirational communities', where benefactors and self interest groups established distinctive industrial settlements, are also recorded.

The period covered by the book ends at 1870 when the author considers changes to be more social than economic even though some of the staple industries functioning then were still in operation a century later. He frequently mentions visitors and writers from Europe and America who were just as curious and amazed then as they are with our politics today. He quotes the French historian Paul Mantoux (1877–1956) writing in 1909 who says of Britain's industrial revolution that it '*gave rise to such important results that it has been aptly compared to a revolution, though it may be confidently asserted that few political revolutions have ever had such far reaching consequences'*. This book should be on the shelves of anyone interested in the physical evidence of the history of science, technology and engineering.

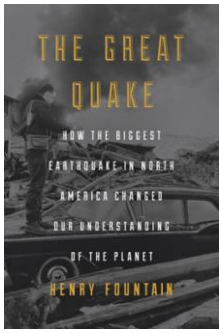
[1] e mail geoffw@dustscan.co.uk

Out of the Shadow of a Giant
Hooke, Halley & the Birth of British Science
John Gribbin & Mary Gribbin
William Collins. 2017. 320pp.
ISBN 9780008220594 hardback
RRP £25.00



"What if Isaac Newton had never lived?
Robert Hooke and Edmond Halley, whose place in history has been overshadowed by the giant figure of Newton, were pioneering scientists within their own right, and instrumental in establishing the Royal Society. Whilst Newton is widely regarded as one of the

greatest scientists of all time, and the father of the English scientific revolution, John and Mary Gribbin uncover the fascinating story of Robert Hooke and Edmond Halley, whose scientific achievements neatly embrace the hundred years or so during which science as we know it became established in Britain. They argue persuasively that even without Newton, science in Britain would have made a great leap forward in the second half of the seventeenth century, headed by two extraordinary men, Hooke and Halley." [publisher's notes]



The Great Quake: How the biggest earthquake in North America changed our understanding of the planet
Henry Fountain
Crown (Penguin Random House). 2017. 288pp.
ISBN 978-1-101-90406-0 hardback
ISBN 978-1-101-90407-7 E book
RRP £20.88

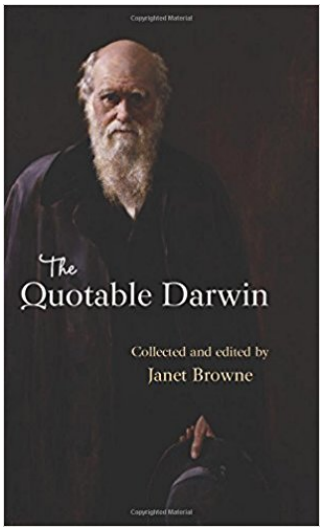
"*.....The Great Quake* is a riveting narrative about the biggest earthquake in North American recorded history—the 1964 Alaska earthquake that demolished the city of Valdez and swept away the island village of Chenega—and the geologist who hunted for clues to explain how and why it took place.

At 5:36 p.m. on March 27, 1964, a magnitude 9.2 earthquake—the second most powerful in world history—struck the young state of Alaska. The violent shaking, followed by massive tsunamis, devastated the southern half of the state and killed more than 130 people. A day later, George Plafker, a geologist with the U.S. Geological Survey, arrived to investigate. His fascinating scientific detective work in the months that followed helped confirm the then-controversial theory of plate tectonics. In a compelling tale about the almost unimaginable brute force of nature, *New York Times* science journalist Henry Fountain combines history and science to bring the quake and its aftermath to life in vivid detail. With deep, on-the-ground reporting from Alaska, often in the company of George Plafker, Fountain shows how the earthquake left its mark on the land and its people—and on science."[publisher's notes]

A Galaxy of Her Own
Libby Jackson
Century Books (Penguin). 2017 144pp.
ISBN 978-1-780-89836-0 hardback
RRP £16.99

"From small steps to giant leaps, *A Galaxy of Her Own* tells fifty stories of inspirational women who have been fundamental to the story of humans in space, from scientists to astronauts to some surprising roles in between. From Ada Lovelace in the nineteenth century, to the women behind the Apollo missions, from the astronauts breaking records on the International Space Station to those blazing the way in the race to get to Mars, *A Galaxy of Her Own* reveals extraordinary stories, champions unsung heroes and celebrates remarkable achievements from around the world. Written by Libby Jackson, a leading UK expert in human space flight, and illustrated with bold and beautiful artwork from the students of London College of Communication, this is a book to delight and inspire trailblazers of all ages." [publisher's notes]

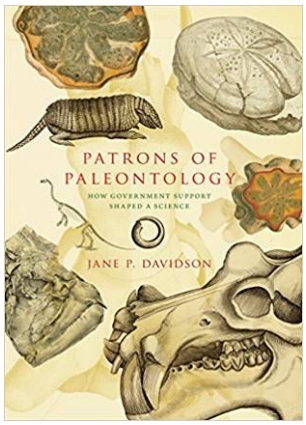
NB. Geologists Monica Price and Frances Westall are amongst those included.



The Quotable Darwin
Janet Browne
Princeton University Press. 2017. 384 pp.
ISBN 9780691169354 hardback
ISBN 9780691169357 E book
RRP £19.95

"Here is Charles Darwin in his own words—the naturalist, traveller, scientific thinker, and controversial author of *On the Origin of Species*, the book that shook the Victorian world. Featuring hundreds of quotations carefully selected by world-renowned Darwin biographer Janet Browne, *The Quotable Darwin* draws from Darwin's writings, letters to friends and family, autobiographical reminiscences, and private scientific notebooks. It offers a multifaceted portrait that takes readers through his youth, the famous voyage of the *Beagle*, the development of his thoughts about evolution, his gradual loss of religious faith, and the time spent turning his ideas into a well-articulated theory about the natural origin of all living beings—a theory that dangerously included the origin of humans.

The Quotable Darwin also includes many of the key responses to Darwin's ideas from figures across the social spectrum, scientists and non-scientists alike—and criticism too. We see Darwin as an innovative botanist and geologist, an affectionate husband and father, and a lively correspondent who once told his cousin that he liked to play billiards because "it drives the horrid species out of my head." This book gives us an intimate look at Darwin at work, at home, as a public figure, and on his travels. Complete with a chronology of Darwin's life by Browne, *The Quotable Darwin* provides an engagingly fresh perspective on a remarkable man who was always thinking deeply about the natural world." [publisher's notes]



Patrons of Paleontology
How Government Support Shaped a Science
Jane P. Davidson
Indiana University Press. 2017. 328pp.
ISBN 978-0-253-02571-5 hardback
Kindle edition also available.
RRP £32.00

"In the 19th and early 20th centuries, North American and European governments generously funded the discoveries of such famous paleontologists and geologists as Henry de la Beche, William Buckland, Richard Owen, Thomas Hawkins, Edward Drinker Cope, O. C. Marsh, and Charles W. Gilmore. In *Patrons of Paleontology*, Jane Davidson explores the motivation behind this rush to fund exploration, arguing that eagerness to discover strategic resources like coal deposits was further fuelled by patrons who had a genuine passion for paleontology and the fascinating creatures that were being unearthed. These early decades of government support shaped the way the discipline grew, creating practices and enabling discoveries that continue to affect paleontology today." [publisher's notes]

The Palaeontological Association 60th Anniversary
Looking Back in Time

2017 was the 60th anniversary year of the Palaeontological Association whose inaugural meeting was held in early 1957. An illustrated booklet about the founding of the Association, with some memories about its early days from founding and honorary members, was distributed at its 2017 Annual Meeting. You can view the booklet online at

https://www.palass.org/sites/default/files/media/association/palass_at_60.pdf

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RECENT HISTORICAL PUBLICATIONS BY HOGG MEMBERS

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

John Henry. 2018. 1851 Exhibition is still paying. *In* Readers' Letters, *Geoscientist*, Vol.28, No. 01, 25.

Michael A. Taylor & Hugh S. Torrens. 2017. 19th Century plaster casts of Lower Jurassic ichthyosaurs in the Bristol Institution for the Advancement of Science, Literature and the Arts, and the Academy of Natural Sciences, Philadelphia. *Geological Curator*, **10(8)**, 489–492.

Michael A. Taylor & Hugh S. Torrens. 2017. Henry Riley M. D. (1797–1848) of Bristol. *Geological Curator*, **10(8)**, 493–498.

OTHER RECENT ARTICLES OF HISTORICAL INTEREST IN THE *GEOLOGICAL CURATOR*

(Journal of the Geological Curators' Group—HOGG's sister group)

R. B. Williams. 2017. The palaeontologist William Hellier Baily (1819–1888): new biographical information. *Geological Curator*, **10(8)**, 465–467.

Patrick Wyse Jackson & Matthew Parkes. 2017. Burial place and headstone of William Hellier Baily (1819–1888). *Geological Curator*, **10(8)**, 468.

THE ARTHUR HOLMES PAPERS, UNIVERSITY OF DURHAM

Cherry Lewis has recently donated her extensive collection of material relating to Arthur Holmes (1895–1965) to the University of Durham Library, Archives and Special Collections. In 1924, science was reborn at Durham University when four new departments and seven new positions were created. One of eighteen applicants for the readership in geology, Arthur Holmes was appointed as head of the one-man department. He remained in post for the next 18 years and, by the time he left the department had become one of the leading places in the UK in which to study geology.

The collection comprises two original diaries (written while he was in Mozambique in 1911 and in Burma, 1920–22), a day book, lecture notes taken by one of his students in the 1950s, and photographs of Arthur Holmes. However, in the main it contains copies of his extensive correspondence with some of the leading geologists of his day. Much of it was garnered from

archives worldwide by Cherry Lewis in the course of producing her book *The Dating Game—one man's search for the age of the Earth* (2000), a biography of Holmes's life which primarily focuses on his pioneering work on dating the age of the Earth. Some of the correspondence only came to light subsequent to publication of the book and so is not referenced in it.

The most significant correspondence includes:

- letters to his parents and his best friend, Bob Lawson, written while Holmes was in Mozambique (1911)
- letters to and from the Finnish petrologist Jakob Johannes Sederholm (1863–1934) on the development of very early (1912–1914) techniques in U/Pb geochronology, discovered after *The Dating Game* was published
- correspondence with mainly American geologists regarding Holmes' pioneering work on continental drift during the 1920s
- original letters regarding the possibility of an expanding Earth, on which Holmes was working at the time of his death.

Other documents relate to his time as a student at Imperial College, and the various phases of his career in academia and the oil industry; there is also material concerning his second wife Doris Reynolds and her academic career. Cherry has organised the papers into files by correspondent and/or subject, and there is also a little material about her own work on Holmes.

Full details of the collection can be found here: http://reed.dur.ac.uk/xtf/view?docId=ark/32150_s1gt54kn119.xml;query=Arthur%20Holmes;brand=default#1 or by searching for Arthur Holmes in the University of Durham Library's Special Collections catalogue.

ELECTRONIC ENLIGHTENMENT

Electronic Enlightenment (**EE**) is an evolving research project of the Bodleian Libraries, University of Oxford. It allows students and scholars to explore the relationships and the movement of ideas in the early modern period (17th–20th centuries) through its web of correspondence. It makes available over 69,000, often previously unpublished, letters and documents between more than 8,000 correspondents, providing detailed information on the private conversations and thoughts of a wide range of both 'great' and lesser known figures. EE is international in scope covering over 50 nationalities, with letters often provided in their original language including English, French, German, Italian, Spanish, Swedish, and Russian, as well as Latin and Greek.

This online searchable collection of edited inter-connected letters and documents is a subscription (Institutional or Personal) resource; to enjoy the full range of content and functionality, it is necessary to be a subscriber. Subscribers can connect to over 50 other online resources including the *Oxford Dictionary of National Biography*, and search and browse letters and lives by writer, recipient, date, location and letter content.

For more information visit www.e-enlightenment.com

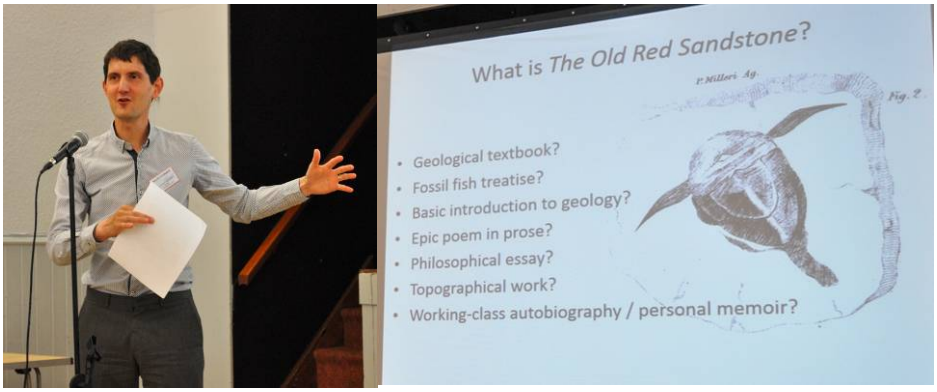
THE OLD RED: HUGH MILLER'S GEOLOGICAL LEGACY

Martin Gostwick*[1] *reports on the conference organized by the Friends of Hugh Miller* (www.thefriendsofhughmiller.org.uk) *at Cromarty, Scotland, on 9th–10th September 2017.

This report first appeared in Newsletter 96 of the Palaeontological Association, who were one of the sponsors of the conference, and is included here with their permission and that of the author.

This 'legacy' conference was aimed at geologists and palaeontologists internationally, and anyone with a general interest in Hugh Miller, fossils and the natural world. It was held over a day and a half at the Victoria Hall in Cromarty and achieved outstanding success according to all those present. It was attended by 49 delegates and two volunteers, and was addressed by 12 speakers.

Among the many highlights was a *tour de force* on the subject of Hugh Miller's classic geological work, *The Old Red Sandstone*, by the editors currently working on a comprehensive new edition of the great work, which has been out of print for almost a century. The editors, **Ralph O'Connor**, University of Aberdeen professor in the Literature and Culture of Britain, Ireland and Iceland (*picture right*), and **Michael A. Taylor**, research associate at the National Museums Scotland (NMS), emphasized with many examples why its outstanding literary qualities make it as worth reading today as when it was first published in 1841. What category as a work does Hugh Miller's *The Old Red Sandstone* fall into: geological textbook, fossil fish treatise, basic introduction to geology, epic poem in prose, philosophical essay, topographical work, working class autobiography or personal memoir? The answer is: all of these and more!



Keynote speaker **Prof. John Long** of Flinders University, South Australia presented new revelations concerning the complex reproduction structures in Devonian fossil fish, including some in the very same animals Hugh Miller first discovered nearly 200 years ago. He showed how, while placoderms reproduced principally by spawning (external fertilization), internal fertilization (copulation) must have been lost and regained at least once, indicated by evidence of strong claspers similar to those used by sharks. **Martin Brazeau** of Imperial College London further developed the theme of vertebrate evolution, exploring how fish from the Orcadian Basin have helped shape our understanding of evolutionary relationships, ranging from the origin of jaws, teeth and paired appendages, to the eventual conquest of the land by tetrapods. The lively and productive scientific debate that followed has likely stimulated researchers to revisit and revive their interest in these fossils.

In probably a first for many conference delegates, they were invited by retired oil and gas consultant **Roger Jones** to view an extraordinary fossil named for Miller, *Homostius milleri*. At 66 cm long and 40 cm wide, it is potentially the largest and most complete specimen of this species known. Roger forms one of a group led by Prof. Nigel Trewin† known as 'The Old Red Fish Filleters', particularly due to his interest in new techniques for high-quality fossil preparation that can reveal morphological detail not seen in traditional 'split' fish. Roger has had five exceptionally good casts made of the *H. milleri* specimen, one of which the delegates were later able to see on

display during their tour of the Hugh Miller Museum. **Andrew Ross**, head of the NMS Palaeobiology Section, brought to our attention several samples from the NMS Miller collection purchased from his family after his death, all rarely, if ever, seen before. He said they numbered some 4000 fossils, a small proportion of NMS holdings which amount to a quarter of a million specimens.

John Hudson, Emeritus Professor of Geology at the University of Leicester, has researched the Jurassic rocks of the Inner Hebrides since 1956, and used many quotations from Miller's writings in co-authoring *The Geology of Eigg* (2nd edition) published by the Edinburgh Geological Society in 2016. Miller's "Lias" is now known to be Late Jurassic, Kimmeridgian, in age. His observations on the brackish "estuarine" molluscan faunas on Eigg were notable in anticipating later research. In general, Miller was more interested in fossils than in rocks, but striking phenomena like the concretionary sandstones on Eigg, and the modern 'musical sands' derived from them, called forth enthusiastic descriptions and speculations. **Elsa Panciroli**, a palaeobiologist from the Highlands of Scotland, is a member of the Isle of Skye research teams from NMS, and the universities of Edinburgh and Oxford. She described how their field work has yielded exceptionally complete mammal skeltons. Many of these are revealed through micro-CT scanning and digital reconstruction in unprecedented detail. Elsa went on to talk about their National Geographic-sponsored fieldwork in 2017, including revisiting Miller's Reptile Bed. She also reviewed the larger animals and the fossil localities being studied in the Inner Hebrides, including dinosaurs, flying and marine reptiles, expansive fossil footprints sites, and elusive fish groups.

Alan McKirdy, author of a wide-ranging series of geological guidebooks, took as his starting point Miller's quote: "Let me qualify myself to stand as interpreter between nature and the public". He said a challenge was facing today's Earth scientists: "Geology is still one of the lesser known of the sciences. Many of the exciting facts about the geology of Scotland remain locked in academic texts and are not widely known by the general public". Gold prospector **Gavin Berkenheger** then raised the audience's spirits by invoking how two of Miller's maxims inspired his work, about using your eyes properly, and treating life itself as a 'school', through which new discoveries in the natural world could become covered in "a coat of magic".

The Friends of Hugh Miller's chairman, palaeontologist **Bob Davidson**, said Miller was one of many scientists who attempted to rationalize body plans of the fossils they collected by producing models of them. His eventual paper version of his *Pterichthyodes* remained reasonably accurate. Today technological advancement has allowed the recreation of ancient forms via computer media in place of the rubber moulds, gutta-percha and plaster materials of old. **Alison Morrison-Low**, writer and publisher on the history of NMS science and photography collections, gave a visually striking account of geology's early years as represented in the new art form, encompassing the Hill/Adamson calotypes of the early 1840s, and photography's meteoric rise from the 1850s onwards.

Amongst the most pleasant, and indeed thrilling, aspects of the event, was the post-conference excursion to Miller's famous Cromarty Fish Bed, during which several delegates and some speakers found remarkable Devonian fish specimens, from virtually the same locality as Miller did (*picture right*). We hope the conference has stimulated future research on this interesting area.

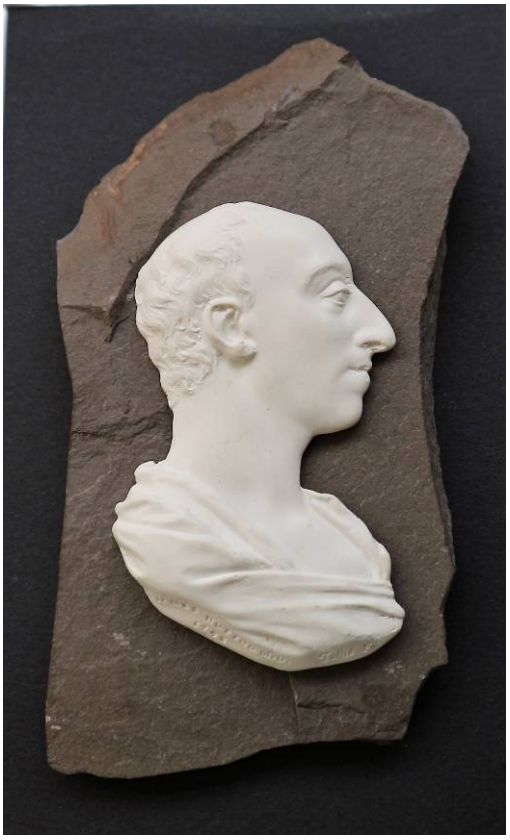
Images © Laura Thompson

† deceased 25th October 2017

[1] mgostwick@gmail.com

A PORTRAIT MEDALLION OF JAMES HUTTON (1726–1797) BY JAMES TASSIE (1735–1799)

Bill George*[1] *reports on a portrait medallion of the Scottish 'Father of Modern Geology' James Hutton which appeared for sale on a well-known online auction website in October 2017.



The portrait, which is 3 inches [7.62 cm] in length, is appropriately stuck on a lump of slate rock, in the same vein as a lucky brass Cornish pixie is attached to a piece of Dartmoor granite or slab of polished serpentine. The legend at the base reads "JAMES HUTTON M.D. 1792 Tassie F."

James Hutton is well known to all history of geology aficionados, especially for his famous words "no vestige of a beginning, no prospect of an end" but James Tassie may not be so familiar.

James Tassie, who was also Scottish, worked as a stonemason until he studied art under the Foulis brothers in Glasgow before moving to Dublin and assisting Henry Quin to perfect an enamel for making replica gems and medallions. Tassie then moved to London in 1766 where he exhibited at the Royal Academy before receiving a commission from Catherine II of Russia for 15,000 replica classical gems, cameos and intaglios in 1781. Today, Tassie is better known for his large profile medallion portraits of his contemporaries including Adam Smith, Dr Joseph Black, Sir Henry Raeburn and James Hutton. Tassie modelled his subjects in wax before casting them in white enamel paste. Sometimes the whole medallion was cast in enamel while in other cases, such as the Hutton example, only the head was cast. When he died in 1799, the collection of Tassie's work numbered 20,000.

In 1894, John M. Gray published *A biographical and critical sketch of James and William Tassie together with a catalogue of their portrait medallions*. On page 119, item 204 reads:

HUTTON, JAMES. Geologist; born 1726; died 1797.

"JAMES HUTTON M.D. 1792 Tassie F. [fecit] 3 inches"

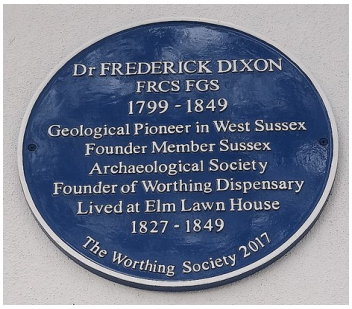
When this medallion portrait was executed in 1792 Hutton, aged 66, was suffering great pains due to bladder stones and had recently given up further field work to concentrate on finishing off his writings for publication.

A simple internet search will provide much more information about James Hutton and James Tassie, but I could find very little about Tassie's medallion portrait of Hutton. The Royal College of Physicians, Edinburgh holds a wax model for the profile portrait (OBJ/OBJ/12/12) *circa* 1792 while the Scottish

National Portrait Gallery (PG 267) possesses a ceramic medallion 7.70 cm in height, which was transferred from the National Gallery Scotland in 1889. No other examples, originals, copies or fakes, could be found online in the Victoria and Albert Museum, British Museum or the National Portrait Gallery, London. Perhaps HOGG members know of other examples.

[1] email william-george@lineone.net (dated 7th October 2017)

BLUE PLAQUE FOR SUSSEX GEOLOGIST FREDERICK DIXON (1799–1849)

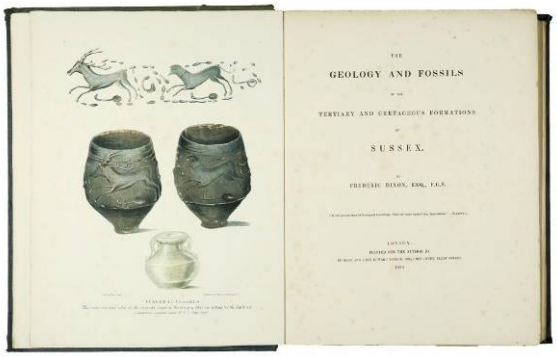


An article by David Bone in the recent *Magazine of the Geologists' Association* (Vol. 16, No. 4 December 2017, p. 25) records the unveiling of a Blue Plaque at Union Place, Worthing, Sussex on 22nd June 2017 to commemorate Dr Frederick Dixon, a surgeon and physician with a keen interest in geology and archaeology. The following text is based on David's article.

(Image: Open Plaques)

Dixon was born in the small South Downs parish of Sullington, north of Worthing. Thanks to a family inheritance, he was educated at Eton before being apprenticed to the leading surgeon of the day, Sir Astley Cooper, at Guys Hospital. In 1821, he became a fellow of the Royal College of Surgeons. In 1825, Dixon married and moved into a newly-built house at No. 3 Union Place, Worthing, which at the time had fine views towards the sea. In the 1830s and 1840s, it became one of the social centres of Worthing, particularly for musical soirees as Dixon was proficient on the piano. In 1829, it was decided that a Dispensary should be established in a disused building in the town, and Dixon became the Chief Surgeon. This was so successful that new premises were built in 1846 to provide basic medical treatment to the people of Worthing.

Throughout this time, Dixon was pursuing his lifelong interest in geology and, in 1840, he was elected a Fellow of the Geological Society. He was sponsored by Roderick Murchison, Charles Lyell and Gideon Mantell. He also became a close friend of Richard Owen. Dixon made a substantial collection of Sussex fossils, some of which were engraved in the 40 plates used to illustrate his posthumously published book *The Geology and Fossils of the Tertiary and Cretaceous Formations of Sussex*. The book is usually known by the abbreviated title of the second edition *The Geology of Sussex* (Dixon and Jones 1878) which included additional text and a selection of plates of Chalk fossils reproduced from Mantell's *Fossils of the South Downs* (1822). Both editions are collectors' items and are key works on the geology and the history of geology of Sussex.



(Image: Abe Books)

Dixon was also an antiquarian and a founding member of the Sussex Archaeological Society established in Lewes in 1846. He was active in organising and chairing meetings, and published three short papers in early volumes of the *Sussex Archaeological Collections*. His interest in such matters is also reflected in diversions from geology into archaeology in *The Geology of Sussex*.

Dixon died in 1849 at the age of 50 from a fatal water-borne disease. He was buried in the family tomb in Sullington Churchyard. The Blue Plaque was arranged by the Worthing Society and is mounted on the wall of his former home, Elm Lawn House in Union Place, Worthing. The property now forms part of Amelia Court Complex, retirement homes by McCarthy and Stone who also hosted the unveiling by His Worship the Mayor, Councillor Alex Harman, and reception.

OTHER FUTURE MEETING AND EVENTS

STONES, SLABS and SEASCAPES
George Victor du Noyer's
Images of Ireland

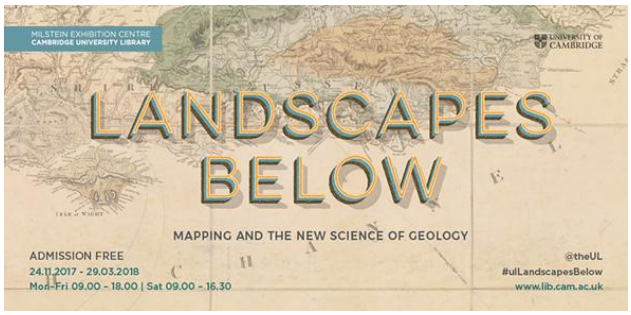
Until 24th February 2018

Crawford Art Gallery
Emmet Place, Cork, Eire

In 1845, the newly established Geological Survey Ireland (GSI) began a hugely ambitious project to map the entire island, in the process documenting geographical, geological, archaeological and historical sites.

George du Noyer worked as a surveyor, travelling by foot and on horseback in all weather, producing an extraordinary record of the landscape he encountered from Malen to Mizen Head, creating a resource of interest to art lovers, geologists, botanists, archaeologists and historians alike. He was often in demand to provide illustrations for public lectures given by some of the more famous names.

LANDSCAPES BELOW
Mapping and the New Science of Geology



Until 29th MARCH 2018
Mon.-Fri. 09.00-18.00hrs, Sat. 09.00-16.30hrs, closed Sunday

Milstein Exhibition Centre, Cambridge University Library, West Road, Cambridge CB3 9DR
Admission Free

During the late eighteenth and early nineteenth centuries, a new science of Geology developed. Intellectual curiosity produced a greater understanding of how the Earth's strata were formed and layered. Disagreement was, however, common.

Maps of the period did not just show new knowledge, but represented visible arguments about how that knowledge should be recorded.

Landscapes Below explores geological map-making, and how these new subterranean visions of the British landscape influenced our understanding of the Earth.

Read more about the exhibition at
www.lib.cam.ac.uk/news/going-underground-cambridge-digs-history-geology-landmark-exhibition

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5TH INTERNATIONAL PALAEONTOLOGICAL 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."

Deadline for abstract submission 15th February 2018
Deadline for 2nd wave registration 31st March 2018
Scientific programme and 3rd Circular May/June 2018

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

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INHIGEO 43rd CONFERENCE MEXICO CITY, MEXICO
12th–22nd November 2018

CONFERENCE THEMES

- History of vulcanological 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 s*pecial 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

• 31 December 2017 deadline for "Expression of Interest" for Conference and Post-Conference trip
• 15 April 2018 deadline for abstract submission
• 18 May 2018 notification of acceptance and 2nd Circular
• 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

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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

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, Poland and 25th International Congress on the History of Science and Technology (25ICHST)

HOGG STANDING ORDER MANDATE

Name of bank or building society……

Branch address…….

…….

……..

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